

COMPUTING RESEARCH NEWS

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NIBIB at NIH Promotes Collaboration in Research

By Donna J. Dean

Overview

The establishment of the National Institute of Biomedical Imaging and Bioengineering (NIBIB) clearly is having a positive impact on the other institutes and centers that comprise the National Institutes of Health. As it enters its third year, the NIBIB's unique status as an institute dedicated to emerging biomedical technologies is leading to innovative and collaborative science that crosscuts all biological processes, organ systems, and diseases.

The NIBIB supports and conducts interdisciplinary research and training in biomedical imaging and bioengineering, and supports the development and translation of technologies that enable fundamental discovery and facilitate early disease detection and management. An outstanding extramural research program has been established, and in fiscal year 2002 the Institute supported 289 extramural research grants in the amount of \$100,003,000.

As the Institute continues to expand and prosper, areas of considerable interest include biomaterials, nanoscience, platform development, surgery, bioinformatics, multimodality imaging, imaging devices and agents, computer modeling, image-guided therapies and interventions, imaging reconstruction, and the physics and mathematics of biomedical imaging. Areas of interest in the technology arena include sensors, nanotechnology, microtechnology, micro and macro materials, computer applications, and biomedical imaging.

An important component of the NIBIB's mission is to promote collaborations that integrate multiple scientific disciplines. These collaborations cut across NIH institutes and centers, other Federal agencies, and academia and industry. Key to the collaborative efforts of the Institute are several trans-NIH and inter-agency organizations administered by NIBIB: the Bioengineering Consortium (BECON), the NIH Inter-Institute Imaging Group, and the NIH

Biomedical Implant Science (BMIS) Coordinating Committee.

The development of a new generation of research scientists is also critical to the successful future of trans-disciplinary research. Therefore, the NIBIB has taken a lead role in the development of methods for training researchers who are technically competent in the field, independent thinkers, successful communicators, team players, and visionaries in transcending disciplinary boundaries.

Current Research

Significant results from a wide array of research projects in NIBIB's extramural grant portfolio have already been demonstrated.

A new, high-frequency ultrasound scanning system has been developed by Dr. Katherine Ferrara, professor and chair of the Department of Biomedical Engineering at the University of California, Davis. This new scanning system will provide an unprecedented opportunity to image blood flow in the anterior segment of the eye, and holds promise for other opaque tissues. The ability to monitor the physiology of the eye will help combat major causes of blindness and



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will be paramount to fully understanding the mechanisms of all eye diseases and disorders.

Professor Enrico Gratton, a NIBIB-supported researcher from the Department of Physics at the University of Illinois, Urbana, has developed a new, non-invasive sensor technology that significantly increases a clinician's ability to resolve high-resolution images of brain function. This technology holds the potential to provide a wealth of new knowledge about the progression, detection, and treatment of a wide range of neurological disorders, including Parkinson's and Alzheimer's diseases.

Another significant project supported by NIBIB is that of a digital

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Sun Microsystems Laboratories: License to Innovate

By Greg Papadopoulos

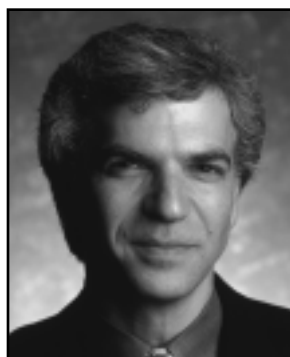
In technology, success comes from equal parts innovation and pragmatism.

Jim Mitchell, the director of Sun Microsystems Laboratories, puts it this way: "This is not university research. We are here to make things that will someday make money."

Creating useful technologies—marketable technologies—is what keeps us going.

We're idealistic enough to want to make a difference in peoples lives and practical enough to realize that selling useful products enables us to keep doing what we love.

Since Sun Labs was founded in 1990, a number of our rule-changing innovations have made it into the mainstream—from platform-independent Java technologies to our ground-breaking Sun Ray and Sun Cluster products. A very important piece of our business model is not just to predict, but also to help stimulate



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uses of the network that ultimately create more demand.

As the network expands, the fundamental questions that drive our thinking include: "What will the impact be on the infrastructure?" and "What pieces of the network infrastructure are missing?"

Secrets of the Supernet

Certainly one of the critical pieces is security—and one of the key con-

cepts currently being developed at Sun Labs is a new method of communications tunneling.

We call it Supernetting. What it does is add a new layer of abstraction to a layered model of computer networking, making it easy to encrypt both the transmission and storage of data.

Communications tunneling is already used in today's virtual private networks, but mainly on a network-to-network basis. Other uses are possible, but remain costly and complicated. The beauty of Supernetting lies in how easy it is to manage.

I won't go into the technical details; suffice it to say, the Supernet layer sits directly above the network layer and includes its own addressing structure and security services. This

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Expanding the Pipeline

Grace Hopper Celebration of Women 2002

By Valerie Taylor, Amy Pearl, and Telle Whitney

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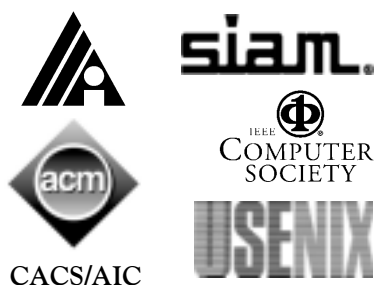
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Affiliate Societies



Co-founded by Dr. Anita Borg and Dr. Telle Whitney in 1994 and inspired by the legacy of Admiral Grace Murray Hopper, the Institute for Women and Technology's Grace Hopper Celebration of Women in Computing Conference (www.gracehopper.org) is designed to bring the research and career interests of women in computing to the forefront. It is the largest technical conference for women in computing and results in collaborative proposals, networking and mentoring for junior women, and increased visibility for the contributions of women in computing.

The fourth Grace Hopper Conference was held at the Hyatt Regency in Vancouver, British Columbia, on October 9-12, 2002 with more than 600 attendees. Of particular interest was the large number of students who attended—366, of which 160 received scholarships. The Grace Hopper Conference was truly an international conference with women attending from Bangladesh, Ghana, Holland, Japan, Kenya, Mexico, Nigeria, Norway, Pakistan, South Africa, Sweden, Uganda, United Kingdom, and Zimbabwe, as well as the United States and Canada.

The Senior Women's Summit was held at the same hotel a day prior to the Hopper Conference, and was attended by more than 60 senior women from industry, academia, and government. The theme was "Women Leading Technology in a Time of Change," which was exemplified in four breakout sessions on policy, ethics, education, and leadership. The results of the Summit were presented at the Grace Hopper Conference and can be found at www.iwt.org.

The Conference kicked off with a reception on Wednesday, October 9, 2002, hosted by IBM's Women in Technology Programs in honor of Dr. Fran Allen's significant contributions to the field of computing. The Conference opened on Thursday with a keynote talk, "The Future of the Internet," by Ms. Judy Estrin, CEO of Packet Design and former CTO of Cisco. Estrin began by describing her journey of co-founding three technology companies with her husband, Bill Carrico, or, as she described it, "building houses without ceilings." This was followed by a presentation about the future of Internet Technology, focusing on what is needed with the Internet Protocol to make it easier to use and manage as well as more secure. Estrin concluded by focusing on how women can uniquely take advantage of the Internet's ubiquity.

The remainder of the day offered very interesting parallel sessions that included panels, invited technical presentations, technical papers, and technology innovation forums. The topics of the Thursday sessions included a panel on "Recruiting and Retaining Women," technical papers

on "Ad Hoc Networks," and a panel on "Career Transitions and Choices." The program also included three invited technical talks—"Living and Working with Ubiquitous Computing: Technical and Societal Challenges" by Dr. Jean Scholtz of NIST, "Simultaneous Multithreaded Processors" by Dr. Susan Eggers of the University of Washington, and "Compiler Technology: Trends and Challenges" by Dr. Mary Lou Soffa, University of Pittsburgh.

Thursday featured the Mentor Match program, a volunteer-based program that grouped senior women with young professionals and graduate students. During luncheon, mentees were grouped with mentors at reserved tables to get to know each other and to identify other times during the conference to network. More than 20 mentors and 150 mentees signed up for this program. For the first time the conference also included poster presentations, which provided an opportunity for researchers to present their latest research results.

Thursday evening's banquet began with the presentation of the conference's first Young Investigator awards. Designed to reward and recognize emerging stars in computing, the recipient of Best Technical Paper Award was Z. Morley Mao, University of California at Berkeley, for her paper entitled "Framework for Universal Service Access Using Device Ensemble"; the recipient of the Best Technical Poster Award was Kathleen McCandless, Lawrence Livermore National Laboratory, for her poster entitled "Taming Kull the Conqueror: Innovative CS Development in a 3D, Parallel Multi-Physics Application."

At the conference banquet, Dr. Francine Berman, Director of the San Diego Supercomputer Center (SDSC) and Director of the National Partnership for Advanced Computational Infrastructure (NPACI), gave a very "tasteful" keynote talk, "A Tale of Two Positions: Transitioning Through the Glass Ceiling." In particular, Berman discussed her experiences and lessons learned transitioning from the full-time teaching and research activities of a senior-level computer science professor to the more "CEO-like" position of director of SDSC and NPACI. Berman used a banquet format for her presentation, serving up her sequence of experiences as an "appetizer," followed by the "main course," and wrapping up with "dessert."

The second day of the conference, Friday, opened with a very informative keynote talk by Dr. Leah Jamieson, Ransburg Professor of Electrical and Computer Engineering at Purdue University, on "Engineering, Community, Passion, and Balance." Jamieson presented the Engineering Projects in Community Service (EPICS) program, which was truly inspiring. The EPICS program

was created to fulfill the complementary needs of undergraduates desiring real-world skills and community organizations that increasingly rely on technology, but often lack the expertise and budget. As Jamieson described the program, snapshots of the different EPICS project were continuously being displayed on the side, providing true passion to her spoken words.

Again, the conference included very interesting parallel sessions following the keynote talk, such as technical papers on "Networks, Protocols and Proxies," a talk on the "CRA Grand Research Challenges Conference on Systems: A Status Report," and a technology innovation forum on "Bridging the Digital Divide: Ubiquity Without Boundaries and Borders." The invited technical talks included "An Open Web Services Architecture" by Stans Kleijnen of Sun Microsystems, Inc.; "Common Security Exposures" by Dr. Dorren Galli, author and former IBM executive; and "Machine Learning Meets the Real World: Successes and New Research Directions" by Dr. Andrea Danyluk of Williams College. The conference also included a short papers session that featured two papers from developing countries, Bangladesh and Kenya, on the state of computer technology in those countries. The second evening was open for attendees to enjoy the Vancouver area.

On the last day of the conference, there were two keynote panels organized by Katherine Tobin, Senior Research Director at Catalyst. Tobin started the panel with a presentation outlining the results from various Catalyst roundtable sessions about what it takes to become a leader in the high-technology fields. This presentation was followed by the first panel on "Leadership Careers in High Tech: What It Takes To Be Successful." The panelists included Kathleen Holmgren, Senior Vice President of Network Storage Marketing at Sun Microsystems; Jill Huchital, Director of Engineering, TiVo, Inc.; and Rebecca Norlander, Group Program Manager, Microsoft, Inc. All three panelists discussed very important issues, including time management and gaining the needed knowledge for a position.

The second panel focused on "What Women Bring to the Table in the 21st Century"; the panelists included Margaret Asihida, Director of University Relations at IBM; Naseen Bhatti, Director of the Computer Training Center in Islamabad, Pakistan; and Carol Muller, CEO and President of MentorNet. This panel focused on the unique perspectives that women bring to technology. The two panels resulted in attendees leaving the conference feeling truly inspired to change the world of technology and the way technology impacts the world!

Grace Hopper Celebration
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Outstanding Undergraduate Award Winners Announced

The Computing Research Association honors the recipients of the CRA Outstanding Undergraduate Awards competition for 2003, sponsored this year by Microsoft Research.

Omar Khan, Cornell University, received the Outstanding Male Undergraduate award. **Bistra Dilkina** from Simon Fraser University received the Outstanding Female Undergraduate award. **Noah Snavely**, University of Arizona, was named Runner-Up for the male award. **Julia Thornton**, Kansas State University, was the Runner-Up for the female award.

About the Winners

Omar Khan is in his fourth year at Cornell University. He will receive his Bachelor's degree in Computer Science in May 2003.

Omar has done significant research in data analysis techniques. He has addressed a wide variety of problems at both the theoretical and implementation levels. Omar's work involves attempting to cluster all documents in the NEC CiteSeer collection and determining how the clustering changes with time. Omar posed fundamental questions about the nature of structures found by clustering algorithms. He contributed to the development and implementation of a sophisticated clustering technique that he then validated using several independent methods. His range of skills includes theoretical analysis, careful experimentation, and explanation of results. Additionally, he obtained research results in stochastic search and in sensor fusion. Omar and his advisors are now writing papers that will disseminate his work.

Omar ranked first in his class of nearly 700 students at Cornell in his freshman and sophomore years. He has been a teaching assistant and a course consultant at Cornell. He has also been a research assistant at Cornell, a summer research intern at McGill University, a summer research intern at Xerox PARC, and a student researcher and project leader at the Cornell Theory Center. Omar has won national recognition in mock trial competitions. At Cornell University, he was awarded the 2002-03 Frank and Rosa Rhodes Scholarship and has been named to the Dean's List in every semester of his undergraduate studies. He has participated in a variety of outreach activities with the Cornell Theory Center.

Bistra Dilkina is a senior at Simon Fraser University, and will receive a Bachelor's degree in Computer Science in spring 2003.

Bistra's research is in artificial intelligence. She has been developing a constraint programming system for solving difficult scheduling

problems. In addition to her conceptual contributions, Bistra is the project's lead programmer. A spin-off company incorporating some of her research results has been formed by Simon Fraser University. The research is being published at the Third International Workshop on Constraint Programming and Belief Revision in Sydney, Australia.

Bistra was awarded a research assistantship in Simon Fraser University's Intelligent Systems Lab. She has won numerous scholarships and awards, including the International Shrum Scholarship. Bistra is representing her university in the ACM Programming Competition, and helped to prepare training materials for her team. Her extensive record of public service includes work for the St. James Community Service Society, which provides help and shelter to people with mental illness.

Noah Snavely (Runner-Up) is a senior at the University of Arizona. He will receive a Bachelor's degree in Computer Science and Mathematics in spring 2003.

Noah is interested in compiler optimization. His work has focused on post-linktime optimization for explicitly parallel instruction computing (EPIC) architectures. He single-handedly ported optimizing software to work on the Intel/HP Itanium architecture in record time, creating the Itanium Link-Time Optimizer. Over the last year, his work has focused on improving the efficiency of the optimized code. He developed a novel approach in which predication can be postponed to late in the compilation process. He has also developed new algorithms for analyzing predicated code and has evaluated their efficiency. He is the lead author of a paper submitted to the ACM/IEEE International Symposium on Code Generation and Optimization.

Noah has been an undergraduate research assistant in both the Department of Mathematics and the Department of Computer Science at the University of Arizona. He maintains a 4.00 grade point average, and was awarded the Helen and John Murphey Foundation Scholarship. He is an avid composer and performer of music. He regularly participated in the Tucson Symphony Orchestra's Young Composers Project, played the bagpipes at the 2002 World Pipe Band Competition in Glasgow, and performed on the bassoon at Carnegie Hall.



Julie Thornton (Runner-Up) is a senior at Kansas State University. She will receive Bachelor's degrees in Computer Science and in Mathematics in May 2003.

Julie has contributed to multiple fields in computer science. She has developed and implemented, and has worked on performance evaluation for, sampling algorithms for Bayesian networks. She has worked on computer-aided instruction, creating a critiquing module for a tutoring system for college algebra. And she is currently helping geology faculty by working on using the Fourier transform to rescale digital images to lower resolutions. In her work on designing and implementing sampling-based approximation algorithms for Bayesian networks, she implemented a system, augmented the system with a new adaptive importance sampling design, and instrumented a full suite of experimental tools. She has co-authored two AAAI 2002 student posters, a paper at the 2002 Genetic Evolutionary Computation Conference, and a journal article in preparation.

Julie has served as a lab instructor at Kansas State, teaching classes and training instructors in college algebra, intermediate algebra, and general chemistry. She was awarded research assistantships in both the Department of Mathematics and the Department of Computer Science at Kansas State. Julie co-advised two graduate-student project groups. She has received numerous academic honors and scholarships, including a 2002-03 CRA Collaborative Research Experiences for Women (CREW) award. She has volunteered to help children in a number of programs.

Finalists, Female Award

Erin Earl, University of Washington
Kylie Evans, Harvey Mudd College
Kristen Stubbs, University of Minnesota, Twin Cities

Finalists, Male Award

Chand John, University of Texas at Austin
Colin McMillen, University of Minnesota, Twin Cities
Alexander Sherstov, Hope College
Yuli Ye, University of Waterloo

This year's selection committee included David Novick, University of Texas at El Paso (Chair); Ran Libeskind-Hadas, Harvey Mudd College; and Frank Tompa, University of Waterloo. ■

Honorable Mention (Male)

Colin Bleckner, University of Washington
Christopher Cabanne, University of California, Irvine
Jason Calhoun, James Madison University
Andrew Catton, University of British Columbia
Ryan Caudy, Johns Hopkins University
Ping Chen, University of California, Irvine
Leonard Chung, University of California, Berkeley
Wesley Coelho, University of British Columbia
Daniel Conti, College of the Holy Cross
Michael DeRosa, Dartmouth College
Mark Dredze, Northwestern University
Chris Feng, University of Toronto
Thomas Finley, Duke University
Brett Flegg, University of Waterloo
Meena George, Columbia University
Robert Goretzky, University of Delaware
Ronen Gradwohl, University of California, Berkeley
Benjamin Hosp, Roanoke College
Wojciech Jarosz, University of Illinois, Urbana-Champaign
Sean Jellish, University of Virginia
Adam Kirsch, Brown University
Samson Kwong, University of Washington
Joseph Lammersfeld, University of Notre Dame
Florent Launay, Florida Institute of Technology
Marius Leordeanu, Hunter College
Phillipe Loher, North Carolina State University
Jonathan McCune, University of Virginia
Mahdi Mekic, Lamar University
Edward Miller, Harvey Mudd College
Anton Morozov, Hunter College
Blaine Nelson, University of South Carolina, Columbia
Jonathan Nilsson, University of Maryland, Baltimore Co.
Vijay Reddi, Santa Clara University
Albert Robinson, University of Rochester
Michael Rosulek, Iowa State University
Samir Sapra, Carnegie Mellon University
Jonathan Schmid, University of Rochester
Ben Sigelman, Brown University
Jerry Sun, University of Texas, Austin
Richard Tichy, University of Western Ontario
GilmanTolle, Carnegie Mellon University
Adam White, University of New Brunswick, Saint John
Jerome White, Rensselaer Polytechnic University
Benjamin Wyser, Mississippi State University
David Xiao, Harvard University
Joseph Zadeh, Northwestern University

Honorable Mention (Female)

Karen Brennan, University of British Columbia
Stacy Crochet, University of Louisiana, Lafayette
Breanne Duncan, University of New Mexico
Julie Farago, Harvard University
Kimberly Ferguson, University of California, Irvine
Erica Findley, Mississippi State
Leticia Fuentes, University of Texas, El Paso
Archana Ganapathi, University of California, Berkeley
Emily Gibson, College of New Jersey
Rachel Gockley, Carnegie Mellon University
Kristina Holst, Columbia University
Youngji Kim, University of Washington
Tiziana Ligorio, Hunter College
Mahshid Madani, University of New Brunswick, Saint John
Mi Peng, University of Virginia
Hannah Rohde, Brown University
Rachel Smith, University of Texas, El Paso
Mira Stoilova, Harvey Mudd College
Victoria Sweetser, University of Rochester
Lisa Torrey, Dartmouth College
Boriska Toth, Carnegie Mellon University
Jenine Turner, University of Rochester
Lauren Wye, University of Virginia

2001-2002 Taulbee Survey

2001-2002 Preliminary Taulbee Data on Faculty Salaries

By Moshe Y. Vardi, Timothy Finin, and Thomas Henderson

Each September the Computing Research Association surveys academic departments in the United States and Canada that offer the Ph.D. in computer science or computer engineering. The annual CRA Taulbee Survey collects data on the enrollment in the undergraduate, master's, and Ph.D. computing programs; the employment of Ph.D. graduates of these programs; and the number and salaries of faculty in these programs.

This is the 32nd year that CRA has tracked the production and employment of Ph.D.s in the computer science field. For the past 16 years, computer engineering data have also been incorporated into the survey. The traditionally high response rate to the survey makes the data especially useful; the data are used widely, not only by CRA's members but also by other organizations and institutions.

Each January, as a service to our members, CRA publishes a preliminary report of the survey's faculty salary data. We believe these preliminary results comprise enough data to be valuable and valid as tools for planning for the spring faculty-recruiting season. The full survey results—including updated salary data; enrollment, production, and employment data; and trend analyses—will appear in the March 2003 issue of *CRN*.

Tables 1 through 9 show the results in a format comparable to that used in previous CRA surveys. We have included the data for computer engineering departments (Table 6), although the low return rate (8 responses of 29) reduces their reliability. In the tables that group the departments by rank, the groupings are based on the 1993 National Research Council ranking of research-doctorate programs in the United States, released in 1995 (<http://cra.org/statistics/nrcstudy2/>).

Each department was asked to report the minimum, median, mean, and maximum salaries for each rank (full, associate, and assistant professors and non-tenure-track teaching faculty) and the number of persons at each rank. The salaries are those in effect on January 1, 2003. For U.S. departments, nine-month salaries are reported in U.S. dollars. For Canadian departments, twelve-month salaries are reported in Canadian dollars. Respondents were asked to include salary supplements such as salary monies from endowed positions.

The minimum and maximum of the reported salary minima (and maxima) are self-explanatory. The range of salaries in a given rank among departments that reported data for that rank is the interval ["minimum of the minima," "maximum of the maxima"]. The mean of the reported

salary minima (maxima) in a given rank is computed by summing the departmental reported minimum (maximum) and dividing by the number of departments reporting data at that rank. The median salary at each rank is the middle of the list if you order its members from lowest to highest, or the average of the middle two numbers if there is an even number of items in the set. The average salary at each rank is computed by summing the individual means reported at each rank and dividing by the number of departments reporting at that rank.

For comparison with last year's data, Table 9 shows, separately, the overall average computer science salaries for U.S. departments and for Canadian departments. The preliminary data from 2001 are those published in the January 2002 *CRN*, and the final data from 2001 are those published in the March 2002 *CRN*.

When compared with the final 2000-2001 data, the U.S. preliminary average salaries have increased by:

- 0.0 percent (6.8 last year) for non-tenure-track teaching faculty;
- 3.4 percent (5.9 last year) for assistant professors;
- 3.0 percent (5.3 last year) for associate professors; and
- 3.6 percent (5.7 last year) for full professors.

Canadian preliminary average salaries have increased/decreased by:

- -3.0 percent (20 percent* last year) for non-tenure-track teaching faculty;
- 2.7 percent (7.4 last year) for assistant professors;
- 2.8 percent (5.1 last year) for associate professors; and
- 4.3 percent (6.1 last year) for full professors.

[*The large (20 percent) increase reported last year for non-tenure-track teaching faculty in Canada is due in part to one relatively high salary reported. If that figure is excluded from the calculation, the increase was still substantial at 13 percent.]

Tables 2, 3, and 4 report the data for the same set of schools reporting last year. In the group of U.S. computer science departments ranked 1 through 36, the average salaries for tenure-track faculty increases ranged from a low of 1.3 percent (for associate professors in departments ranked 13-24 and for full professors in those ranked 25-36) to a high of 5.7 percent (for associate professors in those ranked 25-36). The average increase was 3.4 percent.

The Taulbee Survey Committee members include Moshe Y. Vardi (Rice University), Chair; Timothy Finin (UMBC); and Thomas Henderson (University of Utah). ■

Table 1. Nine-month Salaries, 139 Responses of 170 US CS Computer Science Departments

Faculty Rank	Number of Faculty	Reported Salary Minimum			Mean of all Salaries	Median of all Salaries	Reported Salary Maximum		
		Minimum	Mean	Maximum			Minimum	Mean	Maximum
Non-Tenure Teaching Faculty	598	\$20,000	\$47,229	\$81,840	\$55,465	\$54,624	\$30,000	\$65,050	\$132,400
Assistant Professor	921	\$25,000	\$70,607	\$90,500	\$75,153	\$75,193	\$61,308	\$79,459	\$120,000
Associate Professor	887	\$53,772	\$75,595	\$110,000	\$83,677	\$83,500	\$63,648	\$92,733	\$175,000
Full Professor	1,297	\$39,873	\$86,810	\$146,000	\$109,203	\$105,423	\$80,760	\$142,954	\$280,786

Table 2. Nine-month Salaries, 11 Responses of 12 US Computer Science Departments Ranked 1-12

Faculty Rank	Number of Faculty	Reported Salary Minimum			Mean of all Salaries	Median of all Salaries	Reported Salary Maximum		
		Minimum	Mean	Maximum			Minimum	Mean	Maximum
Non-Tenure Teaching Faculty	75	\$37,296	\$53,956	\$76,136	\$71,672	\$71,719	\$66,150	\$88,114	\$110,000
Assistant Professor	118	\$50,000	\$74,711	\$82,000	\$80,891	\$81,357	\$83,200	\$86,483	\$96,000
Associate Professor	86	\$62,995	\$84,148	\$103,000	\$91,412	\$90,847	\$79,300	\$97,949	\$120,000
Full Professor	218	\$51,600	\$88,632	\$109,800	\$122,732	\$116,825	\$139,518	\$168,860	\$198,646

Table 3. Nine-month Salaries, 12 Responses of 12 US Computer Science Departments Ranked 13-24

Faculty Rank	Number of Faculty	Reported Salary Minimum			Mean of all Salaries	Median of all Salaries	Reported Salary Maximum		
		Minimum	Mean	Maximum			Minimum	Mean	Maximum
Non-Tenure Teaching Faculty	56	\$46,542	\$60,096	\$81,840	\$69,208	\$66,993	\$62,200	\$80,631	\$100,000
Assistant Professor	94	\$74,000	\$78,070	\$82,000	\$83,673	\$82,239	\$82,500	\$90,538	\$117,000
Associate Professor	64	\$67,915	\$85,663	\$97,520	\$92,985	\$92,069	\$85,900	\$98,827	\$127,000
Full Professor	200	\$76,596	\$94,322	\$111,300	\$127,845	\$121,462	\$153,422	\$185,306	\$280,786

Table 4. Nine-month Salaries, 12 Responses of 12 US Computer Science Departments Ranked 25-36

Faculty Rank	Number of Faculty	Reported Salary Minimum			Mean of all Salaries	Median of all Salaries	Reported Salary Maximum		
		Minimum	Mean	Maximum			Minimum	Mean	Maximum
Non-Tenure Teaching Faculty	54	\$39,634	\$53,998	\$75,408	\$63,655	\$61,595	\$59,223	\$79,911	\$132,400
Assistant Professor	99	\$46,800	\$71,228	\$80,000	\$77,462	\$77,485	\$73,380	\$82,390	\$88,134
Associate Professor	96	\$63,907	\$78,592	\$92,277	\$89,260	\$89,502	\$87,100	\$99,251	\$120,000
Full Professor	141	\$68,199	\$89,345	\$109,000	\$115,646	\$114,154	\$110,650	\$160,350	\$195,550

Table 5. Nine-month Salaries, 104 Responses of 134 US Computer Science Departments Ranked Higher than 36 or Unranked

Faculty Rank	Number of Faculty	Reported Salary Minimum			Mean of all Salaries	Median of all Salaries	Reported Salary Maximum		
		Minimum	Mean	Maximum			Minimum	Mean	Maximum
Non-Tenure Teaching Faculty	414	\$20,000	\$44,363	\$81,500	\$51,407	\$50,773	\$30,000	\$59,323	\$109,000
Assistant Professor	610	\$48,269	\$69,501	\$90,500	\$73,332	\$73,496	\$61,308	\$77,145	\$120,000
Associate Professor	641	\$53,772	\$73,330	\$110,000	\$81,284	\$80,782	\$63,648	\$90,831	\$175,000
Full Professor	738	\$39,873	\$85,530	\$146,000	\$104,878	\$101,359	\$80,760	\$133,319	\$275,000

Table 6. Nine-month Salaries, 8 Responses of 29 US Computer Engineering Departments

Faculty Rank	Number of Faculty	Reported Salary Minimum			Mean of all Salaries	Median of all Salaries	Reported Salary Maximum		
		Minimum	Mean	Maximum			Minimum	Mean	Maximum
Non-Tenure Teaching Faculty	17	\$44,112	\$59,798	\$89,611	\$66,766	\$66,425	\$54,468	\$73,027	\$89,611
Assistant Professor	57	\$55,000	\$70,110	\$80,020	\$75,165	\$73,805	\$70,002	\$79,455	\$94,500
Associate Professor	39	\$69,000	\$77,036	\$87,000	\$84,283	\$81,446	\$69,786	\$91,021	\$110,000
Full Professor	87	\$76,398	\$87,501	\$95,000	\$114,659	\$102,720	\$80,220	\$148,338	\$200,000

Table 7. Twelve-month Salaries, 18 Responses of 27 Canadian Computer Science Departments (Canadian Dollars)

Faculty Rank	Number of Faculty	Reported Salary Minimum			Mean of all Salaries	Median of all Salaries	Reported Salary Maximum		
		Minimum	Mean	Maximum			Minimum	Mean	Maximum
Non-Tenure Teaching Faculty	60	\$38,411	\$56,228	\$94,000	\$61,914	\$60,929	\$47,283	\$69,765	\$100,000
Assistant Professor	186	\$43,582	\$69,575	\$95,000	\$77,276	\$76,817	\$59,568	\$85,859	\$127,000
Associate Professor	155	\$62,298	\$80,856	\$111,000	\$89,520	\$88,875	\$62,947	\$98,893	\$135,000
Full Professor	234	\$71,853	\$92,669	\$109,000	\$109,389	\$108,225	\$94,000	\$132,544	\$188,133

Table 8. Nine-month Salaries for New PhDs, Responding US CS and CE Departments

Faculty Rank	Number of Faculty	Reported Salary Minimum			Mean of all Salaries	Median of all Salaries	Reported Salary Maximum		
		Minimum	Mean	Maximum			Minimum	Mean	Maximum
Tenure-track	122	\$60,000	\$75,701	\$98,800	\$76,306	\$76,149	\$60,000	\$76,797	\$98,800
Researcher	5	\$42,000	\$61,750	\$72,000	\$63,250	\$63,250	\$42,000	\$64,750	\$75,000
Non-Tenure Teaching Faculty	10	\$36,000	\$53,475	\$70,772	\$53,475	\$53,475	\$36,000	\$53,475	\$70,772
Postdoc	34	\$26,000	\$47,942	\$60,000	\$51,129	\$51,694	\$40,512	\$53,361	\$65,000

Table 9. Average Salary Comparison with 2001 Survey

	US CS Departments			Canadian CS Departments		
	Preliminary 2001	Final 2001	Preliminary 2002	Preliminary 2001	Final 2001	Preliminary 2002
No. Reporting/Surveyed	128 / 166	141 / 164	139 / 170	19 / 23	23 / 23	18 / 27
Non-Tenure Teaching	\$56,368	\$55,450	\$55,465	\$62,874	\$63,780	\$61,914
Assistant	\$73,367	\$72,691	\$75,153	\$73,898	\$75,208	\$77,276
Associate	\$81,645	\$81,050	\$83,677	\$85,560	\$87,107	\$89,520
Full	\$105,496	\$105,396	\$109,203	\$102,783	\$104,845	\$109,389

Shooting Inward

By Rick Adrion and Steve Mahaney, NSF

“We must avoid our well-ingrained tendency to circle the wagons and shoot inward” (Ed Lazowska, Computing Research Association Conference at Snowbird, July 1998).

Does Ed Lazowska’s comment apply to the CISE review process? Yes!

Although our recent observation of CISE panels and mail reviews indicates that CISE reviewers are being more consistent and supportive than in years past, CISE reviewers, on the average, give lower ratings than reviewers in other disciplines. This could be deserved, but that suggests that the quality of research in CISE areas is lower and we do not believe that to be true. This short article looks at how such lower ratings are perceived in NSF’s processes and makes some suggestions for reviewers.

In the NSF’s Mathematical and Physical Sciences Directorate (MPS) for example, which supports mathematics, physics, chemistry, astronomy, and materials sciences, the average rating for awards over the past three fiscal years was close to 4.5/5 (where “poor” =1, “fair” =2, and so on up to “excellent” =5). In CISE, the average rating for awards was around 3.9/5. More telling are the averages for declined proposals. In MPS, it was 3.5/5; in CISE, it was 2.8/5. These differences in averages have held up over several years now; CISE is consistently the lowest in self-rating among NSF’s supported fields.

Does that mean that the average awarded project in CISE is merely “very good” and perhaps comparable to declined proposals in MPS? Does it imply that CISE is funding mundane projects, while MPS must decline much higher quality proposals? Figures 1 and 2 show the distribution of reviews for awards and declines in CISE and MPS.

For awards, the MPS data skew heavily towards VG-E, while the CISE data is more of a normal distribution around VG. For declines, both sets are fairly normally distributed; MPS around VG and CISE around G. These data imply that MPS awards are clearly distinguished from the declines, but that the declines include a number of high-quality proposals. In the CISE data, awards and declines have similar distributions, with awards of higher (but not excellent) quality.

MPS and CISE proposals average around 4 reviews, with awards typically receiving more reviews than declines. These data imply that the average MPS award has 2 to 3 “excellent” and 1 to 2 “very goods,” while the average CISE award has 1 “excellent,” 2 “very goods,” and 1 “good.” The comparison is not flattering to CISE proposals.

Since the funding rate in CISE is dropping as the proposal pressure increases faster than the CISE budget, one might expect that the perceived quality of declined awards would be increasing. Overall, the CISE funding rate has dropped from above the NSF average (around 30%) to a level closer to 25 percent. The 2001 and 2002 data for declines

are remarkably similar, showing only an increase in the number of reviews per proposal, not a significant change in the distribution.

It may be useful to consider how these reviews have an impact at the NSF. The most obvious is the impact on how resources are allocated. In cross-disciplinary competitions (such as ITR, centers programs, graduate traineeship programs), proposals are examined as a pool at one or more stages, not just in individual disciplinary processes. In a setting where quality is the primary criterion, a group that has a lower average score is likely to receive a smaller share of funded proposals.

A second resource allocation process that can be affected is the allocation of new funds among directorates. An organization such as MPS that must turn away highly rated proposals is in a stronger position to argue for resources than one that is perceived to have resources going to weaker proposals. These allocation issues are not unique to the NSF; they are the same processes that influence admissions or allocation of faculty lines at universities.

A third impact is less directly connected to resources, but may have a longer impact: the reputation of CISE research among the NSF-supported fields of science and engineering suffers.

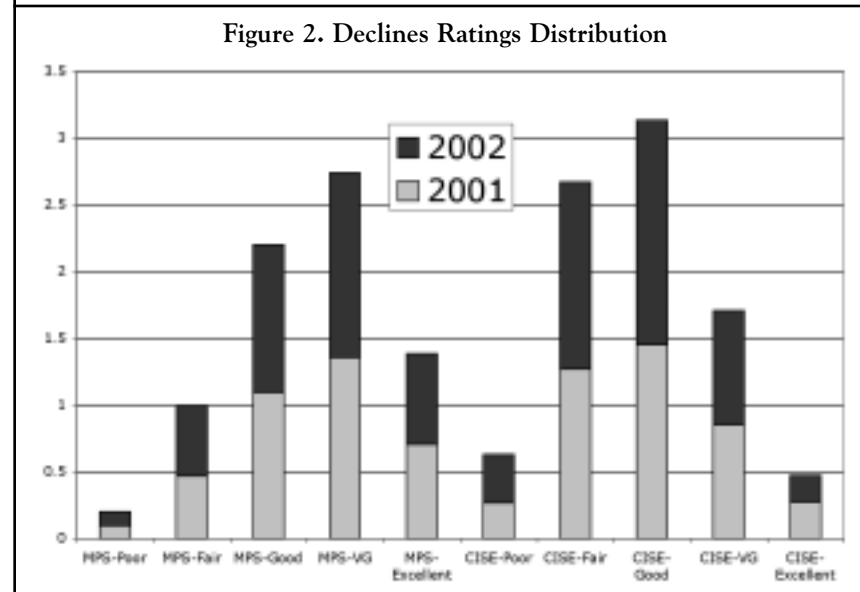
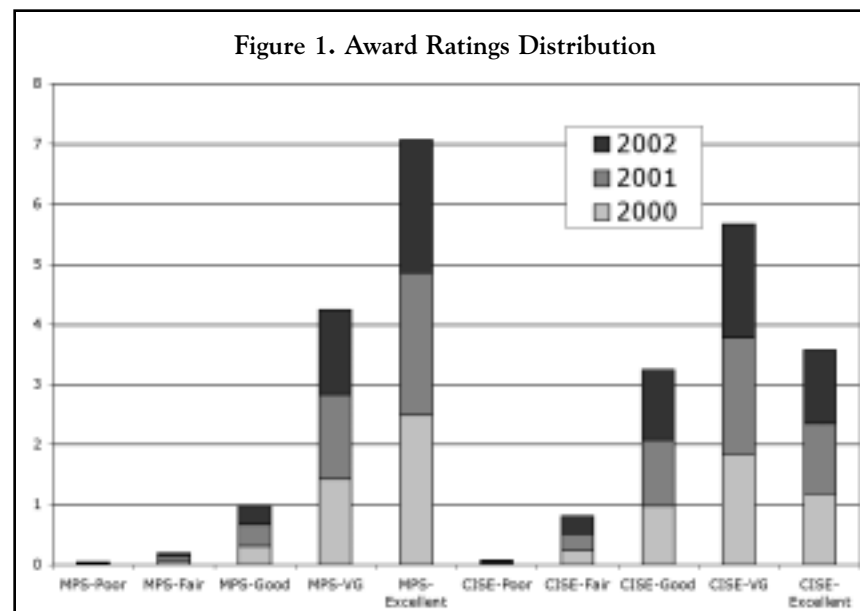
It would help if CISE reviewers came to a clear consensus on the best proposals.

We are looking at the panel process to find and adapt techniques from other review processes (conferences, journals) to achieve consensus in advance of the panel meeting. We believe that many more proposals deserve consideration than we can fund, but it is hard to make this argument based on these data for declined proposals.

These data and other observations lead to some deeper comments and suggestions about the review process—suggestions for both reviewers and for NSF practices. First, the review can have both assessment of the project and suggestions for improving the project. As a reviewer, you can rate a proposal within the context of the competition. If a proposal represents quality PIs, important research, and valuable impacts but has **flaws that can be fixed**, give it your support, indicate what needs to be addressed, and leave it to NSF and the PI to ensure that, if funded, these flaws are addressed. Even if declined, the PI will feel that her/his work is valued and can see the concerns as constructive recommendations for improvement.

We are trying to provide more analysis of the reviews to PIs. The increased proposal load has made it difficult for program managers to offer detailed guidance for improving proposals, but this is essential and we are giving extra attention to this issue.

In addition to the difference in summary rating (poor, fair, etc.), we believe there is a difference among disciplines in the approach to reviewing proposals. For example, consider the following exchange, overheard at



a Quantum Computing review panel: “How do you feel about proposal xxxxxx?”

“Has the potential to be a major breakthrough.”

“First-class PI and team.”

“Great track record.”

“High risk, but very high return.”

“Excellent.”

“Excellent.”

“Any concerns?”

“The apparatus probably won’t work.”

“[My] approach is more likely to succeed.”

“Highly speculative.”

“Overall rating?”

“Highly recommended.”

These reviewers were a mix of physicists, material scientists, and computer scientists. Note how the assessment of the PI, the potential impact, and the quality of the research is very high, even though the panelists have some concerns about apparatus, approach, and risk.

In CISE panels, one might expect the order of the comments to be reversed (“probably won’t work,” “too speculative,” etc.) and the conclusion to be quite different. The difference is in what is emphasized. This group gave weight to the potential outcome in reaching their ratings. The differences each reviewer might have with the PI’s approach were left as “concerns.” In our discipline, we often put approach first (“I wouldn’t do it that way, so it isn’t likely to be successful [interesting]”). We aren’t suggesting that impossible goals or poorly designed approaches deserve support.

However, in other disciplines, there is a belief that supporting a variety of research approaches is healthy and that “all boats rise on the incoming tide.” Other scientists and engineers can be conservative, shying from high-risk, non-traditional, or highly interdisciplinary research, but they are more supportive of their discipline and their colleagues.

Our experience with CISE panels may reflect the relative immaturity of the field as well as the breadth and natural interdisciplinary nature of CISE programs. It’s time that we stop “shooting inward” and start being more supportive.

Take a lesson from the QC panel: put your review comments in context. If you think a proposal should be funded, give it a strong rating and clearly state the scientific and other impact outcomes that you expect to see. If you have problems with some specifics of the approach or the lack of citations or other issues, but still think the work deserves support, then state these concerns clearly as **guidance to the PI**, not as major criticisms of the overall effort.

There may be other ways in which reviewers can do a better job of reviewing, while at the same time helping to form a more cohesive and supportive community. We hope that this brief discussion will stimulate you to think of some!

Rick Adrion is Senior Advisor and Steve Mahaney is Senior Advisor for Budget Management & Planning and Policy, both in the Office of the Assistant Director for CISE at NSF. ■

The Federal Budget Cycle—A Primer

By Peter Harsha

This is the second of a two-part series explaining the Federal budget process. Part 1 appeared in the November 2002 issue of CRN.

Part Two—The President Proposes, Congress Disposes

The President's role, and the role of his administration, in the annual budget process hits its apex each year on the first Monday in February with the release of the President's budget request, his plan for spending trillions of dollars in federal funding over the coming fiscal year (nearly \$2 trillion in FY 2003).

All over D.C.—on Capitol Hill and in the headquarters of nearly every federal agency—members of the administration fan out to brief congressional staffers, members of the press, and concerned outside groups like CRA on the President's proposal, presenting a unified, administration-approved view of its merits. (For more on how the President assembles his budget request, see "The Federal Budget Cycle—A Primer" in *CRN*, Volume 14, issue 5, November 2002.)

In the weeks that follow, great attention will be paid to programs the President requested be cut, or to initiatives the President requested be undertaken. The budget request is the primary document expressing the President's priorities for the coming year, so much effort is expended in analyzing it for its economic, and more importantly political, implications. But ultimately the budget is simply a suggestion—a request of Congress for a particular amount of funding or organization at all of the various federal agencies—to be heeded or ignored by Congress, based

on its reading of the political wind.

The President's budget serves as the starting point in a year-long process in Congress that will ultimately lead to appropriated funding for each federal agency. It is a process fraught with politics and gamesmanship. With 435 individual opinions in the House and 100 individual opinions in the Senate, crafting a final funding arrangement that satisfies the priorities of a majority (and the President) will take the better part of a year—in the case of FY 2003, more than a year—and require a bewildering amount of deal-making. Fortunately, Congress has established a formal procedural framework to aid in facilitating the budget process.

At the same time the President sends his overall budget request to Congress on that first Monday in February, each agency prepares its own "budget justification" for Congress, detailing work performed by the agency in the previous fiscal year, work it intends to do in the coming year, and an explanation of how that work meshes with the President's overall plan. These justifications are generally provided to the members of the congressional committees with oversight responsibility for each particular agency. The National Science Foundation (NSF) budget justification, for example, is provided in a nice, three-ring binder to members of the House Science Committee; the Senate Committee on Commerce, Science and Transportation; the Senate Committee on Health, Education, Labor and Pensions; and both House and Senate Appropriations Committees. In addition, NSF's Director will brief members and staff

of all of these committees, explaining the President's budget request and what her agency intends to do with the provided funding.

The Committees, in turn, will analyze the budget justifications and provide their own budget recommendations. These committee "Views and Estimates" are provided to the House and Senate Budget Committees and will form the basis of a Congressional Budget Resolution produced by the Budget committees. This resolution is usually prepared by the end of March or early April and is sent to the floors of their respective chambers shortly thereafter. The budget resolution establishes the overall funding levels for a series of budget function categories that define the different types of federal spending—such as "General Science, Space and Technology" or "National Defense"—not by agency. More importantly, the budget resolution forms the basis of the total amount allocated to appropriators to use in funding the 13 appropriations bills necessary to fund government operations each year.

Because the budget resolution is the first significant step Congress takes in the annual budget process, it is generally regarded as a bellwether for the sense of Congress in the coming year. In past years (as with FY 2003), support for an increase to the "General Science, Space and Technology" function has translated into increased funding for NSF at appropriations time. Similarly, the fact that the House and Senate Budget committees this year could not come to an agreement on a budget resolution does not bode well for easy passage of FY 2003 appropriations bills. This observation is borne

out in Congress's failure at this point to complete work on 11 of 13 appropriations bills for FY 2003, despite the fiscal year having begun on October 1, 2002. The lack of a budget resolution does not procedurally hinder Congress from continuing with the budget process; it does, however, make it a bit messier.

In addition to the Budget Committee, the House and Senate each have a number of authorizing committees and appropriating committees. The authorizing committees have the responsibility of overseeing particular agencies, setting policy where appropriate, and "authorizing" the appropriations committees to designate funding to those agencies up to an approved level. The House Science Committee, which has oversight responsibility for NSF, is an authorizing committee, for example. While authorizing committees like House Science might review NSF's operations on an annual basis, they tend to write bills granting funding authority to the appropriators for well beyond 12 months. In NSF's case, the House Science Committee authored, and Congress passed last month, NSF's most recent authorization through FY 2007, authorizing a doubling of the foundation's research budget over the course of five years. This authorization does not guarantee that the Appropriations Committees will fund NSF at that level each year—there might be competing priorities that affect the total funding level—but without the authorization, the appropriators are procedurally prohibited from increasing funding

Federal Budget Cycle
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NSF and Cyber Security Bills Pass as Congress Adjourns *Appropriations Still on Hold*

The 107th Congress adjourned in late November after a "lame duck" session that included passage of two bills authorizing increased funding for computing research. However work on Fiscal Year 2003 appropriations bills, including a bill that would increase research funding at the National Science Foundation by 15 percent in FY 2003, remained unfinished, postponed until the 108th Congress convenes in January.

Before adjourning, members of the House and Senate reached agreement on two authorization bills of interest to computing researchers. First passed was the "Cyber Security Research and Development Act," H.R. 3394, a bill authorizing \$900 million in research and fellowship opportunities in Cyber Security at NSF and the National Institute for Standards and Technology over five years. In his remarks at a press conference marking the bill's final passage, House Science Committee Chairman and

bill sponsor Rep. Sherwood Boehlert (R-NY) thanked the Computing Research Association for help in crafting the original legislation. CRA Board member Eugene Spafford testified before the Science Committee last October as the Committee was beginning the process of assembling the bill. At press time, the bill was awaiting the President's signature, but he is expected to sign it.

Members of the House and Senate also reached a last-minute agreement allowing for consideration and passage of a bill that authorizes the doubling of NSF's core research programs, including computing research, over the next five years. The "Investing in America's Future Act," H.R. 4664—also known as the "NSF Doubling Bill" in the Senate—introduced by Rep. Nick Smith (R-MI) and Rep. Eddie Bernice Johnson (D-TX), authorizes increases of 15 percent per year for five years to NSF's research accounts. Late

concerns expressed by the White House's Office of Management and Budget over the length of the authorization and the inclusion of the word "doubling" in the Senate version of the bill's title threatened to scuttle the bill. However, these concerns were allayed by reverting to the title the bill carried when it passed the House, and by making the last two years of funding authorizations contingent on a finding by Congress that NSF has made "successful progress toward meeting [specified] management goals" set out in the legislation. The bill is also expected to get the President's signature.

Both H.R. 3394 and H.R. 4664 are authorization bills, which means they provide congressional appropriators with the authority to fund the programs listed, but neither bill actually provides any funding to the agencies. Agency funding is contained in the 13 annual appropriations bills necessary to fund activities of the fed-

eral government each year. Congress postponed further work on FY 2003 appropriations until January after having finished only the appropriations for the Department of Defense and for military construction. It remains to be seen what will happen to the remaining 11 bills, including funding for agencies like NSF, NIST, and the National Institutes of Health when Congress reconvenes in January. The appropriations committees in both chambers have already approved large increases at NSF for FY 2003—an increase of 15 percent to NSF's research and related activities account—and that level is not expected to change when action finally occurs. However, the Commerce-State-Justice appropriations bill, which includes funding for NIST and NIH, had yet to be written at press time. Congressional staff indicate the Members intend to make quick work of appropriations in January. ■

Nominees Sought for CRA Board

The Computing Research Association seeks your help in suggesting nominations for its Board of Directors. The deadline for receipt of nominations is **January 17, 2003**.

Each spring CRA's member organizations elect about one-third of the association's board members to three-year terms. Candidates are not required to be affiliated with CRA member organizations. It is important that the CRA Board represents the interests of the entire computing research community, and it is CRA's policy to solicit a broad range of candidates. From the nominations received, the elections committee selects the candidates whose names will appear on the ballot.

In past elections there has often been a shortage of industry nominations. For that reason, the committee particularly encourages the nomination of candidates from the industrial sector.

The CRA board is a working board, and all members are expected to actively participate. Although CRA has a small professional staff, board members have detailed involvement in all major projects. Recent and current projects include:

- Planning the biennial CRA Conference at Snowbird.
- Conducting the annual CRA Taulbee Survey.
- Conducting other surveys (e.g., industrial lab salaries; departmental budgets, space, personnel).
- Developing workshops on critical policy issues for computing research.
- Planning academic and industrial careers and effective teaching workshops.
- Increasing the participation of women and minorities in computing research, with the help of National Science Foundation grants.

In addition to actively participating in board projects, board members are asked to attend two board meetings per year and pay their travel costs to the meetings.

Further information on CRA and its activities is available on the Web at <http://www.cra.org> or by e-mailing elections@cra.org.

Please contact the person you are nominating before submitting his or her name to ensure that the nominee is willing to stand for election to the board. Those who are nominated are required to write a brief (not to exceed 100 words) statement supporting their nominations.

To receive a nomination form, send an e-mail request to elections@cra.org. Nominations must reach CRA by **January 17, 2003**. ■

Transitions and Awards

Gregory R. Andrews, Professor of Computer Science at the University of Arizona, has been named Director of CISE's Division of Experimental and Integrative Activities (EIA) at the National Science Foundation, effective January 1, 2003.

Richard A. DeMillo has been named the John P. Imlay, Jr. Dean of the College of Computing at Georgia Tech. Dr. DeMillo, who received his Ph.D. in Information and Computer Science from Georgia Tech, had recently returned to Georgia Tech to head its Information Security Center. Previously he was Vice President and Chief Technology Officer at Hewlett-Packard.

Dorothy Denning is now Professor of Defense Analysis at the Naval Postgraduate School in Monterey, CA. She was formerly a Professor of Computer Science at Georgetown University.

Peter Denning, previously at George Mason University, has been appointed chair of the Department of Computer Science at the Naval Postgraduate School, effective November 18, 2002.

Congratulations to CRA board member, **Leah Jamieson**, the Ransburg Professor of Electrical and Computer Engineering at Purdue University, who has been named the 2002 Indiana Professor of the Year. The award was announced on November 21 by the Carnegie Foundation and the Council for Advancement and Support of Education, which administers the program. The award was presented for "extraordinary dedication to undergraduate teaching," as well as commitment to students and innovative teaching methods.

Alan Kay has joined Hewlett-Packard as a Senior Fellow in the HP Labs. He will research and develop new software platforms for devices and distributed applications, based on open source code. Kay, one of the founders of Xerox PARC, will continue his association with the Viewpoints Research Institute, a nonprofit organization in Glendale, Calif., that he helped found. ■

CRA Distributed Mentor Project

Deadline for Applications

February 14, 2003

<http://www.cra.org/Activities/craw/>

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bone (hand and wrist) atlas that will allow physicians to more accurately assess skeletal development in adolescents across various ethnicities. This resource, developed by Professor H.K. Huang of the Department of Radiology at the University of California, San Francisco, will enhance the diagnosis and management of a variety of metabolic and growth disorders and can also be used in planning for pediatric orthopedic procedures. This project also addresses health disparities among pediatric populations, an area of significant concern for the NIH.

Innovative, new bioengineering and computational imaging strategies that allow researchers to directly map changes in the brain corresponding to specific aspects of brain function have been developed by Professor James Duncan of the Department of Diagnostic Radiology at Yale University. Initial research has already focused on surgical procedures used to alleviate brain seizures in patients with epilepsy.

The inability to accurately predict the onset of labor and to differentiate between true and false labor has led to the development of a new device called SQUID, a superconducting quantum interference device array. Dr. Curtis Lowery, associate professor and director of maternal-fetal medicine at the University of Arkansas for Medical Sciences, examined the

feasibility of measuring and recording both spatial and temporal electrical activity of the uterus. Using this tool, along with data from three-dimensional ultrasound, Dr. Lowery was able to determine regions of localized activation, propagation velocity, and the direction and spread of uterine activity as a function of distance. Adoption of this innovative technique will allow physicians to more accurately assess labor progression, avoiding unnecessary hospital stays and medical treatment.

Future Concepts

For fiscal year 2003, the Institute has identified several focus areas for further program development such as operation of sensors *in vivo*, systems and methods for small animal imaging, telemedicine, imaging informatics, image-guided interventions, optical imaging, biomaterials/tissue engineering, cellular/molecular imaging, and career development and training. Two Requests for Applications (RFAs) issued recently that may be of interest are "Improvements in Imaging Methods and Technologies," which will support multidisciplinary investigations to improve and extend technologies for biomedical imaging, and "Telehealth Technologies Development," which will support research aimed at the design and development of technologies and instruments that

can be applied to a broad range of disorders or diseases.

Several other RFAs have also been released by the NIBIB and include "Systems and Methods for Small Animal Imaging," "Research and Development of Systems and Methods for Cellular and Molecular Imaging," "Operation of Sensors In Vivo," and "Image-Guided Interventions." Additional information on all of these RFAs is available at the NIBIB website at <http://www.nibib.nih.gov>.

Collaborations

Several collaborative organizations at NIH are administered by the NIBIB. The Bioengineering Consortium (BECON) is an NIH-wide consortium started in 1997 to promote and coordinate bioengineering research across the NIH and other Federal agencies. Members of the Consortium include representatives from the NIH institutes and centers, as well as other government agencies. In June 2002, BECON held a symposium on "Sensors for Biological Research and Medicine." The symposium provided a forum to showcase current advancements, provide advice, and identify future needs in biomedical sensor technology and applications. Planning for the BECON 2003 symposium is well underway. The symposium, scheduled for June 23-24, 2003, will focus on

"Catalyzing Team Science."

The NIH Inter-Institute Imaging Group was started two years ago to foster communication and cooperation in imaging-related issues across the NIH and other Federal agencies. The members meet regularly to share data on new developments in the field, upcoming workshops and meetings, and to ensure coordination of research efforts. In September 2002, the group held the "Third Inter-Institute Workshop on Diagnostic Optical Imaging and Spectroscopy: The Clinical Adventure." Topics discussed included probes and devices in molecular imaging, optical coherence tomography, breast imaging and spectroscopy, brain imaging and spectroscopy, and epithelial imaging and spectroscopy.

Also started two years ago, the NIH Biomaterials and Medical Implant Science (BMIS) Coordinating Committee ensures that communication and activities on issues related to implant materials and science are coordinated across NIH and other agencies of the Federal government. BMIS held an important workshop in September 2002 entitled "Medical Implant Information, Performance, and Policies Workshop." The goals of the workshop were to define the government's role in encouraging the use of

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explanted medical devices for research; to design a support structure for Federal programs to gather and disseminate information from medical implant retrieval; and to design a Federal program that encourages improved health care through research in implant retrieval.

Training

A key component of attracting young and talented researchers into the Institute's research and development activities is providing new training programs in the biomedical imaging and bioengineering fields, and helping researchers maintain high-level technical and clinical skills. The Institute has worked diligently over the past year to develop areas of opportunity in the training arena, and is particularly dedicated to ensuring a broader representation of women and minorities in the training and research pipelines.

A survey conducted in January 2002 identified weaknesses in the biomedical imaging, bioengineering, and NIH training programs. In response, the NIBIB conducted a "Workshop on Biomedical Imaging and Bioengineering Training" in August. The workshop proved successful for obtaining recommendations from the extramural and NIH training communities to be considered when developing future training programs.

The workshop recommendations include: developing training programs using NIH mechanisms that provide support, curriculum development, materials, methods development and assessment, and infrastructure; programs to support pre-undergraduate and undergraduate students, junior graduate student fellowships, and new faculty; training opportunities to address trans-disciplinary training and current academic environments; a one-year research training program for radiology residents and radiologists; support for multi-institutional and interdepartmental centers of training excellence; programs that interface clinical sciences, basic sciences, and industry; and support for short-term faculty and student training courses on high-tech and new instrumentation.

Summary

The NIBIB's challenge to provide new and collaborative ways to conduct and support research in the biomedical technologies area is paying huge dividends as evidenced by current science advances. Those dividends will continue to grow as the Institute looks to the future and identifies new areas of technology and discovery, innovative training programs that ensure a cadre of talented young researchers, and creative ways to collaborate both within and outside of NIH.

Donna J. Dean, Ph.D., is Deputy Director of the National Institute of Biomedical Imaging and Bioengineering (deand@nibib.nih.gov). ■

**Sun Microsystems Laboratories
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makes it possible to create multiple trust domains within any Supernet with ease. Supernets of any size can be created or disbanded with a few simple commands. Even individual participants can be added or removed without having to redo the whole setup—which fits nicely with the way most organizations work.

Ace in the Hole

Another of the pressure points we're addressing in the labs is a fundamental shift in software, from shrink-wrapped product to Net-based service. What that does to developers is radically alter the old ratio: It used to be one user, one machine, one software license. The new ratio is one instance of the application serving millions of users over the Net.

To help developers tackle that challenge, we're looking into new ways to create distributed application with a project called Ace. Ace is unique because it provides a natural way for developers to describe the "intent" of the application rather than manually writing the code that implements that intent.

Developers use it to create a high-level specification that provides enough information so that Ace can automatically generate the implementation code. In other words, Ace completely separates the implementation details of a distributed application from its specification.

The implications, for both developers and business executives, are huge:

Ace reduces the level of expertise required of application programmers. They no longer need to learn technologies such as the Java 2 Platform, CORBA, .Net, database APIs, application servers, Web servers, or Web page programming.

The Ace specification is so concise and straightforward that developers can complete applications ten times faster than with manual programming techniques.

Applications can be designed, prototyped, and modified "on the fly."

Management can easily understand and contribute to the application specification, ensuring that business goals and software capabilities are tightly aligned.

Beat the Clock

In the software example above, it is easy to see how underlying concepts tend to shift in technology, sometimes dramatically. Our thinking around hardware is shifting as well. In a radical departure from traditional microprocessor designs, in which a clock governs all activities, we've been experimenting with asynchronous designs.

The reason: today's individual logic transistors—the on-off switches that move data—can run as much as 20 times faster than the system clocks that regulate them.

Our proof-of-concept prototype, the FLEETzero chip, takes advantage of a sort of reversal of fortunes that has taken place over the years. Synchronous circuits take an operations-centric view that made sense in 1940s and '50s, when logic cost far more than communication. But now, with each circuit sporting many millions of transistors, the reverse is true. As the team noted in a recent paper: "The task of getting two numbers to an adder takes more chip area, consumes more energy, and takes longer than doing the addition."

Controlled by logic rather than a clock, the FLEETzero chip moves data faster than ever before—and reduces power consumption. (After all, it doesn't have a clock that keeps ticking whether needed or not.)

The Next Big Thing

What we hear consistently from customers is that system utilizations are poor, complexity and management costs are outrageous, and the 80/20 split in IT budgets (80 percent for service and support, 20 percent for hardware and software) is a source of real frustration.

That's where N1 comes in. Our most far-reaching project, N1 is a new architecture that treats the whole network as a single computer. N1 will provide the means to "virtualize" the elements of the network—the servers, the storage, even the cabling—so that it can all be managed more easily and cost effectively.

An open architecture, N1 is designed to create a single pool of resources that can be dynamically

allocated to meet the needs of a whole list of services. Yousef Khalidi, the principal architect behind N1, describes it this way: "Whenever demand for a service goes up or down, the N1 architecture adjusts to it automatically."

This ability to match resources to services on the fly is one of the most exciting aspects of the N1 architecture. It makes it feasible to take distributed applications from concept to wide-scale deployment with newfound speed: You just carve out the resources you need and light up the application. It should be no more difficult than running an application on a single computer today; it's just that, in this case, the network is the computer.

It's the People

From James Gosling to Whitfield Diffie, Ivan Sutherland to Guy Steele, Robert Sproull to all the other great minds, it's the people of Sun Labs—in California, Massachusetts, and France—that produce not just big ideas but big results.

I think Director Jim Mitchell said it best: "Our researchers generate great ideas and innovative technologies, but it doesn't stop there. To ensure effective transplant, our researchers accompany the technologies to the product divisions where they work to develop strong, competitive products."

That said, I should add that we don't believe in going it alone. We make it a point to collaborate with other researchers—in a wide range of industries, with major universities, with standards bodies, and on open-source projects—because innovation can happen anywhere, and frequently does.

We really have only seen a single percent, at best, of what the network revolution will be.

Greg Papadopoulos is Senior Vice President and Chief Technology Officer of Sun Microsystems, Inc. ■

**2003 Federated Computing Research
Conference**
June 7–14, 2003

San Diego, California

<http://www.acm.org/sigs/conferences/fcsrc/>
**NSF Announces
"Sensors and
Sensor Networks"
Solicitation**

The deadline for proposals is March 6, 2003.

This broad interdisciplinary program of research and education in the area of advanced sensor development will fund up to \$34.0M in research.

For complete information, see: <http://www.nsf.gov/pubs/2003/nsf03512/nsf03512.htm>

Grace Hopper Celebration from Page 2

The conference was enjoyed by all, as indicated by some of the comments from conference attendees given below:

"The plenary speakers were inspiring and informative. It was wonderful to hear from very successful women who were juggling the same issues as many in the audience."

"It was great! Lots of great talks and lots of great panels. I also participated in the mentor match, and I enjoyed talking to my mentor, but also to the other mentees."

"Not only did the conference provide much needed information for being successful in the male dominated world of computing, but it also allowed for widespread networking. I was able to befriend some wonderful people that will hopefully be the foundation of a great support system as well as life-long friends."

"Overall, I thought the conference was outstanding. It made me proud to be a woman in computer science. All the speakers were well spoken and highly knowledgeable."

Immediately following the Grace Hopper Conference, the attendees were invited to participate in a hands-on workshop organized by the Shodor Foundation on the topic of "Computational Science in the Undergraduate Classroom."

The sponsors of the Grace Hopper Conference include the National Science Foundation (honorary co-chair sponsor); Cisco Systems, Inc., Hewlett Packard

Corporation, IBM Women in Technology Programs, Dwight Look College of Engineering at Texas A & M University (gold sponsors); AT&T, Compaq Computer Corporation, Georgia Tech College of Computing, Google, Intel, Microsoft Corporation, National Center for Supercomputing Applications and National Computational Science Alliance, Sun Microsystems, University of Illinois at Urbana-Champaign, Usenix (silver sponsors); ACM Queue Magazine, American Association for Artificial Intelligence (AAAI), PMC-Sierra, Lawrence Livermore Laboratories (bronze sponsors); Northwestern University (contributor sponsor). The Conference was held in cooperation with the Association for Computing Machinery and the IEEE-CS. The Computing Research Association was the original sponsoring organization of the Grace Hopper Conference.

The keynote speakers were first-rate, the talks and panels were invigorating and thought-provoking, but most compelling was the chance for women to talk with 630 like-minded people, mostly women, whose passion is technology. The effect is abiding!

The next Grace Hopper Conference is scheduled for October 6-9, 2004 in Chicago.

Valerie Taylor, Chair of Computer Science at Texas A&M, was the General Chair of the Hopper Conference; Amy Pearl, Archer HQ, was Program Chair; and Telle Whitney, President of the Institute for Women and Technology, was Fundraising Chair. ■

Federal Budget Cycle from Page 7

beyond a level previously approved by the Science Committee.

At least, that is how the process is supposed to work. However, authorizing committees are notoriously bad at passing authorizing bills in a timely manner. Prior to this year's enactment of NSF's authorization bill, NSF had actually been operating without a specific authorization since FY 2000, yet the appropriators were still able to fund—indeed, increase funding—at the agency for FY 2001 and 2002. How? In NSF's case, it was a simple matter of looking to the NSF "Organic" act, the legislation that created NSF back in 1950. The original language provided a blanket authorization for the new foundation, essentially authorizing NSF to make use of whatever funds were provided to pursue research related to its mission. But even lacking such a clear-cut authorization, appropriators are able to fund programs and agencies they desire by employing a procedural maneuver that waives all "points of

order"—an objection to the bill on the grounds that it violates House or Senate rules—against an appropriations bill. But why would a majority of members agree to such a procedural maneuver?

The Appropriations committees have just one job: pass their bills. Each year, the Appropriations committees must pass all 13 of their appropriations bills by the start of the new fiscal year or the government must cease some (or all) of its operations. So, while other committees can let their legislation get bogged down in ideological disputes between parties and individual members, the appropriators must find ways of convincing a majority of the members in their chamber to vote affirmatively for their bill (and hopefully craft a bill that the President will still sign, otherwise it is back to square one).

The time-tested technique for insuring broad support of appropriations bills is to add provisions to the bills favorable to those you hope will

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CRA-W Career Mentoring Workshop at the ACM SIGSCE 2003 Symposium Reno, Nevada

Wednesday, February 19, 2003

<http://www.csis.gvsu.edu/sigcse2003/>

support it. More often than not, these provisions take the form of earmarks—special programs targeted at specific member districts funded at the request of Congress and not requested by the Administration in its budget. If a House member knows that the VA-HUD-Independent Agencies Appropriations bill contains a \$10 million federal infrastructure improvement project for his district, chances are he will support the bill for final passage, and will therefore support any procedural measure that insures it gets to the floor with his provision safely included. Appropriators receive literally thousands of requests from members for earmarks in their districts—some worthy, some dubious. A significant percentage will find their way into an appropriations bill, and that percentage increases every year.

In the end, appropriators hope to have crafted bills that a majority of both chambers find acceptable and

that the President is willing to sign. [At press time, this is a task that remains unfinished for FY 2003. Congress and the President have been unable to settle on an overall spending number for the year, leaving appropriations at a standstill. The Republican takeover of the Senate effectively removed the negotiating pressure for Republicans this Congress, so they are content to wait until the next Congress to hash out a final deal. In the interim, the federal government continues to operate under a "Continuing Resolution," as it has since October 1, 2002, keeping agencies running and funded at their FY 2002 levels.] Meanwhile, the Administration is busy putting the finishing touches on the President's budget for the next fiscal year, and come the first Monday in February, the whole process begins again. ■

Professional Opportunities

CRN Advertising Policy

See <http://www.cra.org/main/cra.jobshow.html>

Adelphi University

Math And Computer Science-Computer Science

Assistant Professor of Computer Science

Candidate must have completed a Ph.D. in Computer Science by beginning of appointment, and must have a record of, or demonstrated potential for, superior undergraduate teaching and research. All research specialties will be considered. Class sizes in computer science at Adelphi are small (typically under 30), and we encourage close interaction between faculty and students.

Send application, including curriculum vitae, copies of graduate transcripts and three letters of reference by February 1, 2003 to:

Dr. William L. Quirin, Chair
Department of Mathematics & Computer Science
Alumnae 109
Adelphi University
South Avenue
Garden City, NY 11530
No e-mail applications accepted.
Adelphi University is an Equal

Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.

Argonne National Laboratory

Argonne, Illinois
Undergraduate Program in Computational Science

Mathematics and Computer Science (MCS) Division

May 27-August 1, 2003

Focus: Research in numerical and non-numerical methods, parallel tools, scientific visualization, collaboration tools, distributed computing, computational science, and systems administration. See:

<http://www.mcs.anl.gov/stuops>

Contact:

Jan Griffin, MCS Division
Argonne National Laboratory
9700 S. Cass Ave.
Argonne, IL 60439
griffin@mcs.anl.gov
630-252-7271; fax 630-252-5676
Deadline: February 7, 2003.

Argonne National Laboratory

Argonne, Illinois
Summer Givens Associates Appointments
Mathematics and Computer Science (MCS) Division

Focus: for Ph.D. students at U.S. universities beginning careers in numerical analysis or computational mathematics.

See: <http://www.mcs.anl.gov/giv03>

Contact:

Jan Griffin, MCS Division
Argonne National Laboratory
9700 S. Cass Ave.
Argonne, IL 60439
griffin@mcs.anl.gov
630-252-7271; fax 630-252-5676
Deadline: February 10, 2003.

Arizona State University

Advance Ad
Chair of the Department of Computer Science & Engineering

Nominations and applications for the position of Chair of the Department of Computer Science and Engineering in the College of Engineering and Applied Sciences at Arizona State University are invited. The expected starting date is August 16, 2003.

The department has thirty-eight tenured and tenure-track faculty members and six full-time lecturers. The department offers two B.S. degree programs (Computer Science and Computer Systems Engineering), two master degree programs (Master of Science in Computer Science and Master of Computer Science) and a Ph.D. program. The current enrollment is 400 graduate students and 1500 undergraduate students.

Research strengths are in the areas of artificial intelligence, database and multimedia systems, computer-aided geometric design and graphics, computer networks and distributed systems, embedded systems and software engineering.

ASU is a major research university widely recognized as a rapidly emerging educational institution in the US. The main campus is located in the city of Tempe, in the metropolitan Phoenix area. The Department of Computer Science and Engineering provides a stimulating and fast-growing environment for research and teaching, with ample opportunities for partnerships with high-technology industry and emphasis on quality, leading-edge graduate and undergraduate education. For

more information about the department, refer to the website:

<http://cse.asu.edu>

The chair of the department must provide leadership in continuously improving the educational and research activities of the department, promote academic excellence and industry partnership as well as diversity and outreach programs. It is expected the chair will collaborate with other College and University units, the Dean, and other ASU administrators on computer and information science and engineering initiatives across campus.

Evidence of research/scholarly activity, teaching and service in computer science and engineering appropriate to the rank of tenured full professor and administrative experience are required qualifications. Evidence of scientific, academic and organizational leadership, educational innovation, administrative effectiveness and demonstrated effectiveness in establishing industry partnerships and outreach programs are desired. Initial close date is February 28, 2003; if not filled, biweekly thereafter until search closed. Application materials including cover letter, curriculum vitae and names and addresses of four references must be sent by regular post to:

Chair
CSE Chair Search Committee
Goldwater Center
206 Arizona State University
P.O. Box 875406
Tempe, AZ 85287-5406
ASU is an equal opportunity, affirmative action employer.

Auburn University

Department of Computer Science and Software Engineering

Assistant, Associate, and Full Professor

The Department of Computer Science and Software Engineering (CSSE) invites applications for multiple tenure-track faculty positions at the Assistant, Associate, or Full Professor level to begin Fall 2003. Salary will be commensurate with the candidate's qualifications.

Women and ethnic minorities are encouraged to apply. Responsibilities include research, graduate student supervision, and graduate and undergraduate teaching. In addition, successful applicants will be expected to participate in departmental, college, and university service activities.

Applicants should have a Ph.D. in computer science, software engineering, or a closely related field; however, applicants that are ABD may apply if they reasonably expect to complete the terminal degree prior to January 2004. The following are preferred research areas: simulation, computer and communication networks, wireless engineering, information assurance and security, real-time and embedded systems, operating systems,

human-computer interaction, database systems, programming languages, and software engineering; however, all areas of computer science and software engineering will be considered. The candidate selected for this position must be able to meet the eligibility requirements for work in the United States.

CSSE has recently created a center for Innovations in Mobile, Pervasive, and Agile Computing Technologies (IMPACT). The University will invest over \$1M over five years in new positions with an objective of gaining national prominence in the IMPACT research areas and other areas of information technology.

The CSSE Department currently has 17 full-time faculty members and supports strong graduate (M.S., M.Sw.E., Ph.D.) and undergraduate programs (B.S., B.Sw.E.) in computer science and software engineering. Beginning in Fall 2002, CSSE, jointly with Electrical and Computer Engineering, began offering a new undergraduate degree program in wireless engineering (B.W.E). CSSE enrollment for Fall 2002 is approximately 600 undergraduate and 100 graduate students. Faculty research areas include software engineering, computer and communication networks, human-computer interaction, pervasive computing, artificial intelligence, and database systems. Additional information about the Department and faculty research interests can be found at the Department's home page (<http://www.eng.auburn.edu/csse>).

Auburn University was chartered in 1856, and is the largest university in the State of Alabama, with a student enrollment of over 22,000 and 1,125 faculty. Auburn is located 100 miles southwest of Atlanta and 50 miles northeast of Montgomery, the State Capitol. Auburn offers nearly 150 baccalaureate degree programs in 64 academic departments. The Graduate School provides master's level programs in 130 areas and doctoral programs in 96 fields. The College of Engineering has an enrollment of 3,100 undergraduates and 500 graduate students in eight departments. The picturesque main campus covers 1,875 acres, and includes the entire southwest quadrant of the city of Auburn. The Auburn-Opelika community has a population of about 70,000, an excellent public school system, and has been nationally ranked as one of the "best small towns in America".

Applicants should submit a current curriculum vita, research vision, teaching philosophy, and the names and addresses of three references to:

James H. Cross II, Professor and Chair
Computer Science and Software Engineering
107 Dunstan Hall
Auburn University, AL 36849-5347
cross@eng.auburn.edu (with copy to sheriev@eng.auburn.edu)
334-844-6300 (Voice)
334-844-6329 (Fax)
<http://www.eng.auburn.edu/csse/>

The applicant review process will begin in January 2003 and continue until successful candidates have been identified.

Auburn University is an Affirmative Action/Equal Opportunity Employer.

Boston College

Computer Science Department
Tenure-Track Faculty Position
Chestnut Hill, MA

The Computer Science Department at Boston College is seeking applicants for a tenure-track faculty position commencing in the fall of the 2003-2004 academic year. Applicants at all ranks will be considered. Prospective candidates must have a PhD in computer science or a related field and must be strong and dedicated educators. Senior candidates are expected to have well-established research programs. Junior candidates must show promise of developing strong research programs. Applicants in all areas are encouraged to apply. Particular areas of interest include: systems with an emphasis on novel I/O systems, HCI and assistive technology, security, cryptography and innovative applications of computing systems in science and medicine. Women and minorities are especially encouraged to apply.

The department administers several undergraduate degree programs in computer science and is currently undertaking a major planning and development initiative to establish a doctoral program in computer science. The successful candidate will demonstrate that he or she will be able to contribute to the development of the department.

To apply for the position, please prepare a cover letter, a curriculum vitae, research and teaching statements and a list of the names and addresses of at least three references. Candidates are also encouraged to include one or two recent research articles.

Candidates are encouraged to apply electronically either by sending the required documents as PDF attachments to faculty-search@cs.bc.edu or by emailing the url of a web page containing the required information. Candidates who prefer to apply via postal mail should send the material to:

Faculty Search
Computer Science Department
Boston College
140 Commonwealth Avenue
Chestnut Hill, MA 02467

Persons writing letters of reference are welcome to email their letters to faculty-search@cs.bc.edu.

Applications must be received by January 15, 2003. Review of applications will commence in December and will continue until the position is filled.

Boston College is a Jesuit and Catholic university that is situated on an attractive suburban campus in Chestnut Hill, Massachusetts. The campus is within a few minutes of a host of Boston's major cultural and academic centers. For further information about the department, please see the department web site: <http://www.cs.bc.edu>.

Bucknell University

Department of Computer Science
Asst./Assoc. and Asst. Prof.

Applications are invited for two tenure-track positions beginning mid-August 2003. A Ph.D. in computer science or computer engineering is required.

(cont'd)

MIT

FACULTY POSITIONS, DEPARTMENT OF AERONAUTICS AND ASTRONAUTICS

The Department of Aeronautics and Astronautics leads in the design and development of complex aircraft, spacecraft, transportation, information, and communication systems. The department seeks candidates for several new faculty positions available in September 2003. The areas of particular interest are: **Software Engineering; Aerospace Automation; Human Factors and Cognitive Engineering; Systems Architecture and Engineering; Materials & Structures; Transportation Systems; Propulsion and Fluids**, but other qualified candidates may also apply. A doctorate in engineering or computer science as well as a strong background in the chosen discipline is required. For some of these positions, a joint professorship with the Engineering Systems Division is possible. In general, the positions are at a junior level but all qualified candidates are encouraged to apply.

MIT encourages women and underrepresented minorities to apply. Application must include two copies of the following: a cover letter, a 2-5 page statement of research and teaching interests and c.v. with the names and addresses of at least three individuals who will provide letters of recommendation. Forward applications by January 15, 2003 to: **Professor Edward F. Crawley, Head, MIT Department of Aeronautics and Astronautics, Room 33-207, 77 Massachusetts Avenue, Cambridge, MA 02139-4307; or by electronic mail to aa-fac@mit.edu (MS Word or plain text).**

Visit us at <http://web.mit.edu/aeroastro/www/careers/positions/faculty.html>



MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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web.mit.edu/personnel/www

Professional Opportunities

Position 1: Asst./Assoc. level with specialization in programming languages preferred.

Position 2: Entry-level Asst. Prof. Specialization open.

Please visit <http://www.eg.bucknell.edu/csci> for more details about the department of computer science and the position.

Send a resume, a transcript, and the names of three references to:

Gary Haggard, Chair
Dept. of Comp. Science
Bucknell University
Lewisburg, PA 17837

California Institute of Technology Computer Science Department Faculty Search

We are seeking applications from exceptional candidates for a tenure-track position at the rank of assistant, associate, or full professor in the field of computer science. Particular emphasis is on researchers in the following areas:

- novel computational substrates and architectures
- distributed systems and networking; and
- foundations of computing

The principal requirements include demonstrated excellence in innovative research and the potential for high-quality teaching and mentoring. Completion of a PhD in Computer Science or a related field is required. The initial appointment term for tenure-track positions is four years.

Interested candidates are asked to complete an on-line application summary, and should electronically submit a complete CV with a list of publications, a one-page statement of research and teaching plans, copies of 3 - 5 scientific publications, and a list of suggested references. Please visit

<http://www.cs.caltech.edu/search> for complete instructions on the application procedure.

Caltech is an Equal-Opportunity/Affirmative-Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

California Institute of Technology Computer Science Department

A position is available for an instructorship with a light teaching load, for candidates interested in combining teaching with postdoctoral research and training. (Appointments are conditional on completion of the PhD.) The position is also suitable for more senior researchers interested in a visiting (e.g. sabbatical) position. Candidates interested in the position should visit www.cs.caltech.edu/search/instructorship for instructions on the application procedure. Appointments are normally for one year, and may be renewed for a second.

Caltech is an Equal-Opportunity/Affirmative-Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

California State University, Chico Department of Computer Science Computer Science Faculty Positions

Applications are invited for one tenure-track position at either the assistant or associate level, and two lecturer positions to be filled by August 2003. A Ph.D. (by time of appointment) in computer science or a closely related field is required for the tenure-track position. A record of funded projects is required for appointment at the associate level. A Masters Degree in computer science is required for the lecturer position. The lecturer positions are for one year, and subject to renewal. Ability to teach a broad range of computer science topics is required. We are especially interested in candidates with teaching interests in networks, architecture, e-commerce, theory, compilers, and operating systems, but candidates in all areas of computer science are encouraged to apply. While the primary focus of the department is teaching at the undergraduate and graduate level, probationary faculty are expected to develop a funded research program.

The department offers several Bachelors Degrees and a Masters Degree. For two of the last three years, Hewlett-Packard has hired more graduates from our department than from any other department in the country. We have over 500 undergraduate majors, 130 graduate students and 21 faculty. Our proximity to Sacramento (90 miles) and the Bay Area (180 miles) provides opportunities for industry and state government collaboration.

The city of Chico offers an outstanding quality of life, and is often rated one of the best small U.S. cities. With fewer than 100,000 people, it has the feel of a friendly small town but it is also a cultural, entertainment, dining, and shopping hub of north central California. Chico has a great four-season climate, with mild winters and 250 days of sunshine. Housing prices are reasonable. Chico has an innovative public school system that offers everyone a choice of schools, and has several special programs (e.g., music immersion, Spanish immersion, academic plus).

Chico's location at the base of the Sierra Nevada foothills offers excellent access for hiking, camping, skiing, boating, rock climbing, and fishing.

As a university that educates students of various ethnic and cultural backgrounds, we value a diverse faculty and staff. CSU, Chico welcomes applicants who are knowledgeable about and interested in working within a cross-cultural learning environment.

Review of applications begins January 15, 2003 and will continue until the positions are filled. Please send a letter of application describing your teaching and scholarship experience / interests, vita, and names of three references to:

Dr. Anne Keunke, Chair
Department of Computer Science
California State University, Chico
Chico CA 95929-0410
Phone: 530-898-6442
www.ecst.csuchico.edu/csci
For disability-related accommodations, call TDD 530-898-4666.

EOE/AA/ADA CSUC only employs individuals lawfully authorized to work in the U.S.

Carnegie Mellon University School of Computer Science Assistant Professor/Research Scientist

The School of Computer Science at Carnegie Mellon University spans a wide range of topics in computer science and the application of computers to real-world systems. It houses the Center for Automated Learning and Discovery; Computer Science Department; Human Computer Interaction Institute; Institute for Software Research, International; Language Technologies Institute; and the Robotics Institute, with research and tenure-track faculty in all of these organizations.

The School of Computer Science seeks applicants for junior level tenure and research-track faculty positions. We are especially interested in those whose research activities lie in the areas of Computational Biology, Computer Graphics, Computer Systems, Human Computer Interaction, Language Technologies, and Software Engineering, but we will consider outstanding candidates in other areas.

All candidates are expected to have a strong interest in research, outstanding academic credentials, and an earned Ph.D. Candidates for tenure-track appointments should also have a strong interest in graduate and undergraduate education. The highly selective undergraduate and graduate programs in the School of Computer Science draw top students from around the world. Further information about the School of Computer Science and its programs may be found on the SCS home page at <http://www.scs.cmu.edu/>.

Review of faculty applications will begin on December 1, 2002. To ensure full consideration, applications should be received by February 1, 2003, but will be accepted until all positions are filled.

Each application should include curriculum vitae, statement of research and teaching interests, copies of 1-3 representative papers, and the names and email addresses of three or more individuals who have been asked to provide letters of reference. Applicants should arrange for reference letters to be sent directly to the Faculty Search Committee (hard copy or email), to arrive before February 1, 2003. Letters will not be requested directly by the Search Committee. All applications should indicate citizenship and, in the case of non-US citizens, describe current visa status.

Faculty Search Committee
Attention: Sharon Burks
School of Computer Science
Carnegie Mellon University
5000 Forbes Avenue
Pittsburgh, PA 15213-3891

Applications and reference letters may also be submitted via email (postscript or .pdf format) to faculty-search@cs.cmu.edu.

Carnegie Mellon is an affirmative action/equal opportunity employer and we invite and encourage applications from women and minorities.

Colgate University Department of Computer Science Visiting Assistant Professor of Computer Science

Colgate University invites applications for a one-year visiting faculty position starting in the Fall 2003. A master's degree in computer science or a related area is required, a PhD or ABD strongly preferred. The successful applicant will help staff department courses. The teaching load is two courses per semester, plus laboratories. Salary is competitive, and research is well supported.

Colgate University is a highly competitive liberal arts college situated in scenic upstate New York, within easy driving distance of several large research universities, such as Cornell and Syracuse. Colgate is committed to promoting excellence in both teaching and research. Review of applications will begin February 15 and will continue until the position is filled.

Resumes and three letters of recommendation should be sent to:

Chair, Faculty Search Committee
Department of Computer Science
Colgate University
13 Oak Drive
Hamilton, NY 13346

Colgate University is an equal opportunity/affirmative action employer. Developing and sustaining a diverse faculty and staff further the University's educational mission. Women and minorities are encouraged to apply.

College of Charleston Department of Computer Science Assistant Professor of Computer Science

The College of Charleston Department of Computer Science invites applicants for a tenure-track position at the assistant professor level. A Ph.D. in computer science, computer engineering or software engineering is required. The successful candidate should demonstrate a commitment to quality undergraduate teaching, and show potential for sustained scholarly activity that complements teaching. The starting nine-month salary range is highly competitive. Startup funds and research space are also provided.

Review of applications will continue until position is filled. Please send your curriculum vitae, statement of teaching philosophy or teaching portfolio, and the names and e-mail addresses of three professional references to csdept@cs.cofc.edu via attachment or URL. If you prefer not to apply electronically, please mail your application to:

Dr. Christopher Starr, Chairman
Department of Computer Science
College of Charleston
66 George Street
Charleston, SC 29424

For more information about our department and this position see www.cs.cofc.edu. The College of Charleston is an Affirmative Action, Equal Opportunity Employer and welcomes applications from women and minorities.

College of William and Mary Department of Computer Science

The Computer Science Department at the College of William and Mary invites applicants for an anticipated tenure-track faculty position. Applications from outstanding candidates in all areas of computer science and at all levels are welcome. A Ph.D. in computer science or a

closely related area is required. Candidates at the associate and full professor level should have a documented record of excellence in research, in teaching, and in the supervision of doctoral students.

Interested individuals should submit a curriculum vitae, statements of research and teaching interests and a list of four references, at least one of whom can comment on teaching, to

Faculty Search Committee
College of William & Mary
Department of Computer Science
P.O. Box 8795
Williamsburg, VA 23187-8795

Materials may also be submitted by email to search@cs.wm.edu. Text email with PDF attachments is preferred. General inquiries and specific questions may also be emailed to that address. Review will begin January 15, 2003 and will continue until the position is filled.

Information about the College and the department, as well as specific instructions for submitting an application, can be obtained at <http://www.cs.wm.edu/hiring>.

The College is an EEO/AA employer.

Colorado School of Mines Faculty Position in Computer Science

Applications are invited for a tenure-track/tenured position in the Department of Mathematical and Computer Sciences at the Assistant or Associate Professor level, starting August 2003. Applicants in all areas of Computer Science consistent with the research interests of the department are encouraged to apply. A Ph.D. in Computer Science or a closely related field by the time of appointment is required. Evidence of interest or successful involvement in interdisciplinary collaborative research projects is desirable. Candidates should have a commitment to excellent research and quality teaching.

The Colorado School of Mines, Colorado's oldest public university, is located in Golden, Colorado, in the foothills of the Rockies, 13 miles west of downtown Denver and 21 miles south of Boulder. The School has an enrollment of approximately 2500 undergraduates and 700 graduate students in a broad range of applied science and engineering disciplines. Research funding is approximately \$22 million annually.

The Department of Mathematical and Computer Sciences offers B.S., M.S., and Ph.D. degrees. The computer science program

Faculty Positions, Computer Science

The Department of Computer Science (www.cs.njit.edu) in the College of Computing Sciences at New Jersey Institute of Technology invites applications for faculty positions beginning August 2003.

NJIT is a public research university. The Department of Computer Science, with 26 faculty members and 1,400 students, is part of the newly formed College of Computing Sciences (www.ccs.njit.edu). Departmental research interests include algorithms, artificial intelligence, computational biology and bioinformatics, computer vision, databases, parallel processing, simulation and modeling, software engineering, storage architectures and computer networking. The Department offers programs at the undergraduate, masters and PhD levels.

The Department especially seeks applicants in software engineering and computational biology, and in computer networking and databases. Strong candidates in other fields will also be considered.

Applicants should have a PhD in computer science or a closely allied field. Senior applicants should have an outstanding record of research, teaching, and service. Junior applicants should have demonstrated potential for original research and a commitment to excellence in teaching. Salaries are competitive, and commensurate with appointment rank and qualifications.

NJIT is located in Newark's University Heights, close to several other universities, affording ample opportunity for collaborative work. NJIT's location in the midst of major concentrations of pharmaceutical, telecommunications, and financial companies and research laboratories offer excellent opportunities for consulting and industrially-sponsored collaborative research.

New Jersey enjoys a high standard of living and quality of life. Newark is minutes from New York City and close to the Jersey Shore, providing a wide range of cultural and leisure activities.

Inquiries may be directed to this email address: faculty-search@cs.njit.edu or to the following website: <http://web.njit.edu/cs/recruiting.htm>

Applicants should send a curriculum vitae and a list of at least three references to the following: Department of Human Resources, Personnel Box CS-AP

NJIT
New Jersey Institute of Technology

A Public Research University

University Heights
Newark, NJ 07102-1982

Professional Opportunities

within the department is experiencing a period of strong growth in both research and teaching; research interests include mobile computing and networking, databases, graphics, algorithms, machine learning, and parallel and distributed computing. The School's proximity to Denver and Boulder provides opportunities for significant collaboration with both industry and other universities. More information about the department can be obtained from the department's home page

<http://www.mines.edu/Academic/mac>.

To apply, send (a) a curriculum vitae, (b) names and contact information of four references, at least one of whom can address teaching ability, (c) a statement of teaching experience and philosophy, and (d) a statement of research interests and aspirations, to:

Colorado School of Mines
Office of Human Resources
Search #02-081190
1500 Illinois Street
Golden, CO 80401-1887
fax: (303) 384-2025

Review of applications will commence on January 17, 2003, and continue until the position is filled.

The Colorado School of Mines is an EEO/AA employer. Women and minorities are encouraged to apply.

Columbia University Department Of Computer Science Tenure-Track

The Department of Computer Science is seeking applicants for a tenure-track position. Applicants will be considered in the areas of computer graphics and computational geometry, should have a Ph.D. in a relevant field, and have demonstrated excellence in research.

Our department of 27 tenure-track faculty and 5 lecturers emphasizes excellence in research and teaching and attracts excellent Ph.D. students, virtually all of whom are fully supported by research grants. We have close ties to the nearby research laboratories of AT&T, IBM, Lucent, Siemens, Verizon, Telcordia Technologies, NEC, and other leading industrial companies, including the start-up companies of Manhattan's Silicon Alley and the financial companies of Wall Street.

Columbia University is one of the leading research universities in the United States, and New York City is one of the cultural, financial, and communications capitals of the world. Columbia's enclosed campus of tree-lined walks is located in Morningside Heights on the Upper West Side.

Applicants should submit summaries of research and teaching interests, CV, email address, and the names and email addresses of at least three references by filing an online application at <http://www.cs.columbia.edu/recruit>. Review of applications will begin on December 1, 2002.

Columbia University is an Equal Opportunity/Affirmative Action Employer. We encourage applications from women and minorities.

Dartmouth College Faculty Positions in Computer Science

The Department of Computer Science seeks candidates for faculty positions starting in September 2003. We anticipate several tenure-track openings at the Assistant Professor level. In special cases, a senior faculty appointment may be possible.

We are looking for candidates with backgrounds and interests in all areas of computer science. We are particularly interested in the areas of algorithms, graphics, security, databases, and networks.

Persons interested should submit a curriculum vitae, a research statement, and a teaching statement. Please ask at least four professionals to send letters of reference, at least one of whom, can comment on teaching. Review of the applications will begin January 15, 2003 and will continue until the search is complete. Please send application materials and general inquiries to:

Delia Mauceli
Computer Science Recruiting
Department of Computer Science
Dartmouth College
6211 Sudikoff Laboratory
Hanover, NH 03755-3510

Specific questions can be referred to David Kotz, at recruit@cs.dartmouth.edu.

Information on faculty and their research, facilities, and graduate students is available at <http://www.cs.dartmouth.edu>. Our department is affiliated with the new Institute for Security Technology Studies, and further information can be found at <http://www.ists.dartmouth.edu>.

Dartmouth is an equal opportunity/affirmative action employer and encourages applications from women and members of minority groups.

Florida State University The School of Computational Science and Information Technology (CSIT) and The Department of Statistics Tenure-Track Faculty Position

Invite applications for a tenure-track position starting August 8, 2003. CSIT is focused on the development of novel methods and approaches in the computational sciences and promotes broad, computer-intensive interdisciplinary research. The Statistics Department is interested in statistical approaches to computational vision and has a Laboratory for Computational Vision. People with interests in computational methods, especially in the general areas of visualization and computational vision and with a strong focus towards interdisciplinary research, are encouraged to apply. A Ph.D. in Statistics, Computer Science, or a related field is required.

Candidates are expected to have strong commitments to excellence in teaching, research, and interdisciplinary work. See the CSIT website at <http://www.csit.fsu.edu/> and the Statistics website at <http://stat.fsu.edu/> to gain information. If you are interested in this challenging position, please send a letter of application, curriculum vitae, and three letters of reference to:

Search Committee
Department of Statistics
Florida State University
Tallahassee, Florida 32306-4330
Florida State University is an Equal Opportunity/Affirmative Action employer, committed to diversity in hiring, and a Public Records Agency.

Florida State University, Panama City Campus

The Department of Computer Science invites applications for a non-tenure-track position in Computer Science, beginning August 2003. This position is a 12-month, non-tenure track faculty appointment that is renewable annually. A PhD in Computer Science or a closely related field is strongly recommended. Applicants will be expected to contribute to the undergraduate and graduate teaching mission of the department and should have excellent teaching skills. Duties include in-residence and distance learning instruction at the undergraduate level, as well as in-residence instruction in software engineering at the graduate level.

Florida State University Panama City Campus is located 100 miles southwest of Tallahassee on beautiful North Bay and is only three miles from the waters of the Gulf of Mexico. It provides opportunities for undergraduate and graduate study in 14 bachelor's programs and 19 master's or specialist programs. To complement the local community college, the Panama City Campus offers courses at the junior, senior and graduate levels. The Panama City Campus offers a personalized approach to instruction and facilitates interaction between students and faculty. Further information about FSU-Panama City is available at <http://www.pc.fsu.edu>.

Salary: \$70K minimum, negotiable depending on education and experience.

Screening of candidates will begin January 6, 2003, and continue until the position is filled. Please use the on-line application form at: http://www.cs.fsu.edu/positions/recruit/apply_pc.html. Questions can be e-mailed to recruitment_pc@cs.fsu.edu. Also, please arrange for at least 3 letters of reference to be sent to:

Ken Baldauf, Chair of Search Committee
Computer Science Department
Florida State University
Tallahassee, FL 32306-4530

The Florida State University is an Equal Opportunity/Affirmative Action employer, committed to diversity in hiring, and a Public Records Agency.

The George Washington University Department of Computer Science Tenure-Track Faculty Position in Bioinformatics

The Department of Computer Science is seeking qualified applicants for a tenure-track faculty position beginning Fall 2003 in the area of bioinformatics or computational biology. The position requires a doctoral degree in Computer Science or a closely related bioinformatics field, evidence of strong research potential, as well as a commitment to quality teaching at both undergraduate and graduate levels.

The Department of Computer Science currently has 20 full-time faculty, numerous affiliate and adjunct faculty, over 200 undergraduate majors, and 250 graduate students. Major areas of research include distributed systems, networks, computer and network security, computer architecture and embedded systems, software engineering and systems, multimedia systems, computer graphics, and human computer interaction.

The department has recently initiated interdepartmental programs in bioinformatics,

including a Master's degree program in Genomics and Informatics and an undergraduate program in bioinformatics whose development is being partially funded by a Howard Hughes Medical Institute grant.

The George Washington University, located five blocks from the White House, is one of few in the region that features both an engineering school and medical school on the same campus. GW's Washington, DC, location places it in the center of a biotechnology community that is one of the largest in the world. GW has formal research and research training relationships with three area organizations that are active members of this community: The Institute for Genomic Research (TIGR), Children's National Medical Hospital, and the Holland Laboratories of the American Red Cross. The university is committed to expanding its interest in bioinformatics.

For further information, and additional information on our positions please refer to: <http://www.cs.gwu.edu>

Review of applications began on December 1, 2002, and will continue until the position is filled. Applicants should send curriculum vitae, a research summary and at least three sealed reference letters to:

Chair, Computer Science Search Committee
Department of Computer Science
The George Washington University
Washington, D.C. 20052
<http://www.cs.gwu.edu>
(202) 994-7181

The George Washington University is an equal opportunity/affirmative action employer.

The George Washington University Department of Computer Science Tenure-Track Faculty Position

The Department of Computer Science is seeking qualified applicants for tenure-track faculty positions beginning Fall 2003. We are particularly interested in candidates in the broad areas of computer systems, computer and network security, distributed computing, pervasive computing, software engineering, computer graphics, human computer interaction and multimedia. We are also seeking applicants in the area of bioinformatics and computational biology. The positions require a doctoral degree in Computer Science or a closely related field, evidence of strong research potential, as well as a commitment to quality teaching at both undergraduate and graduate levels.

The Department of Computer Science currently has 20 full-time faculty, numerous affiliate and adjunct faculty, over 200 undergraduate majors, and 250 graduate students. Major areas of research include distributed systems, networks, computer and network security, computer architecture and embedded systems, software engineering and systems, multimedia systems, computer graphics, and human computer interaction. The department houses several institutes and centers of excellence in areas such as graphics, networks and security, including recent certification as one of 36 national centers of excellence by the National Security Agency.

For further information, and additional information on our positions please refer to: <http://www.cs.gwu.edu>

The George Washington University, located five blocks from the White House, is an urban campus in the heart of Washington, DC, and in the center of one of the largest information technology areas in the nation, including Northern Virginia and suburban Maryland, and within a few minutes from many federal agencies.

Review of applications began on December 1, 2002, and will continue until the position is filled. Applicants should send curriculum vitae, a research summary and at least three sealed reference letters to:

Chair, Computer Science Search Committee
Department of Computer Science
The George Washington University
Washington, D.C. 20052
<http://www.cs.gwu.edu>
(202) 994-7181

The George Washington University is an equal opportunity/affirmative action employer.

Harvard University Computer Science Assistant Professor

Over the last several years, Harvard's computer science faculty has experienced significant growth and moved into Maxwell Dworkin, a new state-of-the-art building with excellent teaching and research facilities. The computer science program benefits from its outstanding undergraduate and graduate students, an excellent location, significant industrial support, and substantial support from the Division of Engineering and Applied Sciences.

We invite applications and nominations for a tenure-track faculty position in Computer Science, at the level of Assistant Professor, to begin in the fall of 2003. We are particularly

interested in candidates with a focus in Computer Systems.

Candidates should have an outstanding research record and a strong commitment to undergraduate teaching and graduate training. Applicants should have completed a Ph.D. by September 1, 2003. Information about Harvard's faculty, research, and educational programs is available at http://www.deas.harvard.edu/graduate/computer_science

Candidates should send a curriculum vitae, a list of publications, and a statement of research and teaching interests, and should also arrange to have at least three letters of reference sent to:

CS Search Committee
Division of Engineering and Applied Sciences
Harvard University
Maxwell Dworkin
33 Oxford Street
Cambridge, MA 02138

Applicants may, in addition, include up to three papers representative of their research.

Harvard is an Equal Opportunity/Affirmative Action employer and encourages applications from women and members of minority groups.

Applications will be reviewed as they are received. For full consideration, applications must be received by February 15, 2003.

Illinois Institute of Technology Department of Computer Science

Applications are invited for tenure-track faculty positions in Computer Science beginning Fall 2003. We are interested in all ranks. Candidates from all areas of specialization will be considered. All candidates must have strong commitment to research and teaching at all levels. The departmental goal is to become an internationally recognized, highly ranked department within the next five years.

The department offers B.S., M.S., and Ph.D. degrees in Computer Science. Faculty research interests span many areas, with concentrations in computer networking, distributed and parallel systems, information retrieval and databases, intelligent information systems, medical systems, and software engineering. Our main campus is located within 10 minutes of downtown Chicago. In addition, we have a campus located along the high technology corridor in Chicago's western suburbs.

Applicants should send a detailed curriculum vita, a statement of research and teaching interests, and the names and email addresses of at least four references to:

Computer Science Faculty Search Committee
Department of Computer Science
Illinois Institute of Technology
10 W. 31st Street
Chicago, IL 60616
Phone: 312-567-5152
Email: search@cs.iit.edu
<http://www.cs.iit.edu>

All positions are subject to approval.

Illinois Institute of Technology is an equal opportunity, affirmative action employer.

Indiana University Computer Science Department Department Chair Position

The Indiana University Computer Science Department seeks nominations and applications for the position of department chair. Candidates should possess an international reputation in the computer science research community, should have strong leadership and administrative skills, and should understand the importance of promoting excellence in education. It is expected the chair will expand on existing research programs or initiate new ones. She or he will have the opportunity to fill faculty positions immediately.

The Computer Science Department, part of the College of Arts and Sciences, has 200 FTE faculty members and approximately 200 undergraduate majors, 100 masters students and 100 doctoral students. The department has substantial research interactions with the privately supported Indiana Pervasive Technology Laboratories. Other research interactions include the Cognitive Science Program and the nation's first School of Informatics, which offers degrees focusing on the application of information technology.

The department occupies a gracious limestone building with extensive state-of-the-art computing facilities. The attractive wooded campus of Indiana University is located in Bloomington, one of the most cultural and livable small cities in the US and located less than an hour from the Indianapolis airport. To learn more about the department please visit our web site at www.cs.indiana.edu.

Applicants should send a detailed CV and a list of references to:

Prof. Edward Robertson
Computer Science Department
Indiana University
Lindley Hall 215
Bloomington, IN 47405-7104
email: search@cs.indiana.edu

(cont'd)

Professional Opportunities


www.careers.ualberta.ca

Computing Science

Do you have a commitment to push the frontiers of computing research in one of the most supportive environments in Canada? We are seeking outstanding candidates who are driven by curiosity and interested in collaborative research for the following tenured faculty chair positions:

Tier II Canada Research Chair (www.chairs.gc.ca)

Position in software engineering and/or software systems. Candidates should have demonstrated ability to provide research leadership in some of the following areas: software architecture, software reuse, re-engineering, software system development, parallel and distributed computation, and compiler design and optimization. The CRC award is for a five-year period, renewable for another five-year period.

Tier I Canada Research Chair (www.chairs.gc.ca)

Position associated with the Alberta Ingenuity Centre for Machine Learning (www.aicml.ca) targeted at exceptional individuals who have demonstrated research accomplishments in areas that combine machine learning and bioinformatics, possibly molecular biological modeling, and related areas in nanoscience and nanotechnology. The CRC award is for a seven-year period, and is renewable.

iCore Chair (www.icore.ca)

Targeted at exceptional individuals who have demonstrated research accomplishments in Machine Learning. The iCore award is for a minimum of five years.

About Us

Join us in a dynamic Computing Science department, known for its collegial atmosphere and collaborative research environment. Our department is in the Faculty of Science at the University of Alberta, in Edmonton, the capital of Alberta.

We have established research laboratories, including Advanced Man-Machine Interfaces, Algorithmics, Bioinformatics, Artificial Intelligence, Computer Vision and Multimedia Communications, Database Management, Graphics, Networks and Communications, Robotics, Software Engineering, and Software Systems. We have abundant computing facilities, and our department leads broadly-based multidisciplinary research within the Multimedia and Advanced Computational Infrastructure (www.maci.ca) project. We have standard, state of the art, computational research

facilities, as well as extensive computational infrastructure for high performance parallel computing and computer graphics. In 2001 we moved into a new research laboratory building adjoined to a renovated historical building. This combined space provides us with consolidated office and research space in the middle of our campus of more than 30,000 students.

Computing Science research is well-funded in Alberta. Several provincial programs provide research opportunities that are the envy of every one in the world, including our multi-university collaborations (e.g., www.westgrid.ca, www.maci.ca, www.peoria.cs.ualberta.ca/aserc), research chair programs (e.g., www.icore.ca), and the Alberta Ingenuity Fund (www.albertainguinity.ca). This fund established The Alberta Ingenuity Centre for Machine Learning (www.aicml.ca) in 2002.

Our current complement of 47 regular faculty work within a department of about 32 support staff. There are over 200 graduate students and over 500 undergraduate students in our Computing Science degree programs. We also offer joint degrees with Engineering, Business, and other Science departments. Our performance in ACM World Programming Contests is evidence of our claim to be one of the best undergraduate programs in the country, and our graduate students are successful in industrial and academic research labs around the world.

Our department is part of a full-service university, in a province that has the fastest economic growth in the country, and we enjoy strong collaborative ties with local industry.

Competition will remain open until suitable candidates are found. Find further details about us at www.cs.ualberta.ca. To apply send your curriculum vita and the names and addresses of three referees to:

Iris Everitt
Administrative Assistant
Department of Computing Science
University of Alberta
Edmonton, Alberta
Canada T6G 2E8
E-mail: everitt@cs.ualberta.ca

These positions will remain open until a suitable candidate is found.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. If suitable Canadian citizens and permanent residents cannot be found, other individuals will be considered. The University of Alberta hires on the basis of merit. We are committed to the principle of equity in employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities, and Aboriginal persons.

Indiana University is an Equal Opportunity/Affirmative Action Employer. The Computer Science Department especially seeks applications from women and minorities.

Indiana University Computer Science Department Faculty Positions

The Indiana University Computer Science Department anticipates filling several tenure-track faculty positions beginning 2003-2004. Areas of interest are databases, embedded systems, networking and programming languages. In addition our new, privately endowed, pervasive technology labs will be hiring several senior positions in the areas of graphics, human computer interaction, embedded systems, data mining and security.

The CS department, which is part of the College of Arts and Sciences, is working cooperatively with our new School of Informatics, which offers a B.S. degree focusing on the application of information technology to various disciplines and has M.S. programs in Human Computer Interaction, and Bio and Chemical Informatics. Cross-appointments with Informatics are possible in computer science related areas such as data mining and search technologies.

A Ph.D. in Computer Science is required for all CS faculty positions. Applicants must have demonstrated potential for excellence and productivity in research. In addition, a strong contribution to the educational mission of the department is expected.

The department occupies a spacious limestone building with extensive state-of-the-art computing facilities. The attractive wooded campus of Indiana University is located in Bloomington, chosen as one of the most cultural and livable small cities in the US, and only one hour from the Indianapolis airport. To learn more about the department please visit our web site at www.cs.indiana.edu.

Please send a detailed CV and a list of references to:

Faculty Search Computer Science
Department
Indiana University
Lindley Hall 215
Bloomington, IN 47405-7104
email: search@cs.indiana.edu
Indiana University is an Equal

Opportunity/Affirmative Action Employer. The Computer Science Department strongly

encourages applications from women and minorities.

Indiana University Purdue University Indianapolis Department of Computer & Information Science Assistant or Associate Professor and Lecturer

The Department of Computer and Information Science invites applications for two tenure-track positions and one lecturer position beginning August 2003. Rank and salary will be commensurate with academic credentials and experience.

Applicants for tenure-track positions must have a Ph.D. in computer science or closely related field and are expected to develop a high quality funded research program and be committed to excellence in teaching at both the graduate and undergraduate levels. Candidates from all specializations of computer science are welcome to apply however; we are preferentially seeking candidates in algorithmic computer network security and in software engineering.

Applicants for the lecturer position should hold a minimum M.S. in computer science or closely related field and should be committed to high quality undergraduate instruction and contribute to the teaching mission of the department. Day, evening or weekend assignments are expected.

The application will consist of a letter of interest, curriculum vitae, and a one-page statement of research direction and teaching interests. Applicants should also arrange for four letters of recommendation to be mailed directly to the committee. Send materials to:

Faculty Search Committee
Department of Computer and Information
Science
IUPUI
723 W. Michigan Street, SL 280
Indianapolis, IN 46202-5132
Deadline for applications is February 28,
2003.

IUPUI is an Equal Opportunity / Affirmative Action Employer. Women and minority candidates are encouraged to apply.

For further information about the department, please visit www.cs.iupui.edu.

Iowa State University Department of Computer Science Tenured and Tenure-Track Positions

The Department of Computer Science has several tenure-track faculty positions open for Fall 2003. Emphasis will be on hiring applicants at the assistant professor level, but we invite applicants at all levels in the areas of Software Engineering, Networks, and Systems. We are especially interested in experimentalists that can complement our existing strengths in these areas. All positions require a Ph.D. in Computer Science or a closely related field. Candidates who are in the final stages of obtaining a Ph.D. will also be considered. For an assistant professor appointment, outstanding potential for research in computer science and promise of effective teaching at undergraduate through graduate levels is required. For an associate professor or full professor appointment, an outstanding record of research in computer science and a record of effective teaching at undergraduate through graduate levels is required.

The department currently consists of 23 full-time tenure-track faculty and offers B.S., M.S., and Ph.D. degrees in Computer Science. It also participates in interdepartmental graduate programs in Bioinformatics and Computational Biology, and Information Assurance. Both programs are supported by large multiyear training grants from the National Science Foundation. The department has about 600 undergraduates, 60 M.S. students and 40 Ph.D. students. The department has strong research and educational programs in Algorithms and Complexity, Artificial Intelligence, Bioinformatics and Computational Biology, Databases, Data Mining, Parallel and Distributed Computing, Information Assurance, Programming Languages, Multimedia Systems, Operating Systems and Networks, and Software Engineering.

A dynamic faculty, moderate teaching load (typically 3 courses per year with further reductions for junior faculty), strong graduate program, and well-funded research program provide an excellent academic environment. In addition interdisciplinary interactions facilitated by the Laurence H. Baker Center for Bioinformatics and Biological Statistics, the Information Assurance Center, DOE Ames Laboratory, and the Virtual Reality Center nurture cutting edge research and education.

Iowa State University is a major land-grant university located in Ames, Iowa. It is a pleasant, small, yet cosmopolitan city with a population of over 50,000 (including about 26,000 students), a vibrant cultural scene, an excellent medical clinic, and a secondary school system that ranks among the best in the United States. In 2002, Ames has been ranked as the 20th best place to live in North America.

Applicants should send a curriculum vita, including the names and addresses of at least three references, to:

Chair of Search Committee
Department of Computer Science
Iowa State University
Ames, Iowa 50011-1041
Tel: 515-294-4377
Fax: 515-294-0258
E-mail: faculty-search@cs.iastate.edu
URL: www.cs.iastate.edu

Review of applications will begin on January 1, 2003 and will continue until the positions are filled.

ISU is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

Johns Hopkins University Dean, Whiting School of Engineering

The Johns Hopkins University is seeking applications and nominations for the position of Dean of the Whiting School of Engineering. Exercising a high degree of autonomy, the Dean has responsibility for and authority over the School's programs and budgets in a highly decentralized university. The University seeks an individual of distinguished accomplishment to lead a faculty with a strong tradition of excellence in research, teaching, and service. Candidates should have demonstrated skills in academic leadership, administration, and development.

The Whiting School is a leader in research-based engineering education and is now in an exciting period of growth. The School has a tenured and tenure-track faculty of 110 and enjoys the active participation of an additional 20 faculty whose primary appointments are in the School of Medicine. It has an undergraduate population of 1,290 and a full-time graduate population of 515. In partnership with the University's Applied Physics Laboratory, the School also offers part-time master's degree programs to more than 2,000 students. The School has nine academic

Professional Opportunities

departments: Biomedical Engineering (jointly with the School of Medicine); Chemical Engineering; Civil Engineering; Computer Science; Electrical and Computer Engineering; Geography and Environmental Engineering; Materials Science and Engineering; Mathematical Sciences; and Mechanical Engineering. The Whiting School is also the home of thirteen research centers.

Sharing the same campus and many of the same facilities, the School of Engineering has a close relationship with the Krieger School of Arts and Sciences. It also collaborates extensively with the University's School of Medicine and Applied Physics Laboratory. Additional information on the Whiting School may be found at www.wse.jhu.edu.

Nominations and/or letters of application with a curriculum vitae should be sent to: Dr. Steven Knapp, Provost Chair, Engineering Search Committee Johns Hopkins University Room 265, Garland Hall 3400 North Charles Street Baltimore, MD 21218-2688 Or e-mailed to: provost@jhu.edu

The Search Committee will begin reviewing nominations and applications immediately. The University expects to fill this position by July 1, 2003.

The Johns Hopkins University is an Equal Opportunity/ Affirmative Action Employer.

Johns Hopkins University Department of Computer Science Tenure-Track Faculty Position

The Department of Computer Science at Johns Hopkins University is seeking applications for a tenure-track faculty position at all ranks and in all fields. We have particular interest in senior level candidates with research and teaching interests in systems, networks, security, algorithmic theory, programming languages, machine learning, artificial intelligence, computer vision, computational biology and bioinformatics. Of highest interest are candidates who will further increase the national and international recognition of our research and teaching programs.

All applicants must have a Ph.D. in computer science or a related field and are expected to show evidence of an ability and willingness to develop academic research and teach programs of the highest quality. Commitment to quality teaching at the undergraduate and graduate levels will be required of all candidates considered.

Johns Hopkins is a private university well-known for its commitment to academic excellence. Accordingly, Hopkins attracts extremely talented undergraduates and graduate students. The Department of Computer Science is among the first rank of departments at the Hopkins in terms of funded research activities and student involvement in educational programs. The administration at Johns Hopkins recognizes the major role that computer science and information technology must play in the future of the University.

See the department webpage at <http://www.cs.jhu.edu> for additional information about the department, including links to research laboratories and centers.

Applicants should apply using the online application form, which can be accessed from <http://www.cs.jhu.edu/apply>. Those applicants who cannot access this URL may send their materials to:

Faculty Search Committee
Department of Computer Science
Room 224, New Engineering Building
Johns Hopkins University
Baltimore, MD 21218-2694
Fax: 410-516-6134
Phone: 410-516-8577

If you have any problems or have any questions, please email fsearch@cs.jhu.edu

We encourage applications to be submitted as soon as possible; however, to ensure full consideration, complete applications (including the reference letters) should be received by February 1, 2003.

The Johns Hopkins University is an EEO/AA employer.

Knox College Department of Computer Science Computer Science Tenure-Track Teaching Position

The Department of Computer Science invites applications for a tenure-track position at the Assistant Professor level or above to begin Sept. 1, 2003. We seek candidates with the potential for excellence in teaching and research in a liberal arts institution. While all areas of specialization will be considered, the following areas would be particularly complementary to the current faculty: database management systems, graphics and visualization, theory of computation. A Master's degree in Computer Science with some industry experience is required, a PhD is preferred.

Knox is a highly selective independent liberal arts college with students from 48 states and 41 countries. The college is consistently

ranked as one of the "Best Values" among national liberal arts colleges in the U.S. News & World Report survey of quality and price in higher education. Small classes, a strong advising system, and an emphasis on independent research foster close student/faculty interaction. Please visit us at www.knox.edu for more information about the College, the department and our facilities.

To apply, please send us a curriculum vitae, a letter detailing your research interests and teaching philosophy and copies of your graduate transcripts. Also please arrange to have sent to us copies of current letters of recommendation from three references, one of which must address your teaching. Send your application to:

John F. Dooley, Associate Professor
Department of Computer Science
Knox College, #138
2 East South Street
Galesburg, IL 61401-4999
(e-mail: cs-search@knox.edu)

Review of applications will begin as soon as they are complete and will continue until the position is filled.

Knox College is an affirmative action, equal opportunity employer. In keeping with its 165-year commitment to equal rights, the College particularly welcomes applications from individuals in under-represented groups.

Marquette University Department of Mathematics, Statistics, and Computer Science Assistant Professor

The Department of Mathematics, Statistics and Computer Science invites applications for a tenure-track position in Computer Science at the Assistant Professor level, to begin Fall 2003. A Ph.D. in Computer Science or a closely related field is required by the time of appointment. Candidates in all areas of specialization will be considered, but preference will be shown to those with a demonstrated interest in research that complements current areas of study within the department. Requirements include a commitment both to quality teaching and outstanding scholarship.

The department offers the successful applicant the opportunity to work in a multi-disciplinary environment where research is currently conducted in distributed computing, bioinformatics, biomathematical modeling and biostatistics; in algebra, both abstract and computational, logic, and probability theory; and in mathematics education. In addition, faculty members work jointly with the Medical College of Wisconsin, the Zablocki Veterans Administration Medical Center and the departments of Biology and Biomedical Engineering.

The department offers both undergraduate and graduate degrees in Computer Science, Mathematics and Mathematics Education. In addition, a terminal Master of Science in Computing is offered jointly with the department of Electrical and Computer Engineering; and a Master of Science in Bioinformatics is offered jointly with the Medical College of Wisconsin. For more information about the department and its programs see <http://www.mscs.mu.edu>.

Marquette is a Catholic, Jesuit University that offers undergraduates a vigorous liberal arts core combined with a choice of 60 majors. The Graduate School offers 39 masters and 11 doctoral degrees across 11 colleges and schools. The university offers to all members of its community the educational, professional and cultural advantages of its location in the heart of Milwaukee. More information is available at <http://www.mu.edu>.

Applicants should submit a cover letter with a statement of research interests and teaching philosophy, together with a current CV, and should arrange for three letters of reference to be sent to:

Computer Science Hiring Committee
Department of Mathematics, Statistics and
Computer Science
Marquette University
P.O. Box 1881
Milwaukee, WI 53201-1881

Email applications may be sent in post-script, Word or PDF format to cscmm@mscs.mu.edu. Review of applications will begin December 1 and continue until the position is filled.

Miami University School of Engineering and Applied Science, Dept. of Computer Science & Systems Analysis Assistant/Associate Professor of Computer Science or Computer Engineering

The School of Engineering and Applied Science (www.eas.muohio.edu/csa) seeks applicants for tenure-track positions in Computer Engineering and Computer Science beginning fall 2003. Successful candidates will be expected to teach courses, conduct labs, perform service and maintain an active research program. We are primarily seeking applicants

to begin at the rank of Assistant Professor, but will consider applicants qualified for Associate Professor. A Doctorate in Computer Science, Computer Engineering, or related field is expected. ABDs will be accepted, but the doctorate must be completed by the time of the appointment. Any area of specialty will be considered, but ideal candidates will have research interests in computer networks. Screening of applications will begin November 2002 and continue until positions are filled.

Send resume, three letters of reference, and visa status (if applicable) to:

Alton F. Sanders
Computer Science and Systems Analysis
Dept.
School of Engineering and Applied
Science
Miami University
Oxford, OH 45056
Phone: 513-529-5935, Fax: 513-529-1524
Email: gakermb@MUOhio.edu
Electronic submissions are encouraged.

Miami University, located 35 miles north of Cincinnati, has 14,000 undergraduate and 1,800 graduate students. Miami has recently been recognized as a top value in higher education by *The Fiske Guide to Colleges 2003* and the *Kaplan-Newsweek College Catalog 2003*; was again named a "Public Ivy" in the "The Public Ivies: America's Flagship Universities"; and was ranked 26th among national public universities in the *US News & World Report 2003* college rankings.

We encourage applications from a broad spectrum of individuals, including women and members of ethnic minorities. Miami University is an affirmative action/equal opportunity employer.

Montana State University Computer Science Department Assistant Professor

The Computer Science Department at Montana State University is seeking outstanding candidates with a commitment to excellence in teaching and research for a tenure-track position at the Assistant Professor level beginning August 15, 2003, or January 1, 2004.

An earned Ph.D. in Computer Science or a closely related field is required. Applicants in all areas of computer science are encouraged to apply, but candidates with an interest or experience in Software Engineering and/or Database Systems will be given preference. The Department offers degrees at all academic levels and has active research programs in many areas. MSU is located in one of the most beautiful outdoor recreational areas in the country.

For a complete position description, application instructions, information about the Department, and a description of the area, candidates must visit www.cs.montana.edu/search. Other questions may be addressed to search-app@cs.montana.edu.

The review of candidates will begin February 15, 2003 and continue until the position is filled. ADA/AA/EO/VetPref.

New Jersey Institute of Technology College of Computing Sciences Chair, Department of Computer Science

The Dept. of Computer Science at New Jersey Institute of Technology (<http://www.cs.njit.edu>) invites applications for the position of Dept. Chair for an appointment to begin as early as July 1, 2003. The dept. is part of the newly formed College of Computing Sciences (<http://www.ccs.njit.edu>), which also houses the Dept. of Information Systems & also offers a multi-disciplinary undergraduate program in Information Technology. With strong backing from the university, the College of Computing Sciences is continuing its plans for growth, in which the Dept. of Computer Science and its new chair will play significant roles.

Candidates must have a PhD in Computer Science or a closely related field & excellent record of research, teaching & service that merits appointment as a tenured full professor. Successful applicants must have the intellectual & leadership qualities needed to help our growing dept. achieve the next level of excellence in teaching, research & industrial outreach.

The Computer Science dept. currently has 27 tenured/tenure-track faculty & a student enrollment of over 1,500. The dept. offers degrees at the undergraduate, graduate & doctoral levels. Departmental research interests include algorithms, artificial intelligence, computational biology & bioinformatics, computer vision, databases, parallel processing, simulation & modeling, software engineering & computer networking.

NJIT has an enrollment of approx. 9,000 students, with almost 25% enrolled in the College of Computing Sciences. The university is located in the University Heights section of Newark, close to New York City, the

Jersey Shore, Philadelphia & the Pocono Mountains, which provide a wide range of cultural & leisure activities.

Applicants should send a curriculum vitae & list of at least 3 references to:

New Jersey Institute of Technology
Attn: Personnel Box CCS-CS Chair
University Heights
Newark, NJ 07102-1982

The vitae may also be submitted by email to hr@njit.edu. (Inquiries may be directed to: "chair-search@cs.njit.edu") Review of applications will begin immediately & will continue until the position is filled. The university reserves the right to substitute equivalent education and/or experience at its discretion.

NJIT is an equal opportunity, affirmative action, equal access employer & especially encourages applications from minorities, women & persons with disabilities.

New York University Department of Computer Science Regular Faculty Position

The department expects to have several regular faculty positions beginning in September 2003 and invites candidates at all levels. We will consider outstanding candidates in all areas; high priority areas include: bioinformatics, databases, distributed and secure systems, e-commerce, HCI, machine learning, mobile and autonomous computing, networking, and operating systems. Faculty members are expected to develop an independent first-rate research program and to participate in teaching at all levels from the undergraduate to the doctoral. The new appointees will be offered highly competitive salaries, competitive startup packages, and low-cost university housing within short walking distance of the department. New York University is located in Greenwich Village, one of the most attractive residential areas of Manhattan.

The department may also have one or more visiting positions, with appointments for either one or two semesters.

The department has 30 regular faculty members and several adjunct, clinical, research, and visiting faculty members. Current strengths of the department lie in algorithms, compilers and programming languages, computational biology, computer graphics, computer vision and image processing, cryptography and security, distributed and parallel computing, multimedia, natural language processing, scientific computing, and verification. There are specialized laboratories and research facilities for computer graphics and multimedia, computer vision, and parallel and distributed computing.

Collaborative research with industry is facilitated by the geographic proximity to the main research centers of AT&T, BellCore, IBM, Lucent, Matsushita, NEC, and Siemens.

Applications should include a resume, a statement of career objectives and key publications; junior candidates also need to have at least three letters of reference sent to the address below. Applicants are encouraged to provide a URL for a description of their activities. To guarantee full consideration, applications should be received no later than Jan. 6, 2003; however, this is not a hard deadline, as all candidates will be considered to the extent feasible, until all positions are filled.

Please send applications to:
Shanta Stroud
Faculty Search
Department of Computer Science
New York University
251 Mercer Street
New York, NY 10012-1185

New York University is an equal opportunity/affirmative action employer.

Northeastern University College of Computer and Information Science Boston, Massachusetts Faculty Position in Information Science

The College of Computer and Information Science invites applications for a tenure-track faculty position in information science beginning in Fall 2003. The position is at the Assistant Professor level, but exceptional candidates at the senior level (Associate or Full Professor) will also be considered. Although any area of information science and technology will be considered, candidates are particularly sought with research and/or teaching interests that include empirical research methods, organizational and social informatics, information systems design and development, and information security. Current areas of faculty research in information science include human-computer interaction/CSCW, databases/data mining, information retrieval, and natural language processing. A Ph.D. in information science, information systems, computer science or a related field is required.

The College has a diverse full-time faculty of 23, with approximately 675 undergraduates, 125 Masters students and 50 Ph.D. students. Located on the Avenue of the Arts in Boston's

(cont'd)

Professional Opportunities

historic Back Bay, the College takes advantage of its location to foster collaborations with other institutions in the greater Boston area. The College will be moving to a new state of the art building opposite the Museum of Fine Arts in Fall 2004.

Please send a resume, statement of research interests, and three letters of recommendation to:

Faculty Hiring Committee
College of Computer Science
161 Cullinane Hall
Northeastern University
Boston, Massachusetts 02115

Electronic submission of documents is encouraged; see <http://www.ccs.neu.edu/hiring> for details. Screening of applications begins immediately and will continue until the search is completed. For further information, send e-mail to hiring@ccs.neu.edu.

Northeastern University is an Equal Opportunity/Affirmative Action Employer. We strongly encourage applications from women and minorities.

Northeastern University College of Computer And Information Science Boston, Massachusetts Faculty Position in Computer Science

The College of Computer and Information Science invites applications for a tenure-track faculty position in computer science beginning in Fall 2003. The position is at the Assistant Professor level, but exceptional candidates at the senior level (Associate or Full Professor) will also be considered. Candidates will be considered from all major disciplines of computer science. A Ph.D. in computer science or related field is required.

The College of Computer and Information Science of Northeastern University maintains a strong research program with significant funding from the major federal research agencies and private industry. It has particular strengths in programming languages and software engineering, distributed computing, cryptography and networks, databases, and artificial intelligence.

The College has a diverse full-time faculty of 23, with approximately 675 undergraduates, 125 Masters students and 50 Ph.D. students. In addition to degrees in computer science, the College offers an innovative B.S. program in Information Science, combining traditional computer science with relevant material from business and the social sciences in an integrated program that focuses on the interaction between information, computers, and people.

Located on the Avenue of the Arts in Boston's historic Back Bay, the College takes advantage of its location to foster collaborations with other institutions in the greater Boston area. The College will be moving to a new state of the art building opposite the Museum of Fine Arts in Fall 2004.

Please send a resume, statement of research interests, and three letters of recommendation to:

Faculty Hiring Committee
College of Computer and Information Science
161 Cullinane Hall
Northeastern University
Boston, Massachusetts 02115

Electronic submission of documents is encouraged; see <http://www.ccs.neu.edu/hiring> for details. Screening of applications begins immediately and will continue until the search is completed. For further information, send e-mail to hiring@ccs.neu.edu.

Northeastern University is an Equal Opportunity/Affirmative Action Employer. We strongly encourage applications from women and minorities.

Northwestern University Department of Computer Science Faculty Openings: All Areas & All Ranks <http://www.cs.northwestern.edu>

The Computer Science Department at Northwestern University invites applications in all areas of computer science for three or more faculty positions at all professional ranks.

Northwestern has built an excellent core faculty with expertise in artificial intelligence, bioinformatics, design, distributed and parallel systems, e-commerce, educational technology, graphics, information systems, multimedia systems, robotics, and theoretical computer science. Building on these core areas and broadening to other strategic areas of computer science, we have now embarked on a campaign to attain national leadership at the forefront of computer science. We seek ambitious, energetic, and innovative candidates to join this young, dynamic, and rapidly growing department and encourage applications from qualified underrepresented minorities and women.

Successful candidates must have demonstrated commitment to teaching as well as strong abilities to pursue research. Typical teaching load is three quarter courses per year. The department will move to a new \$35 million building in 2004. Compensation and start-

up packages will be highly attractive.

Northwestern is a top-ranked and well-endowed private university. It attracts the brightest students from all fifty states and from around the world. The main campus is located on the Lake Michigan shore in Chicago's upscale north suburb of Evanston. With its combination of natural beauty, rich culture and the nation's finest school districts, this area has long been recognized as one of the most desirable places to live in the U.S.

Applicants should send a curriculum vita, statement of research and career objectives, and at least three references for junior positions and five for senior positions, by email to facultysearch@cs.northwestern.edu or by postal mail to:

Faculty Search Committee
Department of Computer Science
Northwestern University
1890 Maple Avenue
Evanston, IL 60201

For full consideration, applications should be received by January 1, 2003. Preference will be given to early applications, and interviews may start in late fall, 2002.

Further information about the Department and the University can be found at <http://www.cs.northwestern.edu> and <http://www.northwestern.edu>.

Northwestern University is an Equal Opportunity, Affirmative Action employer. Hiring is contingent upon eligibility to work in the United States.

Oakland University Department of Computer Science and Engineering Assistant/Associate Professor

The Department of Computer Science and Engineering invites applications for two tenure-track positions at the assistant/associate professor level to begin in August 2003. Applicants must have completed a Ph.D. in Computer Science, Computer Engineering, or a closely related field by the appointment date. Candidates must show exceptional promise in both research and teaching. Desired areas of interest include software engineering, database systems, networking, and VLSI design.

For full consideration, applications should be submitted by January 15, 2003. Applications will be accepted until the positions are filled. The positions are open subject to funds availability. Applicants should send a letter of intent, resume, the names of three references, copies of publications and a statement of research and teaching interests to:

Dr. Ishwar K. Sethi, Chair
Department of Computer Science and Engineering
Oakland University
Rochester, MI 48309-4478
For further information, consult www.cse.secs.oakland.edu.

OGI School of Science and Engineering at OHSU Department of Computer Science and Engineering Faculty Positions

The Department of Computer Science and Engineering invites applications for faculty positions at all ranks. The current strengths of our department include graphics and visualization, adaptive systems and machine learning, databases and data mining, networking, programming languages, software systems, human-computer interaction, spoken language systems, software engineering, control, computer architecture, image processing, and applied formal methods and verification of both hardware and software. In addition to these areas, our target areas for hiring include bioinformatics and computational biology, security, mobile and embedded systems, real-time and reactive systems, high-performance computing, vision, robotics, and sensor fusion. While these are particular areas of interest, we will consider outstanding candidates in any area of computer science and engineering.

Building on a shared commitment to excellence in graduate education and research, Oregon Graduate Institute of Science and Technology (OGI) merged with Oregon Health Sciences University (OHSU) on July 1, 2001. OGI now is the OGI School of Science and Engineering in the re-named Oregon Health & Science University (OHSU). The merger is enabling the CSE department to expand in core disciplines and establish strong interdisciplinary collaborations among researchers in information technology, health care, biomedical engineering, and environmental and biological sciences. Significant collaborations between OGI and OHSU have existed for 30 years.

The typical teaching load in CSE is two graduate-level classes per year. Faculty receive contracts of 2-5 years duration, renewable annually with satisfactory academic performance. NSF, NIH and other federal research sponsors recognize OGI faculty appointments

as being equivalent to tenured positions.

OGI is located 12 miles west of Portland, Oregon, in the heart of the Silicon Forest. Portland's thriving high-tech community, extensive cultural amenities and spectacular natural surroundings combine to make the quality of life here extraordinary. To learn more about the department, OGI, OHSU and Portland, please visit www.cse.ogi.edu.

To apply, send a brief description of your research interests, the names of at least three references, and a curriculum vitae with a list of publications to:

Chair, Recruiting Committee
Department of Computer Science and Engineering
OGI School of Science and Engineering at OHSU
20000 NW Walker Road
Beaverton, Oregon 97006
The email address for inquiries is: csdept@cse.ogi.edu.

OGI/OHSU is an Equal Opportunity/Affirmative Action employer. We particularly welcome applications from women, minorities, and individuals with disabilities.

The Ohio State University Department of Computer & Information Science Assistant, Associate and Full Professors

The Department of Computer and Information Science invites applications for several tenure-track/tenured positions. The department's focus areas are in artificial intelligence, graphics, networking, software engineering, and systems. Outstanding applicants in any of these areas will be considered, with priority given to the artificial intelligence (speech, vision, and machine learning in particular) and networking (security in particular) areas.

Appointments at all ranks will be considered. Applicants for an assistant professor position should hold or be completing a Ph.D. in computer science and engineering or a closely related field, and have a commitment to excellent research and quality teaching. Applicants for a senior position should also demonstrate a strong record of external funding and impact on their field.

The department maintains and encourages active collaborations with Ohio Supercomputer Center, Advanced Computing Center for the Arts and Design, Center for Cognitive Science, Department of Biomedical Informatics, and many other units in the university.

To apply, send a curriculum vita (including names and addresses of at least three references) and a statement of research and teaching interests, by e-mail to:

fsearch@cis.ohio-state.edu
or by mail to:
Chair, Faculty Search Committee
Department of Computer and Information Science
The Ohio State University
2015 Neil Avenue, DL395
Columbus, OH 43210-1277

Review of applications will begin immediately and will continue until the positions are filled. For additional information please see <http://www.cis.ohio-state.edu>.

The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, or individuals with disabilities are encouraged to apply.

Ohio University School of Electrical Engineering and Computer Science Faculty Position in Computer Science

The School of Electrical Engineering and Computer Science (EECS) of the Russ College of Engineering and Technology at Ohio University anticipates hiring one tenure-track assistant professor in Computer Science. Qualified applicants in all areas of Computer Science are encouraged to apply, but special consideration will be given to candidates in operating systems, distributed systems, computer networking, security, and databases. At the undergraduate level, the school offers an ABET accredited BSCS degree in Computer Science as well as ABET accredited BSEE degrees in both traditional Electrical Engineering and a Computer Engineering track. Graduate students in Computer Science can pursue an MS in Computer Science or a PhD degree in Electrical Engineering with Computer Science concentration.

The School of EECS has been in existence since the late 1800's and currently has an authorized staffing of 31 tenure-track faculty serving approximately 700 undergraduate and graduate students. The school has access to the Stocker Endowment, which generates over \$600,000 per year of usable income for supporting research and graduate education. Sponsored research expenditures in the school are over \$8M per year. Additional information on our programs, faculty, and facilities is available at <http://webeecs.ent.ohiou.edu>.

All faculty are expected to participate in

graduate and undergraduate teaching and in obtaining and participating in sponsored research. Applicants must have a PhD or equivalent in Computer Science. Salary considerations will be based on qualifications; the school provides nationally competitive compensation.

Applications will be accepted until the positions are filled; however, on-campus interviews of candidates will begin in March 2003. Send a vita including a statement of research and teaching objectives and the names of at least three references to:

Dr. Douglas Lawrence, Interim Chair
School of Electrical Engineering and Computer Science
Stocker Center
Ohio University
Athens, OH 45701-2979
dal@homer.ece.ohiou.edu
Ohio University is an equal opportunity and affirmative action employer.

The Pennsylvania State University Department of Computer Science and Engineering Faculty Position Vacancies

Applications are invited for several tenure-track faculty positions at all ranks. Outstanding candidates in all areas of computer science and engineering will be considered. Areas of particular focus are Bioinformatics, Computer Vision and Robotics, Database & Multimedia Systems, Distributed Systems, Embedded Systems, Internet and Ubiquitous Computing, Networking, Security, VLSI including Analog and Mixed-Mode Circuits. Additional coordinated hiring with the School of Information Sciences and Technology (IST) and the Department of Electrical Engineering is possible. The Department of Computer Science and Engineering (CSE) has 24 collegial, tenure-track faculty and the university is committed to growing the faculty ranks over the next several years. Eight members of our faculty are recipients of the NSF Career Award.

Our faculty also received 7 NSF ITR Grants and a \$2.5M Research Infrastructure Grant in recent years. There are state-of-the-art research labs in areas including microsystems design and VLSI, computer vision and robotics, virtual environments, high performance computing and bioinformatics and a major networking lab is being built. The Department offers a graduate program with about 90 Masters students and 90 Ph.D. students and enrollment controlled undergraduate programs in computer science and computer engineering. By Fall 2003, the Department will move into a new 100,000 square feet building housing both CSE and IST (<http://www.cse.psu.edu/ist.html>).

Penn State is a major research university and is ranked second in the nation in industry-sponsored research among universities. US News and World Report consistently ranks PSU's College of Engineering undergraduate and graduate programs in the top 15 of the nation. The university is located in the beautiful college town on State College, a town of about 40,000 inhabitants in the center of Pennsylvania with a variety of outdoor recreational activities nearby. The university offers outstanding events from collegiate sporting events to fine arts productions. Many major population centers on the east coast (New York, Philadelphia, Pittsburgh, Washington D.C., Baltimore) are only a few hours drive away and convenient air services to several major hubs are operated by three major airlines out of State College.

Applicants should hold a Ph.D. in computer science, computer engineering, or a closely related field and should be committed to excellence in both research and teaching. Support will be provided to the successful applicants for establishing their research programs. We encourage dual career couples to apply. Applications should be received by January 31, 2003 to receive full consideration. To apply by electronic mail, send your resume (including curriculum vitae and the names and addresses of at least three people willing to write a letter of recommendation) as a post-script file or pdf file to recruiting@cse.psu.edu or by post to:

Chair, Faculty Search Committee
The Pennsylvania State University
Department of Computer Science and Engineering
220 Pond Laboratory
Box CRN
University Park
PA 16802-6106 USA

For more information about the Department of CSE at PSU, see <http://www.cse.psu.edu>.

PSU is an Equal Opportunity / Affirmative Action Employer. Women and minorities are encouraged to apply.

Click on the link to fill out and print an Affirmative Action Applicant Data Card. NOTE: This will require you to have Adobe Acrobat Reader 4.0 or better to download this

Professional Opportunities

form and fill it in prior to printing it. This form can then be faxed to Nancy Clark at (814) 865-3176.

The Pennsylvania State University School of Information Sciences and Technology University Park Campus

The School of Information Sciences and Technology (IST) at The Pennsylvania State University invites applications for the Ed Frymoyer Chair in Information Sciences and Technology. Anticipated starting date is August 2003.

The chair will have the opportunity to provide leadership and contribute significantly to the culture and research agenda of this exciting new school and its programs. The School opened in fall 1999 as a new academic unit with college status within the University. It currently has 22 tenured and tenure-track faculty who have been awarded over \$7.6 million in public and private research funding over the last two years. The school's baccalaureate program has approximately 800 students, its Ph.D. program has 25 students, and a masters of science program is slated to begin in fall 2003. Planned growths in all these areas, as well as the addition of a professional master degree, are scheduled over the next three years. A new 180,000 ft, state-of-the art building is under construction and will open in fall 2003. This building will showcase the School and stand as a symbol of the University's commitment to the information sciences and related technologies. The Department of Computer Science and Engineering from the College of Engineering will also occupy the building.

IST is an interdisciplinary school with a focus on research and education that emphasizes theoretical and applied perspectives of how information technology impacts and is impacted by virtually any setting. The faculty's research is grounded by the information, computer, behavioral, and social sciences; integrates concepts and theories of people, information, and technology; and spans across both multiple domains and levels of analysis.

The School's educational mission is to provide students with an understanding of the multidisciplinary principles that govern the creation, organization, application, and structure of information, as well as the issues associated with the application of information technologies. IST enjoys a strong commitment from School and University-level administration for faculty to engage in interdisciplinary research, innovative teaching, and collaborative scholarship across other programs at the University and beyond.

The chair candidate is expected to be, and continue to be, a world-class scholar who has a rich appreciation for, and a willingness to build connectivity across, research issues of information and related technologies from multiple disciplinary bases. The candidate is also expected to be a strong mentor who enjoys working with other faculty and graduate students. They should have an interest in, and commitment to, teaching (primarily at the graduate level). For more about IST go to ist.psu.edu.

For more about Penn State, please go to www.psu.edu. Screening of candidates will begin immediately and will continue until the

chair position is filled. Applications should include cover letter, full curriculum vitae, a one page statement of professional interests, and a separate listing of five references that includes their names, addresses, phone/e-mail addresses and be submitted either through e-mail to recruit@ist.psu.edu or through postal mail to:

Chairperson, IST Chair Search Committee
School of Information Sciences and Technology
001 Thomas Building - Box
The Pennsylvania State University
University Park, PA 16802
Penn State is committed to affirmative action, equal opportunity and the diversity of its workforce.

Pomona College

Visiting assistant professor, 3-year non-tenure-track, starting 7/03. Requirements: Ph.D. in computer science (ABD considered), excellence in teaching wide range of courses, ability to teach ethnically diverse student body, and active research agenda.

Send CV; 3 letters of recommendation (at least one on teaching); statement of teaching philosophy; and description, written for the non-specialist, of research accomplishments and plans to

Search Committee
Computer Science Program
Pomona College
610 North College Avenue
Claremont, CA 91711-6348
or by email to search@cs.pomona.edu (plain text preferred).

Applications completed by 2/17/03 will receive full consideration.

Pomona College is an equal opportunity employer and especially invites applications from women and under-represented groups. More information: www.cs.pomona.edu

Princeton University Department of Computer Science Assistant Professor, Tenure-Track positions

The Department of Computer Science at Princeton University invites application for Assistant Professor, tenure-track positions. We are entertaining applications in all areas of Computer Science. Candidates for more senior ranks with exceptional records of research will also be considered. Applicants must demonstrate superior research ability. A Ph.D. or equivalent in Computer Science or related areas is required.

Successful candidates at all ranks are expected to pursue an active research program and to contribute significantly to the teaching programs of the department. Applicants should include a resume and the names of at least three people who can comment on the applicant's professional qualifications. Applications should be sent to:

Chair, Search Committee
Dept. of Computer Science
Princeton University
35 Olden Street
Princeton, NJ 08544-2087
E-mail search@cs.princeton.edu

The committee will begin to consider application in January 2003. Princeton University is Equal Opportunity/Affirmative Action employer.

Purdue University Department of Computer Sciences Tenure-Track Positions

The Department of Computer Sciences at Purdue University invites applications for tenure-track positions beginning August 2003. Positions are available at the assistant professor level; senior positions will be considered for highly qualified applicants. Applications from outstanding candidates in all areas of computer science will be considered. Areas of particular interest include security, mobile and wireless systems, scientific computing and computational biology, and software engineering.

The Department of Computer Sciences offers a stimulating and nurturing academic environment. Thirty-six faculty members have research programs in analysis of algorithms, bioinformatics, compilers, databases, distributed and parallel computing, geometric modeling and scientific visualization, graphics, information security, networking and operating systems, programming languages, scientific computing, and software engineering. The department implements a strategic plan for future growth which is strongly supported by the higher administration. This plan includes a new building expected to be operational in 2005 to accommodate the significant growth in faculty size. Further information about the department is available at <http://www.cs.purdue.edu>.

Applicants should hold a Ph.D. in Computer Science, or a closely related discipline, and should be committed to excellence in teaching and have demonstrated strong potential for excellence in research. Salary and benefits are highly competitive. Special departmental and university initiatives are available for junior faculty. Applicants can apply electronically by sending a curriculum vitae, a statement of career objectives, and names and contact information of at least three references as a postscript or .pdf file to fac-search@cs.purdue.edu. Alternatively, applicants can send hard copies of their application to:

Chair, Faculty Search Committee
Department of Computer Sciences
Purdue University
West Lafayette, IN 47907-1398

Applications are being accepted now and will be considered until the positions are filled. Any inquiries should be sent to fac-search@cs.purdue.edu.

Purdue University is an Equal Opportunity/Affirmative Action employer. Women and minorities are especially encouraged to apply.

Rochester Institute of Technology Computer Science Department

The Computer Science Department at Rochester Institute of Technology has an open visiting faculty position, and expects to have additional visiting and tenure-track faculty positions (pending approval of funding) beginning September 2003. The Department is currently accepting applications and interviewing candidates for these positions. The Department offers an MS and a CSAB-accredited BS degree in Computer Science.

Applicants in any field of Computer Science will be considered. While a Ph.D. in Computer Science or a related field is preferred, a Masters degree in Computer Science with relevant industrial experience is acceptable. Teaching experience is highly desirable. An important goal of the College and the Institute is achieving diversity in the student body, faculty, staff, and administration. Applications from minorities, women, and other under-represented groups are especially encouraged.

For complete details and submission instructions, please see: <http://www.cs.rit.edu/deptInfo/facPos.html>

MIT is an equal opportunity, affirmative action employer.

Roosevelt University, Chicago The School of Computer Science and Telecommunications Assistant or Associate Professor of Computer Science and Telecommunications

Applications are invited for a tenure-track faculty position at the Assistant or Associate Professor level starting Fall, 2003. Ph.D. in Computer Science, Telecommunications or closely related field preferred. Areas of expertise desired: network engineering and design, data communications, or network management. Teaching load includes lab courses.

Associate Professor candidates are expected to have excellent teaching records and outstanding research accomplishments. Assistant Professor candidates must show ability and commitment to teaching and research potential. Applications, including CV, cover letter, and list of references should be submitted electronically to the search committee chairperson Dr. Alex Wolpert cst@roosevelt.edu

Women and minorities are especially encouraged to apply.

<http://cs.roosevelt.edu/jobs>. EOE.

Ryerson University The Electrical & Computer Engineering Department

Tenure-Track Faculty Positions

Tenure-Track Faculty Positions in the Area of Software engineering, Computer architecture, and Embedded systems: The Electrical & Computer Engineering Department, Ryerson University, Toronto, Canada, invites applications for three positions commencing August 2003. Details and requirements of the positions can be found at website: <http://www.ee.ryerson.ca/positions.html>.

Application review will begin immediately and continue until the positions are filled.

Saint Xavier University Computer Science Department

Saint Xavier University, a coeducational, liberal arts university, is seeking candidates for two tenure-track positions in its Computer Science Department starting January 2003. The successful candidate must have a serious commitment to teaching and curriculum development at the undergraduate and graduate levels of computer science education, and a well-documented history of teaching effectiveness. This position involves the teaching of courses at the introductory, core, and advanced undergraduate levels of our Computer Science and Computer Studies programs, and at the graduate level in our Master of Science in Applied Computer Science in Internet Information Systems program. Other responsibilities include student advising and recruiting, scholarship, and committee and departmental tasks. Applicants must possess a doctorate (ABD considered) in Computer Science or a related field.

Applications, including a letter of interest, curriculum vita, graduate transcript, statement of his or her teaching philosophy, documentation of his or her teaching effectiveness, and two letters of recommendation should be submitted to:

Dr. Florence Appel
Department of Mathematics and Computer Science
Saint Xavier University
3700 W. 103rd St.
Chicago, Illinois 60655

Simon Fraser University

The School of Computing Science at Simon Fraser University in Greater Vancouver invites applications for several tenure-track positions at the Assistant Professor level.

Outstanding candidates at more senior levels will be considered as well. A Ph.D. in Computing Science or equivalent is required, with a strong commitment to excellence in research and teaching. Candidates at the more senior levels should have a strong record of publication, research funding, and student supervision and instruction. Preference will be given to candidates in systems-oriented areas, human computer interaction or interdisciplinary areas such as bioinformatics. However, the overall innovation and promise of the candidate's work will be considered as important as any specific area.

Simon Fraser University is consistently one of the top-ranked, publicly-funded universities in Canada. The School of Computing Science currently has over 150 Ph.D. and M.Sc. students, 700 undergraduate majors, and 40 faculty members. The School is at the outset of a phase of strong growth. As part of the "Doubling the Opportunities" program of the government, both the number of faculty and students shall be significantly increased within the next four years. The School of Computing Science highly encourages interdisciplinary research building upon the strengths of Simon Fraser University.

Simon Fraser University is situated on Burnaby Mountain in Greater Vancouver. Vancouver thrives as a scenic waterfront city located just minutes away from the mountains and a wide range of outdoor activities. It has the mildest climate in Canada. Vancouver's cultural and intellectual pursuits, leisure opportunities, favorable climate, and clean and safe environment are consistently cited as quality of life factors that make it one of the most desirable places in the world to live and work.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Simon Fraser University is committed to employment equity and encourages applications from all qualified women and men, including visible minorities, aboriginal people and persons with disabilities. Applications will be accepted until the positions are filled. For updated information see www.cs.sfu.ca.

To apply, send a curriculum vitae, evidence of research productivity, and the names, addresses and phone numbers of three referees to:

(cont'd)

University of Massachusetts Boston

Alton J. Brann Distinguished Professorship

The Alton J. Brann Distinguished Professorship is a chaired tenured position in the College of Arts & Sciences. It carries endowed support and is to be filled by a distinguished scientist who will influence and enhance our computational science programs. Initial appointment will be at the professor level, although if a suitable junior candidate is selected it will be at the associate professor level.

We are seeking a scientist who is actively involved in computational science and who has an interdisciplinary research program in such areas as bioinformatics, ecoinformatics, computational molecular biology, ecosystems modeling, computational physics, or computer engineering. The applicant's established research area will complement and build on existing strengths, and offer an opportunity to develop an active program around the chaired position that would support post doctoral fellows, visiting scientists, industry practitioners, and additional research activities. Candidates are expected to have a distinguished research publication record and significant record of external grant support. The candidate will have a primary appointment in one of the doctoral granting departments with a joint appointment, if appropriate, in one of the other science departments.

The successful candidate will be expected to:

- Add to the existing strengths in the Sciences and increase UMass Boston's visibility both nationally and internationally in a way that attracts other scholars to our campus.
- Have an established or emerging national and international reputation in computational science.
- Develop an active research agenda at this campus, initiating and engaging in collaborative and interdisciplinary programs.
- Obtain substantial external research support.

Review of applications will begin in January 2003 and continue until the position is filled. Please send a cover letter, curriculum vitae, and names, addresses and telephone numbers of three references to **Chair, Alton Brann Professorship Search Committee, University of Massachusetts Boston, Office of Human Resources, Search #610, 100 Morrissey Blvd., Boston, MA 02125-3393.**

An Affirmative Action, Equal Opportunity, Title IX employer.



University of
Massachusetts
Boston
UMASS www.umb.edu

Professional Opportunities

Faculty Search
School of Computing Science
Simon Fraser University
Burnaby, British Columbia
Canada V5A 1S6
email: faculty-search@cs.sfu.ca

Stony Brook University Computer Science Computer Science Faculty Positions (Tenure-Track)

Stony Brook University's Computer Science Department has several tenure-track faculty positions for Fall 2003. We are particularly interested in receiving applications from junior candidates in experimental computer systems, specifically in wireless/mobile computing, security, and computer-human interaction. The Department currently has 41 faculty members and is expected to recruit additional members in the next few years. There are five main active research areas in the department: graphics/visualization, logic programming/database, concurrency/verification, computer systems, and algorithms. Detailed information on the research activities of these groups can be found in the department home page: www.cs.sunysb.edu.

The Department is in a stage of significant expansion, including a new Computer Science building, along with a new New York State Center of Excellence in Wireless Internet and Information Technology. The Department is also associated with the Center for Data-intensive Computing at the neighboring Brookhaven National Laboratory. Stony Brook enjoys close proximity to both New York City and Long Island's majestic ocean beaches. Its school districts are highly ranked nationally. Opportunities for industrial collaborations abound with many high-profile IT companies close by. Moreover, the Computer Science Department offers a congenial working environment.

Applicants should have a Ph.D. in Computer Science or a related discipline. Review of applications will begin soon and will continue until the positions are filled. Please send a detailed resume, the names of at least three references, and three publications to:

Chair of Faculty Recruiting Committee
Computer Science Department
Stony Brook University
Stony Brook, NY 11794-4400

Please arrange to have at least three reference letters sent to the same address, or letters may also be sent to recruit@cs.sunysb.edu. In addition, please e-mail to the same address a URL pointing to your online resume and publications.

AA/EOE. Applications from women and minorities are particularly sought. For information about this position and other job opportunities see www.stonybrook.edu/cjo.

Texas A&M University Department of Computer Science Faculty Search

Applications are invited for several tenure-track faculty positions. The Computer Science Department has strong activities in both Computer Science and Computer Engineering. Outstanding candidates at all levels and from all areas of specialization in both Computer Science and Computer Engineering will be considered.

Texas A&M University has long enjoyed national leadership status in engineering education. Today, the Dwight Look College of Engineering is one of the largest and best endowed in the nation, and it ranks among the top institutions in every significant national poll.

The Department of Computer Science is one of the fastest-developing departments in the College. In recent years, it has built a strong national reputation based on the quality of its faculty and programs. The Department offers B.S., Master's and Ph. D. degrees in Computer Science and Computer Engineering. Currently we have 31 tenured and tenure-track faculty, including eight NSF PYI/NYI/CAREER award recipients. Most major areas of computer science and engineering research are included among the research interests of our current faculty. More information is available on the Web at <http://www.cs.tamu.edu>.

Candidates should have a Ph. D. in Computer Science or Computer Engineering or a closely related field, a strong commitment to both research and teaching, and demonstrated ability to perform research and acquire external funding appropriate to the rank being sought. The department welcomes applications from academic couples seeking to co-locate. Applications from minority and women candidates are especially encouraged. Texas A&M University is an affirmative action/equal opportunity employer committed to diversity.

Applicants should send a statement of research and teaching interest, a complete resume, and have at least three references send letters of recommendation by email to faculty_search@cs.tamu.edu or by hard copy to:

Faculty Search Committee
Department of Computer Science
Texas A&M University
College Station, TX 77843-3112
Applications will be accepted until the positions are filled.

Tulane University Faculty Positions in Electrical Engineering and Computer Science

The Department of Electrical Engineering and Computer Science invites applications for at least two tenure-track faculty positions in Electrical Engineering, Computer Engineering, or Computer Science starting in Fall 2003. Candidates should have a Ph.D. in Electrical Engineering, Computer Engineering, or Computer Science, a strong commitment to both research and teaching, a publication record in their area, and demonstrate potential for obtaining external research funding. Outstanding candidates at all levels and from all areas of expertise especially with research interests in nanotechnology and bioinformatics will be considered.

Applicants should send a letter of intent, a statement of research and teaching interests, a resume, and the names of at least three references including the reference's address, e-mail, telephone, and fax number to:

Dr. Paul F. Duvoisin
Search Committee Chair
Department of Electrical Engineering and
Computer Science
Tulane University
New Orleans, LA 70118

Applications will be accepted until the positions are filled. Tulane University is an equal opportunity/affirmative action employer.

University at Buffalo, The State University of New York Faculty Positions in Computer Science and Engineering

The Department of Computer Science and Engineering (CSE) has faculty openings at all levels. Excellent candidates in all areas of CSE will be considered, but we solicit applicants in systems and applied areas, especially biometrics and bioinformatics, high-performance computing, multimedia, databases, networks, and security.

CSE faculty are affiliated with the Center for Computational Research, which has recently been rated as the leading academic high-performance computing center worldwide, the Center of Excellence in Document Analysis and Recognition, the Center of Excellence in Bioinformatics, the NSA Center of Excellence for Information Assurance, the National Center for Geographic Information and Analysis, and the Center for Cognitive Science. The faculty include AAAI, ACM, and IEEE Fellows as well as NSF Career and ITR awardees. The average research funding in the past three years is approximately \$6 million, with over \$9 million funding in the last year.

Junior candidates are expected to have a Ph.D. in Computer Science/Engineering or related field by August 2003, and must demonstrate evidence of potential for publishing and developing a successful externally funded research program. Senior candidates are expected to have an excellent record of publication and funded research as well as international stature and recognition commensurate with rank.

All applications should include a cover letter, curriculum vitae, and the names of at least three references (applicants for senior positions should have five references). In addition, all applicants should have letters of reference sent. The due date for applications and letters of reference is January 3, 2003. Address applications and letters to:

Chair, Faculty Search Committee
Department of Computer Science and
Engineering
201 Bell Hall
University at Buffalo
Buffalo, NY 14260-2000
Email: cse-search@cse.buffalo.edu

The University at Buffalo is New York's largest and most comprehensive public university. As the second largest city in New York state, Buffalo is the hub of a metropolitan area with a population over 1.1 million. University life is enriched by scenic, recreational, and cultural opportunities in the city, suburbs, and the neighboring Niagara and Metro Toronto regions. For more information, please visit our website, <http://www.cse.buffalo.edu>.

The University at Buffalo is an Equal Opportunity Employer/Recruiter.

University of Alberta Faculty of Science

The University of Alberta invites applications and nominations for the position of Dean of the Faculty of Science.

The University of Alberta has a clear vision, shared by the Faculty of Science: to be indisputably recognized, nationally and internationally, as one of Canada's finest universities and among a handful of the world's best. The University plays an integral role in the

educational, business and cultural life of Alberta through the impact of its integrated mandate of teaching, research and community service. In excess of 4,500 courses are offered in 16 Faculties at the University of Alberta where more than 33,000 students are enrolled.

The Faculty of Science consists of approximately 300 full-time faculty members and 250 support staff in seven Departments that offer B.Sc., M.Sc. and Doctoral programs. The Departments are Biological Sciences, Chemistry, Computing Science, Earth and Atmospheric Sciences, Mathematical and Statistical Sciences, Physics and Psychology. In addition to offering undergraduate programs to over 6,000 full-time students, the academic staff members are actively involved in graduate instruction and research. Research activities generate approximately \$55 million in grant and contract support. Further information may be obtained from the World Wide Web at <http://www.ualberta.ca/SCIENCE>

The Dean is responsible to the Provost and Vice-President (Academic) for the supervision and administration of the academic programs, budget, and all activities of the Faculty. Candidates should have proven administrative ability, well-developed leadership skills and strong academic qualifications in a field of research that enhances the activities of the Faculty.

The appointment will take effect on July 1, 2003 or as soon as possible thereafter.

Written nominations or applications, accompanied in the latter case by a resume of qualifications and experience, and the names of three referees should be submitted by December 15, 2002 to:

Dr. D.R. Owrarn
Provost and Vice-President (Academic)
2-10 University Hall
University of Alberta
Edmonton, Alberta, Canada T6G 2J9
E-mail: provost@ualberta.ca

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. The University of Alberta hires on the basis of merit. We are committed to the principle of equity in employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities, and Aboriginal persons.

University of Arizona Tenure-Track

Applications invited for a tenure-track Assistant Professor position in the Depts. of Linguistics and Computer Science beginning Aug., 2003. Ph.D. required in Linguistics, Computer Science or related field. Strong commitment to excellence in teaching, and a demonstrated strong potential in research. Primary consideration will be given to specialists in human language and speech technology, natural language processing, and artificial intelligence.

The tenure home will be the Dept. of Linguistics, but part of the responsibility will be to the Dept. of Computer Science. In Linguistics, he/she will be expected to contribute to the development of a Professional Master of Science degree program in Human Language Technology.

Required: Cover letter, Curriculum Vitae and the names of at least three references to:

D. Terence Langendoen
Chair of HLT Rec. Committee
Dept. of Linguistics
PO Box 210028
Tucson, AZ 85721-0028

Review will begin on Feb. 3, 2003, until the position is filled, subject to availability of funds. The University of Arizona is an EEO/AA employer -M/W/D/V.

Consult <http://www.hr.arizona.edu/25255xfacx.htm> for the official job announcement; ref # and salary range.

University of California, Berkeley

The University of California, Berkeley invites applications for tenure-track positions in Computer Science at the Assistant Professor level beginning in Fall Semester 2003 (appointment subject to budgetary approval).

Applicants should have received (or be about to receive) a doctoral degree in Computer Science, EECS, or Computer Engineering, or a related field. A principal requirement is demonstrated excellence in research. In addition, potential for excellence in teaching and leadership are important requirements. Successful applicants will be expected to establish a quality research program and to teach both graduate and undergraduate courses in their general area of specialty.

Interested persons should send an application consisting of a resume, a one- to two-page statement of their future research and teaching interests/plans, a select subset of publications, and the names of three references you have asked to send in recommendations. We will not consider applications received after March

1, 2003. However, review of completed applications will begin December 13, 2002.

Recommendation writers should send letters directly to the same address, to arrive before January 1, 2003 if possible. Reference letters will NOT be requested directly by the department.

Applications should be sent to:
CS Faculty Search Committee
c/o Debra Zaller, CS Academic Personnel
Department of Electrical Engineering and
Computer Sciences
University of California, Berkeley
381 Soda Hall
Berkeley, CA 94720-1776

The University of California is an Equal Opportunity, Affirmative Action Employer.

University of California, Berkeley School of Information Management and Systems Dean

The University of California at Berkeley invites applications or nominations for the position of Dean of the School of Information Management and Systems (SIMS).

This multidisciplinary school was established at Berkeley seven years ago. The mission of SIMS is to advance the understanding of the organization, management and use of information and information technology, and the impact of information on individuals and institutions. The School has a technical component addressing the design of information systems and a social sciences component concerned with the need of the people who create and use organized information. More information about the school can be found at <http://www.sims.berkeley.edu>.

Our search is for someone with an outstanding record of achievement in research of the stature commensurate with appointment to full professorship at the University. We also seek someone with strong interdisciplinary interests who is comfortable dealing with both technology and social science, who can interact productively with faculty, university administrators, private sector constituents, and the broader community which the University serves.

Applications should include curriculum vitae, a bibliography, a brief description of research, management accomplishments or other interests, as well as three references which include email addresses. Applications or nominations should be postmarked no later than February 1, 2003 and sent to:

Chair, SIMS Dean Search Committee
University of California, Berkeley
Office of the Vice Provost
200 California Hall
Berkeley, CA 94720-1500

The University of California, Berkeley is an Equal Opportunity and Affirmative Action Employer.

University of California, Los Angeles Department of Computer Science Tenure-Track Positions

The Department of Computer Science in the Henry Samueli School of Engineering and Applied Science at the University of California, Los Angeles, invites applications for tenure-track positions in all areas of Computer Science and Computer Engineering. Applications are also strongly encouraged from distinguished candidates at senior levels. The UCLA Campus administration is committed to significant growth in the faculty of Computer Science Department, with a projection of 3-4 new faculty members per year for the next five years.

Quality is our key criterion for applicant selection. Applicants should have a strong commitment to both research and teaching and an outstanding record of research for their level. We seek applicants in any mainstream area of Computer Science and Computer Engineering, but we particularly welcome those with a strength in systems, networking, compilers, theory, and in interdisciplinary areas such as bioinformatics and electronic commerce.

To apply, please visit <http://www.cs.ucla.edu/recruit>. Faculty applications received by January 15 will be given full consideration.

The University of California is an Equal Opportunity/Affirmative Action Employer.

University of California, Santa Barbara Department of Computer Science Faculty Positions

The University of California Santa Barbara invites applications for faculty positions in Computer Science and Computer Engineering.

The Department of Computer Science currently has 25 full-time faculty and approximately 180 graduate students (including approximately 90 Ph.D. students) involved in various research areas including digital libraries and databases, parallel and distributed systems, programming languages, networking, computer and network security, theory of computation,

Professional Opportunities

algorithms, computer vision, human-computer interaction, and computational science.

The Department of Computer Science is part of an expanding College of Engineering, which encompasses over 100 faculty in various engineering disciplines. UCSB is a major research institution, elected member of the Association of American Universities, as well as an integral part of the nine-campus University of California system. Graduate degrees in Computer Science are offered at the M.S. and Ph.D. levels. The Department and the College feature a highly collaborative and stimulating working environment. Department faculty lead numerous NSF ITR projects, and have recently been awarded two NSF IGERT grants for interdisciplinary graduate education and research, in computational science and engineering and in interactive digital multimedia. The total amount of 2001-02 extramural funding in the department was more than 6.8 million dollars.

Applicants should hold a doctoral degree in Computer Science or a related field; appointments are scheduled to begin in 2003-2004. Primary consideration will be given to candidates who apply by January 15, 2003, however positions will remain open until filled. Send resume, research and teaching statements, and names and addresses of at least four referees to:

Recruitment Committee
Department of Computer Science
University of California
Santa Barbara, CA 93106-5110

To apply by electronic mail, send the application to: recruit@cs.ucsb.edu. Additional information about the Computer Science Department may be found at <http://www.cs.ucsb.edu>.

The department is especially interested in candidates who can contribute to the diversity and excellence of the academic community through research, teaching, and service. An EO/AA employer.

The University of Chicago Department of Computer Science

The Department of Computer Science at the University of Chicago is recruiting at all levels in a wide range of topic areas, including but not limited to AI, bioinformatics, computational linguistics, security, systems, and theory.

The University of Chicago has the highest standards for scholarship and faculty quality and the Computer Department's charge and goal is substantial growth through appointments that will enhance the quality and prestige of our University. We especially value faculty whose research has impact and visibility beyond Computer Science.

The University and Argonne National Laboratory established the Computation Institute to facilitate such interdisciplinary research. The Chicago Metropolitan area is diverse and exciting. The local economy is vigorous, with international stature in banking, trade, commerce, manufacturing, and transportation, while the cultural scene can boast diverse cultures, vibrant theater, world renowned symphony, opera, jazz, and blues, not to mention the best pizza in the world.

Please send applications and letters of recommendation to:

Professor Stuart A. Kurtz, Chairman
Department of Computer Science
The University of Chicago
1100 E. 58th Street, Ryerson Hall
Chicago, IL 60637-1581

The University of Chicago is an Equal Opportunity/Affirmative Action Employer and encourages applications from under-represented minorities and women.

University of Cincinnati Leadership Position Announcement Head, Department of Electrical & Computer Engineering and Computer Science, College of Engineering

The College of Engineering of the University of Cincinnati invites nominations and applications for the position of Head of the Department of Electrical & Computer Engineering and Computer Science (ECECS). The Head is expected to have a strong commitment to advancing research and education, to lead the development of innovative programs, especially joint ventures with other academic units, to encourage integrative efforts within ECECS, and to foster and strengthen entrepreneurial and academic partnerships with industry. Qualifications for the Head position include an earned doctoral degree in electrical engineering, computer engineering, computer science, or a closely related field; a distinguished record in research and education; a clear vision for the disciplines; and established leadership and interpersonal skills.

The ECECS Department offers undergraduate and M.S. programs in Electrical Engineering, Computer Engineering, and Computer Science, and offers the Ph.D. in Electrical Engineering and in Computer Science & Engineering. The Department has 46 full-time faculty, 350 full-time graduate stu-

dents and 500 undergraduate students, and awards approximately 65 M.S. and 20 Ph.D. degrees per year. Annual research and education programs are supported by extramural funding of approximately \$7M. The Department has well-equipped research and teaching laboratories and occupies 45,000 square feet of space including research laboratory space in a new Engineering Research Center. Additional information is available at the departmental web site: <http://www.ececs.uc.edu>.

The College is renowned as the home of co-operative education, which remains the hallmark of our programs, providing professional experience for all undergraduate students in 1000 companies in the US, Germany, and Japan. Building on this foundation, we are integrating distance learning during co-op terms to create a variety of unique five-year combined BS/MS programs. The University is completing a major building campaign designed to make it one of the finest urban settings in American higher education. A compact campus permits easy access to all resources, including the College of Medicine, with which we share a new Department of Biomedical Engineering.

The University of Cincinnati is a state-supported, comprehensive Research I institution with an endowment of \$900 million, the tenth largest among public institutions in the nation. Cincinnati has been identified as one of the most livable cities in America in a tristate metropolitan area of 1.8 million, with excellent cultural and entertainment opportunities, and a moderate cost of living combined with a wealth of housing options. Curricula vitae and/or nominations should be sent electronically (preferably in pdf format) to Dr. Roy Eckart (roy.eckart@uc.edu).

The position will remain open until filled, but review of applications will begin December 1, 2002.

The University of Cincinnati is an Affirmative Action/Equal Opportunity employer and encourages applications from women and minorities.

University of Colorado at Colorado Springs

The University of Colorado at Colorado Springs seeks a renowned scholar in Computer Science, preferably in the areas of software engineering or computer communications and networks. This position is endowed by El Pomar Foundation, one of the largest private foundations in the west. El Pomar Foundation creates opportunities for Colorado's future through proactive philanthropy and innovative partnerships.

This position offers a unique opportunity for a candidate to have two related leadership roles. Twenty-five percent of the El Pomar Professor's time will be devoted to bringing technical expertise to CITTI, the University affiliated Colorado Institute for Technology Transfer and Implementation. The remaining seventy-five percent of the El Pomar Professor's time will be as a faculty member with the Computer Science Department. Click <http://www.cs.uccs.edu/~cdash/epp/long.htm> to see a full description of the position.

Candidates must have the qualifications, experience, and professional stature appropriate for the academic rank of professor of computer science and a demonstrated commitment to excellence in research and teaching. Applicants should send a letter describing qualifications and experiences, curriculum vitae, and contact information for five references. Salary and other support costs are negotiable.

Applications and nominations should be directed to the:
El Pomar Professor Search Committee
Department of Computer Science
University of Colorado at Colorado Springs
P.O. Box 7150
Colorado Springs, CO 80933

Applications for this position may be sent electronically to a confidential e-mail address, elpomarsearch@cs.uccs.edu.

Applications will be reviewed beginning February 1, 2003 and continue until the position is filled.

The University of Colorado is an Affirmative Action/Equal Opportunity employer and encourages a diversity of applicants.

University of Delaware Computer and Information Sciences Faculty Positions

Applications are invited for multiple tenure-track Assistant Professor positions to begin Fall 2003. Outstanding candidates for senior level positions are also encouraged to apply. Of primary interest are candidates whose research is in networks, systems, security, software engineering, graphics and visualization, speech processing, data mining, or databases. Applicants should hold a Ph.D. or its equivalent, and should be committed to excellence in research and teaching. The normal teaching load is three courses per year.

The Department has 17 tenure-track and 2 research faculty members, with a substantial portion of our 100 graduate students pursuing the Ph.D. We have significant external funding, including NSF Career and ITR Awards, a \$2.2M grant in Communications and Networks that is part of the Army Research Lab's Collaborative Technology Alliance, and an NSF CISE Research Infrastructure Grant for parallel and distributed computing. A major UDel biotechnology initiative (<http://www.dbi.udel.edu>) offers opportunities for collaborative research in bioinformatics.

The University of Delaware is centrally located between Philadelphia and Baltimore, with major government and industrial labs nearby. Considerable information about the Department is available at <http://www.cis.udel.edu>. To apply, please mail a curriculum vitae to

Professor Errol Lloyd
Chair of the Faculty Search Committee
Department of Computer and Information Sciences
University of Delaware
Newark, DE 19716

In addition, candidates should have three confidential letters of reference sent directly to either (but not both) the above address or csfacsch@cis.udel.edu. The CV and letters of reference shall be shared with departmental faculty. Applications will be accepted until the positions are filled; those received by February 1, 2003 are assured full consideration. Qualified minority group members and women are encouraged to apply.

The University of Delaware is an equal opportunity employer.

University of Florida Computer and Information Science and Engineering

Assistant/Associate/Full Professor
The Department of Computer and Information Science and Engineering at the University of Florida invites applications for several tenure-track positions at all ranks beginning January 2002 or anytime thereafter. While applications in all areas of computer science and engineering are welcome, we are particularly interested in outstanding candidates with expertise in the following fields: systems and architecture, digital arts, bioinformatics and biocomputing, computer graphics and visualization, computer networks, computer algorithms, database and information systems, human-computer interaction, augmented reality, intelligent interfaces and nanotechnology.

All applicants should hold a PhD in Computer Science, Computer Engineering, or a closely related discipline, and should be committed to excellence in teaching and research. Salary and support are competitive and depend on background and experience.

The Department of CISE currently has tenure track faculty of 32 and a student body of 336 graduate and 1370 undergraduate students. The Department encompasses a wide range of research areas including high performance computing, database systems, computer vision, computer graphics, simulation, computer networks and security and distributed and real-time systems.

Candidates should send a curriculum vitae and have at least three letters of recommendation sent to:

Chair, Faculty Search Committee
c/o Robyn Edwards
Department of Computer and Information Science and Engineering
301 CSE, P.O. Box 116120
University of Florida
Gainesville, FL 32611
e-mail to: search@cise.ufl.edu
Tel: (352) 392-1212

The committee will begin reviewing applications on January 15th, 2003 and will continue to receive applications until the positions are filled. Applications will not be reviewed until all reference letters have been received.

The University of Florida is an Affirmative Action Employer and women and minorities are encouraged to apply. For more information about the department and positions, please visit <http://www.cise.ufl.edu>.

University of Georgia Computer Science Assistant Professor positions

The Department of Computer Science at the University of Georgia invites applications for tenure-track positions for Fall 2003. Successful applicants must be committed to excellence in both research and teaching.

Our two open positions are dedicated to the Georgia strategic initiative Yamacraw, whose goal is to make Georgia a world leader in the design of broadband communications systems, devices, and chips. These positions are at the assistant professor level but a higher level might be possible under special circumstances. Relevant research areas include networking, operating systems, distributed systems, mobile computing, architecture, chip design and embedded systems, programming languages, and compilers. We currently have several faculty with research interests spanning these areas.

Computer Science is a growing and congenial department of 21 faculty. The department has 400 undergraduate and over 90 graduate students and offers the B.S., M.S., and Ph.D. degrees in CS. The teaching load allows for substantial concentration on research. In addition to the areas in which we are recruiting, our faculty cover a broad range of research interests, including distributed information systems, human-computer interaction, databases, vision and image processing, theory, algorithms, bioinformatics, scientific computing, parallel and distributed computing, and artificial intelligence.

The University of Georgia, founded in 1785, is the oldest land-grant university in the nation and the largest university in Georgia, with a student body of over 32,000. It is located in Athens, a charming and historic university town of 100,000, approximately 65 miles from metropolitan Atlanta, with mild winters and warm summers. The University boasts a major Performing Arts Center and the country's best fitness and exercise facility for students and faculty. It was recently ranked in the top 20 public universities by U.S. News and World and Report.

Submit a vita and a statement of research interests and arrange to have three reference letters sent to:

Prof. David Gries
Faculty Search Committee Chairman
Computer Science
The University of Georgia
415 GSRC
Athens, GA 30602-7404

To be assured full consideration, applications should be received by 15 January 2003.

UGA is an equal opportunity/affirmative action employer and especially encourages applications from women and minorities.

The University of Iowa Computer Science Department Assistant Professor Positions, Fall 2003

The University of Iowa Computer Science Department invites applications for tenure-track positions at the assistant professor level. We will consider strong candidates in all research areas, but especially seek those with expertise in graphics, HCI, systems and

(cont'd)

University of Massachusetts Boston Department of Computer Science

Assistant Professor

The Computer Science Department at the University of Massachusetts Boston invites applications for Fall 2003 for one faculty position at the Assistant Professor level. We are a growing department, offering a BS, and MS with an emphasis on software engineering, and a recently established doctoral program. We seek to strengthen our research program significantly. Current faculty interests include databases, data mining, biodiversity informatics, natural language processing, computer and human vision, system modeling, and theoretical computer science.

Strong candidates will be considered from any area of Computer Science. Evidence of significant research potential and a PhD in Computer Science, Computer Engineering, or a related area are required. Applicants should be able to teach all levels of computer science. We offer a competitive salary and a generous start-up package. Send cover letter, curriculum vitae, statements about research and teaching, and the names and email addresses of three references to **Office of Human Resources, Search 730, University of Massachusetts Boston, 100 Morrissey Boulevard, Boston, MA 02125-3393.**

Our campus overlooks Boston harbor; our faculty and students enjoy professional life in a center of academia and the software industry. For more information, visit us at <http://www.cs.umb.edu>
An Affirmative Action, Equal Opportunity, Title IX employer.

 **University of
Massachusetts
Boston**
UMASS www.umb.edu

Professional Opportunities

networks, databases and information systems, verification, applied algorithms, and computational biology.

Candidates should be committed to developing a nationally recognized research program, supervising Ph.D. students, and obtaining appropriate funding. A Ph.D. in Computer Science (or a closely related field) is required.

Iowa City is a small city of approximately 75,000, with excellent public schools, affordable housing, outstanding health care facilities, and abundant cultural and recreational activities. The University is situated along the banks of the Iowa River and is adjacent to the shops and restaurant area of downtown Iowa City.

To apply, please send a curriculum vita, a statement of research and career objectives, and three letters of recommendation to:

Faculty Hiring Committee
Computer Science Department
University of Iowa
14 MacLean Hall
Iowa City, Iowa 52242-1419

Applications or queries may be sent to cs_hiring@cs.uiowa.edu. More information can be found at www.cs.uiowa.edu/hiring.

Evaluation of applications will begin immediately and continue until the position is filled. Applications received on or before January 15, 2003, will be assured of consideration.

Women and minority candidates are especially urged to apply for this position. The University of Iowa is an Affirmative Action/Equal Opportunity Employer.

University of Manitoba Department of Computer Science Assistant Professor

Applications are invited for at least 4 full-time tenure-track positions in the Department of Computer Science at the University of Manitoba, at the Assistant Professor level, commencing July 1, 2003, or as soon as possible thereafter. Some of these positions are part of the Computer Science Development Plan that has been approved and funded by the Manitoba Provincial Government. Minimum qualifications are a PhD in Computer Science or equivalent, complete or completed at time of appointment, and evidence of strong research and teaching potential in Computer Science. A Faculty of Science startup research grant will be awarded to all newly appointed faculty members.

We are primarily seeking expertise in the areas of Databases and/or Software Engineering. We will also consider candidates in the areas of programming languages and compilation, human-computer interaction, operating systems, networks, data security and cryptography, bioinformatics, and multimedia, as well as outstanding candidates in other areas of Computer Science. Duties will include undergraduate and graduate teaching and supervision, research, and service-related activities.

The Department currently has 22 full-time tenure-track faculty members and 6 full-time instructors, and offers a full range of both undergraduate and graduate programmes, including cooperative programmes. We currently have over 50 graduate students and over 400 undergraduate students. There are a total of approximately 25,000 students at the University of Manitoba.

The Department was founded in 1970 and is currently expanding. The Computer Science Development Plan, funded by the Provincial Government of Manitoba, has provided \$3.6 million of special funding for this expansion. In addition, a new \$50M Engineering and Information Technology Complex is nearing the completion of the design phase, and it will house all of the teaching and research activities of the department.

Winnipeg (www.city.winnipeg.mb.ca) has a great deal to offer, both culturally and recreationally, with a number of professional and ethnic arts groups, professional sports teams, outstanding restaurants, and many opportunities nearby for all types of outdoor activities in all seasons. The Winnipeg housing market is one of the most favourable in Canada to the home buyer.

This is an excellent opportunity for individuals with outstanding research potential and a commitment to excellence in teaching to get in on the ground floor of an exciting, expanding department. The University of Manitoba encourages applications from qualified women and men, including members of visible minorities, Aboriginal peoples, and persons with disabilities. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

Further information concerning the Department and the University may be obtained from the Department's website (www.cs.umanitoba.ca) and the University's website (www.umanitoba.ca).

Applicants should send a curriculum vitae and the names of three referees to the address below. Qualified women are particularly encouraged to apply. Consideration for the

positions will commence immediately and will continue until June 30, 2003, or until the positions are filled.

Chair of Search Committee
Department of Computer Science
University of Manitoba
Winnipeg, Manitoba R3T 2N2 Canada
E-mail: search@cs.umanitoba.ca
Telephone: (204) 474-8313
Fax: (204) 474-7609
Website: www.cs.umanitoba.ca

The University of Massachusetts, Amherst

Faculty and Research Scientist Positions

The University of Massachusetts, Amherst invites applications for tenure-track faculty positions at the assistant professor level. Applicants must have a Ph.D. in Computer Science or related area and should show evidence of exceptional research promise. Candidates with an established record of strong research may also apply for positions other than at the assistant professor level. We particularly welcome candidates who would thrive in a highly collaborative environment in which projects often span several research groups.

The Department of Computer Science has 39 tenure and research track faculty and 180 Ph.D. students with broad interdisciplinary research interests. The department offers first-class research facilities and has just moved into a new state-of-the-art building. Please see <http://www.cs.umass.edu> for more information. Applications should reference search R17424.

We also invite applications for Research Faculty (R17423), Research Scientist (R17422), Postdoctoral Research Associate (R17422), and Research Fellow (R17422) positions in all areas of Computer Science. Applicants should have a Ph.D. in Computer Science or related area (or an M.S. plus equivalent experience), and should show evidence of exceptional research promise. These positions are grant-funded; appointments will be contingent upon continued funding.

To apply, send a letter with your vitae and at least three letters of recommendation to:

Search (fill in number from above)
c/o Chair of Faculty Recruiting
Department of Computer Science
University of Massachusetts
Amherst, MA 01003-9264

Review of applications has begun and will continue until available positions are filled. Salary commensurate with education and experience; comprehensive benefits package.

Inquiries and requests for more information can be sent to: facrec@cs.umass.edu

The University of Massachusetts is an Affirmative Action/Equal Opportunity employer. Women and members of minority groups are encouraged to apply.

UMass Lowell Computer Science

Bioinformatics and Biomedical Computing

The Department of Computer Science at the University of Massachusetts Lowell seeks scholars with exceptional records or, for junior appointments, with exceptional potential to expand our interdisciplinary program in Bioinformatics and Biomedical Computing. Successful candidates will be expected to participate in the development of a national stature academic and research program with a strong interdisciplinary emphasis. Currently, working relationships exist between Biology, Chemistry, Computer Science, Mathematics and Philosophy.

We invite applications for several tenure-track faculty positions, to start in September 2003. The applicant's primary focus should be in Computer Science and its applications to biomedical computing, medical informatics and/or biomolecular computation. We anticipate hiring at the assistant professor level, but will consider outstanding candidates at senior levels.

Our campus is located 35 miles northwest of Boston in the state's high-tech corridor and is considered the most technology-oriented of the five UMass campuses. The CS department has 20 full-time faculty, as well as over 400 undergraduates in our accredited bachelor's program and over 250 graduate students in the master's and doctoral programs. Our research specialties include human-computer interaction, visualization and perception, bioinformatics, database systems, computer networks, languages and compilers, object-oriented software engineering, internet and web systems and newly formed groups in computational complexity, computational geometry, network and system security, and robotics and assistive technology. For more information about us, please visit <http://www.cs.uml.edu> and <http://genome.uml.edu>.

We are seeking candidates who will contribute to the intellectual life of the department, the university and the region by establishing active research groups, teaching

core and elective computer science courses to undergraduate and graduate students, and establishing professional connections with the some of the thousands of thriving information technology companies in the area.

Applicants must have a doctorate in Computer Science or a closely related discipline at the time of appointment. Please send a statement of research interests and goals; curriculum vitae; selected relevant papers; the names, addresses, email addresses, and telephone numbers of at least three references and, if appropriate, your residency status to:

Dr. Thomas M. Costello, Head
Department of Computer Science
University of Massachusetts, Lowell
One University Avenue
Lowell, Massachusetts 01854

tom@cs.uml.edu
Review of applications will begin immediately, and will continue until the positions are filled.

The University of Massachusetts is an equal opportunity, affirmative action employer, and encourages applications from women and minorities.

University of Michigan, Ann Arbor

Department of Electrical Engineering and Computer Science Computer Science and Engineering Division

Faculty Positions

Applications and nominations are solicited for multiple junior and senior faculty positions in the Computer Science and Engineering (CSE) Division. Qualifications include an outstanding academic record, a doctorate or equivalent in computer engineering or computer science, and a strong commitment to teaching and research. Candidates from all areas of computer science and engineering are encouraged to apply, especially those in graphics and software systems.

The University of Michigan is a Non Discriminatory/Affirmative Action Employer.

Please send resume, url and names of three or more references to:

Professor John E. Laird, Assoc. Chair
CSE Division
Department of Electrical Engineering and Computer Science
University of Michigan
1301 Beal Avenue, Room 3402
Ann Arbor, MI 48109-2122
URL: <http://www.eecs.umich.edu/cse>

You may submit applications and inquiries via email to csearch@eecs.umich.edu

University of Michigan – Dearborn

Department of Computer and Information Science

Assistant/Associate Professors

The Department of Computer and Information Science (CIS) at the University of Michigan - Dearborn invites applications for tenure-track faculty positions. Rank and salary will be commensurate with qualifications and experience. All areas will be considered, with preference being given to embedded systems, enterprise computing, intelligent systems, software engineering, and virtual systems.

The applicant must have a Ph.D. in CIS or a closely related discipline by the time of appointment and will be expected to do scholarly and sponsored research, as well as teaching at both the undergraduate and graduate levels. The CIS Department offers several BS and MS degrees. Doctoral programs are under discussion in the College of Engineering and Computer Science. The current research areas in the department include CAD/CAM, distributed systems and middleware, embedded software systems, graphics and visualization, and information engineering.

The University of Michigan – Dearborn is located in the southeastern Michigan area and offers excellent opportunities for faculty collaboration with many industries.

The University of Michigan – Dearborn is dedicated to the goal of building a culturally diverse and pluralistic faculty committed to teaching and working in a multicultural environment, and strongly encourages applications from minorities and women.

A cover letter, curriculum vitae including e-mail address, and three letters of recommendation should be sent to:

Dr. William Grosky, Chair
Department of Computer and Information Science
University of Michigan – Dearborn
Dearborn, MI 48128-1491
e-mail: wgrosky@umich.edu
Internet:
<http://www.engin.umd.umich.edu/CIS>
Phone: 313.583.6424
Fax: 313.593.4256

The University of Michigan – Dearborn is an equal opportunity/affirmative employer.

University of Mississippi Assistant Professor

The Department of Computer and Information Science invites applications for tenure-track positions at the Assistant Professor level.

Requirements include a Ph.D. or equivalent in computer science or a closely related field. The applicant must have the ability to teach both undergraduate and graduate students, conduct research in major areas of computer and information science, and supervise M.S. and Ph.D. students. Applicants are especially invited from individuals with the ability to teach in the systems area at the undergraduate and graduate levels.

The BSCS program has been accredited by CSAB since 1990. The University is located in the historic town of Oxford in the wooded hills of north Mississippi, an hour drive from Memphis. Oxford has a wonderful small-town atmosphere with excellent schools.

Review of applications will begin immediately and will continue until the position is filled or an adequate applicant pool is reached. The applicant must provide evidence of research potential, effective communication skills, and a broad background in computing. Please send (email preferred) a complete application (including vita, graduate courses, and vita/citizenship status) and the names of four references to:

Search Committee
Department of Computer and Information Science
The University of Mississippi
229 Weir Hall
University, MS 38677
Email: search@cs.olemiss.edu
WWW: <http://www.cs.olemiss.edu>
Phone: (662) 915-7396
Fax: (662) 915-5623

The University of Missouri-Columbia

Department of Computer Engineering and Computer Science

Announcement of Faculty Positions

The Department of Computer Engineering and Computer Science invites applications for several tenure-track positions. Applicants should have or are about to complete a PhD in Computer Engineering, Computer Science, or a related field. Applicants should show evidence of excellent research and teaching promise. Successful applicants will be expected to establish a quality research program, to teach both graduate and undergraduate courses, and to participate in student advising.

Currently the department has several open positions: one in Computational Mathematics (computer/network security and cryptography); one in Knowledge-Based Health Care (medical imaging, networked multimedia, digital library, artificial intelligence, storage/processing of images/videos, and human-computer interaction); one in Networked Learning Systems (natural language processing, human-computer interaction, networked multimedia, web-based multimedia applications, and high performance communications and networking); one in Operating Systems (operating systems, compiler, and software engineering); and, one in Bioinformatics and Computational Biology. We request that applicants specify a position that most closely matches their expertise.

The Department of Computer Engineering & Computer Science has established several outstanding federally and industrially funded research programs in multimedia communications and networking, bioinformatics and computational biology, applied image processing and fuzzy-logic-based vision systems, speech recognition and human-machine interfaces, large dataset scientific visualization, distributed computing and web technology with applications in education, cognitive science and connectionist machines, content-based image databases, high-performance computing and networking, spatial data analysis and information fusion, and spatial descriptions and robot navigation.

Please send a resume, a statement of teaching and research plan, and three references to:

Faculty Search Committee Chair
Prof. Yunxin Zhao
Department of Computer Engineering and Computer Science
201 Engineering Building West
University of Missouri-Columbia
Columbia, Missouri 65211-2060
<http://www.cecs.missouri.edu>

We will start the review of applications January 01, 2003, and will continue to consider applicants until positions are filled or until the closing date of July 15, 2003. Subject to availability of funds, positions are expected to start in January or August 2003.

The University of Missouri is an Affirmative Action/Equal Opportunity employer, and is designated a Doctoral/Research Extensive Institution by the Carnegie Foundation for the Advancement of Teaching. To request ADA accommodations please contact our ADA Coordinator at (573) 884-7278 (V/TTY).

Professional Opportunities

University of Missouri-Rolla Faculty Positions in Computer Science and Information Science & Technology

The Computer Science (CS) and Information Science and Technology (IST) departments at the University of Missouri-Rolla are seeking qualified applicants for positions in both CS and IST. Several are joint appointments. All areas of CS and IST are welcome. Applicants must have a demonstrated record of research publications and funding commensurate with the position they seek. Successful candidates are expected to establish funded research programs and show a commitment to quality teaching both at undergraduate and graduate levels. Further information about the CS and IST programs and positions is available at www.cs.umr.edu and www.umn.edu/~smis, respectively.

Applications will be reviewed as received and will continue until filled. Applicants should send 1) a vita, 2) a statement of research and teaching interests, 3) evidence of teaching, research, and communications skills, and 4) three letters of reference to:

Human Resource Services
Reference Number: R53850
University of Missouri-Rolla
1202 North Bishop
1870 Miner Circle
Rolla, MO 65409-1050

UMR is an AA/EEO employer. Females, minorities and persons with disabilities are encouraged to apply.

University of Nebraska – Lincoln Jensen Chaired Professorship in Software Engineering

Software engineering is a focus area of the Computer Science and Engineering (CSE) Department at the University of Nebraska-Lincoln (UNL). Supported by recent endowments for research and teaching, we are embarking on dynamic growth and seek applications for the Jensen Chaired Professorship in software engineering.

UNL is a comprehensive research university with Carnegie I standing and membership in the elite Association of American Universities. The CSE Department offers BS, MS, and PhD degree programs in computer science, computer engineering, and software engineering. Lincoln, the capital of Nebraska, is a prosperous community of over 250K people and ranks high in quality-of-life.

For complete position advertisements, visit <http://cse.unl.edu/search>
search@cse.unl.edu
(402) 472-2401

University of Nebraska - Lincoln Computer Science and Engineering Department

The UNL CSE Department is embarking on dynamic growth and seeks applications for assistant professorships in the following areas:

Bioinformatics, Computational sciences, Computer engineering, Computer science and engineering education, Database and information systems, Distributed systems, Networks, Simulation and modeling, or Software engineering.

Exceptional candidates in other areas will be considered.

UNL is a comprehensive research university with Carnegie I standing and membership in the elite Association of American Universities. The CSE Department offers BS, MS, and PhD degree programs in both computer science and computer engineering. Lincoln, the capital of Nebraska, is a prosperous, medium-sized city that ranks high in quality-of-life.

For complete position advertisements, visit <http://cse.unl.edu/search>
email: search@cse.unl.edu
or phone (402) 472-2401

University of North Carolina at Charlotte Department of Software and Information Systems

The Department of Software and Information Systems at UNC Charlotte has open tenure-track faculty positions with highly competitive salary offerings. The Department offers degrees at Bachelor, Masters and PhD levels. Current faculty members have strong research programs, with substantial funding from both federal agencies and industrial partners.

Applicants must have a Ph.D. in Computer Science or a related field, and a strong commitment to teaching and research. We are especially interested in faculty with expertise in software engineering, computer supported collaborative work, distributed information systems, enterprise integration, human-computer interaction, and systems security. For further details please visit www.sis.uncc.edu.

Application review will start in January 2003. Please send detailed CV together with four references, copies of scholarly publications and other support material to

Dr. William J. Tolone
Search Committee Chairperson
Department of Software and Information
Systems
UNC Charlotte
9201 University City Blvd
Charlotte, NC 28223
Email: search@sis.uncc.edu
Tel: 704-687-4333

Women, minorities, and individuals with a disability are encouraged to apply. UNC Charlotte is an equal opportunity/affirmative action employer.

The University of Northern Iowa Department of Computer Science Assistant Professor

The University of Northern Iowa Computer Science Department invites applications for a tenure-track, assistant professor position effective August 2003.

The successful candidate will demonstrate expertise sufficient to teach a broad spectrum of undergraduate and graduate courses related to Operating Systems, Networking, and System Administration. Additional background in applied computer networking hardware/systems is also desirable. The successful candidate will develop a research program that will involve undergraduate and graduate students.

A Ph.D. in computer science or equivalent is required. ABD's will be considered with evidence of completion by August 15, 2003.

Submit application by February 15, 2003 for full consideration.

(<http://www.cs.uni.edu/job.html> for details)

UNI is an equal opportunity employer with a comprehensive plan for affirmative action.

University of Notre Dame Department of Computer Science and Engineering Faculty Position

The Department of Computer Science and Engineering at the University of Notre Dame (<http://www.cse.nd.edu>) invites faculty applications. Rank and area of specialty are open.

Our faculty are actively engaged in high-quality research in a variety of areas, supported by NSF, DARPA, SRC, Air Force, HP/Compaq, and other organizations. The blend of small class size, low teaching load, and a "PhD only" graduate program allows us to emphasize true excellence in both research and teaching. Faculty must be committed to both quality teaching and a strong externally-funded research program.

Notre Dame is ranked 18th among national universities in the 2002 US News and World Report survey. Notre Dame's heritage and values are unique among top-ranked national universities, resulting in a distinctive character of campus life.

Screening of applications will begin December 1, 2002 and continue until positions are filled. Applicants should send cover letter, cv, statement of research interests, statement of teaching interests, and names and addresses of at least three references either to faculty-search@cse.nd.edu, or to:

Chair, Faculty Search Committee
Department of Computer Science and
Engineering
384 Fitzpatrick Hall
University of Notre Dame
Notre Dame, IN 46556

University of Oregon Department of Computer and Information Science Faculty Positions

The Department of Computer and Information Science invites application for one (possibly two) tenure-track faculty positions open for fall 2003. The department's primary recruiting emphases are in the areas of programming languages and distributed informatics. Programming languages is broadly construed to include compiler construction, domain-specific languages, program analysis, etc. Distributed informatics may include distributed database systems, web engineering, distributed document architecture, and other aspects of future distributed information systems. Outstanding applicants in other areas may also be considered. Applicants must have a Ph.D. in computer science or a closely related field, a demonstrated record of excellence in research, and a strong commitment to teaching.

The CIS department has eighteen research faculty and two instructors and offers B.S., M.S., and Ph.D. degrees. We offer a stimulating and friendly environment for collaborative research both within the department and with other departments on campus. The CIS Department is associated with the Computational Intelligence Research Laboratory, the Cognitive and Decision Sciences Institute, the Computational Science Institute, and the Software Engineering Research Center. More information about the department, its programs and faculty can be found at <http://www.cs.uoregon.edu>, or mail your request to:

University of Oregon
Dept. of Computer and Information
Science
Eugene, OR 97403-1202

The University of Oregon is an AAU research university located in Eugene and within one hour drive of both the Pacific Ocean and the snow-capped Cascade Mountains.

Applicants should send their curriculum vitae, names of at least four references, a statement of research and teaching interests, and selected publications to:

Faculty Search Committee
Dept. of Computer and Information
Science
University of Oregon
Eugene, OR 97403-1202
email: faculty.search@cs.uoregon.edu

Review of applications will begin in December 2002 and continue until the positions are filled.

The University of Oregon is an Equal Opportunity/Affirmative Action institution committed to cultural diversity and compliance with the Americans with Disabilities Act.

University of Pennsylvania Department of Computer and Information Science Faculty Positions

The University of Pennsylvania invites applicants for tenure-track appointments in both experimental and theoretical computer science to start July 1, 2003. Senior level appointments will also be considered. Faculty duties include undergraduate and graduate level teaching as well as research.

Successful applicants will find Penn to be a stimulating environment conducive to professional growth. The Department of Computer and Information Science is undergoing a major expansion, including new faculty positions and a new building, Levine Hall, with completion this academic year. Over the last year, we have successfully recruited faculty in artificial intelligence, computer architecture, databases, distributed systems, machine vision, programming languages, and security. We are now especially interested in candidates in computer architecture, computational biology, cryptography, embedded systems, and graphics and animation, but we will consider seriously applications by outstanding candidates in all areas at all levels, especially those who complement our current strengths in algorithms, artificial intelligence, databases, formal methods, machine vision, and networking and distributed systems.

The University of Pennsylvania is an Ivy League University located near the center of Philadelphia, the 5th largest city in the US. Within walking distance of each other are its Schools of Arts and Sciences, Engineering, Medicine, the Wharton School, the Annenberg School of Communication, Nursing, Law, and Fine Arts. The University campus and its surroundings in Philadelphia benefit from a rich diversity of scientific, educational, and cultural opportunities, major technology-driven industries such as pharmaceuticals and aerospace, as well as attractive urban and suburban residential neighborhoods. Princeton and New York City are within commuting distance.

To apply, please complete the form located on the Faculty Recruitment Web Site at: http://www.cis.upenn.edu/positions/faculty_application.html

Electronic applications are strongly preferred, but hard-copy applications (including the names of at least four references) may alternatively be sent to:

Chair, Faculty Search Committee
Department of Computer and Information
Science
School of Engineering and Applied
Science
University of Pennsylvania
Philadelphia, PA 19104-6389

Applications should be received by January 15, 2003 to be assured full consideration. Applications will be accepted until positions are filled. Questions can be addressed to faculty-search@central.cis.upenn.edu.

The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer. The Penn CIS Faculty is sensitive to "two-body problems" and would be pleased to assist with opportunities in the Philadelphia region.

University of Pennsylvania Department of Computer and Information Science Lecturer Positions

The University of Pennsylvania invites applicants for the position of Lecturer in Computer Science to start July 1, 2003. Lecturer duties include undergraduate and graduate level teaching. The position is for one year and is renewable annually up to three years.

Successful applicants will find Penn to be a stimulating environment conducive to professional growth. The Department of Computer and Information Science is undergoing a major

expansion, including new faculty positions and a new building, Levine Hall, with completion this academic year. In fall 2001 we started a new Master of Computer and Information Technology (MCIT). The MCIT is designed for candidates who have a strong academic background in areas other than computer science but who have a need for graduate education in computer science or a closely related discipline.

Completion of the MCIT program will give the graduate a solid foundation in computer science, providing the advanced expertise needed to meet the demands of the rapidly growing field of information technology. MCIT graduates will be ready to enter the IT workforce, or will find new opportunities in continuing their education. The MCIT program will also prepare students for further graduate education in computer science.

The University of Pennsylvania is an Ivy League University located near the center of Philadelphia – the 5th largest city in the US. Within walking distance of each other are its Schools of Arts and Sciences, Engineering, Medicine, Nursing, Law, Business and Fine Arts. The University campus and its surroundings in Philadelphia benefit from a rich diversity of cultural opportunities as well as attractive urban and suburban residential neighborhoods.

To apply, please complete the form located on the Faculty Recruitment Web Site at: http://www.cis.upenn.edu/positions/faculty_application.html

Electronic applications are strongly preferred, but hard-copy applications (including the names of at least four references) may alternatively be sent to:

Chair, Lecturer Search Committee
Department of Computer and Information
Science
School of Engineering and Applied
Science
University of Pennsylvania
Philadelphia, PA 19104-6389

Applications should be received by March 1, 2003 to be assured full consideration. Applications will be accepted until positions are filled. Questions can be addressed to faculty-search@central.cis.upenn.edu.

The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer. The Penn CIS Faculty is sensitive to "two-body problems" and would be pleased to assist with opportunities in the Philadelphia region.

University of Pittsburgh Department of Computer Science

The Department of Computer Science at the University of Pittsburgh is initiating a search for one tenure-track, Assistant Professor position in the area of Artificial Intelligence effective September 2003. Responsibilities include research, supervision of graduate student research (PhD and MS), and graduate and undergraduate teaching. Candidates should have a PhD in Computer Science and demonstrate exceptional research potential and teaching ability. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups who are under-represented in academia are especially encouraged to apply.

Candidates should send a curriculum vita, a statement of research and teaching interests, and names and addresses of at least three references to

Professor Rami Melhem, Chair
Department of Computer Science
University of Pittsburgh
Pittsburgh, PA 15260

Please direct your inquiries to faculty-search@cs.pitt.edu. Applications must be received by January 17, 2003 to ensure full consideration.

The Department provides a stimulating environment for research and teaching that results in strong graduate and undergraduate programs. The Department already has a strong group in artificial intelligence. It is also a partner in the Intelligent Systems program, and the Computer Engineering program, and has strong ties with the Learning Research and Development center and the center for bioinformatics.

Departmental resources include extensive computing facilities of over 400 workstations and personal computers with multimedia capabilities and specialized networks and devices. Faculty members also have network access to additional high performance computing platforms provided by the general computing facilities of the University as well as by the Pittsburgh Supercomputing Center (of which the University of Pittsburgh is a founding member). For further information about the Department please see <http://www.cs.pitt.edu>.

Professional Opportunities

University of Puerto Rico at Mayagüez College of Engineering Electrical and Computer Engineering Department

The Department of Electrical and Computer Engineering of the University of Puerto Rico at Mayagüez invites applications for a tenure-track position in Computer Science or Computer Engineering. The Department plans to increase its overall strength in computing, and has particular interest in attracting faculty in the areas of networks, databases, computer architecture, and distributed systems. But candidates from all areas of computing are encouraged to apply. Applicants must possess a PhD degree in Computer Science, Computer Engineering or related fields, and demonstrate strong potential for excellence in research. Appointments will be made by July 1, 2003.

Currently, a significant number of faculty members of ECE Department are engaged in research in Computer Science and Engineering areas including image processing, signal processing, parallel and distributed computing, information systems, net-centric computing, human-computer interaction, and databases, among others.

The department offers an undergraduate degree in Computer Engineering, a Master degree in Computer Engineering, and a PhD degree in Computing and Information Sciences and Engineering (CISE).

For further information concerning the ECE department, and the PhD in CISE program, please visit www.ece.uprm.edu, and www.phd.ece.uprm.edu. Applications, with curriculum vitae, three reference letters and MS and PhD transcripts should be sent to:

Prof. Hector Monroy, Chairman
Department of Electrical and Computer Engineering
University of Puerto Rico-Mayagüez
P. O. Box 9042
Mayagüez, Puerto Rico 00681
UPRM is an equal opportunity affirmative action employer.

University of Puget Sound Mathematics and Computer Science Assistant or Associate Professor of Computer Science

Two full-time, tenure-line positions; begin Fall Term 2003. Teach junior/senior-level courses in computer science, along with introductory courses. Standard teaching load is three courses/semester. Ph.D. (ABD considered) in computer science or closely related field preferred, but Ph.D. in a related field and Masters in computer science will be considered.

Commitment to undergraduate teaching and liberal arts education is essential. Preference will be given to those candidates whose research interests can incorporate or generate undergraduate research projects. Submit interest letter, resume and three reference letters by January 23, 2003 to:

Computer Science Search
University of Puget Sound
Campus Mail Box 1007
Tacoma, WA 98416
An equal opportunity, affirmative action educator/employer.

University of Redlands Department of Mathematics and Computer Science Computer Science Position

The University of Redlands invites applications for two tenure-track positions in Computer Science, specialty and rank open, to begin in fall of 2003. Candidates should have a strong interest in teaching a wide variety of undergraduate computer science courses. Responsibilities include teaching six courses per year, primarily in computer science, directing student research projects, pursuing scholarly activity, and engaging in university service. Opportunities exist to teach courses in our Master of Science degree program in geographic information systems.

Requirements include the Ph.D. in computer science or a related field by September 1, 2003, and evidence of excellence in and a commitment to both undergraduate teaching and scholarship in computer science. We seek candidates with interest and demonstrated ability in working with a diverse student population. The University of Redlands, which enrolls 2000 undergraduates, is a selective, private, comprehensive liberal arts university located in Southern California.

To apply, submit a letter of application, a curriculum vitae, graduate transcripts (unofficial OK), a statement of teaching philosophy, and three letters of reference, at least two of which must address teaching, to:

Dr. Alexander E. Koonce, Chair
Computer Science Search Committee
Department of Mathematics and Computer Science
University of Redlands
1200 E. Colton Ave.
Redlands, CA 92373-0999

Review of applications will begin on Friday, January 17, 2003, and will continue until the position is filled. The University of Redlands is an EEO employer. We especially encourage women and members of other underrepresented groups to apply.

University of Rhode Island Department of Electrical and Computer Engineering Assistant Professor

This is a tenure-track, academic-year appointment, beginning in the Fall of 2003. Teach undergraduate and graduate level courses, develop curricula and laboratories, advise graduate students, and develop and maintain high-quality funded research.

Required: a doctorate in electrical, computer, or biomedical engineering or computer science; demonstrated ability to teach undergraduate and graduate courses in the areas of computer, biomedical, or electronics engineering; demonstrated ability to conduct high-quality research. Preference will be given to candidates who add to department strengths in one or more of the following areas: computer networks, computer architecture, embedded systems, biomedical engineering, analog/digital VLSI systems, design and test of system-on-chip, communications, signal processing, or closely related fields.

Review of applications will begin February 3, 2003 and continue until position is filled. Submit a resume and cover letter, including description of research and teaching background and objectives to:

Richard Vaccaro, Search Chair
(Req #CRA010137)
University Of Rhode Island
P.O. Box G
Kingston, RI 02881
URI is an AA/EEO employer and values diversity.

University of Rochester Department of Computer Science

The Computer Science Department at the University of Rochester invites applications from candidates seeking a tenure-track appointment. Applicants at the Assistant Professor level must have received, or be about to receive, a doctorate in Computer Science or a related discipline, and must demonstrate exceptional potential for both research and teaching. Applicants at more senior levels must possess an outstanding record of scholarly achievement.

Applications are welcome in all areas of computer science, but the department is particularly interested in areas that will advance the vision of *intuitive computing*, in which users collaborate in their everyday activities with an intelligent digital assistant that models user intent, and suggests or carries out actions likely to satisfy that intent. Intuitive computing systems can be expected to actively monitor the physical environment; learn from past experience; seek out and utilize distributed information and computational resources; use innovative algorithms to compute the most promising courses of action in the face of complex, incomplete, or contradictory inputs; and employ sophisticated spoken language and graphical interfaces.

Our department has a strong record of publication and external funding. We offer an outstanding research environment, with excellent students and facilities, and an unusually close-knit and collegial atmosphere. Current areas of expertise include artificial intelligence (computational vision; robotics; virtual reality; natural language understanding; knowledge representation), systems (compilers; operating systems and runtime environments; computer architecture; parallel, distributed, and mobile computing), and theory of computation (algorithms; computational complexity; data mining; DNA computing). Computer Science faculty also participate in externally funded projects with colleagues in more than a dozen other departments. Total enrollment in the Ph.D. program is approximately 45 students. Further information can be found at <http://www.cs.rochester.edu>.

Applicants should send a curriculum vitae, copies of relevant papers, and the names and addresses of at least three references to:

Faculty Recruiting Committee
Department of Computer Science
University of Rochester
Rochester, NY 14627-0226

The University of Rochester is an Equal Opportunity employer; women and members of minority groups are strongly encouraged to apply.

University of South Florida Computer Science and Engineering Department Chair

Applications and nominations are invited for the position of Chair of the Department of Computer Science and Engineering. The department is one of six departments in the College of Engineering. The college conducts over 20 million dollars per year in sponsored research. The University of South Florida is a

Carnegie Research I University and is among the 20 largest universities in the U.S. The university is located in the metropolitan Tampa Bay area and is one of the anchors of the Florida I-4 Technology Corridor.

The new chair is expected to maintain and build upon the strong and successful academic programs existing in the department and to provide the vision and leadership to elevate its stature in national and international reputation. Candidates must possess a PhD in Computer Engineering, Computer Science, or other closely related area and must qualify for appointment as a full professor in the department. The candidate is expected to have an internationally recognized record of academic scholarship and a proven record of external support. The successful candidate must have a commitment to high quality undergraduate and graduate education, research, and professional activities. The candidate should have outstanding communication and interpersonal skills, as well as a commitment to diversity in faculty and staff recruitment. Key responsibilities will include strategic planning, development of emerging areas of expertise, coordination of interdisciplinary activities, fostering of scholarship, and leading the department in developing and implementing a visionary plan for its research, education, and funded programs.

The Department offers BS degrees in Computer Science (ABET accredited), Computer Engineering (ABET accredited), and Information Systems. The graduate program offers MS (137 students) and PhD degrees (47 students). The department has 18 faculty members and expects significant growth in the next several years. The department's faculty secured over 2.5 million in research funding for 2001. A strong partnership exists with the USF College of Medicine and the H. Lee Moffitt Cancer Center and Research Institute. Department faculty are well funded from federal and state agencies that include DARPA, NIH, NSF, ONR, and USGS. More information about the department is available at <http://www.csee.usf.edu/>.

The starting date for this position is August 2003. Applicants should send a cover letter, complete vitae, names and addresses of at least four references, and a statement of educational and research philosophy that includes the candidate's vision for the future of computer science and engineering.

The search and selection process will be conducted in accordance with the provisions of the "Government in the Sunshine" laws of the State of Florida. Meetings of the search committee are open to the public and all documents related to the search will be available for public inspection. Applicants who need a reasonable accommodation in order to participate in the selection process should notify the office manager at the address given below. Screening of applications will begin on January 13, 2003 and will continue until the position is filled. Applications and nominations are to be submitted by mail to:

CSE Chair Search Committee
Department of Computer Science and Engineering
4202 East Fowler Avenue, ENB 118
University of South Florida
Tampa, FL 33620-9951

The University of South Florida is an Affirmative Action/ Equal Opportunity employer. Women and minorities are strongly encouraged to apply.

The University of Texas at Arlington (UTA) Computer Science and Engineering Department

The University of Texas at Arlington (UTA), Computer Science and Engineering (CSE) Department - CSE@UTA invites applications for multiple tenure-track faculty positions at all levels. However, preference will be given to positions at assistant or associate professor levels. All areas of computer science will be considered, including: software engineering; computer security; bio-informatics; pervasive computing; multimedia and video processing; intelligent systems; networks and telecommunications; database and data mining; and applied theory. UTA, part of The University of Texas System, is located in the heart of the rapidly growing Dallas/Fort Worth area, one of the nation's largest high-technology regions, with a flourishing industrial base and excellent opportunities for industry/university collaboration.

We at CSE@UTA are committed to excellence in research, teaching, and service. We are in the third year of our "Top 25 Initiative" plan to reach a national top 25 ranking within 10 years. The initiative is strongly supported by all CSE@UTA stakeholders including the UTA administration, faculty, students and alumni, and industry partners. Since 2000, we have added 7 new tenure-track faculty and 4 new full-time non tenure-track faculty to our roster of 37 full-time faculty. The number of our PhD students has increased by 50% since 2000 and the research funds awarded to the

department faculty surpassed \$3.5M in 2001-02 academic year.

Applicants must have an earned doctorate in computer science, computer engineering, or closely related fields and a commitment to teaching and scholarly research. Applicants are expected to have an excellent record of professional accomplishments, commensurate with their level of experience. The faculty openings are anticipated for September 2003. Screening of applications will begin immediately and will continue until all positions are filled.

Interested persons should submit a letter of application, a resume, and reference letters online at: <http://www.cse.uta.edu/application/>. Please note that we do not accept hardcopy submissions.

For additional information, please contact:
Dr. David Kung
Chair of Search Committee
Department of Computer Science and Engineering
The University of Texas at Arlington
Phone: 817-272-3605
FAX: 817-272-3070
Email: search@cse.uta.edu
<http://www.cse.uta.edu>

The University of Texas at Arlington is an Equal Opportunity/Affirmative Action Employer.

The University of Texas at Austin Department of Computer Sciences Tenured and Tenure-Track Positions

The Department of Computer Sciences of the University of Texas at Austin invites applications for tenure-track positions at all levels. Excellent candidates in all areas will be seriously considered.

All tenured and tenure-track positions require a Ph.D. or equivalent degree in computer science or a related area at the time of employment. Successful candidates are expected to pursue an active research program, teach both graduate and undergraduate courses, and supervise graduate students.

The department is ranked among the top ten computer science departments in the country. It has 36 tenure-track faculty members across all areas of computer science. The department participates in the University's Computational and Applied Mathematics interdisciplinary program. Austin, the capital of Texas, is located on the Colorado River, at the edge of the Texas Hill Country, and is famous for its live music and outdoor recreation. Austin is also a center for high-technology industry, including companies such as IBM, Dell, Motorola, Sematech, AMD, National Instruments, Tivoli, Trilogy, Schlumberger, Computer Sciences Corporation, and Intel. For more information please see the department web page: <http://www.cs.utexas.edu/>.

To apply, please send a curriculum vita, home page URL, description of research interests, and selected publications, and ask three referees to send letters of reference directly to:

Faculty Search Committee
Computer Science Department
University of Texas at Austin
Austin, Texas 78712 USA

Inquiries about your application may be directed to faculty-search@cs.utexas.edu.

Applications will be considered immediately until the positions are filled. To ensure full consideration, please apply by January 15, 2003. Women and minority candidates are especially encouraged to apply. The University of Texas is an Equal Opportunity Employer.

The University of Texas at Dallas Department of Electrical Engineering Tenure-Track Positions

The Electrical Engineering Program invites applications for tenure-track faculty positions. We seek candidates in the areas of digital systems, communications and signal processing, analog and mixed signal design, and experimental microelectronics circuits and systems. Candidates must have a Ph.D. degree in electrical Engineering, Computer Science/Engineering, or similar, must have demonstrated their ability to conduct research by publishing their work at conferences and/or in refereed journals in their field of research, and should provide evidence of ability in teaching. Ph.D. candidates with an expected graduation date in summer of 2003 may also apply. Responsibilities include research, teaching at undergraduate and graduate level, and direction of doctoral research students.

The university is located in the most attractive suburbs of the Dallas metropolitan area. There are over 250 high-tech companies within 10 miles of the campus, including Nortel, Texas Instruments, Samsung, Alcatel, Ericsson, Raytheon, and more. Opportunities for joint university-industry research projects and consulting are excellent. The program expects to continue its growth into a major center for research and teaching in Electrical Engineering.

Each Electrical Engineering faculty member has personal computing resources for their

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research. In addition, the department has laboratories for research in digital systems, DSP, optics, telecommunications, solid-state devices, plasma science, and clean-room facilities for semiconductor processing and microelectronics. These laboratories are equipped with high performance workstations and high-end PCs in addition to other research related equipment.

Currently the Electrical Engineering Program has 34 tenured/tenure-track faculty. The potential for growth is excellent. New faculty members have a great opportunity to influence the direction of growth in the program. Applicants should mail their curriculum vitae, statement of goals and plans for teaching and research, and a list of at least three academic or professional referees to:

Academic Search #752
The University of Texas at Dallas
PO Box 830688, MS AD 23
Richardson, Texas 75083-0688

Applications will be accepted until the positions are filled; screening will begin immediately. Indication of sex and ethnicity for statistical purposes is requested as part of the application but not required. For informal inquiries contact Dr. Dinesh Bhatia, Chair of the Search Committee at (972-883-2386) (dinesh@utdallas.edu), or view the Internet Web page at <http://www.ee.utdallas.edu/>.

The University of Texas at Dallas is an Equal Opportunity Affirmative Action employer and strongly encourages applications from candidates who would enhance the diversity of the University's faculty and administration.

The University of Texas El Paso

The Department of Computer Science invites applications for two (2) tenure-track faculty positions at all ranks to begin in Fall, 2003. We are specifically interested in applicants in the areas of high-performance computing (e.g., systems design, performance evaluation, and parallel/distributed computing) and software engineering. In exceptional cases, we will consider applicants in other areas of computer science.

Our faculty value excellence in research and education, our environment of collegiality, faculty collaboration across a wide range of interests, and academic involvement with students outside the classroom. We favor collaborative methods in both teaching and research. We seek colleagues who share these values, have a strong commitment to both education and research, can collaborate with other faculty, and can build a strong research program, and enjoy working in a culturally diverse community.

The Department, part of UTEP's College of Engineering, offers BS and MS Degrees in Computer Science and has a joint Ph.D. program with the Department of Electrical and Computer Engineering. We have an internationally distinguished record of research, and our teaching program is a nationally recognized model of excellence. UTEP is a Carnegie doctoral-intensive university with an enrollment of 17,000 students.

Our campus, situated where the Rocky Mountains meet the Rio Grande, echoes the beauty of the surrounding high desert. El Paso is a highly livable, bi-cultural community of 700,000 people that offers affordable homes and is a major meeting point for the United States and Latin America. Candidates must hold a Ph.D. in Computer Science or a closely related field. Send curriculum vitae, a list of publications, and a statement of teaching and research interests, and contact information for at least four (4) professional references to:

Faculty Recruiting Committee, UTEP
Department of Computer Science
El Paso, TX, 79968-0518

Information about the department is available at <http://www.cs.utep.edu>. Send e-mail inquiries to recruiting@cs.utep.edu.

The University of Texas at El Paso does not discriminate on the basis of race, color, national origin, sex, religion, age, sexual orientation, or disability in employment or the provision of services.

The University of Washington Department of Computer Science & Engineering Tenure-Track, Research, and Teaching Faculty

The University of Washington's Department of Computer Science & Engineering has several open positions in a wide variety of technical areas in both Computer Science and Computer Engineering, and at all professional levels.

Candidates whose research interests include HCI or hardware are especially welcome, but we welcome applicants in all CSE research areas. A moderate teaching load allows time for quality research and close involvement with students. We expect candidates to have a strong commitment both to research and to teaching.

The department is primarily seeking individuals at the Assistant Professor rank; however, under unusual circumstances and commensurate with the qualifications of the

individuals, appointments may be made at the rank of Associate Professor or Professor. We are also seeking non-tenured Research Assistant Professors and Lecturers.

Applicants for the tenure-track and research positions must have earned a doctorate by the date of appointment; those for the lecturer position must have earned at least a Master's degree by the date of appointment.

Information about the department can be found on the web at <http://www.cs.washington.edu/>. Please send a letter of application, a resume, statement of research and teaching interests, and the names of four references to:

Faculty Recruiting Committee
Computer Science & Engineering
University of Washington
Box 352350
Seattle, WA 98195-2350

Applications received before February 1, 2003 will be given priority consideration. The University of Washington is a recipient of a new National Science Foundation ADVANCE Institutional Transformation Award to increase the participation of women in academic science and engineering careers.

The University of Washington is building a culturally diverse faculty and encourages applications from female and minority candidates. AA/EEOE.

The University of Western Ontario Department Of Computer Science

The University of Western Ontario, a top-tier research University in Canada, is actively expanding its activities in Computer Science. The Department has open probationary (tenure-track) positions and also has an open Tier 1 Canada Research Chair in Bioinformatics (for details see www.bioinformatics.uwo.ca) and an open Tier 2, Canada Research Chair in Computer Vision or Computer Algebra. Applications are invited for probationary (tenure-track) positions, and for the Canada Research Chairs. The department is particularly interested in candidates in bioinformatics, computer algebra, computer vision, databases, software engineering, and systems and networks, but the department will consider outstanding candidates in any area of Computer Science.

The department currently comprises 32 faculty in teaching and research positions. Degrees at the BSc, MSc and PhD levels are offered in Computer Science, as well as degrees with specialization in Software Engineering. Research in the department spans topics in the fundamental areas of computer science, as well as emerging subjects such as molecular computing, bioinformatics, legal issues in computing, network quality of service, and web technologies (see www.csd.uwo.ca/research for more details).

Links with the other departments in the Faculty of Science and with Faculties of Medicine & Dentistry, Law, Information and Media Studies, Ivey School of Business allow the department to offer its students unique courses and foster interdisciplinary research opportunities for faculty and graduate students. Major research projects are funded by international, federal, provincial and private sector sources. New faculty are invited to participate in existing research projects, and to initiate projects of their own.

With a full-time enrollment of about 25,000, The University of Western Ontario graduates students from a full range of academic and professional programs. The university campus is located in London, a city of 340,000, located midway between Toronto and Detroit. With parks, tree-lined streets and bicycle trails, London is known as the "Forest



Computer Science Assistant Professor(s)

Union's Computer Science Department invites applications for two tenure-track assistant professor positions to start September 2003. The new hires will join four full-time faculty and a new department chair. The department offers a small master's program as well as a Computer Science major, and offers a Computer Engineering major with the Electrical and Computer Engineering department. Candidates should hold a Ph.D. in computer science or a closely related discipline, and be committed to excellent teaching and research. All specializations are welcome.

Union is a highly selective coeducational college with programs in the liberal arts and engineering, and with a strong tradition of undergraduate research. The department offers a congenial working environment, excellent students, and labs with up-to-date Unix workstations and PCs. Rensselaer Polytechnic Institute, the University at Albany, and the GE Global Research Center are nearby. We are three hours from New York and Boston, and near the Adirondack Mountains. Salaries and fringe benefits are competitive.

For more information write to williamg@union.edu, or see www.cs.union.edu. Send applications including names, postal and email addresses of three references, and a statement of teaching and research goals to:

**Prof. George Williams, Chair
Computer Science Department
Union College, 807 Union Street, Schenectady, NY 12308**

Review of applications will start 6 January and continue until the positions are filled.

Union College is an equal opportunity, affirmative action employer and is strongly committed to increasing the diversity of its employees.

City". An international airport, galleries, theatre, music and sporting events are to be found, as would be expected of a larger center (see www.city.london.on.ca).

The closing dates for applications are the second Friday of each month until August 8, 2003. Candidates should have a PhD in Computer Science or Software Engineering and must show evidence of a strong research program and commitment to teaching. Priority will be given to candidates who build on existing strengths of the department, or who can establish leading projects in new areas. Successful candidates will teach in both the graduate and undergraduate programs of the department and pursue a strong, individually-defined research program.

To apply, please send a CV, a statement of your teaching philosophy and three representative publications to:

Prof. Michael A. Bauer, Chair
Department of Computer Science
MC355

The University of Western Ontario
London, Ontario, CANADA N6A 5B7
Positions are subject to budget approval.

All qualified candidates are encouraged to apply; however Canadian Citizens and Permanent Residents will be given priority. The University of Western Ontario is committed to employment equity and welcomes applications from all qualified women and men, including visible minorities, aboriginal people and persons with disabilities.

U.S. Naval Research Laboratory Software Engineering Section, Center for High Assurance Computing Computer Scientist/Computer Engineer

The Software Engineering Section of the Center for High Assurance Computer Systems at the Naval Research Laboratory invites applications for permanent research positions. Located in Washington, DC, NRL is widely regarded as a center of excellence in basic and applied research in requirements specification and analysis, high assurance computing, and computer security.

The Software Engineering Section conducts research in formal methods for embedded systems, including real-time systems, simulation, applications of interactive and tactic-style theorem proving, model checking, code synthesis, decision procedure integration, intrusion tolerance, survivability, secure agents, and test case generation. Applications for our methods and tools are computer security, safety-critical systems, and fault-tolerant systems. More information about our research is available at the URL:

<http://chacs.nrl.navy.mil/SoftwareEng>

Applications for research positions are solicited from experienced or recent Ph.D.s, Ph.D. candidates, holders of Master's degrees, and Master's candidates in Computer Science or Computer Engineering, and those having an equivalent combination of education and experience. Expertise in one of more of the following areas is desirable:

- Methods and tools for software engineering
 - Formal specification languages and formal verification techniques
 - Software testing
 - Fault-tolerant systems
 - Automatic code generation from specifications
 - Software agents
 - Composition, refinement, and abstraction in software development
 - Intrusion tolerance and survivability
- Programming experience in these areas is also helpful.

Send a cover letter, a resume, a list of

publications, and contact information for three references by e-mail, FAX, or regular mail to Dr. Myla Archer (mail to: archer@itd.nrl.navy.mil). Questions about the open positions are welcome.

Dr. Myla Archer
Software Engineering Section (Code 5546)
Naval Research Laboratory
4555 Overlook Avenue, S.W.
Washington, DC 20375-5337
Fax: 202-404-7942

Utah State University Department of Computer Science

Applications are invited for faculty positions at all ranks beginning Fall 2003. Applicants must have completed a PhD in computer science or a closely related field by the time of appointment. The positions require a demonstrated potential for computer science research as well as the ability to teach both undergraduate and graduate courses and supervise student research. Strong applicants in all areas of computer science research will be considered. Specialties of particular interest are bioinformatics, data mining, computer security, or networking.

The department currently has 300 undergraduate majors and 100 MS and PhD students. The BS degree is CSAB accredited. Utah State University is a Carnegie Doctoral/Research University-Extensive. It is one of the top universities in the nation in the amount of research dollars generated per faculty member.

This environment allows a researcher invaluable interaction across a wide variety of active professional fields as well as an administration understanding of researcher needs. Utah State University is situated in a beautiful mountain valley with some of the world's best outdoor recreation opportunities.

Qualified applicants should send a letter of interest, current curriculum vita (statements of research experience and interests, publications, teaching experience, and a copy of their graduate transcript), and the names of three references that the committee may contact, to:

Faculty Search Committee
Dept. of Computer Science
Utah State University
Logan, UT 84322-4205
facultysearch@cs.usu.edu
www.cs.usu.edu

Applications will be reviewed until the positions are filled. Salary will be competitive depending on qualifications. USU is an affirmative action/equal opportunity employer. Women and minority applicants are encouraged to apply.

Vanderbilt University Department of Electrical Engineering and Computer Science

The Department invites applications for faculty positions in computer science and computer engineering. We are interested in junior faculty candidates or exceptional senior candidates. Applicants in all areas are encouraged to apply and will be considered; however, preference will be given to candidates in the areas of distributed real-time and embedded systems, computer networks and middleware, and model-based software development. Applicants should have a doctorate or equivalent degree in computer science, computer engineering, or a closely related discipline. Candidates are expected to demonstrate their capability to develop a strong research program and maintain excellence in teaching. For more information about the department, visit our website at

(cont'd)

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<http://eecs.vanderbilt.edu>.

Applicants should send a resume, copies of representative publications, and names, addresses (postal and e-mail), and telephone numbers of three or more references.

Applicants should submit statements describing their research and teaching goals. The application package should be mailed to:

Faculty Search Committee
EECS Department
Box 1679, Sta. B
Vanderbilt University
Nashville, TN 37235-1679

Electronic submissions and inquiries may be made to eecs-search@vuse.vanderbilt.edu. Applications will be considered as they are received, until the position is filled.

Vanderbilt University is an Equal Opportunity Employer.

Virginia Military Institute Department of Mathematics and Computer Science Assistant/Associate Professor of Computer Science

The Department of Mathematics and Computer Science at Virginia Military Institute invites applications for a position in computer science at the Assistant/Associate Professor level to begin 1 August 2003. This position is for a five-year renewable contract with the possibility of later conversion to a tenure-track position. A Ph.D. in computer science or a closely related field is required.

Candidates should have demonstrated excellence in teaching and an ongoing program of scholarly activity. Candidates are expected to have a strong interest in undergraduate teaching and a desire to involve undergraduate students in research. The successful candidate will teach a wide variety of undergraduate computer science courses. Faculty members are expected to participate in advising and committee work. Members of the faculty wear uniforms and adhere to military customs, but military experience is not required. Applicants should submit a letter stating their professional goals, their teaching interests, a statement of their teaching philosophy, a statement of research interests, a curriculum vitae, official transcripts, and three letters of recommendation to:

Michael J. Tierney, Chair
Department of Mathematics and Computer Science
Virginia Military Institute
Lexington, VA 24450

At least one of the letters must address teaching effectiveness. Review of applications will begin 15 December 2002 and continue until the position is filled. Salary is competitive. Visit <http://academics.vmi.edu/math/>

VMI is a public, four year undergraduate military college (1300 students) located in the historic Shenandoah Valley of Virginia. Lexington (population 7,000), also home to Washington and Lee University, offers a stimulating cultural atmosphere, a relaxed rural pace, and diverse economic base to make life both pleasant and rewarding. Share in Lexington's rich heritage, while enjoying the natural beauty of the Blue Ridge Mountains. Visit <http://lexingtonvirginia.com>
VMI is an AA/EEO employer.

Virginia Tech Department of Computer Science Virginia Bioinformatics Institute

The Department of Computer Science and the Virginia Bioinformatics Institute (VBI) seek applications for several tenure-track positions in the Department of Computer Science from individuals desiring to make fundamental contributions to both computer science and the life sciences in bioinformatics. Applicants for a senior position must have a significant track record of grant funding. All applicants must have a PhD in Computer Science or an allied area, a demonstrated record of publications in computer science or computational science, and a commitment to addressing significant life science problems. Full information about the positions and the department is available at <http://www.cs.vt.edu>.

The university has a strong commitment to bioinformatics. VBI (<http://www.vbi.vt.edu>) serves as a flagship bioinformatics research institute wedding cutting-edge biological research with state-of-the-art computer science. The Department of Computer Science has an outstanding record of multidisciplinary research, and has projects in human-computer interaction, high performance computing, problem solving environments, digital libraries, and bioinformatics.

Applicants should send a curriculum vitae, a 1-2 page statement of research goals in both computer science and life science, and at least three letters of reference to

Bioinformatics Faculty Search
Dept. of Computer Science
660 McBryde Hall (0106)
Virginia Tech
Blacksburg, VA 24061

Review of candidates will begin November 15, 2002, and continue until the positions are filled. Virginia Tech is deeply committed to recruiting, selecting, promoting, and retaining women, persons of color, and persons with disabilities. We strongly value diversity in the university community, and seek to assure equality in education and employment. Individuals with disabilities desiring accommodations in the application process should notify Dr. Lenwood Heath, 540/231-4352, TTY: 800/828-1120.

Virginia Tech Department of Computer Science Bioinformatics Postdoctoral Associate

The Department of Computer Science seeks applications for a postdoctoral associate to contribute to existing bioinformatics projects and to assist in teaching graduate-level courses in computation for life scientists. Applicants for the postdoctoral position must have a PhD in Computer Science or allied field and must demonstrate a genuine interest in participating in bioinformatics research. Full information about the position can be accessed through <http://www.cs.vt.edu>.

Applicants should send a curriculum vitae, a 1-2 page statement of research goals in both computer science and life science, and at least three letters of reference to

Bioinformatics Faculty Search
Dept. of Computer Science
660 McBryde Hall (0106)
Virginia Tech
Blacksburg, VA 24061

Review of candidates will begin November 15, 2002, and continue until the position is filled. Virginia Tech is deeply committed to recruiting, selecting, promoting, and retaining women, persons of color, and persons with disabilities. We strongly value diversity in the university community, and seek to assure equality in education and employment. Individuals with disabilities desiring accommodations in the application process should notify Dr. Lenwood Heath, 540/231-4352, TTY: 800/828-1120.

Washington University in Saint Louis

Department of Computer Science and Engineering Faculty Positions Available

Applications are invited for tenure-track faculty positions at the Assistant, Associate and Full Professor levels. Applicants should hold a doctorate in Computer Science, Computer Engineering or a closely related field, have a record of accomplishment in research, and demonstrate a strong commitment to teaching.

Building upon the impressive recruiting successes of the last four years that included twelve new tenure-track faculty, the Department plans to fill several additional faculty positions. The Department continues to seek outstanding candidates likely to develop synergistic relationships with existing areas of research excellence. Academic couples seeking to co-locate are strongly encouraged to apply. The Department is committed to providing the kind of resources and environment that will enable new faculty members to flourish intellectually. Candidates with a strong background in networking (including wireless communication and security), software systems (particularly embedded systems, mobile computing and database), and computer engineering will receive special consideration.

The Department enjoys a great research reputation and impressive levels of research activity, e.g., annual research expenditures in the range of \$350,000 to \$450,000 per faculty member. Our doctoral graduates have been heading for successful careers in academia and industrial research centers while noteworthy entrepreneurial endeavors spearheaded by our faculty and graduates (with the full support of the University) attest to a highly respected technology transfer tradition and culture. Strict limits on University undergraduate enrollments combined with the increasing popularity of Washington University allows the Department to continue to offer small classes and close personal attention to a diverse student body of exceptional quality and to benefit from strong participation by undergraduates on a wide range of research projects. A faculty known for its friendly, accepting and supportive nature provides a welcoming and mentoring environment for new arrivals. Finally, progressive fiscal policies that reward research, teaching, and innovation by the Department have created an environment rich in resources that fosters a readiness to invest in promising new initiatives.

Qualified applicants should submit a complete application (cover letter, curriculum vitae, research statement, teaching statement, and three letters of reference). Electronic submissions (recruiting@cse.wustl.edu) are preferred. All other communications should be directed to:

Dr. Catalin Roman, Chairman
Department of Computer Science and
Engineering
Campus Box 1045
Washington University
One Brookings Drive
St. Louis, MO 63130-4899

Applications will be considered as they are received. Those arriving after February 1, 2003, may not be given full consideration.

Washington University is an equal opportunity/affirmative action employer.

Wayne State University Department of Computer Science Faculty Positions

The Department of Computer Science of Wayne State University invites applications for several tenure-track faculty positions at Assistant or Associate Professor levels starting in August 2003. All areas of computer science will be considered.

Candidates should have a Ph.D. in computer science, computer engineering or a closely related field, a strong interest in and commitment to both research and teaching, a strong publication record in their area and show potential for obtaining external research funding.

The Department of Computer Science offers B.S., M.S. and Ph.D. degrees. Federal agencies as well as industries support a variety of research programs within the Department. The University has made a strong commitment to information technology and computing. The Computer Science Department is undergoing a major expansion, which includes additional office and research space, Gigabit connectivity and Internet2/Abilene access. The Department has excellent computing facilities including a state-of-the-art Sun Fire 6800 with over 100 processors, several other high-end Sun clusters and servers and access to the University's IBM RS/6000 SP massively parallel supercomputer. The Department also maintains active collaborative relationships with the Institute for Scientific Computing, Institute for Manufacturing Research, Smart Sensor Program, Life Science Corridor initiative, the Wayne State Medical School, and many other centers and departments within the university. Other excellent opportunities for research with industry include existing links with the automotive industry and various computer industries.

Wayne State University, located in Detroit's Cultural Center, is an urban research university serving over 32,000 students. Many outstanding residential communities and some of the nation's top 5% school districts are within close proximity of the campus. The University offers excellent benefits and a competitive compensation package.

Applicants should send a letter of intent, a statement of research and teaching interests, a resume and the names of at least three references including each reference's address, email, telephone and fax number. Please send this information to:

Dr. Farshad Fotouhi, Chair
Faculty Search Committee
Wayne State University
Department of Computer Science
5143 Cass Avenue
Room 431 State Hall
Detroit, MI 48202
1-313-577-5527 (voice)
1-313-577-6868 (fax)
fotouhi@cs.wayne.edu

For full consideration, applications should be submitted by March 1, 2003. However, applications will be accepted until the positions are filled.

Wayne State University is an equal opportunity/affirmative action employer. Wayne State University - People working together to provide quality service. All buildings, structures and vehicles at WSU are smoke-free.

Yale University Department of Computer Science

The Yale Computer Science Department is looking for highly qualified candidates for a senior faculty position in the area of programming language design and implementation. The successful candidate is expected to be an internationally recognized leader in research in the field of programming languages, to serve as an able and influential teacher at both the undergraduate and graduate levels, and to contribute to the well being of the academic community. Please send vitae and at least five names of references to:

Faculty Recruiting Committee
Department of Computer Science
Yale University
P.O. Box 208285
New Haven, CT 06520-8285

The Department's home page may be found at: www.cs.yale.edu. Qualified women and minority candidates are encouraged to apply.

Yale is an affirmative action/equal opportunity employer.



The University of
Science and Technology.
And life.

HEAD OF COMPUTER SCIENCE DEPARTMENT

Worcester Polytechnic Institute (WPI) invites applications for the position of Head of the Department of Computer Science. The department boasts a collegial and energetic faculty with deep commitments to both research and pedagogy. Currently 18 tenure-track faculty strong, the department is growing rapidly in both faculty size and research quality. The department provides undergraduate and graduate education through the doctorate; current enrollment is approximately 650 undergraduate and 100 graduate students. The department's website (<http://www.cs.wpi.edu/>) provides additional information.

The department's ideal candidate is a highly respected computer scientist with strong leadership abilities, a distinguished research record, and demonstrable teaching credentials. The new Head will be expected to promote scholarly initiatives, foster corporate relations, and steer the department through an exciting period of growth and change. The university is in the final year of a major capital campaign that will significantly benefit the department. The department enjoys the administration's strong support, and is in the planning stages for a new building.

WPI is an elite national university in Worcester, MA, with an enrollment of 3,700 and a core focus on engineering, science and the management of technology. It grants bachelor's, master's and doctoral degrees in more than 30 disciplines. Widely recognized for its project-oriented curriculum, its global perspectives program, and for integrating societal elements with technology in the curriculum, WPI fosters a spirit of constructive experimentation in educational development.

Worcester lies in the high-tech region of east-central Massachusetts and offers access to the diverse cultural and recreational resources of Boston and greater New England. The WPI campus lies in close proximity to several area colleges and the UMass Medical School, as well as many of the city's major cultural attractions, including the Worcester Art Museum, American Antiquarian Society and several major music performance venues.

Candidates should send a cover letter, curriculum vitae, and names, addresses, telephone numbers and email addresses of references to: **Dr. William W. Durgin, Associate Provost for Academic Affairs, Chair, Computer Science Search Committee, Boynton Hall, Worcester Polytechnic Institute, 100 Institute Road, Worcester, MA 01609. Email inquiries regarding the position may be sent to wwdurgin@wpi.edu.** Full consideration will be given to candidates whose complete applications arrive before January 15, 2003.

Worcester Polytechnic Institute

To enrich education through diversity,

WPI is an affirmative action, equal opportunity employer.