# Spending Bills Delayed, but NSF Numbers May Improve 

## Computing Researchers See Increase in Completed Defense Bill

By Peter Harsha

By the start of the 2005 fiscal year (on October 1, 2004) Congress had completed work on just one of thirteen annual appropriations bills necessary to fund the operations of the federal government. It appeared increasingly likely that work on the remaining bills would not be completed until after the November 2nd federal election-and possibly not until the new Congress is seated in January 2005.

As this issue goes to press in early October, Congress has passed a "continuing resolution" providing stopgap funding for federal agencies left without a FY 2005 appropriation through November 20, 2004-an indication that the Congressional leadership does not believe it is likely that agreements can be reached on the remaining bills until Congress returns to Washington in a "lame duck" session after the election.

As a result, agencies like the National Science Foundation,

Department of Energy, and NASA, whose appropriations bills have not yet passed, will operate at FY 2004 spending levels, with no new program starts or new spending until an agreement is reached
This result was foreshadowed back in April and May of this year when the House and Senate were unable to agree on a joint budget resolution that would have set caps on FY 2005 appropriations. Without the caps in place, appropriations bills that come to the floors of the respective chambers are open to amendments that could significantly increase funding levels (or cut others) for programs within the bills. This, in turn, would put Members of Congress in the politically awkward position of having to vote up or down on spending increases on any number of individual programs-a prospect neither the Republican nor Democratic leadership relished during an election year.

## Inside CRN

| Expanding the Pipeline ....................... 2 | NSF/CISE Update ............................... 4 |
| :--- | :--- |
| ECEDHA News ...................................... 3 | CRA Service Awards .......................................... 8 |

It is likely that the unfinished appropriations bills will be bundled into a single "omnibus" appropriations bill and passed en masse, either during the lame duck session or perhaps as late as January when the new Congress convenes.
Despite the delay, some progress has occurred on a number of appropriations bills, including a few of particular relevance to computing researchers.

## Defense (P.L. 108-287)

The FY 2005 Defense Appropriation has the distinction of being the only appropriations bill that has been signed into law (P.L. 108-287). Researchers fared reasonably well under the bill, with overall research and development at the Departmen of Defense slated to increase 10.3 percent or $\$ 1.2$ billion, to $\$ 13.3$ billion overall in FY 2005.

Aggregate basic research funding at the Department of Defense (DOD), so-called "6.1" research in OOD parlance, will rise to $\$ 1.5$ billion in FY 2005, an increase of 7.8 percent or $\$ 110$ million over the

## CISE 1994-2004: A Decade in Review

By Peter A. Freeman and Lee Harle

Computing faculty who have recently submitted proposals to CISE have come to understand the increasing demands on CISE' budget. While there has been considerable growth in the budget in recent years, this growth has not kept pace with the escalating number of promising research and education opportunities and challenges in our field. Consequently, proposal success rates in CISE are dropping to new lows. Like you, we are concerned about this This article seeks to shed some light on CISE budget and funding trends, and a companion article on page 4, "CISE Update: Adjusting to the Increase in Proposals," describes CISE's current plan to adapt in this changing environment
The CISE budget has grown significantly in the last decade, but most markedly over the past five years as can be seen in Figure 1. A significant change in growth rate can be observed in the 1999-2000 period. Why? In February 1999, the


Figure 1: Comparison of NSF and CISE Annual Budget trends for 1994-2004.

President's Information Technology Advisory Committee (PITAC) published a report that asserted that "Federal support for research in information technology is seriously inadequate." In response to PITAC recommendations, NSF deemed

Information Technology Research (ITR) a budget priority area and, indeed, Networking and Information Technology Research and Development (NITRD) became CISE 1994-2004
Continued on Page 7

FY 2004 appropriated level. DOD applied research ("6.2") will increase 11.9 percent to $\$ 4.9$ billion, and advanced technology development "6.3") will rise 9.8 percent to $\$ 6.2$ billion in FY 2005.

Of particular importance to computing researchers, the Defensewide "Computing Systems and Communications Technology" program line, which includes much of the funding for IT R\&D at DOD and DARPA, has been split into two program lines. The new "Information and Communications Technology" line will receive $\$ 192.7$ million in funding in FY 2005, and the new "Cognitive Computing Systems" account will receive $\$ 151.2$ million in FY 2005. Their combined $\$ 344$ million represents about $\$ 1.2$ million more than the President requested for FY 2005 and $\$ 5.5$ million more than FY 2004

The "High Performance Computing Modernization Program" also received an increase of $\$ 32.7$ million

Spending Bills Delayed Continued on Page 6

| Computing Research Association |  |
| :---: | :---: |
| Board Officers |  |
|  | mes Foley |
| Chair |  |
|  | eorgia Institute of Technology |
| Janice Cuny |  |
| Vice Chair |  |
|  |  |
| Kathleen McKeown |  |
| Secretary |  |
|  | olumbia University |
| Philip Bernstein |  |
| Treasurer |  |
|  | icrosoft Research |
| Board Members |  |
| William Aspray Indiana University |  |
|  |  |
| Randal Bryant |  |
|  | arnegie Mellon University |
| Lori Clarke |  |
|  |  |
| Robert Constable |  |
|  |  |
| Carla Ellis |  |
|  | uke University |
| Timothy Finin University of Maryland, Baltimore County |  |
|  |  |
|  |  |
| Oscar Garcia <br> University of North Texas |  |
|  |  |
| Mary Jean Harrold Georgia Institute of Technology |  |
|  |  |
| Leah H. Jamieson Purdue University |  |
|  |  |
| Michael Jones <br> Microsoft Research <br> Robert Kahn Corporation for National Research Initiatives |  |
|  |  |
|  |  |
|  |  |
|  |  |
| John King University of Michigan |  |
|  |  |
| Guylaine M. Pollock Sandia National Laboratories |  |
|  |  |
| Daniel Reed University of North Carolina at Chapel Hill |  |
|  |  |
|  |  |
| Robert Schnabel University of Colorado at Boulder |  |
|  |  |
| Marc Snir |  |
| University of Illinois at UrbanaChampaign |  |
| Lawrence Snyder <br> University of Washington |  |
|  |  |
| Mary Lou SoffaUniversity of Virgin |  |
|  |  |
| Eugene Spafford Purdue University |  |
|  |  |
| Alfred Spector IBM Corp. |  |
| John Stankovic |  |
|  |  |
| David Tennenhouse |  |
|  | tel Corp. |
| Frank Tompa |  |
|  |  |
| Moshe Vardi |  |
| Rice University |  |
| Jeffrey Vitter Purdue University |  |
|  |  |
| Richard Waters Mitsubishi Electric Research Labs |  |
|  |  |
| Elaine Weyuker AT\&T Labs - Research |  |
| Stuart Zweben |  |
| Ohio State University |  |
| Executive Director <br> Andrew Bernat |  |
|  |  |

## Affiliate Societies



# Expanding the Pipeline <br> Coalition to Diversify Computing (CDC) 

By Patricia J. Teller

The Coalition to Diversify Computing (CDC), founded in 1996, is an organization whose primary goal is the enhancement and diversification of the available pool of highly trained scientists and engineers in computer-related fields. It is a joint organization of the Association of Computing Machinery (ACM), Computing Research Association (CRA), and IEEE Computer Society (IEEE-CS). The CDC membership includes representatives from academia, industry, and federal labs that are involved in a variety of computerrelated disciplines. Each member is engaged in a project aimed at realizing CDC's goal.

Given the importance of diversity in the workplace, the need for growth of the technical workforce, and national demographic trends, CDC partnerships and projects target an increase in the number of students from underrepresented ethnic groups transitioning into computing-related careers. To reach this objective, it is imperative that students perform well in their undergraduate studies and are strongly encouraged to continue their education into graduate school Similarly, it is essential that graduate students successfully attain M.S. and Ph.D. degrees and take on leadership positions within both societal and technical communities
Some strategies employed by CDC projects that have been effective in achieving these objectives are: 1) accessibility to role models, 2) enhancement of student confidence, 3) availability of financial and emotional support, and 4) awareness of education and career possibilities. For example, with respect to role models, according to CRA's Taulbee Survey 2002-03, only two percent of the doctorates in computer science and computer engineering went to Hispanics and only one percent went to AfricanAmericans; none were awarded to Native Americans. These statistics translate to very few faculty members from underrepresented ethnic groups being visible to students.

Two CDC projects that specifically address the accessibility of role models from underrepresented ethnic groups are the Distinguished Lecturer Series and the Traveling Academic Forum. The former organizes and supports visits of minority researchers from academia and industry to majority- and minority-serving institutions to give lectures on the opportunities, technologies, and relationships needed to be successful in computer-related disciplines. The latter project organizes and presents workshops that provide information (e.g., hiring, promotion, and tenure processes) that permits better understanding and navigation of the
academic ladder. The workshops offer encouragement to under graduate students to pursue graduate studies and early exposure to academic careers. The long-term goal of the Traveling Academic Forum is o create a community of faculty to provide support and guidance for each other. Creating community, whether among undergraduate students, graduate students, or faculty, provides a great impetus for success. For example, consider the fact that many faculty members who have succeeded in their pursuit of tenure and senior faculty status have done so only through information exchanges that led to greater awareness, communication, and interactions. Similarly, many successful graduate students have achieved their goals through directed interactions with peers and faculty.
Another CDC project, Sending Students/Mentors to Technical Conferences, encourages undergraduate and graduate students to gain expertise in areas of computing, while providing them with opportunities to network with researchers in these fields. To this end, it provides financial support to students from underrepresented ethnic groups in science, technology, engineering, and mathematics, with a particular focus on the area of computing, to attend and participate in leading technical conferences. It is always easier to attend a conference with someone else; thus, a student is not eligible for support unless a faculty member commits to serving as the student's mentor at the conference. Additionally, students are encouraged to apply in pairs or triplets. Student and faculty mentor pairs who would otherwise be unable to attend such conferences (i.e., who lack individual and institutional means for attending the conferences) are the primary targets of this project.

In supporting the students, the project endeavors to provide access to role models, enhance their confidence, and increase their awareness of educational and career possibilities. Through the faculty mentors, whether supported directly or indirectly (through support of their students), the project seeks to increase the number of faculty who work towards CDC's goals. The project has had some notable successes. For example, after attending the 2003 SIAM Conference on Computational Science and Engineering with his student Omar Santiago, Damian Rouson, Assistant Professor at the City University of New York, let us know that "... Omar decided to join my research group and pursue his Ph.D. He applied, was accepted, and is now a Ph.D. student!" Heather Ann Wake, University of South Carolina,
supported by the project to present a paper at FCCM '03, said of her experience "... I must have done fine because people came up to me fterward to talk about my project and ask for my personal opinions. Overall, this conference was an irreplaceable experience that will help me in the future." Heather received an NSF graduate fellowship, and was the female runner-up in CRA's 2004 Outstanding Undergraduate Award competition.

Other current CDC projects nclude:

CREU (Collaborative Research Experiences for
Undergraduates)—a joint program between CDC and CRA-W that makes research experiences available to teams of undergraduate students during the academic year at their home institutions.

- CDC Database of minority researchers and graduate students.
- Distributed Rap Sessions, which provide support for minority undergraduate and graduate students by creating a virtual community of peers with common backgrounds, both ethnically and intellectually.
- Traveling Graduate School Forum.

Bringing together the objectives of all of CDC's projects is the biennial Richard Tapia Celebration of Diversity in Computing Conference, which is organized by CDC. This conference, which began in 2001, celebrates the technical contributions and career interests of diverse people in computing fields. The next conference is scheduled for October 19-22, 2005 at the Hyatt Regency in Albuquerque, NM

If you would like to help CDC attain its goals, 1) be a mentor-you don't need to be a member of an underrepresented ethnic group or an academician to do this, 2) build community among undergraduate and graduate students of underrepresented ethnic groups, 3) provide hese students access to role models, even on a limited basis, or 4) submit a CDC project for consideration. Get involved! For more information about CDC, its projects, and the Richard Tapia Celebration of Diversity in Computing Conference, go to http://www.cdc-computing.org.

[^0]Page 2

## ECEDHA News and Activities

By Kenneth Jenkins, Stephen Goodnick, and Kenneth Connor

We would like to begin this article by providing some history of the organization currently known as ECEDHA.

In 1963, at the ASEE Annual meeting, the department heads of Electrical Engineering Departments in the United States began to organize, and the organization that grew out of these efforts soon became known as the Electrical Engineering Department Heads Association (EEDHA). EEDHA's purpose was to serve as an advisory group on accreditation and to the IEEE Professional Group on Education. It also provided an independent forum for members to discuss mutual problems, and facilitated the dissemination of educational methods and materials. EEDHA's early meetings were held at the annual ASEE and FIE meetings.

In 1981, EEDHA became independent of ASEE and IEEE. Aided by a grant from NSF, EEDHA reorganized on a national level in 1984 and held its first National EEDHA (NEEDHA) meeting in Hilton Head, SC. In 1986, the International Engineering Consortium (IEC) took over the "management" of NEEDHA.
In 2001, NEEDHA changed its name to recognize the emergence of computer engineering curricula among its member institutions, becoming the Electrical and Computer Engineering Department Heads Association (ECEDHA). Its mission is formally stated in the organization's constitution (see Box 1).

ECEDHA expanded further in 2003 when the Canadian Heads of Electrical and Computer Engineering (CHECE) were invited as full members of ECEDHA after passage of a constitutional amendment. In December 2003, the ECEDHA membership totaled 286, with members from the United States, Canada, Puerto Rico, Mexico, and

South America. The member institutions supported 339 total accredited programs, representing 85 percent of the total ECE programs in these countries.
ECEDHA maintains a Web site (www.ecedha.org), supports a job posting list server (ecedhajobs@iec.org), and publishes an Annual Departmental Survey and an Annual ECEDHA Newsletter. At its annual national meetings, ECEDHA sponsors an ABET Workshop and a New Chairs Workshop. ECEDHA also sponsors an annual awards program, with awards presented in the categories of Service, Innovative Programs, and Accreditation Advocacy.

ECEDHA's key activities for 2003 included organizing a Special Issue of the IEEE Transactions on Education: Vision for ECE Education in 2013 and Beyond (Vol. 45, No. 4, Nov. 2003); organizing an NSF/ECEDHA/IEC NanoEngineering Education Workshop in January, 2003; and co-organizing with NSF an NSF/ECEDHA Agents of Change Workshop: Achieving Diversity in Electrical and Computer Engineering Research and Education in June, 2003. Reports from these workshops are available on the ECEDHA Web site.

## 2004 Annual Meeting

The 2004 ECEDHA Annual Meeting was held in Orlando, Florida, March 16-22, 2004. The meeting was well attended with more than 180 chairs and heads present. Sessions were devoted to varied topics of interest to heads of ECE departments, including future research directions, diversity in ECE programs, ABET and undergraduate education issues, public policy, and engineering education research. Dr. William Wulf, President of the National Academy of Engineering, presented the keynote talk entitled

## Box 1. ECEDHA Mission Statement

The purposes of ECEDHA are:

- To advance the fields of electrical and computer engineering and contribute to the development and dissemination of engineering knowledge in the public interest and for the public good;
- To provide a forum for electrical and computer engineering department heads (hereinafter referred to as heads of departments) in the United States to exchange information and ideas for improving the quality and effectiveness of electrical and computer engineering education; and
- To allow the heads of departments to improve electrical and computer engineering education through effective communication with:
i. the electrical and computer engineering profession,
ii. the electrical and computer engineering industry,
iii. other electrical and computer engineering professional organizations,
iv. the institutions with accredited electrical and computer engineering programs,
v. appropriate government agencies.
"Thoughts on the Globalization of Engineering and Its Implications for Engineering Education." This issue is currently at the forefront of public discussion (particularly during this election year), and Dr. Wulf's insights on these issues stimulated a great deal of discussion throughout the 2004 annual meeting. Electrical and Computer Engineering are fields that are heavily impacted by the global economy in areas such as software, electronics manufacturing, and electronic design.


## Globalization and the Engineering Workforce

As a result of the intense interest in public policy and engineering outsourcing abroad that was stimulated during the 2004 annual meeting, the ECEDHA Board of Directors has initiated an effort to organize a workshop on this topic. Plans are currently being developed to hold the workshop in the Washington, D. C. area in spring 2005. It is hoped that this workshop will stimulate further debate on
outsourcing and globalization, in light of the lack of hard data concerning the impact of this evolution on engineering jobs in the United States. It seems that much recent discussion has been shaped by anecdotal evidence as opposed to aggregate statistics. It was somewhat surprising to learn of May 2004 labor statistics that claimed to show only a minor portion (less than 5\%) of job losses in the workforce as being identifiable with outsourcing. One wonders if such statistics truly account for the large growth of offshore facilities, and associated obsolescence of older US-based facilities, as opposed to simply measuring direct loss of individual jobs due to outsourcing.

It is becoming increasingly apparent that there is a growing need to educate engineering students for competitive careers in a global economy. Educators will face the challenge of recruiting students into ECE programs in the face of the negative publicity of outsourcing,

ECEDHA News and Activities Continued on Page 5

## 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 14, 2005.

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.
- Improving public and policymaker understanding of the importance of computing and computing research in our society. 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 statement (not to exceed 100 words) supporting their nominations.
To receive a nomination form, send an e-mail request to elections@cra.org. Nominations must reach CRA by January 14, 2005.

# CISE Update: Adjusting to the Increase in Proposals 

By Michael Pazzani, Kamal Abdali, Greg Andrews, and Sangtae Kim

The number of proposals submitted to the CISE directorate at NSF has increased substantially over the past five years. A companion article, "CISE 1994-2004: A Decade in Review," discusses the statistics in more detail. Here we discuss how CISE is adapting to the increase in proposals while pursuing its mission.

The Directorate for Computer and Information Science and Engineering has three goals:

1. To enable the United States to uphold a position of world leadership in computing, communications, and information science and engineering.
2. To promote understanding of the principles and uses of advanced computing, communications, and information systems in service to society.
3. To contribute to universal, transparent, and affordable participation in an infor-mation-based society.
To achieve its goals, CISE supports research in all areas of computer and information science and engineering, helps to develop and maintain cutting-edge national computing and information infrastructure for research and education, and contributes to the education and training of the next generation of computer scientists.
A few general principles guide our policy decisions:

- Very low proposal acceptance rates are harmful to the computing research and education community and should be avoided. We realize that the community as a whole puts a great deal of effort into writing proposals, and we are grateful to those who volunteer to serve on review panels.
- CISE will continue to fund a broad and diverse group of principal investigators to fulfill its research and educational mission.
- CISE strives to fund the most innovative projects with the potential for the greatest impact, and to seek peer input on both the intellectual merit and broader impacts of projects proposed.
- Collaborative, multidisciplinary research is encouraged. However, CISEfunded research should lead to advances in computer and information science and engineering.
- CISE will continue to emphasize certain areas of
critical importance, such as computer and network security, but will also continue to ensure that funding is available for a broad range of core computer science research This will ensure that we avoid creating funding gaps that are harmful to the long-term success of computer science.
There are several reasons for the increase in the number of proposals submitted to CISE. First, there has been an increase in computer science faculty nationally. Second, some other funding agencies and some private companies have reduced support for computer science research at universities. Third, the field of computer science has expanded to take on a broader mission (e.g., by including new areas such as bioinformatics)

We will illustrate how CISE is adjusting to the increase in proposals in the Information and Intelligent Systems (IIS) division. IIS received 1,220 proposals in FY2002, 2,029 in FY2003, and 2,636 in FY2004. In FY2003, NSF received a substantial budget increase and IIS funded more awards than in any prior year. However, the budget increase did not keep up with the number of proposals. As a consequence, IIS declined more proposals and a higher percentage of proposals in FY2003 than in prior years.
The growth in proposals in 2004 was not accompanied by a substantial budget increase. Without some adjustments to our plans, acceptance rates in 2004 would be below 10 percent in many competitions. Consequently, only a few IIS solicitations will have their usual winter deadlines; the deadlines for the other solicitations will be delayed from the winter to the spring of 2005 .

Specifically, Collaborative Research in Computational Neuroscience, Universal Access, and Science and Engineering Information Integration and Informatics (SEIII) will continue with their December 2004 deadlines as planned. All other IIS solicitations will have their deadlines delayed until mid-April 2005. FY2005 funds will be used to fund some additional proposals that were submitted in FY2004 to the competitions with unacceptably low acceptance rates, as well as 2005 CAREER awards and awards in the solicitations with December deadlines. Proposals submitted in April 2005 will be funded with FY2006 funds. We anticipate that the deadlines for all IIS programs will be the same in 2006 as in 2005 (e.g., proposals submitted in April 2006 will be funded in October 2006 with FY2007 funds).

One advantage of this adaptation is that some high-quality proposals submitted to IIS in FY2004 that would not otherwise have been funded will indeed be funded. If these proposals were not funded, it is likely that updated versions of them would be submitted again, and we would place an additional burden on the CISE community by asking them to review them again.

Another advantage of this adaptation is that funds provided to NSF will be available to the IIS research community earlier in the fiscal year. While in most years the community receives the majority of NSF funding in the last quarter of the fiscal year, in 2005 most funds will be distributed in the first quarter of the fiscal year (allowing students to be hired earlier, for example).
Of course, the disadvantage of this adaptation is that PIs who were intending to write proposals for the winter deadline in hopes of receiving funding in the late summer will not be able to receive funding until the early fall. The effects of this delay can be mitigated by requesting nocost extensions or supplements to existing grants, by applying to grant solicitations with winter deadlines (such as SEIII), and by NSF notifying PIs of award decisions as early as possible so PIs may elect to charge some costs to grants up to 90 days before the grant is received.

CISE is exploring similar strategies in the Computing and Communication Foundations division. The Theoretical Foundations cluster and the Emerging Models and Technologies for Computing cluster will have proposal deadlines in January and February 2005, respectively, and awards will be made during the summer of 2005 . The deadline for the Computing Processes and Artifacts cluster will be delayed until May 2005, with awards made in the late fall of that year. The other CISE divisions, CNS and SCI, will have the same or earlier deadlines for their programs in 2005.

Two other adaptations are also worth noting. First, CISE will limit the number of proposals that one may submit to some competitions, and will enforce regulations that prohibit sending virtually identical proposals simultaneously to more than one competition. The goal here is to reduce the number of proposals, while sending the message that it is better to invest one's time in one high-quality, innovative proposal than to spread one's efforts over many proposals of perhaps lesser quality.

Second, CISE is coordinating with a variety of agencies, including the Department of Homeland Security, Defense Advanced Research Projects Agency, Central Intelligence Agency, Library of

Congress, and National Institutes of Health to fund proposals of mutual interest. Additional funds provided by these agencies help NSF and these agencies achieve the common goal of supporting innovative research.
Lastly, computing faculty are encouraged to consider funding opportunities not only in CISE, but also in NSF's priority areas (i.e., Nanoscale Science and Engineering, Biocomplexity in the Environment, Mathematical Sciences, and Human and Social Dynamics), centers (e.g., Science and Technology Centers, Science of Learning Centers, and Engineering Research Centers), cross-directorate programs (e.g., Major Research Instrumentation and Integrative Graduate Education and Research Traineeship), and other NSF programs where information technology advances might play an enabling role.

While CISE wishes that it could return to the days of 35 percent acceptance rates, by creatively adapting to the changing environment according to the principles enumerated in this article, we believe that CISE can fulfill its mission by investing in the people, tools, and ideas that enable the United States to uphold a position of world leadership in computing, communications, and information science and engineering.

The authors are Division Directors at NSF in the Directorate for Computer and Information Science and Engineering (CISE): Michael Pazzani, Information $\mathcal{E}$ Intelligent Systems (IIS); Kamal Abdali, Computing $\mathcal{E}$ Communication Foundations (CCF); Greg Andrews, Computer $\mathcal{E}$ Network Services (CNS); and Sangtae Kim, Software and Tools for High-End Computing (SCI). I

## CRA Welcomes New Members

Academic Departments
Toyota Technological Institute at Chicago
University of Arkansas (CS)
University of Massachusetts, Boston (CS)
University of Southern California (EES)

Industry Labs
NTT DoCoMo USA Labs

## ECEDHA News and Activities from Page 3

and the perceived undercutting of the value of an engineering degree in the United States due to global competition. Another challenge is the retraining of engineering professionals in fields that have suffered from excessive outsourcing. Addressing this challenge requires a new emphasis on continuing education in providing opportunities for engineers at all career levels to refresh and change the direction of their evolving careers.

## Preview of the 2005 Annual Meeting

The 2005 annual ECEDHA meeting will be held in New Orleans, March $18-22,2005$. The primary technical focus of the 2005 annual meeting will be on the future development of "Biotechnology and the Electrical/Computer Engineer." The 2005 technical program will include panel discussions and specially organized sessions to address what needs to be done to prepare Electrical and Computer Engineering graduates for careers in the biosciences and bioengineering fields. Public policy, globalization, and the offshoring of engineering jobs will be addressed as well. Additional topics that will be highlighted at the next annual meeting include cyber security, collaborations between engineering and fine arts, the role of educational research, and best practices in the recruitment and retention of minorities and women in the Electrical and Computer Engineering profession.

## New Relationships between ECEDHA and Canadian ECE Departments

During the past year, a constitutional amendment was approved by a vote of the ECEDHA membership that extends full membership privileges to accredited $\mathrm{EE} / \mathrm{ECE} / \mathrm{EECS}$ departments at Canadian institutions. Prior to the passage of this amendment, ECEDHA membership was open to Canadian departments, but when they joined ECEDHA they were granted Affiliate Membership status even though they paid the same membership fees as US institutions. The Affiliate Membership status limited the ability of the Canadian departments to vote in ECEDHA elections and to fully participate in certain other ECEDHA activities. Under the new constitutional amendment, Canadian departments are granted full membership status upon payment of normal annual membership fees. Furthermore, unaccredited Canadian institutions can also join ECEDHA as Affiliate Members under the same rules and regulations extended to unaccredited US institutions.

## Recent Interactions between ECEDHA and CRA on Public Policy Matters

At the recent CRA meeting at Snowbird, ECEDHA attendees (including two ECEDHA board members, Bob Janowiak and Ken Connor) took the opportunity to explore how ECEDHA and CRA can work together more closely in the area of public policy. As a result, CRA has invited Dr. Wayne Bennett, who currently serves on the ECEDHA Board of Directors, to become a member of the CRA Government Affairs Committee as an ECEDHA representative. CRA has also expressed interest in developing a stronger relationship with IEC in the interest of strengthening their relationships with the computer/IT industry.

Kenneth Jenkins (jenkins@engr.psu.edu) is ECEDHA's President; Stephen Goodnick (stephen.goodnick@asu.edu), ECEDHA's Past-President; and Kenneth Connor (connor@rpi.edu), ECEDHA's Vice President.【

## REMINDER TO CS\&CE CHAIRS

(Ph.D-Granting Institutions)
Taulbee Surveys Were Due November 1

Please make certain your survey
has been submitted to:
http://www.cra.org/taulbee

## Questions?

Contact: survey@cra.org

## Students Receive CRA Awards at Hopper Conference

Eight students were in attendance at the Grace Hopper Celebration of Women in Computing banquet in Chicago on October 7 to receive their 2004 CRA Outstanding Undergraduate Awards.

The female winner award was presented to Anna Cavender (University of Oregon); Heather Wake (University of South Carolina) received the female Runner-Up award; and Honorable Mentions went to Erika Shehan (Purdue); Arati Kurani and Dong-Hui Xu (both from DePaul); Katrina Ligett (Brown); ane Tougas (Dalhousie); and Kristin Vadas (Georgia Tech).
Jan Cuny, CRA's Vice Chair, and Andy Bernat, CRA's Executive Director presented the awards.
Other winners were presented with their awards in July at the AAAI annual meeting in San Jose (see CRN September 2004).

(L to R): Kristin Vadas, Erika Shehan, Arati Kurani, Heather Wake, Jan Cuny, Anna Cavender, Dong-Hui Xu, Katrina Ligett, Jane Tougas, and Andy Bernat.

## February 11 Deadline for CRA Service Award Nominations

The Computing Research Association invites nominations for the CRA Distinguished Service Award and the A. Nico Habermann Award for 2005.

## Distinguished Service Award

CRA makes an award, usually annually, to a person who has made an outstanding service contribution to the computing research community. This award recognizes service in the areas of government affairs, professional societies, publications or conferences, and leadership that has a major impact on computing research

## A. Nico Habermann Award

CRA makes an award, usually annually, to a person who has made outstanding contributions aimed at increasing the numbers and/or successes of underrepresented groups in the computing research community. This award recognizes work in areas of government affairs, educational programs, professional societies, public awareness, and leadership that has a major impact on advancing these groups in the computing research community. Recognized contributions can be focused directly at the research level or at its immediate precursors, namely students at the undergraduate or graduate levels.
For a list of previous recipients of these two awards, see: http://www.cra.org/main/cra.projects.html.

## Nomination Procedure:

The deadline for receipt of nominations is February 11, 2005 Nominations should not exceed two pages in length and should describe the contributions on which the nomination is based. Letters in support of the nomination are welcome but not required. Questions or comments may be addressed to awards@cra.org.
Send nominations electronically to: awards@cra.org (in plain text or as a
Word attachment). Alternatively, mail or fax to:
CRA Service Awards
Computing Research Association
1100 17th Street, NW, Suite 507
Washington, DC 20036-4632
Tel. 202-234-2111
Fax: 202-667-1066
E-mail: awards@cra.org
http://www.cra.org/main/cra.awards.html

Spending Bills Delayed from Page 1
or 15.9 percent over FY 2004, increasing to $\$ 238$ million for FY 2005.

Full details of the branch-bybranch breakouts are included in table 1.

## VA-HUD-Independent

Agencies (HR 5041, S 2825)
Both the House and Senate Appropriations Committees have approved their respective versions of the VA-HUD Appropriations bill, which includes funding for the National Science Foundation and NASA; however, as this issue goes to press in early October, neither bill has been considered by the full House or Senate.

The House Appropriations Committee acted first (as we reported in CRN, September 2004, Vol. 16, No. 4), approving a bill that would cut NSF's overall budget by $\$ 110$ million over the FY 2004 level to $\$ 5.47$ billion in FY 2005, a cut of 2.0 percent. In addition to cuts at NSF, the House committee also approved a \$1.1 billion cut to NASA's FY 2005 budget, earning a veto threat from the Administration.
However, NSF fared much better in the Senate version of the bill, which included an increase of 3.0 percent overall for the agency in FY 2005. Under the Senate bill, NSF funding would rise to $\$ 5.75$ billion in FY 2005, an increase of $\$ 167$ million over FY 2004. This matched the President's requested level, but is still well beneath the 15 percent per year increases authorized by Congress and approved by the President in the NSF Authorization Act of 2002.
Computing research fared better than most other areas in the Senate version. Under the plan, the Computing and Information Science and Engineering directorate (CISE) would increase 4.1 percent over FY 2004, from $\$ 605$ million to $\$ 630$ million ( $\$ 12$ million more than the President's request). Only Social, Behavioral, and Economic Sciences (SBE) and "Integrative Activities" had a higher percentage increase, and those are directorates with considerably smaller baseline budgets.

In addition, the Senate committee, noting the success of the agency's Information Technology Research program at "increas[ing] our understanding of computing, communications, and information systems as well as the areas of largescale networking, new high-end architectures, high-data-volume instruments, and information management," increased funding for the activity to $\$ 190$ million for FY 2005. Having completed the five years it was originally slated to run, the ITR program was due to drop in funding to $\$ 178$ million for FY 2005.

It is not yet clear how work on the respective VA-HUD bills will proceed. They could move as individual bills for consideration by their respective bodies or get bundled up with all of the other unfinished appropriations bills as part of an omnibus bill and never see individual consideration. However, at
some point, House and Senate negotiators will have to work out the discrepancies between the House and Senate funding levels. As in the past, CRA will work to see the highest possible funding level approved. For the latest updates on that effort, check CRA's Computing Research Policy Blog at http://www.cra.org/ govaffairs/blog/index.php.

## Commerce, State, Justice, and Judiciary (HR 4754, S 2809)

This bill includes funding for the National Institute of Standards and Technology (NIST) and the National Oceanic and Atmospheric Administration (NOAA). As a result of a very poor FY 2004 appropriation, NIST has found itself in a very dire financial situation. A $\$ 22$ million cut in the agency's budget in the appropriation left it unable to move forward on much of its cyber security work and led to layoffs for some lab personnel.

Both the House and Senate Appropriation Committees have approved their FY 2005 CSJJ appropriations bills. The Senate bill would funnel more funding to the NIST Labs than the House version, adding $\$ 43$ million to the FY 2004 number for a total of $\$ 384$ million for FY 2005. In contrast, the House version would provide $\$ 375$ million for FY 2005. Both versions are still well short of the Administration's request of $\$ 423$ million.

However, the Senate took a completely different path than the House regarding the controversial Advanced Technology Program. The House bill and the President's budget request both zeroed out the $\$ 177$ million ATP program, but the Senate version would actually increase the program by 14.5 percent to $\$ 203$ million. It is not clear how this significant divergence of opinion will get resolved.

Of note to computing researchers, the Senate bill would set aside $\$ 3$ million for quantum computing research, with the committee noting that a breakthrough in quantum computing technology "would rival that of the transistor 50 years ago."

## Homeland Security (HR 4567, S 2537)

Both the House and Senate Appropriations Committees have marked up their respective versions of the Homeland Security bill; both have the same relatively small investment of $\$ 18$ million in cyber security research and development for FY 2005 out of a total Homeland Security S\&T budget of more than $\$ 1.0$ billion.

For the latest updates on the appropriations process, check the CRA Government Affairs website at http://www.cra.org/govaffairs . For commentary and analysis on the latest developments, be sure to check CRA's Computing Research Policy Blog at http://www.cra.org/ govaffairs/log.

Peter Harsha is CRA's Director of Government Affairs.

Table 1
Final Science and Technology Funding Levels, Defense Appropriation (in Millions)

| Account | $\begin{gathered} \text { FY } 2004 \\ \text { Level } \end{gathered}$ | President's Budget Request | FY 2005 Appropriated | \$ Change FY 05 vs. FY 04 | \% Change FY 05 vs. FY 04 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total Science and Technology (6.1, 6.2, 6.3) | \$12,081 | \$10,550 | \$13,329 | \$1,248 | 9.80\% |
| Total Basic Research (6.1) | \$1.403 | \$1,331 | \$1,513 | \$110 | 7.80\% |
| Total Applied Research (6.2) | \$4,424 | \$3,877 | \$4,949 | \$525 | 11.90\% |
| Total Adv. Tech. Development (6.3) | \$6,254 | \$5,342 | \$6,867 | \$613 | 9.80\% |
| Total Army 6.1, 6.2, 6.3 | \$2,626 | \$1,784 | \$3,010 | \$384 | 14.60\% |
| Basic - 6.1 | \$381 | \$318 | \$408 | \$27 | 7.10\% |
| Applied - 6.2 | \$1,040 | \$651 | \$1,158 | \$118 | 11.40\% |
| Adv. Tech. Dev. - 6.3 | \$1,205 | \$815 | \$1,444 | \$239 | 19.80\% |
| Total Navy <br> 6.1, 6.2, 6.3 | \$2,217 | \$1,718 | \$2,308 | \$91 | 4.10\% |
| Basic - 6.1 | \$484 | \$477 | \$496 | \$12 | 2.50\% |
| Applied - 6.2 | \$724 | \$564 | \$826 | \$102 | 14.10\% |
| Adv. Tech. Dev. - 6.3 | \$1,009 | \$677 | \$986 | (\$23) | -2.30\% |
| Total Air Force 6.1, 6.2, 6.3 | \$2,321 | \$1,919 | \$2,354 | \$33 | 1.40\% |
| Basic - 6.1 | \$331 | \$346 | \$362 | \$31 | 9.40\% |
| Applied - 6.2 | \$807 | \$786 | \$958 | \$61 | 6.80\% |
| Adv. Tech. Dev. - 6.3 | \$1,093 | \$787 | \$1,034 | (\$59) | $-5.40 \%$ |
| Total Defense-Wide 6.1, 6.2, 6.3 | \$4,917 | \$5,129 | \$5,657 | \$740 | 15.50\% |
| Basic - 6.1 | \$207 | \$190 | \$247 | \$40 | 19.30\% |
| Applied - 6.2 | \$1,763 | \$1,876 | \$2,007 | \$244 | 13.80\% |
| Adv. Tech. Dev. - 6.3 | \$2,947 | \$3,063 | \$3,403 | \$456 | 15.50\% |

## Computing Research News

## Vol. 16/No. 5

Computing Research News
(ISSN 1069-384X) is published five times per year, in January, March, May, September, and November. Copyright 2004 by the Computing Research
Association (CRA), 1100 Seventeenth Street, NW, Suite 507, Washington, DC 20036-4632; tel. 202-234-2111. All rights reserved. Material in CRN is not endorsed by CRA nor intended to reflect any official positions of CRA or its board.
Subscriptions: Call 202-234-2111, send e-mail to crn@cra.org, or mail subscription inquiries to CRA, 1100 17 th Street, NW, Suite 507, Washington, DC 20036-4632. A free subscription is available to qualified subscribers. One-year paid subscriptions are $\$ 30$ in the United States, $\$ 45$ (U.S.) in Canada, and $\$ 54$ (U.S.) elsewhere.

Change of Address: Note that a change of address must include the old and new addresses with ZIP+4. Please include a street address or PO Box number.

Postmaster: Send address changes to: CRA, 1100 17 th Street, NW, Suite 507, Washington, DC 20036-4632. Postage paid at Washington, DC.

CRA Communications Committee
Dan Reed (University of North Carolina at Chapel Hill), Chair
Philip Bernstein (Microsoft Research)
Frank Tompa (University of Waterloo)
Computing Research Association Staff
Andrew Bernat, Executive Director
Betsy Bizot, Program Evaluator
Peter Harsha, Director of Government Affairs
Dana Neill, Business Manager
Susanne Pile, Administrative Assistant
Carla Romero, Director of Programs
ean Smith, Sr. Communications Associate and CRN Editor
Jay Vegso, Manager of Membership and Information Services

## CISE 1994-2004 from Page 1

a government-wide priority. And more dramatic increases in the CISE budget ensued. Figure 1 describes CISE budget growth over the 19942004 period and demonstrates that growth in CISE funding exceeded growth in NSF overall.

Over this same time period, the number of CS and CE faculty nationally has also been rising, with CRA's Taulbee Survey indicating a greater than 35 percent increase from 1998 to 2003 in tenure-track faculty in Ph.D.-granting CS and CE departments. This increase in the number of computing faculty can be attributed to the movement of researchers to academia following the closing or downsizing of industrial labs, and to the growing number of new Ph .D.s accepting tenure-track positions in Ph.D.granting departments in recent years.

The growing number of CS and CE faculty, coupled with NSF's annual solicitations for ITR proposals (2000-04), resulted in a significant increase in the number of proposals submitted to CISE. This growth in what we call 'proposal pressure' should not, however, be attributed only to the growing number of faculty and our ITR competitions. In fact, it is also associated with the expanding mission of our field and the
associated increase in emerging research and education opportunities. Undoubtedly, there is growing recognition of the promise of computing research contributions in society, and as part of that, the expanding role of computing in science and engineering research and education in general (e.g., in science and engineering informatics).

Figure 2 compares the number of proposals received and reviewed by CISE and the number of proposals awarded, and it presents the funding rates calculated from these data over the 1994-2004 period. In 1998, CISE received a total of 2,044 competitive proposals. By 2004, this number had risen to 6,222 . Figures 1 and 2 clearly indicate that while the CISE budget more than doubled between 1994 and 2004, the number of proposals received on an annual basis has more than tripled during this ten-year time period. Over the same period, the funding rate for proposals submitted to CISE has dropped considerably, from approximately 36 percent in 1994 to a decadal low of 16 percent in 2004.

While in the early part of the last decade CISE funding rates were higher than NSF's overall funding rate, more recently CISE funding rates have dropped below the overall rate by quite a significant margin, even while the CISE budget was growing at a faster rate, as demonstrated in Figure 3

Funding Rate for Competitive Awards in CISE


Figure 2: Competitive proposals received, proposals awarded, and successful funding rate trends for CISE, 1994-2004. Competitive proposals are initiated through the normal NSF review process in a specific fiscal year. The data do not include amendments to existing grants such as supplements.

## NSF and CISE Funding Rate Trends



Figure 3: Comparison of NSF and CISE Funding Rates for 19942004.


Figure 4: Average Award Size and Duration in CISE, 1994-2004.

Funding rates within CISE programs vary. However, direct comparisons across programs cannot readily be made due to different funding histories and proposal solicitation strategies. For example, some programs carry significant mortgage obligations, upwards of 60 percent of their annual budget, due to awards recommended for funding in previous years. Some programs impose restrictions on the number of proposals a PI can submit while others do not, which of course modulates funding rate data. Yet others are new programs that may be either oversubscribed or undersubscribed at their inceptions before reaching relatively steady-state conditions. What is clear, though, is that funding rates for CISE as a whole have halved in a decade

Also contributing to the decline in funding rates is the desire to increase average grant size. As indicated in Figure 4, although award duration has remained relatively constant over the ten-year period, the average grant size has risen steadily-from an annual level of $\$ 72,000$ in 1994 to an annual level of $\$ 165,000$ in 2004. This growth in average grant size is consistent with NSF's goals and is responsive to PITAC's recommendations.

We think you can see that a combination of a number of factors-increasing numbers of
proposals, an increased number of awards, increasing average annual award amounts, and budget growth that has not kept pace with demand-has resulted in significantly reduced proposal funding rates.

The companion article, "CISE Update: Adjusting to the Increase in Proposals," describes CISE's current plan to adapt to this changing environment. However, as we make and implement these plans, the community must also think about its funding needs, priorities, and strategies. With computing advances increasingly important to advances in other science and engineering fields, computing faculty must continue to explore funding opportunities from all sources, including CISE and other organizations within NSE. Moreover, the computing research and education community needs to speak with one voice about the critical contributions that they can, and indeed must, be empowered to make towards creating a safe, healthy and vibrant civil society, both in the United States and around the world.

Peter Freeman (pfreeman@nsf.gov) is the Assistant Director of Computer and Information Science and Engineering at the National Science Foundation. Lee Harle is an NSF AAAS Fellow. I

## Transitions

The NSF Directorate for Computer and Information Science and Engineering has announced the selection of two new CISE Division Directors.

Dr. Wei Zhao has been selected Director, CISE Division of Computer and Network Systems, effective January 3, 2005. Dr. Wei will join NSF from Texas A\&M University, where he is Associate Vice President for Research and a Professor of Computer Science.

Dr. Michael Foster has been selected Director, CISE Division of Computing and Communication Foundations, effective October 31, 2004. Dr. Foster has served as a program director at NSF since 1992, and most recently was a program director in the CISE Division of Shared
Cyberinfrastructure (SCI).

## Professional Opportunities

## CRN Advertising Policy

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

## Boston College

Biology Departm
Tenure-track Faculty Position
The Boston College Biology Department invites applications for a tenure-track faculty position in the area of computationa Assistant Piolormatics. This searh is at the senior candidates will be considered. The university provides extremely competitive start-up funds and research
with the expectation that the successful candidate will establish a vigorous, externally funded research program. We would welcome a colleague pursuing computational biology research in silico or one who is pursuing a research program that involves laboratory experimentation combined with developmen and use of bioinforches tools. Particula biological networks, though all areas of computational biology and bioinformatics will be considered. The successful candidate will be expected to train graduate students and to participate in the teaching mission of the department, which has added five new tenure track faculty members over the past four years The university is committed to the vigorous expansion of bioinformatics. The Biology Department currently has two bioinformatics faculty with postdoctoral associates; and the Computer Science Department will conduct a separate search bioinformatics this year. The successful candidate in Biology will join a departm with established and growing research strengths in bioinformatics, molecular and cell biology, developmental biology, genetics, biology, and insect vector/pathogen interactions.
Applicants should submit a curriculum vitae and a statement of present and future research plans, and arrange
letters of reference sent to:

Bioinformatics Search Committee
Boston College
Biology Department
140 Commonwealth Avenue
Higgins Hall
Chestnut Hill, MA 02467
This appointment will begin on or after July 1, 2005. Applications should be received Review of applications will continue until Review of applications will continue until the
position is filled.

Boston College is an affirmative action equal opportunity employer. Women and encouraged to apply.

## Boston College

Computer Science Department
Clare Boothe Luce Professorship in Bioinformatics
The Computer Science Department at Boston College invites applications for the Clare Boothe Luce Professorship in Bioinformatics. The position is limited to women applicants at the assistant prof
level. Boston College and the Luce Foundation are providing a highly compet Foundation are providing a highly competitiv candidate would have a PhD in computer candidate would have a PhD in computer would welcome a colleague with areas of interest in computational genomics, gen data mining, systems biology (biological networks), structural biology or protein and RNA structure determination. Other areas of computational biology and bioinformatics will also be considered. The successful candidate will train both undergraduate and graduate students and will establish a vigorous externally funded research program.
Boston College is committed to expanding the role of computer science at the university The Computer Science Department exp
move into a new facility in 2006 and to move into a new facility in 2006 and to 2007 The Biology Department currently has two The Biology Department currently has
bioinformatics faculty with postdoctoral associates and is conducting a separate search in bioinformatics this year. A new interdepartmental center for bioinformatic research is planned.

Applicants should prepare a curriculum vitae, a statement of present and future research plans as well as a teaching statement Applicants should also request three letters of reference. The preferred method of submission
is to send the documents as email attachments
to faculty-search@cs.bc.edu <mailto:faculty earch@cs.bc.edu>. Letters of reference may also be sent via email. Applicants who prefer to submit
to: Clare Boothe Luce Professorship Computer Science Department Boston College
140 Commonwealth Avenue This appointment will begin on or after July 1, 2005. Applications should be received by January 15 to assure full consideration. Review of applications will continue until the position is filled

Boston College is an affirmative action, equal opportunity employer. Minority grou

California Polytechnic State University, San Luis Obispo Tenure-track Faculty Positions in Computer Science and Computer Engineering

Full-time academic year tenure-track Computer Science and Computer Engineering faculty positions beginning September 2005 at Assistant/Associate levels. Duties include eaching core undergraduate courses, and upper-division and master's level courses in a specialty area; performing research in a mainstream area of computer engineering or computer science; and service to the department,

Applicants from all mainstream areas of computer science, software engineering, and computer engineering are encouraged to apply. A doctorate in Computer Science, Computer Engineering, Electrical Engineering, Sof required

Candidates must have a strong commitment to teaching excellence and aboratory-based instruction; dedication to continued professional development and scholarship; and a broad-based knowledge computer science/computer engineering. Demonstrated ability in written and oral use of the English language is required. Rank and alary is commensurate with qualifications
Cal Poly offers BS and MS degrees in Computer Science, BS in Software Engineering, and a BS in Computer
Engineering. Cal Poly emphasizes "learn doing" which involves extensive lab work and projects in support of theoretical knowledge. The available computing facilities for instructional and faculty support are modern and extensive.
To apply, please visit
WWW.CALPOLYJOBS.ORG and complete an online faculty application. Computer science applicants apply to requisition \#100392. Computer engineering applicant apply to requisition \#100393. Review of applications will begin December 1, 2004; pplicater. For full conideration, candidate considered. For full con thir ondidates re required to attach to their online pplication: (1) resume, (2) cover letter, (3) research. Three letters of reference and officia ranscripts are required for final consideration, and should be mailed to:

Recruitment Committee
Computer Science Departmen
Cal Poly
San Luis Obispo, CA 93407
Questions can be emailed to. recruit@csc.calpoly.edu. Please include requisition number(s) in all correspondence. For further information about the department and its programs, see www.csc.calpoly.edu and Cal Poly is strong
Cal Poly is strongly committed to diversity. The university actively enco applications and nominations of all qualified individuals. EEO.

## Caltech's Center

Cale the Mathematics of Information Caltech's Center for the Mathematics of Information (CMI) announces openings in the CMI Postdoctoral Fellowship Program, starting in fall 2005. The CMI is dedicated to fundamental mathematical research with an eye to the roles of information and and engineering. Areas of interest include
gorithms, complexity, applied combinatorics, coding theory, geometry processing, multiresolution
Please apply and have three reference etters sent directly as instructed at http://www.ist.caltech.edu/joinus/positions.htm Paterials are due by january 14, 2005.
f the PhD.
Caltech is an affirmative action/equal opportunity employer; women, minorities, veterans, and disabled persons are encouraged

## Carleton College

Mathematics and Computer Science
 Carleton College invites applications for a nure-track position in computer science, in any area of specialization, to begin in September 2005. This is an entry-level Assistant Professor position, but we may
onsider appointment at a higher level. Carleton is among the nation's most ective ling enthusiastic students. W utstanding, enthusiastic students. We seek an teach, to participate in the development of ur curriculum, to develop a program of ongoing research, and to help us guide our students in undergraduate research.
Carleton's Mathematics and Computer Science department includes fifteen faculty, ix of whom teach computer science, and an experienced full-time system administrator. Each year, between 10 and 30 students
raduate with a computer science major.
To apply, send us a letter of application, a CV , a graduate transcript, and brief statements describing your research interests and teachin philosophy. Also arrange to have sent to us of which addresses your teaching. Send your application to:

## cssear

CS Search
Math/CS Department
Carleton College
1 North College Street
Northfield, MN 55057
Review of the applications will begin January 3, 2005 and will continue until the osition has been filled
For a detailed description of this position, see $h$ ttp:// ttp://webapps.acs.carleton.edu/curricular/cs/fa c_pos/. If you have questions, please contact
Carleton is an affirmative actionlequal Carleton is an affirmative action/equal pportunity employer. We are committed to developing our faculty to better reflect the
diversity of our student body and American diversity of our student body and American
society. Women and members of minority groups are strongly encouraged to apply.

## Center for Visualization and

 Virtual Environments
## PhD Studies in Computer Vision, Image

## Thing and Graphics

The Center for Visualization and Virtual Environments has open positions for PhD students in computer vision, image processing nd graphics.

The center is associated with the Department of Computer Science at the
University of Kentucky, Lexington, Kentuck University of Kentucky, Lexington, Kentucky. Successful candidates will have a BSc or MS
computer science, mathematics, electrical computer science, mathematics, electrica background in mathematics and programming is must. Prior experience with computer vision, image processing or graphics is a plus. The positions are available immediately as of Sept
20,2004 , and will remain open until filled.
0, 2004, and will remain open until filled. Interested candidates should place
inquiries or send their resume to
Dr. David Nister
Assistant Professor of Computer Science
Center for Visualization and Virtual
Environments
hore://www vis uke information, see

## Clemson University

Department of Computer Science
The Department of Computer Science at lemson University expects openings for tenure-track faculty positions at the rank of Assistant Professor. The search will focus on esearch and technical infrastructure for information technology. Areas of interest nclude graphics and visualization, networking, programming languages, software engineering, and theory. Applicants should have a Ph.D. in Computer Science or a elated discipline, and should be able to IT disciplingergit

The department, housed in a new uilding, has 20 faculty members, about 500 ndergraduate majors, and over 100 graduate tudents. B.A., B.S., M.S., and Ph.D. degree n Computer Science, B.S. degree in Computer and Information Science interdisciplinary programs in E-Commerce and Digital Production Arts are offered. Clemson is the land grant university of South Caroli 17000 TIME magazine napred Clem Public Colle ogaine near uews \& World Report ranks Clemson 32nd ews \& World Report ranks Clemson 32nd ationally among public universities in 2004 mall college town on beautiful Lake Hartwell the foothills of the Blue Ridge Mountains. he area offers numerous outdoor activities. or additional details, please see
ww.cs.clemson.edu.
Electronic applications, including names of three references, should be sent to: earch@cs.clemson.edu as a single PDF attachment. If unavoidable, hard copies may mailed to:
Faculty Search Committee
Deparment of Computer Science
Clemson University
We will begin accepting and reviewin applications immediately. Applications received by January 15 will receive fulled, the search will continue until May 1, 2005.
Clemson University is an Affirmative
Action/Equal Opportunity Employer.
College of William \& Mary
aculty Positions in Computer Science
Applications are invited for three tenure rack faculty positions in Computer Science or the Fall 2005 at all academic ranks. Applicants must hold a Ph.D. in computer cience or a related field. Appointment at he assistant professor level requires that the ppointment and demonstrate a strong research record and high interest in teachin Appointment at a senior level requires a ocumented record of sustained excellence teaching and a demonstrated research eadership at the national/international level. We are primarily interested in individuals with research expertise in the following areas: omputational biology, data mining and information management, graphics and isualization, computer system security, and compilers and programming languages However, strong applicants from all other
The computer science will be considered.
onistently ranked in the elite gre, consistently ranked in the elite group of the U.S. News and World Report, has committe a multi-year effort to further strengthen its Computer Science research program. The epartment currently consists of fifteen faculty members who support B.S., M.S., and Ph.D. rograms. More information about the epartment and the University can be btained at http://www.cs.wm.edu.
Applicants should submit a resume, statements of research and teaching purposes, the names of at least three references and any upporting documents to:
Faculty Search Committee
Department of Computer Science P.O. Box 8795

Will Box 8795
Williamsburg, VA 23187-8795
Questions and application materials can be -mailed to search@cs.wm.edu. Review of condinue until all positions are filled. The College is an EEO/AA employer

## Colorado School of Mines

Department of Mathematical and Computer Sciences
Assistant Professor of Computer Science
The Department of Mathematical and Computer Sciences, which offers B.S., M.S., nd Ph.D. degrees, invites applications for an Assistanted tenure-track faculty position at the 2005 . The computer science program within A05. The computer science program with he department is experiencing a period of Rtrong growth in both research and teaching. sensor networks, databases, graphics,
algorithms, machine learning, simulation, and parallel and distributed computing. Applicants all areas of Computer Science consistent with the research interests of the department re encouraged to apply. More information

## Professional Opportunities

about how to apply
http://www.is.mines.edu/hr/Faculty_Jobs.sh
tm . committed to enhancing the diversity of it campus community. Women, minorities, veterans, and individuals with disabilities are

## Colorado State University

## Tenure-track Faculty

The Department of Computer Science at Colorado State University solicits applications for a tenure-track faculty position preferably a the level of assistant professor, beginning fall 2005. Applicants must have a Ph.D. in demonstrate potential for excellence in research and teaching.

The department has over 400 undergraduate majors and 150 graduate students in Master's and Ph.D. programs. The department has 17 faculty with strong researc programs in artificial intelligence, computer computation and embedded systems.

Colorado State University, with an enrollment of 25,000 students, is located in Mountains, 65 miles north of Denver. More information about the department can be obtained from the department home page at: http://www.cs.colostate.edu.
Applications must be received by January format curriculum vitae and apload their PDF postal and e-mail addresses, and telephone numbers of three references at: i/index.cfm
Inquiries may be directed to faculty erch@cs.colostate.edu. Anticipated start
date is August 16, 2005.
When semi-finalists are identified, thei files will be open to all faculty in the Colorado State University is an EEO/AA employe

## D. E. Shaw Research and

 Development, L.L.CResearch on Algorithms and Architectures for Computational Biochemistry
Extraordinarily gifted computer scientists, systems architects, electrical engineers and systems software professionals are sought to join a rapidly growing New York-based research group pursuing an ambitious, lon term prict amed achieving major scientific advances in the field of biochemistry
and fundamentally transforming the process of and fundamentally transforming the process of drug discovery. This research effort is being
financed by the D. E. Shaw group, an investment and technology development firm with approximately US $\$ 8$ billion in aggregate
cientific leadership of its founder, Dr. David E. Shaw. Among the group's current research activities is a project aimed at developing a massively parallel special-purpose supercomputer and innovative mathematic and computational techniques to direct unprecedented computational power toward
the solution of key scientific and technical the solution of key scientific and technical
problems in the fields of molecular simulation and molecular design.
Successful candidates will be working closely with a number of the world's leading computational chemists and biologists, and ill have the opportunity not only to venture with considerable economic potential but to make fundamental contributions within the fields of biology, chemistry and medicine. Serious candidates will have an exceptionally distinguished history of academic and/or industrial accomplishment in computer science, electrical engineering, applied mathematics, or a related area. Particularly relevant areas of expertise might include parallel computation, high-speed computing, numerical analysis, optimization computing, numerical analysis, optimization, digital systems simulation, reconfigurable computing, and ASIC design, but specific knowledge of any of these areas is less critical than exceptional intellectual ability and a demonstrated track record of achievement We are prepared to reward exceptionally well qualified individuals with above-market compensation.
Please send
Please send your curriculum vitae (including list of publications, thesis topic, and advisor, if applicable) to:
career93@desrad.deshaw.con
The D. E. Shaw group members do not discriminate, in enplolsent matters, on the basis of race, color, relgion, gender, national rigin, age, military service eligility, veteran disability, or any other protected class.
D. E. Shaw Research and Development, L.L.C.
Systems Architects and ASIC Engineer Specialized Supercomputer for Computational Drug Design
Extraordinarily gifted systems architects and ASIC design and verification engineers are sought to participate in the development of a special-purpose supercomputer designed to fundamentally transform the process of drug discovery within the pharmaceutical industry. This early-stage, rapidly growing project is being financed by the D. E. Shaw group, an with approximately US $\$ 8$ billion in aggregate capital. The project was initiated by the firm's apital. The project was initiated by the fi
founder, Dr. David E. Shaw, and operates under his direct scientific leadership.


This project aims to combine an innovative, massively parallel architecture hip" ASICs with novel mathematical techniques and groundbreaking algorithmic advances in computational biochemistry to direct unprecedented computational power toward the solution of key scientific and echnical problems in the field of molecular closely with a number of the world's leading omputational chemists and biologists, and will have the opportunity not only to articipate in an exciting entrepreneuria enture with considerable economic potential, but to make fundamental contributions within he fields of biology, chemistry, and medicine
The candidates we seek will be unusually ntelligent and accomplished, with a demonstrated ability to design and implement complex, high-performance hardware solutions based on the latest semi-custon echnologies. We are prepared to reward exceptionally well-qualified individuals with
Please send resume alon. Please send resume, along with GPA ompensation history, to:
com
D. E. Shaw Research and Development, L.L.C. does not discriminate in employment matters on the basis of race, color, religion, ender, national origin, age, military service gitity, veteran status, sexual orher marital status,

## Dartmouth College

## Department of Com Faculty Positions

The Department of Computer Science eeks candidates for a faculty position starting September 200. We hav a tenure-track senior faculty appointment may also be enior faculty appointment may also be possible. We particularly encourage applicants
in Programming Languages or Compilers, but in Programming Languages or Compilers, but science will be seriously considered.
Persons interested should submit urriculum vitae, a research statement, and a teaching statement. Please ask at least four rofessionals to send letters of reference, at east one of whom can comment on teaching. full consideration will be given to applications that arrive by December 1, 2004. Please send application materials and genera quiries to:

Emily Holt Foerst
Computer Science Recruiting
Department of Com
Dartmouth College
6211 Sudikoff Laboratory
Hanover, NH 03755-3510
Specific questions or emailed applications an be sent to Scot Drysdale, at recruit@cs.dartmouth.edu.
Information on faculty and their research, acilities, and graduate students is available at http://www.cs.dartmouth.edu. Our department $s$ affiliated with the Institute for Security Technology Studies, and further information an be found at http://www.ists.dartmouth.edu. Dartmouth is an equal opportunity affirmative action employer and encourages pplications from women and members of

## Duke University

Department of Compute
We invite applications and nominations or two tenure-track or tenured faculty positions at any rank in the Department of Computer Science at Duke University, to start September 2005, in the following areas: Systems and architecture, with emphasis on networking, distributed systems, databases, security, and computer architecture. Computational biology and artificial intelligence. A successful candidate must demonstrate promise of becoming an utstanding scholar in every respect, including reseach and teachis, and mast have a about the faculty, facilities and other bout the faculty, facilities and other
Applications should be submitted online at www.cs.duke.edu/facsearch. Applications publications, and copies of the most important publications. A Ph.D. in computer science or elated area is required. Assistant Professor applicants should arrange for at least three letters of reference to be sent preferably via email (facsearch@cs.duke.edu) to the Faculty Search Chair. Senior candidates should provide the names and contact information of
three potential references. To guarantee full three potential references. To guarantee full
consideration, applications and letters of consideration, applications and letters of
reference should be received no later than January $14,2005$.

Duke University is an affirmative action, apportunity employ

## Emory University

## Department of Mathematics and Computer

Tenured or Tenure-track Position
The Emory University Department of Mathematics and Computer Science invites Aspistant Professorshic or a tenured Assistant Professorship or a tenured appointment at higher ranks in areas of
databases, starting Fall 2005. Preference will
be given to candidates with research in data models and query languages, database systems, data mining, scientific and biological databases, text databases and information ther areas of computer science related to departmental interests and development plans will also be considered. Applicants must have a PhD in compute cience or a closely related field, with demonstrated promise in research and a strong commitment to teaching in a liberal arts nvironment. Senior andidate
Emory is a nationally ranked, highly-
lective research university located on a 600 ace campus, 15 minutes from downtown 600 Atlanta. The University is committed to development of both computer science and scientific computing, both within the department and in collaboration units across the campus including BIMCORE, the Emerson Center for Scientific Computation and the the Digital Library Research at the Emory Library.
Applicants must send a letter of application, a CV , which includes names of at least 3 recommenders, and arrange to have recommendation letters sent to:

Ccreening Committee, CS Search
Computer Science
Emory University
Atlanta GA 30322
Screening of applications will begin on 1 , December 2004, with initial interviews planned for mid-January and continuing until position is filled.

Interested parties are encouraged to contact the screening committee chair (csfs2005@mathcs.emory.edu) or one of the faculty members listed in the detailed version of this announcement:
http://www.mathcs.emory.edu/News/Ops/
Emory University is an Affirmative

## The Florida State University

Department of Computer Science
Tenure-track Professorship Positions
The Department of Computer Science s at all ranks, beginning Augu 2005. Our areas of preterence are: information security, networking, databases, grid computing, computer vision, multimedia systems, architecture and compilers. Strong applicants with expertise in other areas will lso be considered.
Applicants for a full or associate professorship position should have an established research and leadership record. We may also be able to consider visionary individuals who are established internationally as lefessorsship.

Applicants for an assistant professorship Applicants for an assistant professorship
position should hold a PhD in Computer Science or a closely related field, and have excellent research and teaching accomplishments / potential.

The department offers degrees at the BS, MS, and PhD levels. It is in a period of significant growth and has hired six tenuretrack faculty since 2003. Further information can be found at http://www.cs.fsu.edu. FSU is classified as a Carnegie Research I university Its primary role is to serve as a center for advanced graduate and professional studies while emphasizing research and providing FSU is located in the beautiful and picturesque Florida capital - a city of picturesque Florida capital - a city of
approximately 250,000 , about an hour's drive approximately
from the Gulf Coast.
Screening will begin November 1, 2004 for full and associate professorship positions and January 15, 2005 for assistant professorships, and will continue until th position(s) are filled. Please use the on-line application form at
http://www.cs.fsu.edu/positions/apply.html. Questions can be e-mailed to
recruitment@cs.fsu.edu. Upon request from the search committee, the candidate will be
expected to arrange for at least 3 letters of expected to arrange for
reference to be sent to:

## Professional Opportunities

Faculty 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

## Georgia State University <br> <br> Department of Computer Science

 <br> <br> Department of Computer Science}
## Department of Comp

The Department of Computer Science of Georgia State University invites applications for an anticipated tenure-track position for assistant professor beginning the Fall semester, a closely reled Ph.D. in Computer Science, record of public discipline, and ater science at required with preference for extramural funding. Preference is for individual with specialty in networking, databases, digital image processing, bioinformatics or operating systems.
The department offers programs leading to the B.S., M.S., and Ph.D. degrees in compute science. Departmental computing facilit
for research and instruction include a departmental network f PCs Unix/ departmental network of PCs, Unix/Linux workstations, two interconnected Beowulf high-performance computer, and five labs, including a hypermedia and visualization research laboratory. A full-time systems programmer supports the departmental computing facilities.

Applicants should send a letter of application, vitae without birth date, but with citizenship status, and three letters of to: Chair

Department of Computer Science Georgia State University 34 Peachtree Street, Suite 1450
Atlanta, GA 30303
Or e-mail to mfras Applications will be accepted until position is filled. Georgia

## Harvey Mudd College

Assistant Professor of Computer Science
The Computer Science Department of Harvey Mudd College intends to appoint a tenure-track Assistant Professor of Computer Science, to start 1 July 2005 (classes begin in Septen PhD . We are searching for a candidate with a M b he Computer Science who is excited by the undergraduate experience, and
is devoted to excellence in teaching, as well to the development of a research program involving undergraduates. Outstanding candidates in all areas of computer scien will be considered. We are particularly interested in applicants with strengths software architecture, databases, bioinformatics, and knowledge discovery. Applicants for one-year visiting appointmen or partial appointments (such as sabbatical visitors) will also be considered.

Harvey Mudd College is a highly-selective undergraduate college ( 700 students) emphasizing science, mathematics, and engineering. It is a member of the Claremont Scripps College Pitzer College ClaremontMckenna College, Claremont Graduate University and the Keck Graduate Instit Applied Life Sciences. Visit Applied Life Sciences. Visit
htt.//ww.cs.hmc.edu for more information Applicants should respond with a
curriculum vitae, a statement regarding teaching and research philosophy or plan, and supporting materials such as reprints. Concurrently, please ask three references to write to us directly. Reviews of applications will commence 15 December 2004. Please send hardcopy of applications and reference letters to:

Search Committee
Computer Science Department
Harvey Mudd College
Claremont, CA 9171
Harvey Mudd College is an Equal Opportunity Employer and is committed to Opportunity Employ recruitment of candidates traditionally underrepresented on college faculties.

## Hobart and William Smith

 CollegesDepartment of Mathematics and Computer Science
Assistant Professor Tenure-track Position The Department of Mathematics and Smith Colleges invites Smith Colleges invites applications for
cience to begin in the Fall of 2005. Desirable specialties include operating systems, networking, and software engineering, but all fields will be considered. Duties include teaching all levels of undergraduate computer science and participating in the Colleges' interdisciplinary general curriculum. Experience with and/or interest in working in a multicultural environment are highly desirable A strong commitment to teaching and promise of continued scholarly activity are required. The teaching load is five courses and William Smith College for women are coordinate, four year, liberal arts colleges committed to teaching and interdisciplinary study. The Colleges have a combined enrollment of 1800 students.

Interested persons should consult the complete position description at http://campus.hws.edu/ADM/hr/Employment/ Faculty.asp. To learn more about the department, visit our web pages starting at: http://math.hws.edu/
Hobart and William Smith Colleges are committed to attracting and supporting a aculty of women and men that fully represent nation, and actively seek applications from under-represented groups. The Colleges do no discriminate on the basis of race, color, religion, sex, marital status, nat, age, disability, veteran's status, sexual orientation, or any other protected status.
Application: Applicants should expect to have completed their doctorates by Fall 2005. Send detailed resume, statement of research interests and plans, description of teaching philosophy, three letters of recommendation at least one including comments on teaching), and undergraduate and graduate ranscripts (photocopies acceptable) to:
Professor David Eck

Professor David Eck
Department of Mathematics and
Computer Science
Hobart and 11 iiam Smith Colleges
Geneva, NY
eck@hws.edu
eck@hws.edu Evaluation of applications will begin anuary 15, 2005 and will continue until the position is filled.

## Iowa State University

Department of Computer Science
College of Liberal Arts and Sciences
College of Liberal Arts and Sciences
Tenure-track Position
The Department of Computer Science ha one tenure-track faculty position open for Fall 2005. We are especially interested in hiring an experimentalist at the assistant professor level Systems. The position requires a Ph D in Computer Science or a closely related field and outstanding potential for research in and outstanding potential for research in teaching at undergraduate through graduate evels. Candidates who are in the final stages of obtaining a Ph.D. will also be considered.
The department currently consists of 26 ull-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, Computational Intelligence, Learning and Discovery, Human-Computer Interaction, and nformation Assurance. The department ha and 100 Ph . students. Almost all dents are supported either as RA or TA. The department has strong research and The department has strong research and Complexity, Artificial Intelligence Bioinformatics and Computational Biology Databases, Data Mining, Parallel and Distributed Computing, Information Assurance, Programming Languages, Multimedia Systems, Operating System and Networks, and Software Engineering. A dynamic faculty, moderate teaching load (typically 3 courses per year for active researchers with further reductions for junior aculty), strong graduate program, and wellcadenic and pront adge research and education are nutured edge research and education are nurtu facilitated by the Laurence H. Baker C for Bioinformatics and Biological Statistics he Information Assurance Center, DOE Ames Laboratory, and the Virtual Reality Application Center
lowa State University is a major landgrant university located in Ames, lowa. It is a pleasant, small, cosmopolitan city with a population of over 50,000 (including about 27,000 students), a vibrant cultural scene, an excellent medical clinic, and a secondary school system that ranks among the best in he United States. In 2002, Ames was as the 20th best place to live in North

Applicants should send a curriculum vitae, hree references, to:

Chair of Search Committee
Department of Computer Science
Iowa State University
Ames, Iowa 50011-1
Tel: 515-294-4377
E-mail: faculty-search@cs.iastate.edu
URL: www.cs.iastate.edu
Review of applications will begin on November 15, 2004 and will continue until
ISU position is filled.
ISU is an Equal Opportunity/Affirmative Action Employer. Women and minorities are ncouraged to apply.

## La Salle University

## Department of Mathematics and Computer

Assistant Professor, Computer Science
We invite applications for a tenure-track faculty position in our undergraduate and graduate computing programs, beginning Fall, 2005. A Ph.D. in Computer Science is referred. This position entails teaching nine to twelve hours each semester, student
Send cv , three letters of recommendation, and statements regarding your teaching and research philosophies to:

Chair
Department of Mathematics and
Computer Science
La Salle University
1900 West Olney Avenue
Philadelphia, PA 19141-1199 elliott@lasalle.edu
Screening of applications will begin immediately upon receipt of curriculum vitae. La Salle University is a Roman Cathol university in the tradition of the La Salle Christian Brothers and welcomes applicants nique educational miscion. For a complete mission statement, please visit our Web site at mission statement, please visit our Web site at w.lasalle.edu
AA/EOE.

## Lafayette College

## Tenure-track position

Applications are invited for a tenure-track sistant-professor starting in the fall of 2005. Qualifications include a love of teaching, a esearch program in any mainstream area of computer science, and a Ph.D. - completed or nearing completion - in Computer sioge, please check out our home pare rogram, please check out our home pag http://www.cs.lafayette.edu
ecommendation sent, and send a resume and recommendation sent, and send a resume and
an unofficial transcript of your graduate work in computer science to:
Bill Collins, Head
Computer Science Department
Lafayette College
Easton, PA 18042-1781
610-330-5228
collinsw@lafayette.edu
Applications will be considered as they are eceived. Recruiting will continue until the position is filled. Lafayette College is a most competitive, private liberal-arts college with excellent students and small classes. Nestled a 70 miles north of Philadelphia 0 g N Yok City
miles west of New York City.
The college is an Equal Employment Opportunity employer and encourages
applications from women and minorities

## Massachusetts Institute of

 TechnologyDepartment of Electrical Engineering and Computer Science
Faculty Positions
The Department of Electrical Engineering and Computer Science (EECS) seeks candidates for faculty positions starting in September 2005. We anticipate faculty openings for individuals who are completing, in special cases, a senior faculty appointment In special cases, a senior faculty appoin
may be possible. Faculty duties include teaching at the graduate and undergraduate levels, research, and supervision of student research. We will consider candidates with backgrounds and interests in all areas of electrical engineering and computer science. Candidates must register with the EECS search website at https://eecs-
search.eecs.mit.edu. Materials may be submitted preferably electronically to the website or sent to the address below. Candidate applications should include a description of professional interests and goals in both teaching and research. Each application should include a curriculum vitae
individuals who will provide letters of recommendation. Letter writers should submit heir letters directly to MIT, preferably on the website or by mailing to the address below. lease submit complete application by January 5, 2005.
Send all materials not submitted on the
bsite to:
Professor Rafael Reif, Department Head
Electrical Engineering and Computer
Science
38-403 77 Massachute of Technolog
Cambridge, MA 02139
M.I.T. is an equal opportunity/affirmative tion employer.

## McGill University

School of Computer Scien
Tenure-track positions
The School of Computer Science at McGill University wishes to invite applications for a tenure-track position, at the assistant professor Level, to begin June 1st, 2005. Areas of priority include, but are no limited to, software architecture, systems development, software testing and validation.
evelopment, software testing and valid
Hardcopy applications, including a
Hardcopy applications, including a
curriculum vitae, a list of publications
copies of one or two sample reprints, a research proposal and the names and Eaddresses of three references should be sent to:

Head, Search Committee
McGill University
McConnell Engineering Building, \#318
3480 University Street
Montreal, QC H3A 2A7
The review process will begin immediately and the search will continue until the position is filled. Information about our departmen
All qualified candidates are encouraged to All qualified candidates are encouraged to pesidents of Canada will be given priority-
McGill University is committed to equity in employment.

## McGill University

school of Computer Sci
nure-track positions
The School of Computer Science at McGill University wishes to invite aplications for tenure-track positions, at the assistant professor level, to begin June 1st, 2005. Applications for more senior positio are also welcome. We are searching for omputational biologists who are interested in ither of the following areas: bioinformatics gorithme and data structures, machines gorth and in omputational modeling of biomolecules.
Bioinformatics at McGill University has eatly expanded over the past four years and andidates would benefit from the world clas medical school and biomedical research programs. The McGill Center for
Bioinformatics is comprised of approximately 5 members who are involved in large scale projects that include (but are not limited to) reas such as genomics, functional genomics proteomics, protein- protein interaction, tructural biology, clinical informatics, phylogeny, genome evolution, neuroscience
medical imaging and cellular simulation.
Hardcopy applications, including a Hardcopy applications, including a opies of one or two sample reprints a copies of proposal and the names and E ddresses of three references should be sent

## Professional Opportunities

the eight original "Public lvy" schools, is consistently recognized as one of the nation's premiere public universities by such publications as The Fiske Guide to Colleges, the Kaplan-Newsweek College Catalog, and US News $\mathcal{E}$ World Report. The School of Engineering and Applied Science ranks among the nation's top engineering programs among schools that do not offer a Ph.D. in engineering. Learn m
at www.muohio.edu.
at www.muohio.edu.
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 the rank of assistant professor, but will professor. A doctorate in computer science or related field is expected. ABDs will be accepted, but the doctorate must be completed by the time of the appointment August 2005. Send resume, visa status, (if applicable) and teaching experience and current research
to: Kathy Ketcham
Computer Science \& Systems Analysis Dept.
Miami University
Oxford, OH 45056
Phone: 513-529-926
Fax: 513-529-1524
Web address: www.muohio.edu/jobs Email: CSsearch@MUOhio.edu
Electronic submissions are encouraged.
Screening of all applications will begin October 2004 and continue until positions are filled.

We encourage applications from a broad spectrum of individuals, including women and members of ethnic minorities. Miami University is

## Montclair State University

Department of Compute
enure-track position
The Department of Computer Science invites applications for a tenure-track professor in computational science starting
September 1, 2005. The Department's 14 faculty support the BS with an ABET CAC accredited track and the MS in Computer Science. Qualifications include work with Object Oriented technology with C++ or Java, modern architecture (RISC), UNIX, a willingness to teach a rich variety of compute science courses at all levels to ethnically diverse students, and a PhD in Compute Science with research experience using dat mining, image processing, and/or parallel computing in scientific, mathematical, and/or engineering phenomena.
bility to a demonstrate the ability to work as a member of an interdisciplinary team and to carry out team All faculty are expected to have an ongoing esearch plan, to commit to quality teaching to be involved in professional activities, and to pursue grants. The position is subject to available funding. Rank and salary are dependent on qualifications.

Candidates should send (No Emails) hardcopy of resume, statement of research interests, teaching philosophy and professiona
goals to:
Dr. Dorothy Deremer, Chairperson
Dept. of Computer Science
Mox C316 \# F- 20
Upper Montclair, NJ 07043 Screening begins immediately and Montclair State University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

## National Science Foundation Arlington, VA

Division of Computer and Network Systems
Program Director
NSF's Directorate for Computer and Information Science and Engineering (CISE) (CNS) is seeking qulified applicats for the position of Program Director in the
Computing Research Infrastructure C The Program Director will have primary esponsibilities involving proposal evaluat project development and support, program planning, and related administrative duties Additional responsibilities will include coordi nation, Foundation-wide education efforts, and advising on logistics requirements of the computer science and education technology field. Additional information about CNS and their programs can be found at
http://www.nsf.gov/home/cise.
Appointment to this position will be filled Personnel Act (IPA). Applicants must have a
h.D. or equivalent experience in compter science, computer engineering computational cience, communication information science, allied disciplines, and significant experience research experience beyond the Ph.D. are esearch experience beyond the Ph.D. are minority candidates are especially encouraged to apply.
ouncement E20040121-IPA which includes position requirements and applications procedures, is located on NSF's Division of Human Resource Management Website http://www.nsf.gov/jobs.
Applications may be transmitted electronially to: rotator@nsf.gov.
Telephone inquiries may be referred to
acqueline Jackson, at (703) 292-4358.
 Gregory Andrew
(703) 292-8950.
Hearing impaired individuals may call DD \&903) 292-8044
Applications must be received by October 9, 2004.
NSF is an equal opportunity employer ommitted to employing highly quali

## New York University

## Faculty Openings

The department expects to have several regular faculty positions beginning in September 2005 and invites candidates at all evels. We will consider outstanding andidates in all areas; high priority areas are bioinformatics, machine learning, programming languages and formal methods, cientific computing, and systems (including networking, mobile and autonomous computing, distributed and secure systems, and operating systems). Also, see our web page
regarding a search with an earlier deadline for a joint position with biology. Faculty a joint position with biology. Faculty
members are expected to be outstanding scholars and to participate in teaching at all levels from the undergraduate to the doctoral New appointees will be offered highly competitive salaries, competitive startup packages, and low-cost university housin within short walking distance of the department. New York University is located in Greenwich Village, one of the most
ttractive residential areas of Manhattan.
The department has 32 regular faculty members and several adjunct, clinical esearch, and visiting faculty members. Current strengths of the department lie in gorithms, computational biology, comput raphics, computer vision and allel timedia lin multimedia, machine learning, natura programming languages and verification, and cientific computing. There are specialized aboratories and research facilities for
computer graphics and multimedia, computer ision, and parallel and distributed computing. Collaborative research with industry is facilitated by the geographic proximity to the main research centers of AT\&T, IBM, Lucent, Matsushita, NEC, Siemens and Telcordia.
Applications should include a resume, tatement of career objectives and ke publications; junior candidates also need to leat he address below. Applicants are ncouraged to privities. To consideration, applications should be consideration, applications should be received a hard deadline, as all candidates will be considered to the extent feasible, until all
positions are filled.
Please send applications to either: jobs@cs.nyu.edu [mailto:jobs@cs.nyu.edu](mailto:jobs@cs.nyu.edu) Faculty Search Committee c/o Shanta Stroud
Department of Computer Science
251 Mercer Street
New York, NY 10012-1185
New York University is an equal

## Oak Ridge National Laboratory

Director (50196262)
The newly formed Computational Biology Institute (CBI) within the Center for Computational Sciences (CCS) at the Oak Ridge National Laboratory (ORNL) and Vanderbilt University (VU) seeks candidates for a Director to take a lead role in the labwide computational biology program at ORNL. As currently envisioned, this position
reports jointly to the CCS Director at ORNL Research at Vanderbilt. The candilor for Iso become a faculty member at Vanderbilt
in an appropriate school and department with 11 the attendant benefits, support and eporting relationships. 70,000 sq. ft. world-class facility pecifically designed to promote mult disciplinary research. The facility include $40,000 \mathrm{sq}$. ft. computer center-the andions largest for unclassified, open scientific mputer for grand challenge science and mputers f Vineering
anderbilt University is establishing ignificant bioinformatics capabilitie informatics program. The University has recently made substantial investment in transhstitutional computing, creating the Advanced Computing Center for Research and Education (ACCRE).

Responsibilities
The CBI Director will guide a team of omputational biologists, computer scientists and applications domain scientists drawn from the Computer Science and Mathematics ORNL 1 he sche Mesinio Engineering and Arts and Science at Engineering, and Arts and Science at
Vanderbilt to develop the CBI in its formative stages. The initial programmatic direction of he CBI will be aligned with the goals and bjectives of the DOE Office of Advanced Sbjectives of the DOE Office of Advanced
Scientific Computing Research and the DOE Office of Biological and Environmental

The CBI Director must have a emonstrated record of drawing upo scientists from diverse backgrounds relevant to computational biology to create innovative solutions and new tools. The Director should also have credentials and experience consistent with Associate or Full Professo

## nk at VU

Program development and group eadership are primary tasks of this position, irections as a basis of continued funding and hus, the health of the Institute. These efforts e expected to lead to identification of new dimensions of systems biology that maximize computing, computational science and life cience resources available at ORNL and hrough research community partnerships. The CBI will constitute an intellectual hub or the expertise needed to meet challenges in biology and its nexus with mathematics and omputational science. The CBI Director must be responsive to the Laboratory agenda computing wis bion be able to articulate a multidisciph oresific af poly cont

## Requirements

Applicants should have an advanced egree ( PhD or MD and a mature research program in computational biology preferred). to develop and maintain research programs develop and maintain research progal to velop programmatic ventures in diverse research environment involving ointly appointed university faculty. Personnel nanagement skills are essential, along with he ability to communicate effectively verbally nd in writing to diverse audiences. Knowledge of government laboratory business practices is a plus, specifically within the federal departments.
For additional information about ORNL, visit: http://compbio.ornl.gov, http://www.ccs. mll.gov or http://wwwornl.gov For additional information about VU and ACCRE, visit: http://www vanderbiltedu/ ttp://www.mc.vanderbilt.edu/ or ttp://www.accre.vanderbilt.edu
Qualified candidates are encouraged to
submit a statement of qualifications for the
position and a resume, along with a list of at
Sast three references, to:
Staffing
Computer Science and Mathematics
Division
Oak Ridge
Oak Ridge National Laboratory
P.O. Box 2008

Oak Ridge, TN 37831-6164
Please include the number of the position
which you are applying in the subject line
of your email.
Alternatively, interested our search consultant in full confidence:
P. J. O'Hare

Executive Search Consultant
2956 Missy Drive NE
Marietta, GA 30062-4329
Phone: 404-642-9105
Email: pjosearch@mindspring.com ORNL, a multipurpose research facility Department of Energy is an equal opportunity
mployer committed to building and

## Oak Ridge National Laboratory

 Gcientific Applications SuppThe Group Leader for Scientific Applications Support in the DOE Center for Computational Sciences is responsible research and conducting leading-edge f high-performance computing (HPC) systems and for performing research on HPC tools and algorithms. Support will cover a wide range of HPC applications, such as climate modeling, astrophysics, materials science, chemistry, and database searching

The major duties and responsibilities of
the position include, but are not limited to,
Develop and lead a successtul program in scientific applications research (quality of cience, staffing and budget oversight) Interact with the appropriate program offices dother agencies to develop and main rogram funding for basic and applied h. Collu wh mity research. Collaborate with application scientific mission of the Laboratory. Take responsibility for personnel management, ncluding but not limited to, creation of personnel performance appraisals and employee development plans. Represent group-level work to review committees and outside non-government bodies as appropriate Program development and development of new research directions as a basis of continued funding and the overall health of the Group. Provide leadership in all areas of ES\&H and full implementation of integrated safety empliance with Laborat Elicies, compliance with Laboratory policie regulations. Select and retain highly qualified staff, develop capabilities of staff, and ensure that staff is competent, trained and qualified for assigned work. Provide effective and meaningful performance feedback to individual staff members. Ensure that staff are effectively utilized, rewarded and motivated. Support the professional development of staff consistent with Laboratory and individual development plans. Prepare plans and budgets, and manage assigned resources (people, equipment, facilities).

Experience and Education Requirements:
An advanced degree in computer science (or an equivalent combination of education nd experience). Ad disally, the position experience with a substantial publications ecord in HPC research and applications. Requires a demonstrated ability to develop and maintain research programs and substantial programmatic funding. Personnel management skills are essential, along with he ability to communicate effectively verbally and in writing. Knowledge of governme aboratory business practices is a plus, pecifically within the Department of Energy related federal departments. Candidates must have a proven capability to work effectively in a team environment.
Inquiries and expressions of interest may e directed to:

Staffing
Computing and Computational Sciences
Directorate
. B. Bational Laboratory
O. Box 2008
ak Ridge, TN 37831-6163
Email: CCSD_Staffing@ornl.gov
Pease include the number of the position for which you
of your email.

## Professional Opportunities

Basic and applier and applied mathematics. Bastra-scale colied research programs focus on applications that require it
The successful candidate will join an interdisciplinary team of computer scientists, mathematicians and engineers working at the National Leadership Computing Facility Acluding fusion stes of national interest modeling, genomics, and computational
chemistry
Position requires a PhD in computational science or a related discipline with $3-5$ y research experience, or an equivalen Candidates must have a proven record of research accomplishments, including a strong record of scientific publications. Candidates should have excellent communications and a strong desire to work in a team environment. Project management experience is preferred. Some travel may be required.
Inquiries and expressions of interest may
be directed to
Staffing
Staffing
Computing and Computational Sciences
Directorate
onal Laboratory
P.O. Box 2008

Email: CCSD St831-6163
Email: CCSD_Staffing@ornl.gov Pease include the number of the position for which you
of your email.

Alternatively, interested candidates may contact our search consultant in full confidence:
P.J. O'Hare

Executive Search Consultant
2956 Missy Drive NE
Marietta, GA 30062-4329
Phone: 404-642-9105
Phone: 404-642-9105
Mor. inforationdspring.con More information about the Oak Rid National Laboratory and the Computer Science and Math
at: www.ornl.gov
ORNL, a multiprogram research facility managed by UT-Battelle, LLC, for the U.S Department of Energy, is an equal opportunity
employer committed to building and

## Oak Ridge National Laboratory

## Project Manager (50211322)

The basic function of this position is to investigate the architecture of and software systems for high-end computer systems. Area interconnect technology computer sy interconnect technology, computer systen performance modeling and prediction, to performance modeling and prediction, to languages, messaging software, emerging programming models, workload characterization, fault-tolerance, operating systems for HPC, and use of advanced statistical methods and machine learning for performance analysis.

Major Duties and Responsibilities: The successful candidate will analyze architecture and application performance on-site high performance computers to be located in the DOE's National Leadership Computing Facility (NLCF), create and journals and at conferences and collabor journals and at coarchees, and collaborate include, but are not limited to: Evaluation of high-performance software systems and testing the effectiveness of supercomputer architectures in solving complex problems in biology, astrophysics and other scientific disciplines. Studying the performance of high performance computer systems (both vector processing and massively parallel processing) under various workload characteristics through measurement, modeling and simulation. Publishing papers in high-quality referee onferences and journals. Actively collaborating with partner government aboratories, academia, a
Education, Experience, Skills:
The position requires an advanced degree ( PhD preferred) in computer science or one of he computational sciences, with five or more years of recent leading-edge research performance computing software and parallel

## * CITADEL <br> Dean of the School of Science \& Mathematics

The Citadel invites nominations and applications for the position of Dean of the School of Science and Mathematics and the Bryan S. Traubert Chair in Science and Mathe ment to Candidates should possess an earned doctoranina a a strong commit institution. The Dean's primary responsibilities include general administration of the School and oversight of the curricular, budgetary, program and faculty development. The School seeks a proven leader who will provide vision for both the undergraduate and graduate programs. The successful candidate will be expected to facilitate rela fons with the local community (schools and industry) and the college alumni. The Dean is expected also to engage in enhancing the College through fundraising efforts Minimum qualifications:

- Earned Doctorate in a basic sciences field or from one of the disciplines included in the School and demonstrated evidence of distinguished teaching, research, and
A proven record of administrative experience in higher education that should include skills in planning, faculty development, and budgeting.
Strong interpersonal, communication, and decision-making abilities to interac effectively with the public and a commitment to excellence and diversity in the recruitment and retention of students, faculty, and staff
Commitment to shared governance and participatory faculty involvement in determining the goals and mission of the College.
Proven ability to:
Develop and maintain relationships with external constituencies including alumni, local business, local schools and government agencies.
Acquire external resources through nationally competitive grants and contracts.
Work effectively and collaboratively with the faculty through shared
governance at the departmental and college level.
Foster teaching, research and professional development of the faculty in a student-centered environment.
Compensation is highly competitive and commensurate with education and experience. Applications should include a statement of educational and leadership philosophy and a vision for the School. The application should also include curriculum vitae; the names, mailing addresses, e-mail addresses, and telephone numbers of at east three references. Send all material to: The Office of Human Resources, The Citadel, 171 Moultrie Street, Charleston, SC 29409. Please reference JA \#F04-33CRA. Search Committe $843-953$-6588. The review of nominations and applications will start on November 15, 2004 and continue until the position is filled. (122649)

omputer architectures. Requires demonstrated experience in software message passing, OpenMP, and Fortran 90, C or C++, along with expertise in architectures, operating systems, compilers, runtime systems and programming tools.
Candidates must have a proven record of esearch accomplishments and a strong desire to participate in research efforts in a tean communicating clearly and concisely both orally and in writing is also needed.
The chosen candidate will be required to obtain an L clearance.

Inquiries and expressions of interest may
directed to:
Staffing
Computing and Computational Science Directorate
Oak Ridge National Laboratory
P.O. Box 2008

Oak Ridge, TN 37831-6163
Email: CCSD_Staffing@ornl.gov
Please include the number of the position or which you are applying in the subject line
your email.
Alternatively, interested candidates may ontact our search consultant in full P.J. O'Hare

Executive Search Consultant
2956 Missy Drive NE
Marietta, GA 30062-432
Phone: 404-642-9105
Email: pjosearch@mindspring.com More information about the Oak Ridge National Laboratory is available at http://computing.ornl.gov/, http:///www.ccs.ornl.gov/nlcf/ and http://www.ornl.gov
ORNL, a multiprogram research facility nanaged by UT-Battelle, LLC, for the U.S. epartment of Energy, is an equal opportunity maintaining a diverse work force.

## Oak Ridge National Laboratory

## Analyst (040302)

Basic Function of Position: Research Staff Member to provide technical support skills nd program development experience in the Systems Engineering and Technology Group hat supports development of fundamental and applied research across ORNL in advanced
prototype database concepts. Position will involve developing, enhancing and managing prototype database in support of Homeland Security. The staff member will work as part of n ORNL multidisciplinary team consisting of hardware, software, database and programmin specialists.

Major Duties and Responsibilities There are multiple requirements for this osition. The main responsibility will be development in a prototype system currently under design. This will include design of conversion codes from any number of formats o SQL for database population purposes. Individual may be required to develop oftware applications for analytical staff in number of languages on short notice, help design taxonomies and entity relationships, post information to web portals and verify alidity of data population processes.
Experience Education and Skills Requirements:
Position requires a minimum of a BS in Computational Sciences, Computer Programming or System Engineering with at east three years (preferably five) of experience in a relevant area of database or software evelopment for prototype systems. Candidates should be familiar with both Microsoft and Linux operating systems. design and implementation using a relational database management system (RDBMS) such as Microsoft SQL Server, Oracle 9i or 10g. Requires some experience troubleshooting and resolving hardware and/or network problems. Expertise with Veritas or Bru softw plus.
The candidate should be highly motivated with good communications skills and a desire to work with multidisciplinary teams as well as initiate good research concepts and protocols. trong problem solving ability under novel nd/or less structured environments is high desirable. Some travel may be required. The chosen candidate will be required to tain a Q clearance
Inquiries and expressions of interest may
be directed to:
Staffing
Computing and Computational Science Directorate
Oak Ridge National Laboratory P.O. Box 2008

Email. CCSD 37831-6163

Please include the number of the position for which you are applying in the subject line f your email.
Alternatively, interested candidates may contact our search consultant in full

## P.J. O'Hare

Executive Search Consultan
2956 Missy Drive NE
Marietta, GA 30062-432
Phone: 404-642-9105
Email: pjosearch@mindspring.com
More information about the Oak Ridge http://www.ornl.gov

ORNL, a multiprogram research facility managed by UT-Battelle, LLC, for the U.S. Department of Energy, is an equal opportunity mployer committed to building and maintaining a diverse work force.

## Oak Ridge National Laboratory

Compulization Task Leader (50196260)
isualization Task Leader (50196260) The Computer Science and Mathematics ivision of Oak Ridge National Laboratory orform research in advanced visualization and to manage the production PowerWall and econfigurable CAVE Automatic Vitual Environment facilities.

The successful candidate will be esponsible for integrating interdisciplinary teams of computer scientists, applications igh-end visualization applications; immersive irtual reality; high-end conventionally driven ystems; pc-based, cluster-driven systems; ollaborative desktop-to-CAVE environments; dvanced rendering techniques; and advanced teractive visualization.
The position requires a PhD in computer位ce or one of the computational science a cosely res mid anagenent aser facilities. Condidee with have a proven record of research accomplishments, excellent communication interpersonal and organizational skills and a rong desire to work in a team environment. experience managing client-vendor-contractor relationships and contracts is required, as is upervisory experience and strong personal notivation. Project management experience is preferred. Hands-on parallel computing and visualization creation experience is desirable
Inquiries and expressions of interest may be directed to:

Staffing
Computing and Computational Sciences
Oirectorate
Oak Ridge National Laboratory
P.O. Box 2008

Oak Ridge, TN 37831-6163
Email: CCSD_Staffing@ornl.gov Please include the number of the position
which you are applying in the subject line of your email.
Alternatively, interested candidates may ontact our search consultant in full onfidence:
.J. O'Hare
Executive Search Consultant
2956 Missy Drive NE
Marietta, GA 30062-4329
Phone: 404-642-9105
Email: pjosearch@mindspring.com More information about the Oak Ridge and Mathematics Division, and Visualization is available at: http://www.ornl.gov, http://www.csm.ornl.gov/ or
http://www.csm.ornl.gov/viz/index.html
ORNL, a multiprogram research facility nanaged by UT-Battelle, LLC, for the U.S. Department of Energy, is an equal opp
employer committed to building and maintaining a diverse work force.

## Oak Ridge National Laboratory ORNL)

enter for Computational Sciences, National Leadership-Class Computing Facility Director (50215970)
The Oak Ridge National Laboratory (ORNL) in East Tennessee seeks an leadership experience and skills to serve as the Director of the Center for Computational siences (CCS) and the recently announced National Leadership-Class Computing Facility NLCF), in accordance with recently nnounced U.S. Department of Energy's Office of Science, Advanced Scientific Computing Research initiatives. The CCS is the premier organization at ORNL for applied computational sciences, high-performance research systems and intelligent and emerging computational ystems. The position reports to the Assoc aboratory Director for Computing and Computational Sciences

## Professional Opportunities

(http://www.ornl.gov/info/news/cco/ccsfact. pdf).

This high-profile position will require managing a base of activities (basic research, applied research, systems, services, engineering, technical development, assessment, etc.) and multidisciplinary research project areas (organized as institutes) that are highly complex and represent a CCS Institutes of the Center's work. The providing an intellectual home and providng an inf building. The Institutes share common goals for promoting scientific discovery and application. The ideal candidate will have an advanced technical degree with extensive training and experience in the computational sciences. The candidate must also have proven ability to plan, organize, lead and manage activities of a major organizationa unit within a major R\&D facility, including a working knowledge of policies and guidelines that relate to administration and managemen of complex R\&D organizations. Candidat must, of course, possess excelle
communications skills and a strong desire to Inquiries and expronment.
Inquiries a expressions of interest may be directed to
Staffing
Computing and Computational Sciences
Directorate
Oak Ridge National Laboratory
P.O. Box 2008

Oak Ridge, TN 37831-6163 Email: CCSD_Staffing@ornl.gov Please include the number of the position for which you
Alternalivel, contact our search consultant in full confidence:

Executive Search Consultant
Executive Search Co
2956 Missy Drive NE
Marietta, GA 30062-4
Phone: 404-642-9105
email: pjosearch@mindspring.com National Laboratory is available at
http://www.ornl.gov
ORNL, a multiprogram research facility mased by UT-Battelle, LLC, for the U.S. Department of Energy, is an equal opportunity employer committed to building and

## The Ohio State University

## Departm

## Engineerin

ent Chair
The Department of Computer Science and Engineering at The Ohio State University seeks nominations and applications for the soistion of Department Chair. Applicants in Computer Science and Engineering or a closely related discipline, and possess strong leadership skills and research vision. The Department of Computer Science and Engineering has a very active research program, with a quadrupling of research funding over the last decade. Current areas of research strength include Artificial Intelligence, Graphics, Networking, Software Engineering, and Systems. The departmen research, including active collabsiphary the Ohio Supercomputer Center, Advanced Computing Center for the Arts and Design, Computing Center for the Arts and Design, Electrical and Computer Engineering, Department of Biomedical Informatics, and many other units in the university.
Faculty positions and other resources will
be made available to the new Chair to facilitate further growth of the department Qualified candidates will also be considered for an endowed Professorship.

Applicants are requested to send a urriculum vitae, preferably by e-mail to Chair-fsearch@cse.ohio-state.edu or by mail to
Chair Search Committee
Department of Computer Science and Engineering
2015 Neil Avenue DL 395
Columbus, OH 43210-1277
Review of applications will begin mmediately and will continue until the position is filled.

The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Applicants from under-represented groups are especially sought

## The Pennsylvania State University <br> Department o Engineering <br> Faculty Position Vacancies

Applications are invited for several tenure rack faculty positions at all ranks. Outstanding candidates in all areas of computer science and engineering will be considered. Areas of particular interest a Software Systems with an emphasis on perating systembedded systems: Cryptograph ystems, and embedded systems; Cryptography nd Compilers and Programming Languages: Applicants with research on trustworthy spects of these disciplines, for example "trusted computing" will be given preferen Candidates are also sought for
interdisciplinary joint positions in the areas of Computational science with a focus on ystems for multiscale modeling with applications to bio/nano-materials; VLSI including Analog and Mixed-Mode Circuits; Bioinformatics; and Medical Imaging.
The Department of Computer Science and Engineering (CSE) has 24 collegial, tenure track faculty. The undergraduate and Doctoral News and World Report. The university is committed to growing the faculty ranks over he next several years. Eight members of our he next re reals. Etight members of our Award. Our faculty also received 7 NSF ITR Grants and a $\$ 2.5 \mathrm{M}$ Research Infrastructure Grant in recent years. There are state-of-the rt research labs for microsystems design and VLSI, computer vision and robotics, virtual environments, high performance computing, bioinformatics, networking and security. The Department offers a graduate program with about 42 Masters students and 142 Ph.D. students, and undergraduate programs with minimum GPA requirements in comput science and computer engineering. In no a new 100 , 00 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 the beautiful college town of State College in the center of Pennsylvania State College has 40,000 inhabitants and offers a variety of cultural and outdoor offers outstanding events from collegiate ffers outstanding events from collegiate an New York, Philadelphia, Pittsburgh, Washington D.C Baltimore) are only Washington D.C., Bla mee are only a few oseveral 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 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 anuary 31,2005 to receive full consideration. o apply by electronic nial, send your resume ind and addresses of at least th postscript file or pdf file to
ecruiting@cse.psu-edu-Applications may also
Chair, Faculty
The Pennsylvania State Unite
Department of Computer Science and
Engineering
111 Information Sciences and Technology Building, 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 Op
PSU is an Equal Opportunity / Affirmative Action Employer. Women and minorities are out and print an Affirmative Action Applicant Data Card. NOTE. This will Applicant Data Card. Note. This will 4.0 or better to download this form and fill it in prior to printing it. This form can then be faxed to Beth Kennedy at 814-865-3176.

## Pomona College

Associate Professor or Professo
Senior appointment in computer science, associate professor or professor, to begin July, 2005. Teaching load equivalent to four course year.
Pomona College, founding member of the

Claremont Colleges, is a highly selective iberal arts college attracting a diverse, ational student body. Send letter of application, detailed cv, names of three references (one evaluating teaching), and description of research accomplishments and plans to:

## Search Committee

Computer Science Program 610 North Colleg
Claremont, California 91711-6348 Further information from
Further information from:
Applications received by January 10, 2005, ill receive full consideration.
Pomona College is an equal opportunity mployer and strongly encourages applications from women and members of

Princeton University Council on Science and Technology Postdoctoral Teaching Fellowships
http://www.princeton.edul $\sim$ stcweb)
The Council on Science and Technology Princeton University solicits applicants to its Postdoctoral Research-Teaching Fellowship Program. The program seeks outstanding cientists at the cutting edge of their research fild, who are also committed to excellence undergraduate teaching. Support will be provided for up to three years of research and teaching. The fellows will be involved in rinceton's undergraduate teaching program nd will conduct research with a Princeton University science or engineering faculty nember.
Applications are currently being accepted or fall 2005. The application deadline is December 1, 2004. Interviews of the top andidates will be conducted at Princeto
Princetoek of January 10, 200
Binceluffrmative is a Epportunity/affirmative action employer. ligibility requirements, applications and Council's Website above.
Carol Prevost
Associate Director of the Council on
Science and Technology
5 Peyton Hall
Princeton Universit
Princeton, 609-258-4316, Fax: 609-258-1020
Email: cprevost@princeton.edu

## Purdue University

## chool of Electrical and Computer

## Engineering

The School of Electrical and Computer Engineering at Purdue University invites applications for faculty positions across the readth of computer science/engineering at all

## The

 hoohttp://engineering.purdue.edu/ECE/Research/ Areas/CompEngr) has nineteen faculty nembers who have active research programs in areas including: AI, architecture, compilers distributed systems, graphics, haptics, HCI, machine learning, machine vision, multimedia ystems, networking, NLP, OS, security, software engineering, and speech processing will consider outstanding applicants in We require a PhD in computer science/engineering or a related field and a significant demonstrated research record gnicant demonstrated research rectrd applied for.
Applications should consist of a cover etter, a cv, a research statement, names and URL fors. Applications, in he form of a single attached PDF file, and inquiries can be sent to:
compengr@ecn.purdue.edu.
Applications will be considered as they are eceived, but for full consideration shoul ive by 1 January 2005.
Purdue University is an equal access, equal Portunity, affirmative action employer.

## Purdue University

## Department of Computer

The Department of Computer Sciences at
The Department of Computer Science tenure-track positions beginning August 2005. Positions are available at the Assistant rofessor level; senior positions will be considered for highly qualified applicants. Applications from outstanding candidates in all areas of computer science will be onsidered. Of particular interest are candidates in the areas of programming anguages and compilers, software engineering, perating systems, data mining, and operating syste
bioinformatics.

The department also plans to fill, in a hool-wide effort, a number of computer science faculty positions in multidisciplinary areas. Within this effort, the department seek to fill positions in the areas of bioinformatics, data mining, graphics and visualization, a well as all aspects of computational science/nanoscience. Applicants in these abiblinary statement. For more information see statement. For more information see
http://www.science.purdue.edu/COALESCE/

The Department of Computer Sciences offers a stimulating and nurturing academic environment. Forty-one faculty members direct research programs in analysis of algorithms, bioinformatics, databases, distributed and parallel computing, graphics and visualization, information security networking, programming languages and compilers, scientific computing, and software engineering. The department is implementing a strategic plan for future growth supported by the higher administration. This plan includes a new building expected to be operational in aly Fubluth department is available at department is available at

Applicants should hold a Ph.D. in Computer Science, or a closely related discipline, be committed to excellence in teaching, and have demonstrated strong potential for excellence in research. Salary ad benefits are highly competitive. Special deparmental and university initiaives are strongly encouraged to apply electronically by sending a detailed curriculum vitae, research and teaching statements, and names and contact information of at least three references in PDF to fac-search@cs.purdue edu. Hard copy applications can be sen Department of Computer Scianc Purdue University
West Lafayette, IN 47907-1398
Applications are being accepted now and will be considered until the positions are filled. Purdue University is an Equal Opportunity/Equal Access/Affirmative Action employer.

## San Francisco State University

## Computer Science Departme

## Assistant Professor

The Department of Computer Science invites applications for a tenure-track position at the Assistant Professor level. We are especially interested in expertise in areas open software development, embedded open software development, embedded technologies, security, and multimedia. Other areas will also be considered. We are looking for a candidate who can teach a range of core courses, can direct Masters student projects and theses, and can collaborate across department and discipline boundaries to produce high-quality research. Industrial and practical experience, including a track recor in applied research, is a plus. The position begins Fall semester 2005

San Francisco State University, a member of the California State University system serves a diverse student body of 27,000 undergraduate and graduate students. The scholarship, freedom, human diversity,

## Professional Opportunities

Interested candidates should send curriculum vitae, statements of research and teaching interests, and copies of three representative publications to:

Chair, Hiring Committee
Computer Science Department
San Francisco State University
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132
or e-mail all
hiring@cs.sfsu.edu.
hiring@cs.sfsu.edu
Candidates should also arrange to have at least three letters of recommendation sent
the same address. Application deadline is January $10,2005$.

SFSU is an Affirmative Action/ Equal Opportunity Employer; women and minorities are strongly encouraged to apply.

## Southern Illinois University Carbondale

Computer Science
Faculty Positions
Applications are invited for up to two tenure-track faculty positions at the Assistan Professor or Associate Professor level. The Basic requirements include a Ph . in Basic requirements include a Ph.D. in hire, evidence of ongoing and future research hire, evidence of ongoing and future research,
and teaching competency in a reasonable number of computer science subjects at both the undergraduate and graduate levels. Applicants with a research specialty in any area of computer science will be considered. Associate Professor position applicants should have at least six (6) years of university-level
teaching and research experience, and should teaching and research experience, and should
have an excellent record of publication and external funding

Review of completed applications will begin on January 17, 2005 and continue unti the position is filled. Applicants should send a least three of your references send their least three of your references send the recommendation letters directl
Faculty Search Committee

Faculty Search Committee
Department of Computer S
Department of Computer 2125 Mailcode 4511
Southern Illinois University
Carbondale IL 62901-4511
For more information about the
Department of Computer Science, visit our web site at http://www.cs.siu.edu. Question may be directed to the Faculty Search Committee, via georgia@cs.siu.edu.
SIUC is an affirmative action/equal opportunity employer that strives to enhance
its ability to develop a diverse faculty and staff its ability to develop a diverse faculty and staff and to increase its potential to serve a div
student population. All applications are student popula ico. All appla will are welcome and
consideration

## Stanford University

Departments of Electrical Engineering and Computer Science

The Departments of Electrical Engineering and Computer Science at Stanford University invite applications for a tenure-track faculty positions at the junior level (Assistant or untenured Associate Professor). We are conducting three searches, with the following themes. In general we give higher priority the overall originality and promise of the candidate's work than to the sub-area of onecialization. The appointments may be in with orber Engineering departments if appropriate.
We are seeking applicants interested in creating the complex systems that are of growing importance in almost all areas of EE such as the creation ranging from applications networks ere more robust and secur for extracting distributed systems to systems interfaces to the physical world. Areas of interest include but are not limited to networking, distributed systems, embedded systems, information management, operating systems, and compilers.

We are seeking applicants knowledgeable in some aspect of sensor networks, e.g., applicants with interest in gathering and
interpreting information from large numb of possibly dispersed sensors, or applicants who design and build sensors for networked applications. We expect candidates to experience in one or more of the following areas: signal processing, sensor design, graph and vision, networking and protocols, data distribut information management, security, distributed algorithms, or other areas related candidates with expertise in applications that may use sensor networks, such as health care transportation and environmental science. We are seeking applicants from all areas Computer Science including Foundations Artificial Intelligence, Graphics, Databases,

Systems, Human Computer Interaction, and Networking. We are also interested in applicants doing research at new frontiers in computer science, for example biological computing, bio-informatics, computation and the arts, and computational economics.
An earned Ph.D., evidence of the ability to pursue a program of research, and a strong commitment to graduate and undergraduate will be expected to teach courses at the will be expected to teach courses at the graduate and undergraduate levels and to build
and lead a team of graduate students in Ph.D. and lead a team of graduate students in Computer Science Department can be fo at http://cs.stanford.edu and about the Electrical Engineering Department at http://www-ee.stanford.edu. The School of Engineering website may be found at http://soe.stanford.edu.

Applications should include a curriculum vitae, brief statements of research and teaching interests, and the names of at least four references. Candidates are requested to ask references to send their letters directly to the search committee. Applications and letters Search Com
Search Committee Chai
c/o Laura Kenny-Carlson
Stanford University
Gates Hall 278
Stanford, CA 94305-9025
or via electronic mail to
The review of applications will begin on anuary 3,2005 , and applicants are strongly encouraged to submit applications by that date; however, applications will continue to be accepted until February 1, 2005.

Stanford University is an equal
Texas A\&M University-Corpus Christi
College of Science \& Technology
Tenure-track positions
Texas A\&M University-Corpus Christi, he Island University, located on the sunny South Texas coast, is seeking applicants for science at the Assistant Professor to Professor science
levels.
TAMU-CC is the fastest growing university in Texas, and has been ranked the op public regional university in Texas two years in a row by U.S. News \& World Report. The Department of Computing and Mathematical Sciences currently offers cademic programs in computer science (BS, MS) that strongly em of computing.

We are planning to offer a Ph.D. in Applied Computing with an emphasis in environmental applications. Thus, for individual with research interests compatible with the research direction of the department who has experience in advising Ph.D. students. The successful candidate will have the opportunity to play a major role in planning and developing our new Ph.D. program. For the junior-level positions we are also seeking individuals with research interest compatible with the research direction of the department. A Ph.D. in computer science or
losely related area is required.
Applicants should send a letter of pplication, a curriculum vitae, unofficial copies of gave three letters of rempen and and to College of Science \& Technology

ATTN: Ken Brown, Administrative
Assistant
Texas A\&M University-Corpus Christi
6300 Ocean Drive (FC-179)
Corpus Christi, TX 78412
The positions are available Fall 2005.
Applicants are encouraged to submit
applications by March 1, 2005.
TAMU-CC is an Equal Opportunity Employer committed to diversity. http://www.tamucc.edu

## Texas State University, San Marcos <br> Department of Computer Science

Applications are invited for two assistant professor level tenure-track positions to begin of Computer Science and Computer Engineering will be considered, preference wil be given to candidates in the areas of Applicants must have an earned doctorate in Computer Science or Computer Engineering or an equivalent degree. A commitment to excellence in teaching, research and service is essential.

The Department of Computer Science has 21 faculty members, 485 undergraduate $m$

Science and Software Engineering. The Science is accredited by the ABET. We have a hriving master's program and the Ph.D. program proposal is in process.
For further details and application directions, visit our website at:
www.cs.txstate.edu/recruitment or
contact. hire is a E
Tffrmative Action employer Texn Stat Affirmative Action employe. Texas State women and minorities in faculty and dministrative positions

## Tufts University

partment
Faculty Positions
The Department of Computer Science at Tufts University invites applications for a enure-track faculty position to commence in Summer or Fall 2005. We seek outstanding andidates in all applied areas of computer science, and especially welcome candidates with research and teaching interests in wera engineering, enbedded systems, Located just three miles from Boston, the Tufts CS department offers the BA, BS, masters and PhD degrees. We are part of the Tufts Engineering school which has recently Ufts Engineering school which has recently information about the department, this position, and instructions on how to apply, please visit:
http://www.cs.tufts.edu/facultysearch05/ Screening of applications will begin December 1, 2004, and continue until the position is filled; all applications received by February 1,2005 are assured of full onsideration.
Tufts University is an Affirmative Action/Equal Opportunity Employer. We are culty Members of underrepresented group re strongly encouraged to apply

## University at Buffalo, The State

 University of New York Department
## Faculty Position

The Department of Computer Science and ngineering (CSE) has faculty openings at all evels. We seek excellent candidates in all core areas of CSE. Of special interest are applicants in biometrics, databases, security and bioinformatics.
The CSE faculty are affiliated with the world-class Center for Computational Research, the Center of Excellence in Document Analysis and Recognition, the NSA Center of Excellence for Information Assurance, the Center for Cognitive Science, Center for Unified Biometrics and Sensors, and the National Center for Geographic Information and Analysis. The faculty include AAAI, ACM, and IEEE Fellows and several ward winners. The faculty are active in esearch and have generated $\$ 9$ million
external funding in the last one year.
Junior candidates are expected to have a h.D. in Computer Science/Engineering or related field by August 2005, with a good publication record and potential for developing an externally funded research program. Senior candidates are expected to funded research as well as international stature commensurate with rank.

All applications should include a cover
etter, 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 to the address below. The due date for applications and letters of reference is January 15, 2005.

Address for correspondence:
Chair, Faculty Search Committee
Department of Computer Science and 201 Bell Hall
201 Bell Hall
Buffalo, NY 14260-2000
Email: cse-search@cse.buffalo.edu For more information about the epartment, the university, the city of Buffalo and Western New York, please visit our website, http://www.cse.buffalo.edu.
The University at Buffalo is an Equal
Opportunity Employer/Recruiter.

## The University of Alabama

## Department of Computer

University of Alabama, Department of Computer Science, invites applications for a tenure-track faculty position at the Assistant
Candidates must have an earned $\mathrm{Ph} . \mathrm{D}$. in
computer science or a related field, with an vidence of research potential, commitment to eaching, and willingness to participate in the Department's graduate and undergraduate rograms. Applicants from all areas of computer science will be considered. Those who specialize in software engineering atabase systems, operating systems, or apply.

The Department of Computer Science rack) , has 20 faculty ( 14 tenured/tenureccredited B.S. degree, and over 50 M.S. and Ph.D. students. A reas of current research mphasis include algorithms, artificial itelligence, database systems, human computer interface, networking, operating ystems, programming languages, and software ngineering. The University of Alabama is a harter member of Internet2. Outstanding pplicants should send a curriculum vitae and the names and addresses of at least three eferences to:

Dr. Susan Vrbsky, Chair
Computer Science Search Committe
Department of Computer Science
Box 870290
The University of Alabama
Tuscaloosa, AL 35487-0290
For additional information, please visit http://cs.ua.edu, or contact Susan Vrbsky at vrbsky@cs.ua.edu.
Review of applications will begin January filled.

The University of Alabama is an equal opportunity/affirmative action employer. Women and minorities are particularly

The University

## The University of Arizona

 College of Scienceepartment of Computer Science Assistant Professor

## Associate or

Applications are invited for multiple enure-track faculty positions at the rank of Assistant Professor, Associate Professor, or mputer science or related field, have a commitment to excellence in teaching, and emonstrated excellence in research appropriate to the candidate's rank. The department is committed to hiring in networks and systems. Applications from xceptional candidates in other areas will also
onsidered.
The Department of Computer Science at of research accomplishment, influential of research accomplishment, influential unding to individual faculty. Major funding unding to individual faculty. Major funding providing a broad array of equipment for computing research. Research areas include rogramming languages, compilers, operating ystems, networks, algorithm design, database sstems, computer vision, and computationa biology.
For full details and to apply, submit an online application for Job\# 31504 at:
http://www.hr.arizona.edu
Be prepared to attach a curriculum vitae and the names of at least three references. Review of application filled.
As an equal opportunity and affirmative action employer, the University of Arizona cognizes the power of a diverse community with varied experiences, perspectives, and backgrounds. M/W/D/V

## The University of Arizona

Department of Computir Science

## Professional Opportunities

machine learning, or data mining) to important problems in computational biology, and have a strong interest in interfacing with To apply in the Job \# 31560 at hubmit an online application for Applicants should attach or mail ander. vitae, research and teaching statements, names of four references.
Review of applications will begin January 15, 2005 and continue until the position is filled. As an equal opportunity and affirmative
action employer, the University of Arizona recognizes the power of a diverse community and encourages applications from individuals with varied experiences, perspectives, and backgrounds. M/W/D/V

## University of California, Berkeley

 Computational Biology Department Faculty Position \#949The University of California, Berkeley invites applications for a position in the area of computational biology at the assistant (tenure track), associate or full professor level
starting July 1, 2005 (appointment subject to budgetary approval). The University has committed to establishing Berkeley as the premier institution for education, training and research in Computational Biology, with numerous inter-campus research activities, full integration between multiple UC campu th through QB3, and relevant programs at the (LBNL) and the Joint Genome Institute (JGI). The position is associated with the newly created Center for Computational Biology along with a primary appointment in a traditional department, tailored to the individual, among Bioengineering, Biology (Molecular and Cell, Plant and Microbial, Integrative), Biostaistics (Puic Health), (Engineering), College of Natural Resources, (Engineering), College of Natural Res exceptional environment for both research and training in this rapidly growing field. The successful candidate will have a unique opportunity to provide intellectual and technological leadership in computational biology and facilitate programmatic interactions across the University of California system.
Applicants should have (or be about to receive) a doctoral degree or equivalent in quantitative field from one of the above departments, and a research focus in the broad area of computational biology. Specialized areas may include, but are not limited to:

- Statistical learning: methodology,
algorithms and computing
algorithms and computing
data sources, e.g. nucleotide heterogeneous data sources, e.g. nucleotide and pr
sequences, microarray data, SNPs,
evolutionary processes, etc
- Methods and algorithms for mathematical/biophysical modeling of proteins, molecular machines, and cells We seek individuals with demonstrated excellence in teaching and leadership. Successful applicants will be leadership. Successful applicants will be expected establish a pre-eminent research and
educational program, and develop and teach courses in appropriate areas of the computational sciences

Applicants should send a complete curriculum vitae, a selection of publication reprints (five or less), a brief statement of
future research plans and teaching interests, future research plans and teaching interests,
and the names of at least three references to:
Professor Mark van der Laan
Center for Computational Biology
University of California, Berkeley
227 Hildebrand Hall
Berkeley, CA 94720-3220
The review of applications will commence on December 1, 2004; all applications must be received by March 1, 2005 for consideration in this year's recruitment cycle.

The University of California is an equal opportunity affirmative action employer,

## University of California, Berkeley

 Alectrical EngineerinUniversity of California, Berkeley announces several approved tenure-track positions in Electrical Engineering and Computer Sciences at level, beginning Fall 2005, subject to budgetary approval. We will also consider the possibility of joint searches with other Berkeley departments. Applicant should have (or be about to receive) Ph.D. in Computer Science, Electrical Engineering, Computer Engineering, or a related field. A principal requirement is demonstrated excellence in research; potential for important requirements. Successful applicant
program and teach both graduate and undergraduate courses in their general area of pecialty.
Interested persons should send an application consisting of a resume, a one- to wo-page statement of their future research nd teaching interests/plans, a select subset of publications, and the names of three
references you have asked to send feferences you have asked to send applications received after March 1,2005 applications received after March 1, 2005.
However, review of completed applications will begin December 15, 2004.

Recommendation writers should send etters directly to the appropriate addres below, to arrive before January 1, 2005. Reference letters will NOT be requested directly by the department.

Send Computer Science applications to:
Debra Zaller
CS Academic Personnel
381 Soda Hall
EECS Department UC
Berkeley, CA 94720-1776
Jean Richter
EE Academic Personnel
231 Cory Hall
EECS Department UC
Berkeley CA 94720-1770
University of California is an Equal

## University of California at Davis

 Department of StatisticsTenure-track position
enure-track position
One tenure-track Assistant Professor position beginning July 1, 2005. Require Ph.D. in Statistics or related field and demonstrated potential for outstanding Staching and research in Computationa
Statics. Send vitae, at least three letters of reprints/preprints, and transcripts (Ph.D. in 2003 or later) by $12 / 1 / 04$ to:

## ttee Chair

Dept. of Statistics
University of Califor
All email to: search@wald.ucdavis.edu.
Affirmative action/equal opportunity employer.
University of California, Riverside Marlan and R
Engineering
Faculty Positions in Computer Science \& Engineering
Engineering
The University of California, Riverside nvites applications for tenure-track or tenured invites applications for tenure-track or Computer Science and Engineering of 2005-2006 academic year.

Applicants must have a Ph.D. in Computer Science or in a closely related field. Areas of particular interest include: software engineering/programming languages, computational science and engineering, computer systems and graphics and visualization, but applications are welcome in all areas of Computer Science and Engineering. Emphasis will be given to candidates at the Associate and Full Profes levels. Senior candidates must have an Junior candidates must show outstandin Jesearch and teaching potential Salary will competitive, and commensurate with opetitive, and and qualificatith Riverside is the fastest-growing member of the en-campus University of California System, widely regarded as the most distinguished ystem of public higher education in the United States. The Campus- and College-wide expansion programs include a new state-of-he-art building soon to house the CSE and EE departments. Annual research expenditures in the College are close to $\$ 352 \mathrm{~K} /$ year per faculty. The CSE Department offers the B.S., M.S., and Ph.D. degrees. More information is availab
The city of Riverside, located about 60 miles away from Los Angeles, offers easy access to mountains, Pacific Ocean beache cultural activities, shopping, and othe attractions. Applications and inquiries should
be sent to:
Chair, Faculty Search Committee Department of Computer Science and Engineering
University of California
Riverside, CA 92521-0304
951-827-5639
or by e-mail to: search@cs.ucr.edu Applications must include curriculum vitae, list of publications, a statement of and addresses of four references (junior
andidates may have reference letters mailed
directly to the department). Formal review of applications begins January 24, 2005. Early applications are encouraged, however, late applications will be considered until the positions are filled
The University of California, Riverside is Equal-Opportunity/Affirmative-Action Employer

## Unive <br> Unity

 Cruzce Department Assistant Professor and/or Associate/Full

The UCSC Computer Science Department welcomes outstanding applicants or the following tenure-track and tenured faculty positions within the rapidly growing Baskin School of Engineering:

Assistant Professor
Concentration: Computer Systems
orage, Database Systems Position \#: 582-05 Assistant Professor, or (Tenured Associate/Full Professor

Cositiontration. Machine/Comp Learnin Position \#: 710-05, 710T-05
Visit http://www.soe.ucsc.edu/jobs/faculty or detailed job descriptions and application
nstructions. Please refer to the position instructions. Please refer to the position Full consideration for applications arriving by anuary 10, 2005.
UCSC is an EEO/AA/IRCA employer.

## University of Central Florida

he School of Computer Science in the College of Engineering \& Computer Science
Faculty Positions Faculty Positions
UCF Computer Science is looking for talented faculty in all areas of specialization. We expect to fill over 10 faculty lines in th next few years, and seek outstanding faculty positions at all levels for appointments in 2005. We are particularly interested in andidates with research interests in artific intelligence, bioinformatics, compilers, omputer architecture, computer graphics, computer vision, database and information systems, mobile systems, multimedia applications, networking, operating systems,
parallel and distributed computing, performance evaluation, quantum computing, and security/cryptography.

We offer competitive salary and start-up
packages and our faculty enjoy generous benefits. New faculty have graduate student support and significantly reduced teaching loads. Special senior-level positions are vailable to exceptionally qualified coordinated and oordinated groups of faculty. In the past five years, nine distinguished faculty have joined
UCF Computer Science, and we seek to add to the growing strength of our program.

Applicants should have a Ph.D. and a Strong commitment to the academic process, including teaching, scholarly publications, and sponsored research. Candidates at the Associate or Full Professor level should have demonstrated leadership in their fields at the national/international level. Those applying for Assistant Professorships should have a track record of high quality publications, and be recognized for their potential.
Ph Computer Science is the oldest Ph.D. granting CS program in the state Florida. We have a rapidfy growing educational and research program with over $\$ 2.8 \mathrm{MM}$ in annual expenditures from grants and 850 undergraduate CS majors. In and 850 undergraduate CS majors. In Technology (IT), with over 400 undergraduate majors. We also encourage faculty candidates for the IT program to respond to this ad. The University is strongly committed to continue the buildup of strength in CS, with significant special monetary support dedicated to maintain and expand the excellence of the School of Computer Science.

Our Federal research sponsors include NSF, NASA, and the Department of Transportation, as well as ARO, ONR, the Department of Defense. We enjoy the support of numerous industrial sponsors including established companies such as Adaptec, ATI, Boeing, Canon, Electronic Arts, Harris, Honeywell, IBM, Imagesoft, Intel, Lockheed Martin, Lucent, Oracle, Schwartz Electro-Optics, and Sun Microsystems as well as local hi-tech start-ups.
(continued)

## TENURE-TRACK FACULTY POSITIONS All Levels Ref: APW\#1

Located in the Finger Lakes region of New York State, Cornell University is committed to creating a more diverse and inclusive campus in which to work, study, teach and serve.
Applications are invited for tenure-track positions. Depending on experience, available positions are at the assistant, associate, or full professor level. Applicants must possess a Ph.D. in computer science or in a closely related field. The department requires demonstrated research accomplishment at the highest level as well as outstanding teaching ability and leadership qualities. We are part of a new administrative structure on campus that promotes interdisciplinary research and teaching in the computing and information sciences. Candidates must be enthusiastic about the central role that computer science can play on the campus of a large research university.
The Department of Computer Science at Cornell University encompasses a wide range of research areas, including artificial intelligence, concurrency and distributed omputing, databases, algorithms, information organization and retrieval, applied logic and semantics, numerical analysis and scientific computing, theory of computation, programming languages and methodology, computer vision, computational biology, graphics, theory, networks, operating systems, and natural language processing Although we are especially interested in programming languages, theory of computation, systems, databases and computational biology, outstanding applicants in 11 areas of computer science will be considered.

## RESEARCH

## Also available: Research Associate positions

 Ref: RESW\#3Applicants should submit a vita and the names of at least three references to: Faculty Recruiting Committee Chair, Department of Computer Science, 4130 Upson Hall, Cornell University, Ithaca, NY 14853-7501. Please include reference number with application.
The Department is administered by the Office of Computing and Information Science (CIS), a larger unit that can co-sponsor faculty positions in the Faculty of Computing and Information Science (CIS) with any department on campus. Applications that are not appropriate for the Department of Computer Science will automatically be evaluated in this larger context by the CIS. In particular, there is a campus-wide Economics Science \& Tcience that involves the Departments of Commanication Industrial Engineering. CIS and the College of Architecture, Art, and Planning are also interested in Digital Arts and Graphics.

Further information about the department and the Faculty of
Cornell Web at httpand Information Science is available on the World Wid
Cornell University is an equal opportunity
Applications from women and minorities are encouraged.
http://chronicle.com/jobs/profiles/2377.htm

## Professional Opportunities

UCF has over 43,000 students and is among the nation's fastest growing universities. We are located in Orlando, FL at the center of the I-4 High Tech Corridor with a thriving industrial base in telecommunications, computer systems, semiconductors, defense and space, lasers, simulation and software, and the world renowned entertainment industry. The Orlando metropolitan area enjoys an Atlantic seashore and the Gulf of Mexico Because of the presence of major theme park such as Disney World, Sea World and Universal Studios, we benefit from a majo airport with numerous direct international and national connections. Orlando is also a major center for national and international technical
rences.
Please send applications electronically
(PDF format is preferred) to
cs-positions@cs.ucf.edu.
Applications should include a cover letter clearly indicating their primary research area a detailed CV, a Research Statement, a
Teaching Statement, and five names of Teaching Statement, and five names of refplication. Applications will be receipt of until all positions are filled Alternativel unteugh not preferred, hardcopy applications though not preferred,
may be sent to: Chair, Com
Committee
School of Computer Science
University of Central Florida
Orlando, FL 32816-2362 The University of Central Florida is an Equal Opportunity/Affirmative Action employer. Women and minorities are particularly encouraged to apply. As an agency
of the State of Florida UCF of the State of Florida, UCF makes all application materials and selection procedures

The University of Chicago Department of Co
Faculty Positions

The Department of Computer Science at the University of Chicago is recruiting faculty at the junior level. The Department is particularly interested in candidates in networking and distributed systems, but exceptionally qualified candidates in other areas will be considered. The University of Chicago has the highest standards for scholarship and faculty quality, and encourages collaboration across disciplines. The Computer Science Department's charge and goal is substantial growth through appoint ments that will enhance the quality and metropolitan area provides a diverse and metropoltan are pro. The lacal and vigorous, with international stature in banking trade commerce, manufacturing transportation, while the cultural scene includes diverse cultures, vibrant theater world-renowned symphony, opera, jazz, and blues. The University is located in Hyde Park, a pleasant Chicago neighborhood on the Lake Michigan shore.
Please send nominations or application
Professor David B. MacQueen, Chairman
Department of Computer Scienc
The University of Chicago
1100 E. 58th Street, Ryerson Hall Chicago, IL. 60637-1581
(attachments in pdf, postscript, or Word).
(attachments in pdf, posts
Please quote ref. $\# 68326$
Complete applications consist of curriculum vitae, including a list of publications and citizenship information, (b) three letters of reference (including one research and teaching statement, discussing both past research and future plans. Applicants must have completed, or will soo complete, a doctorate. Applications must arrive by January 31, 2005
The University of Chicago is an equal

## University of Connecticut

 Computer Science \& EngineeringTenure-track Faculty Openings

The Department of Computer Science \&
Engineering (CSE) seeks outstanding candidates for two tenure-track assistant or candidates for two tenure-track assistant or 2005. Applicants must have a Ph.D. by June 30, 2005.

The first position (Search \# 04A419) is for our computer engineering program, with research interests sought in computer architecture, digital system design and testing, hardware-software co-design, operating systems, real-time and embedded systems, and other related areas.

The second position (Search \# 05A155)
computer science programs, with res
interests sought to supplement and complement our current strengths in artificial intelligence, bioinformatics, databases, graphics, parallel/distributed computing, programming languages/compilers, security software/performance engineering, and heory/algorithms.
The CSE Department has 19 faculty, and Ond University of Connecticad is the flaghts. The University of Connecticut is the flag graduate degree-granting institution in Connecticut ranked as the number one public World Report. For further information please see http://www.cse.uconn.edu.
Email your application (indicate Search \# 04A419 or Search \# 05A155 in the email header) consisting of a resume including a full publication list, names of at least three references, and separate statements of research and teaching interests to:
cse_search@ansible.engr.uconn.edu.
To expedite the selection process, we
equest that the reference letters be emailed to request that the reference letters be email us at the time of application. Review of applications will proceed on their arrv

UConn is an EEOE.

## University of Illinois at Urbana-

## Champaign

Department of Computer Science
Tenure Track Faculty Position http://www.cs.uiuc.edu

## Search 9427

The Department of Computer Science, UIUC, invites applications for full-time, tenure-track and tenured professors. All areas of computer science research will be considered, including, in particular, bioinformatics, computational science, HCI and social computing, security, software Candidates working in interdisciplinary areas are strongly encouraged to apply. Tenure-track applicants must have demonstrated excellence in research; tenured applicants must have recognized national and international stature
Computer Science at Illinois is Contionally recognized for its breadth and depth of research and has strong collaborative relations with many other departments and institutes on campus. The department is targeted to grow aggressively to over 60 faculty; it has recently moved into the newly completed Thomas M. Siebel Center for Computer Science, a large, technologically advanced facility that provides outstanding Computer Science and is used by the department as a living lab
Successful candidates must initiate and conduct independent research and perform academic duties associated with our BS, MS and PhD programs. Qualifications: PhD in Computer Science or a closely related field (or mminent completion of degree), outstanding effectively at both the graduate and undergraduate levels. Starting date: August 16
2005. The salary is open, based on 2005. The salary is open, based on qualifications.

To ensure full consideration, applications must be received by January 7, 2005. Early applications are strongly encouraged. application period, but a final decision will not be made until ad closing.

Applicants should submit online an application letter, curriculum vitae, statement of career objectives to www.cs.edu/employment/faculty.html. If you have questions or are unable to apply using this URL, please send email to
admin@cs.uiuc.edu for further instructions.
The University of Illinois is an Affirmative Action, Equal Opportunity Employer

## The University of Iowa

Faculty Positions, Fall 2005
The University of Iowa Computer Science Department is soliciting applications for two tenure-track positions commencing August Applications from all areas of computer Application including applied algorithms, databases, graphics/HCI, informatics, programming languages, security, and systems. The department is committed to growth in research in emerging and interdisciplinary areas of computer science, especially in connection with our highly regarded programs in the health sciences More emphasis will be placed on innovation and promise of the candidate's scholarship than on specific area.

The University of Iowa is a major nationa with a tradition of fostering intelisciplina
esearch and scholarship. Candidates must
 aned discipline. Competitive salary and b anuary 15,2005 , are assured of full onsideration.
For more information, visit ttp://www.cs.uiowa.edu/hiring. Application nay be completed online or send a CV , research statement, and three letters of
recommendation to:

## cs_hiring@cs.uiowa.edu.

cs_hiring@cs.uiowa.edu.
The University of Iowa is an affirmative action/equal opportunity employer. Women, minorities and individuals with disabilities are encouraged to apply.

## Jniversity of Maryland, Baltimore County

An Honors University in Maryland nformation Systems Department
Tenure-track position
The Information Systems Department nvites applications for a tenure-track faculty The Department is multi-disciplinal. The Department is multi-disciplinary,
 information systems. We are particu expertise in the area of Decision Suppot expertise in the area of Decision Support
Systems including, but not limited to, the following areas of specialization: Collaborative Agents, DSS Analysis and Design, Decision Theory, Intelligent DSS, Management Science, Supply Chain Management, and Web-based DSS. Outstanding candidates in other areas, including Database or Data Mining, will also be considered. An interest in teaching management information systems, emphasizing the application and management of information and information technology in organizations to meet strategic and tactical bective, is PhD in and aditional candidates with significant raditional candidates with significant encouraged to apply. All candidates must show trong potential for excellence in research and teaching in an academic environment.
The Department offers a wide variety ourses at the Bachelors, Masters, and Doctoral levels, has one of the highest IS nrollments in the USA, and offers the only PhD in Information Systems in Maryland. Further details on research, programs, and the faculty may be found at
http://www.is.umbc.edu/. Consistent with the UMBC vision, the Department has excellent echnical support and teaching facilities as well as outstanding laboratory space and state Center, Research Park, and Center for Entrepreneurship are major indicators of Entrepreneurship are major in.
Interested applicants should send a cov letter, a one-page statement of teaching interests, a one-page statement of research interests, and a curriculum vitae and have Dr. Andrew Sear
Chair of Faculty Search Committee
Information Systems Department
UMBC
1000 Hilltop Circle
Baltimore, MD 21250-5398
For inquiries, please call Barbara Morris at 410) 455-3795 or e-mail: bmorris@umbc.edu. Electronic submission of cover letter and
curriculum vitae as PDF documents (sent he preceding e-mail address) are preferred. Review of applications will begin mmediately and will continue until the positions are filled. This position is subject to the availability of funds.

UMBC is an Affirmative Action/Equal Opportunity Employer and welcomes pplications from minorities, women and individuals with disabilities.

## University of Massachusetts, Amherst

Computer Science Department
Tenure-track positions
We invite applications for tenure-track aculty positions at the assistant professor
level. Applicants must have a Ph.D. in level. Applicants must have a Ph.D. in how 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. Applicants in all areas omputer Science will be considered. Area of particular interest include programming anguages, software engineering, databases, ecurity, architecture, and theory. One to hree positions are expected. 42 tenure and research track faculty and 169
h.D. students with broad interdisciplinary research interests. The department offers firstlass research facilities. Please see http://www.cs.umass.edu for more information. Applications should reference search R23012.
We also invite applications for research faculty positions (search R23011) in all areas of Computer Science. Applicants should have a Ph.D. in Computer Science or related are -each promise. These positions funded; appointments will be contingent upon continued funding.
To apply, please send a cover letter with your vitae, a research statement, a teaching statement and at least three letters of ecommendation. Please refer to search research faculty position) in the cover lette A teaching statement is not required for esearch positions.
Electronic submission of application materials is strongly recommended. Application materials may be submitted in pdf format to facrec@cs.umass.edu. Likewise, lectronically to facrec@csumass subur etronically to facrec
If electronic format
is not possible,
be sent to:
Search \{fill in number from above\}
o Chair of Faculty Recruiting
Department of Computer Science
Aniversity of Massachusetts
We will begin to review applications on November 1, 2004 and will continue until available positions are filled. Salary commensurate with qualifications and xperience; comprehensive benefits package
Inquiries and requests for more Inquiries and requests for more information can be se

The University of Massachusetts is an Affirmative Action/Equal Opportunity groups are encouraged to apply.

## The University of Michigan, Ann

 ArborDepartment 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) Divion. Qualifications include an utstanding academic record, a doctor quivalent in computer engineering or teaching and research. Candidates from teas of con er anering are reas of co to science Cilly those in heory, programming languages, security databases, and robotics.

The University of Michigan is a NonDiscriminatory/Affirmative Action Employer. Please send resume, url and names of three or more references to:

Professor Karem Sakallah, Chair
CSE Faculty Search
Department of Electrical Engineering and Computer Science
1301 Beal Avenue, Room 3402
1301 Beal Avenue, Room 3402
Ann Arbor, MI 48109-2122
Ann Arbor,: M1 48.ect: hamich.edu/cse
You may submit inquires and applications in pdf or word format via email to:

University Of Minnesota - Twin Cities
Department of Computer Science and
Engineering
Faculty Positions
The Department of Computer Science and

## Professional Opportunities

computer architecture, compilers, operating systems, programming languages, artificial intelligence, robotics and computer vision, natural language processing, computer graphics and visualization, algorithms and complexity theory, geometric computing and applications, human-computer interaction, geographic information systems, paralle//distributed computing, and scientific computing. Its faculty members, numbering
thirty-eight, have access to outstanding computing and research facilities both the Department and at the various research centers on campus, including the Army High Performance Computing Research Center (http://www.ahpcrc.org/), the Minnesota Supercomputing Institute
(http://www.msi.umn.edu/), and the Institute for Mathematics and its Applications (http://www.ima.umn.edu). The Department also plays a prominent role in the Digital Technology Center (http://www.dtc.umn.edu) established recently at the University, and is conducting with the Center a separate search to fill chaired faculty positions in networ nd wreless con. 1 he don. Extern significantly over the past several years and significantly over the past several years and Million recently. Additional information about the Department is available at its Worl Wide Web home page, listed above

The Twin Cities metropolitan area is major center for the computer and medical
technology industry, among others, and offers humerous opportunities for collaborative research and consulting. The Departmen enjoys an excellent rapport with loca industry. The Twin Cities area is also renowned for its high quality of life, excellent public schools, and opportunities for yearround recreational activities, and consistently nks highly in national survey
Applicants should submit a curriculum
vitae, a research summary, and the names of applications@cs.umn.edu. (Submissi
appingle PDF document are preferred.)
Applicants who are unable to submit
electronically may submit a hardcopy to
Chair, Faculty Recruiting Committee Department of Computer Science and Engineering
University of Minnesota
4-192 EE/CSci Building
200 Union Street S.E.
Minneapolis, MN 55455
For full consideration, applications and reference letters should be received by February 1, 2005. However, the search will

The University of Minnesota is an equal pportunity educator and employer

## University of North Carolina at Charlotte

Systems
Tenure-track positions
The Department of Software and Information Systems at UNC Charlotte has multiple tenure-track faculty positions available at the assistant and associat professor levels. The Department is dedicated to research and education in Information Technology and applications, with emphasis En the areas of Information Integration \& Assurance; it offers degrees at the Bachelor Masters, and Ph.D. levels. Current faculty members have strong research programs with ubstantial funding from both federal agencie and industrial partners.

The Department is particularly interested in faculty with research expertise in: HumanComputer Interaction, Software Engineering, Trusted Information Infrastructures, and Trusted Software Development. Highly qualified candidates in other areas will also be considered. Salary will be highly competitive. Applicants must have a Ph.D. in Computer Science, Information Technology, Software Engineering, or a related field, as well as a For further details, plese visit aducation. For further details, please visi ww.sis.uncc.edu. App
Please send a detai
Please send a detailed CV together with four references, copies of scholarly publications, and other support material to Search Committee Chair Systems
UNC Charlotte
9201 University City Blvd
Charlotte, NC 28223
Email: search-sis@uncc.edu
Women, minorities, and individuals with
disabilities are encouraged to apply
UNC Charlote is an equal

University of Notre Dame
Engineering
Faculty Positions
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. Senior applicants are especially elcome, as are applicants in algorithms, AI / obotics, data mining, machine learning, and
Our faculty all
Our faculty are actively engaged in highof areas. The blend of small class size, low teaching load, and a "PhD only" graduat program allows us to emphasize true excellence in both research and teaching Faculty must be committed both to quality teaching at the undergraduate level and to an externally-funded research program of major prominence

Notre Dame is ranked 18th among national universities in the most recent US News and World Report survey. Notre Dame's heritage and values are unique among topanked national universities, resulting distinctive character of campus life. Screening of applications will begin filled. Applicants should send cover letter, tatement of research interests statement of teaching interests, and names and addresses of at least three references to acultysearch@cse.nd.edu.
The University of Notre Dame is an Affirmative Action/Equal Opportunity Employer.

## University of Oregon

## Faculty Position

The Department of Computer and nformation Science invites applications for ne tenure-track faculty position open for fal mphases are in the areas of networking rogramming languages and distributed informatics. Programming languages is broadly construed to include compiler construction, domain-specific langures, program analysis, etc. Distributed informatics may include distributed database systems, web engineering, distributed document
architecture, and other aspects of future distributed information systems. Networking areas of interest include but are not limited to network security, measurement, forensics, multimedia streaming, peer-to-peer systems, and group communication. Outstandin pplicants in other areas may also be considered. Applicants must have a Ph.D. in emonstrated record of excellence in researh, a strong commitment to teaching. We are recruiting primarily at the assistant professor level, but exceptional candidates may be considered for the rank of associate professor. CIS department has seventee esearch faculty and two senior 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 with the Computational Intelligence Resear Laboratory, the Cognitive and Decision Sciences Institute, the Computational Scienc More inform 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
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 itae, names of at least four references, a tatement of research and teaching interest, Faculty Search Committee

Dept. of Computer and Information Dept. of
Science
University of Oregon
Eugene, OR 97403-1202
Email: faculty.search@cs.uoregon.edu Review of applications will begin in December 2004 and continue until the positions are filled.

University of Oregon Rice of the Vice President for Research Science
The University of Oregon seeks applications for a Research Associate in the rea of computational science. The position will be responsible to the Vice President for Research and the Director of th
Responsibilities for the
Responsibilities for the Neuroinformatic Center include but are not limited to: roviding systems administration support for ftware support for "computational grid" oftware support for "computational grid" collaborations through the use of computational techniques and networking capabilities; coordinating and providing raining for researchers using scientific platforms and enhancements to research specific systems; maintaining and creating databases for the use and needs of the NIC/CSI researchers; and providing roubleshooting support to the NIC/CSI esearchers on hardware/software applications
Red in that environment.
Responsibilities for the Office of Research nclude interacting with the research community to foster greater utilization of computational activity in areas such as
neuroscience, chemistry and molecular developmental and evolutionary biology and engaging in special projects at the behest of the Vice President for Research. Requirements include a doctorate in Math, Computer Science or one of the Physical or Biological sciences; demonstrated understanding of the needs of researchers for computing services, and experience with active scholarly research. Candidates should possess outstanding analytic and collaborative skills. Send a letter of application, current resume and a list hree references with complete contac information to:

Assistant Vice President for Research
1258 University of Oregon
Eugene, Oregon 97403-1258
The position is open until filled; revie files will begin on October 22, 2004. The nticipated start date is January 2nd or earlier For more information, please go to the University of Oregon website at
http://www.uoregon.edu and click on jobs - see academic positions.
The University of Oregon is an equal opportunity, affirmative action institutio committed to cultural diversity and compliance with the Americans with Disabilities Act

## University of PennsyIvania

## Depar

## Faculty Positions

The University of Pennsylvania invites pplicants for tenure-track appointments in both experimental and theoretical comp appointments will also be considered. Faculty uties include teaching undergraduate and graduate students and conducting high-quality esearch.
Successful applicants will find Penn to be stimulating environment conducive to professional growth. The Department of Computer and Information Science is ndergoing a major expansion, including new faculty positions and a new building, Levine he last three years, we have successfully ecruited faculty in artificial intelligence, computer architecture, databases, machine omputer architecture, databases, machine
vision, programming languages, and security We are now especially interested in candidates in graphics and animation, systems and networking, bioinformatics and computational biology, and security, although outstanding candidates in other areas might also be

The University of Pennsylvania is an Ivy eague University located near the center of hiladelphia, the 5th largest city in the US. ithin walking distance of each other are it Shools of Arts and Sciences, Engineer and Nursing, Law, and Fine Arts. The University campus and the Philadelphia area support a campus and the Philadelphia area support a
rich diversity of scientific, educational, and ich diversity of scientific, educational, and
cultural opportunities, major technologydriven industries such as pharmaceuticals and erospace, as well as attractive urban and uburban residential neighborhoods.
Princeton and New York City are within ommuting distance.
To apply, please complete the form located the Faculty Recruitment Web Site at:
http://www.cis.upenn.edu/positions/faculty application.htm
referred, 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
Applications should be received by
Applications should be received
January 15,2005 to be assured full Jonsideration. Applications will be accepted until positions are filled. Questions can be addressed to faculty-
search@central.cis. upenn.edu.
The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University of Pennsylvania does not discriminate on the basis of race, sex, sexual orientation, gender identity, religion, color, national or ethnic origin, age, disability, or status as a Vietnam Era Veteran or disabled veteran in the administration of educational plicies, programs or activities, admissions or other University administer progras or other employme
The Penn CIS Faculty is sensitive to "two -body problems" and would be pleased to assist with opportunities in the Philadelphia

## region

## University of South Florida

Department
ure-track faculty positions
Applications are invited for several tenuretrack faculty positions in the Department of Computer Science and Engineering. We are particularly interested in candidates with including datatases, distributed syte incluaing databases, distributed systems, engineering. Applications are also invited for several non-tenure-track faculty positions with primary responsibilities for teaching in all areas of computer science and engineerin Rank and salary commensurate with qualifications and experience. Screening of applications will begin on Nov 15, 2004 and will continue until the positions are filled. For the tenure-track positions candidates are preferred who have completed or are nea completion of a Ph.D. degree in computer cience, computer engineering, electrical engineering or related areas. For the non-tenure-track positions, candidates are preferred Ph have co in ar an ith MS. der anderable teaching experience will be considered.
The Department of Comp
The Department of Computer Science and Engineering (http://www.csee.usf.edu) has 22
faculty members and offers BS, MS, and PhD degrees. The graduate program serves some 150 students. The research program is well supported ( $\$ 3.3 \mathrm{M}$ in 2003) by federal and state agencies including DARPA, NIH, NSF, ONR, and USGS, as well as industry. A strong partnership for inter-disciplinary research exists with the other research centers at the
university as well as the H. Lee Moffitt Cancer university as well as the H . Lee Moffitt Cancer Center and Research Institute.

The application package should include a cover letter, curriculum vitae, brief statement utlining research and teaching goals, and three references. It is preferred that the applications are sent via email to: facultysearch@csee.usf.edu.
Hardcopy applications may be mailed to the:

Search Committee Chair, Box C Computer Science and Engineering
University of South Florida

## Professional Opportunities

in two high priority areas of bioinformatics and security (computer and network). For the bioinformatics area, preference will be given to applicants at the rank of Associate or Full
Professor (with Tenure); while for the security area preference will be given to applicants at the rank of Assistant Professor (in tenuretrack). Applicants in other areas of computer
science, with an established record of science, with an established record of areas, will also be considered, including. software engineering: pervasive computing software engineering; pervasive computing,
multimedia and video processing; intelligent systems; networking; databases; and applied systems; networking; databases, 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 ser We are in the Fifth year of our "Top 25 Initiative plan to reach a national top 25 ranking within 10 years. The initiativ strakeholders including the UTA stakeholders including the UTA
administration, faculty, students and alumni, and industry partners. Since 2000, we have and industry parters. 10 new tenure-track faculty and 5 new full-time non-tenure-track faculty to our rost PhD students has more than doubled since 2000 and the actively funded research awards exceeded $\$ 6.3$ million in 2003-04 academic year.

Applicants must have an earned doctorate in computer science, computer engineering, closely related fields and a commitment to teaching and scholarly research. Applicants are expected to have an excellent record of with their academic level. The faculty orate is anticipated for September 2005. Screening is anticipated for September 2005. Screening continue until all positions are filled. Interested persons should submit a letter application, a resume, and reference letters online at:
Please note that we do not accep
hardcopy submissions. For additional Dr. David Kung
Chair of Search Committee Department of Computer Science and Engineering The University of Texas at Arlington Arlington, TX 76019
Phone: 817-272-3605; Fax: 817-272-3070
Or, visit the departmental website at
http://www.cse.uta.edu
Equal Opportunity/Affirmative Action Employer.

## University of Texas at Austin

Tenure-track Faculty
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 levels. Excellent candidates in all areas will be
seriously considered. eriously considered.
All tenured and tenure-track position equire a Ph.D. or equivalent degree in of employment. Successful candidates are expected to pursue an active research program, teach both graduate and undergraduate teach both graduate and undergraduate
The department is ranked among the top en computer science departments in the country. It has 42 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, Computer Sciences Corporation, and Inte For more information
department web page:
department web page:
The department prefers to receive 2004. To submit yours, please visit

## http://wurw.isi.edu



## The University of Southern California Information SCIENCES INSTITUTE (ISI) INVITES APPLICATIONS FROM OUTSTANDING RESEARCHERS IN ALL AREAS OF COMPUTER SCIENCE AND ENG NEERING, AND THEIR INTERFACES WITH OTHER FIEIDS (SUCH AS NEERING, AND THEIR INTERFACES WITH OTHER FIELDS (SUCH AS BIOINFORMATICS. GOMPUTATIONAL SCIENCE, AND HUMAN-COMPU ER INTERACTION), FOR THE POSITION OF PROJECT LEADER.

$\mathbf{S} \left\lvert\, \begin{aligned} & \text { is a computer science and engineerin }\end{aligned}\right.$ IS research institute overlooking the Pacific in Marina del Rey, California, with a
satellite facility in Arlington, Virginia. ISI is part of the sixth-ranked USC Viterbi School of Engineering (VSOE).
|SI's mission is to combine world class I Iresearch with the development of deployable prototype systems to solve prot
lems of national importance while supporting the university and the community. Project leaders at ISI combine the freedom to set their own research agenda with the respon-
sibility of sibility of maintaining funding for their research group. Our goal is to recruit a handful
of top people who are already well established in their careers, roughly at the level of associate professor or equivalent.
We are seeking people who are interested in leveraging what is unique about ISI while con-
environment and stature
Ambitious, entrepreneurial researchers can grow large-scale, interdisciplinary projects in a
collaborative environment built upon a supportive R\&D infrastructure and a long history of successful interaction with funding agencies. Academically oriented researchers also have the opportunity to teach and to work with students through racult
ments of the VSOE.
IS ingers a strong set of colleagues cover and engineering with particularly strong groups in artificicial intelligence, and grid computing. IS ${ }^{\text {has especially close ties }}$ with USC's Department of Computer Science as well as working relationships with facu-
ty from across the university.

http://recruiting.cs.utexas.edu/facuity/
If you cannot apply online, please send curriculum vitae, home page URL, description of research interests, and selected publications and ask three referees to send letters of

## ference directly to:

Faculty Search Committee
Department of Computer Science
The University of Texas at Austin
Austin, Texas $78712-0233$ USA
Inquiries about your application may be

## directed to:

aculty-search@cs.utexas.edu
For full consideration, please apply by
candidates are especially encouraged to app
The University of Texas is an Equal
The University of Texas is an Equal
University of Texas at El Paso Assistant Professor
ssistant Professo
UTEP's Faculty of Computer Science invites applications for tenure-track faculty positions at all ranks to begin in Fall, 2005 reallence in education and research excellence in education and research environment of collegiality, faculty and academic involvement with students outside the classroom. The Faculty favors collaborative methods in both teaching and research. Candidates should share these values, be willing to build a strong research program, and enjoy working in a culturally
diverse community.
Research areas of primary interest are
High-Assurance Systems and High
Productivity Computing. Preference will be
ive to candidates that have expertise in:
Parallel, distributed, networked and grid computing, for both scientific computing

- Computer security
- Human-computer interaction, including spoken-dialogue systems and other areas
relevant to our research focal areas Candidates will be expected to contribute to and help create a number of cross-cutting Engineering. Descriptions of these crossdisciplinary areas can be found at http://academics.utep.edu/eng/. UTEP offers $\mathrm{BS}, \mathrm{MS}$ and PhD degrees in Computer Science. The CS Faculty has an internationally distinguished record of research, and its teaching program is a nationally recognized model of excellence
UTEP is a Carnegie doctoral-intensive UTEP is a Carnegie doctoral-intensive
university with an enrollment of 19,000 students. Its campus, situated where the Rocky Mountains meet the Rio Grande, echoes the beauty of the surrounding high desert. El Paso 700,000 people that offers affordable homes and is a major meeting point for the United
States and Latin America
Qualifications Required: Candidates must hold a Ph.D. in Computer Science or a closely elated field.
Application Procedure: Send a curriculum vitae, a list of publications, a statement of eaching and research interests, and contact information for at least four professional
Faculty Recruiting Committee
UTEP
College of Engineering
Information about the department and El Paso is available at http://www.cs.utep.edu. Send e-mail applications and inquiries to facultyrecruiting@utep.edu.

The University of Texas at Dallas Erik Jonsson School of Engineering and Computer Science
Computer Engineering
Faculty Positions - System-Level Design Computer/Processor Architecture, Real Time Systems and Electronic Design Automation
The Erik Jonsson School of Engineering Texas at Dallas invites applications for exas Dallas invites applications for faculty position in: System-level design, ynthesis and optimization; co-design ynthesis and optimization; co-design, architecture; high performance, power superscalar and embedded processors; prating systems and compiler intraction and DSP architectures Real time systems Electronic design automation VLSI verification; synthesis and related areas. Position is at the assistant, associate or full
professor levels, starting spring, summer or fall 2005. The successful candidate would be Department of Electrical Enginering on

Department of Computer Science; a joint ppointment is possible. Candidates must have Ph.D. degree in Computer Science, Electrical Engineering, Computer Engineering or equivalent. Candidates should have a trong record of research, teaching. Candidates for associate or full professor position should have strong record of external unding. A significant start-up package has
The Erik Jonsson School of Engineering nd Computer Science offers an interdisciplinary Ph.D. degree in Computer Engineering. Faculty for the computer engineering program consists of members from Computer Science and Electrical Engineering. Currently there are 18 CE affiliated faculty. In all 2002 , a new 152,000 sq. ft . building pened for Computer Science and Engineering to supplement the existing 1994, 50,000 sq. ft. engineering and computer science building. The engineering \& computer science buildings provide extensive laboratory acilities for research in computer engineering, electrical engineering, telecommunicat
omputer science.
The University is located in the most attractive suburbs of the Dallas metropolitan rea. There are over 900 high-tech companies ithin 5 miles of the campus, including Texat Ericsson, Hewlett-Packard, Nokia, Fujits MCI, EDS, and Perot Systems. Almost all the country's leading telecommunication's companies have major research and development facilities in our neighborhood. Opportunities for joint university-industry esearch projects are excellent. The Jonsson School has experienced very rapid growth in recent years and will become a top-ranked engineering school in the next five ye
Jonsson School is strengthening and expanding its programs by recruiting expanding its programs by recruiting
outstanding faculty and Ph.D. students, ncreasing funded research, and establishing new programs. The Jonsson School will ew programs. The Jonsson School will funding from public and private www.utdallas.edu/utdgeneral/news/). For more nformation, view the Internet webpage at www.ce.utdallas.edu or contact Dr. Dinesh Bhatia, Search Chair, at dinesh@utdallas.edu or 972-883-4663. The search committee will begin evaluating applications as soon as
possible and will continue until the position is possible and will continue until the position
filled. Applicants should mail their resume with a list of at least five academic or p
references as soon as possible to:
The University of Texas at Dallas
The University of Texas at Dal
P.O. Box 830688 , M/S AD 23
Richardson, TX 75083-0688
The University of Texas at Dallas is Equal Opportunity Affirmative Action employer and strongly encourages applications from candidates who would enhance the iversity of the University's faculty and dministration
The University of Texas at Dallas ric Jonsson School of Engineering and Computer Science
epartment of Computer Scienc - Speech Recognition echnology
The Department of Computer Science he University of Texas at Dallas invites pplications for a tenure-track faculty position t the level of Assistant or Associate Professor, starting Spring, Summer or Fall 2005. Candidates must have a Ph.D. degree in Computer Science, Software Engineering Computer Engineering or equivalent. Candidates should have a great potential for excellence in research, teaching, and external funding. A significant start-up package has been budgeted for this position.
The Department offers Ph.D. degrees in Computer Science, Software Engineering
M.S. degrees in Computer Science with M.S. degrees in Computer Science w
emphases (tracks) on Networks and Telecommunications, Traditional Computer Science, Intelligent Systems, and a Major in Software Engineering; Bachelor's degrees in Computer Science, Software Engineering (the first in the State of Texas). In addition, the epartment is part of Ph.D. and master's rograms in two interdisciplinary fields, Computer Engineering and elecommunications Engineering, whose aculty consists of members from Computer Science and Electrical Engineering. Currently the Department has a total of 41 tenure-track
faculty and 15 senior lecturers. In Fall 2002, faculty and 15 senior lecturers. In Fall 2002,
the Department of Computer Science moved into a new 152,000 sq. ft. building. In addition into a new 152,000 sq. ft. building. In

## Professional Opportunities

department has many computer/research laboratories, equipped with around 300 high performance workstations and high-end PCs. The Academic Computer Center supports both UNIX based workstations and PCs as well as high-speed dial-in access to campus computing facilities
The University is located in the most attractive suburbs of the Dallas metropolitan
area. There are over 900 high-tech companies within 5 miles of the campus, including Texas within 5 miles of the campus, including Texa Ericsson, Hewlett-Packard, Nokia, Fujit MCI, EDS, and Perot Systems. Almost all the country's leading telecommunication's companies have major research and development facilities in our neighborhood. Opportunities for joint university-industry research projects are excellent. The Jonsson School has experienced very rapid growth in recent years and will become a top-ranked engineering school in the next five years. Based in large part on a 5 -year, $\$ 300$ million initiative involving the State of Texas, the University of Texas System, and Texas Instruments, the School is strengthening and expanding its programs Ph . stude increasing funded research, and establishing new programs (see
nww.ecs.utdallas.ed
information, contas information, contact Dr. D.T. Huynh, e-mail to cs-search@utdallas.edu, or view the Internet Web page at
http://www.utdallas.edu/dept/cs/. The search committee will begin evaluating applications as soon as possible and will continue until the position is filled.
Applicants should mail their resume with a list of at least five academic or professional references as soon as possible to
Academic Search $\# 760$

Academic Search \#760
PO Box 830688 MIS AD Dall
P.O. Box 830688, M/S AD 23

The University of Texas at Dallas is an Equal Opportunity Affirmative Action employer and strongly encourages applic from candidates who would enhance the diversity of the University's faculty and administration.

## The University of Texas at Dallas

 Eric Jonsson School of Engineering and Computer Science
## Department of Con

Faculty Positions
The Department of Computer Science of the University of Texas at Dallas invites applications from outstanding applicants for tenure-track faculty positions in all areas, at
all levels, starting Spring, Summer or Fall 2005. Candidates must have a Ph.D. degree in Computer Science, Software Engineering, Computer Engineering or equivalent. The successful applicants must have a distinguished research and publication record. Applicants for senior positions must have an outstanding funding record and demonstrated leadership ability in developing and expanding funded research programs. Positions for Distinguished Chaired Professors are available
The Department offers Ph.D. degrees in Computer Science, Software Engineering; M.S. degrees in Computer Science with emphases (tracks) on Networks and Tclecommunications, Traditional Computer Software Engineering. Bachelor's Megrees in Computer Science, Software Engineering (the first in the State of Texas). In addition, the department is part of Ph.D. and master's programs in two interdisciplinary fields, Computer Engineering and

Telecommunications Engineering, whose faculty consists of members from Computer Science and Electrical Engineering. Currently the Department has a total of 41 tenure-track faculty and 15 senior lecturers. In Fall 2002, the Department of Computer Science moved into a new 152,000 sq. ff. building. In addition to individual faculty workstations, the department has many computer/research performance workstations and high | PC |
| :--- | performance workstations and high-end PCs. both UNIX based workstations and PCs as well as high-speed dial-in access to campus computing facilities.

The University is located in the most attractive suburbs of the Dallas metropolitan rea. There are over 900 high-tech companies within 5 miles of the campus, including Texas Instruments, Nortel Networks, Alcatel, Ericsson, Hewlett-Packard, Nokia, Fujitsu, MCI, EDS, and Perot Systems. Almost all the country's leading telecommunication' companies have major research and development facilities in our neighborhood. research projects are excellent. The Jonsson

School has experienced very rapid growth in recent years and will become a top-ranked engineering school in the next five years. Based in large part on a 5 -year, $\$ 300$ million initiative involving the State of Texas, the University of Texas System, and Texas Instruments, the School is strengthening and expanding its programs by recruiting outstanding faculty and Ph.D. students,
increasing funded research, and establishing ncreasing funded r
www.ecs.utdallas.edu/welcome.html) For more information, contact Dr. D.T. Huynh, more information, contact Dr. D.I. Huynh, e-mail to cs-search@utdallas.edu, or view the Internet Web page at
http://www.utdallas.edu/dept/cs/. The search committee will begin evaluating application as soon as possible and will continue until the positions are filled.

Applicants should mail their resume with list of at least five academic or professional eferences as soon as possible to

Academic Search \# 762
The University of Texas at Dallas P.O. Box 830688, M/S AD 23

The Univ, TX 1 T
The University of Texas at Dallas is Equal Opportunity Affirmative Action mployer and strongly encourages applica diversity of the University's faculty and administration.

## The University of Texas at Dallas

 Eric Jonsson School of Engineering and Computer ScienceDepartment of Computer Science Faculty Positions - Network Security and Iformation Assurance
The Department of Computer Science of he University of Texas at Dallas, invites in all areas of Information Security including nat Security Infornation Assunce, Data and Applications Security, at the Data and Applications Security, at the Spring Summer or Fall 2005. Candidates mut have a Ph.D. degree in Computer Science, Software Engineering Computer Engineering or equivalent. Candidates should have a great potential for excellence in research, teaching, nd external funding. A significant start-up package has been budgeted for this position
The Department offers Ph.D. degrees in Computer Science, Software Engineering; M.S. degrees in Computer Science with emphases (tracks) on Networks and Telecommunications, Traditional Computer Science, Intelligent Systems, and a Major in Sofwre Ensern St Bachelors degres (th Conpur Sce department is part of $\mathrm{Ph} . \mathrm{D}$. and master's programs in two interdisciplinary fields, Computer Engineering and Telecommunications Engineering, whose faculty consists of members from Computer Science and Electrical Engineering. The Department has established a CyberSecurity Research Center with a well-funded security aboratory, which is part of the School's CyberSecurity and Emergency Preparednes Institute. The Institute is also building a Security Analysis and Information Assurance Laboratory for testing network security esearch. The University of Texas at Dallas doun Security as one of the National Centers of Academic Excellence in Information Assurance Education

Currently the Department has a total of 41 enure-track faculty and 15 senior lecturers. In Fall 2002, the Department of Computer Science moved into a new $152,000 \mathrm{sq}$. ft. building. In addition to individual faculty workstations, the department has many computer/research laboratories, equipped with around 300 high performance workstations and high-end PCs. The Academic Compute Center supports both UNIX based workstations and PCs as well as high-speed The University is located in the most tractive suburbs of the Dalla metroplitan atea. There are over 900 high meth within 5 miles of the campus, including Texas Instruments, Nortel Networks, Alcatel, Ericsson, Hewlett-Packard, Nokia, Fujitsu MCI, EDS, and Perot Systems. Almost all the country's leading telecommunication' development facilities in our neighborhood. Opportunities for joint university-industry esearch projects are excellent. The Jonsson School has experienced very rapid growth in recent years and will become a top-ranked engineering school in the next five years. Based in large part on a 5 -year, $\$ 300$ million University of Texas System, and Texas

Instruments, the School is strengthening and expanding its programs by recruiting outstanding faculty and Ph.D. students, increasing funded research, and establishing new programs (see
www.ecs.utdallas.edu/welcome.html ). For more information, contact Dr. D.T. Huynh, Department Head, at 972-883-2169, or send Internet Web page at
ttp://www.utdallas.edu/dept/cs/. The search as soon as possible and will continue until th positions are filled.
Applicants should mail their resume with references as soon as possible to

Academic Search \# 761
The University of Texas at Dallas
P.O. Box 830688, M/S AD 23

Richardson, TX 75083-0688
The University of Texas at Dallas is an Equal Opportunity Affirmative Action employer and strongly encourages applications rom candidates who would enhance the iversity of the University's faculty and

## University of Victoria

## Canada Research Chair

The Department of Computer Science University of Victoria, is seeking an utstanding candidate for a Tier 1 Canad Research Chair whose research focus will While there will be particular interest in While there will be particular interest in candidates in Software Engineering and mphasis will be on the excellence of the candidate and the research proposal rathe han a particular area
Tier 1 Chair candidates will be experienced researchers whose peers field. They should be, or have the qualifications to be, full professors qualifications to be, full professors or associate he full professor level within one or two years of the nomination; and able to make a positive contribution to undergraduate and graduate teaching.
Full details are at htp://www.csc.uvic.ca/ career/CRCTier1Ad

## University of Virginia

Department of Computer
Tenure-track positions
The Department of Computer Science at the University of Virginia invites applications d in all areas of computer science. These and in all areas of computer science. Th positions are intended for outstanding
ndividuals who are committed both to individuals who are committed both to and to diversity in community.
The University of Virginia rank
onsistently as one of the top public universities in the country. Its highly valued Department of Computer Science has a diverse population with more than 300 undergraduate students, 110 graduate students, nd 28 faculty members. The department offers baccalaureate, master, and doctoral degrees in Computer Science and Computer Engineering. The department is undergoing significant growth and programmatic departments in experimental systems resear and the leading institution in undergraduate omputer science education. Its existing trengths include algorithms, architecture compilers, distributed systems, graphics, grid computing, mobile computing, networks, operating systems, programming environments, real-time and embedded systems, security, sensor networks, and oftware engineering.
Candidates must have an earned doctorate in an appropriate discipline and a genuine desire to contribute to the Department's goal of becoming a world-class computer science
institution. Applications will be reviewed as they are received and until the positions are filled. Applicants are encouraged to visit the departmental website for more information a www.cs.virginia.edu.
Applicants should submit a letter of application, curriculum vitae, URLs of selected reprints, and statements of research plans and teaching interests and philosophy three letters of recommendation are sent directly to the Department.
We prefer the electronic submission of application materials in PDF form by email to:
positions@cs.virginia.edu.
If necessary, PS is also acceptable Application materials can be alternatively mailed to:

Alfred C. Weaver
Search Committee Chair
School of Engineering and Applied
Science
University of Virginia
151 Engineer?s Way
P. O. Box 400740
Charlottesville, VA

Charlottesville, VA 22904-4740
hone: 344 - 82 220
Applicants are encouraged to submit applications by the beginning review date of
December 1, 2004. Applications will continue December 1, 2004. Applications will con
to be accepted until February 15, 2005. Applications received after this date will be reviewed until the positions are filled.

The University of Virginia is an equal opportunity, affirmative action employer.

## University of Waterloo

School of Computer Scien
Tenure-Track Positions
The University of Waterloo invites applications for several tenure-track faculty with priority for researchers in the Science win prionty for researchers in the areas of scientific computing and software security Candidates at all levels of experience are encouraged to apply. Successful applicant who join the University of Waterloo are expected to develop and maintain a productive program of research, attract and develop highly qualified graduate students, provide a stimulating learning environment for undergraduate and graduate students, an contribute to the administration of the School. A Ph.D. in Computer Science, or equivalent, is required, with evidence of excellence in teaching and research. Rank and salary will be commensurate with experience, and appointments are expected to commenc during the 2005 calendar year. Exceptiona Canada Research Chair.

With over 65 faculty members, the University of Waterloo's School of Computer Science is one of the largest in Canada. It enjoys an excellent reputation in pure and applied research and houses a diverse research program of international stature. Because of its recognized capabilities, the School attracts exceptionally well-qualified students at both undergraduate and graduate levels. In addition, the University has an enlightened intellectual property policy which vests rights in the inventor: this policy has encouraged the creation of many spin-off companies including iAnywhere Solutions Inc., Maplesoft Inc. and Open Text Corp. For Sc .ince plase our web page at:
http://www.cs.uwaterloo.ca
Applications should be sent by electronic mail

Chair, Advisory Committee on Appointments
Universit Computer Science
University of Waterloo
Canada N2L 3G1
An application should include a
curriculum vitae, statements on teaching and research, and the names and contact
(continued)

CRA-W Anita Borg Early Career Award

## Nomination Deadline <br> February 15, 2005

For details see:
http://www.cra.org/Activities/craw/borg/index.php

## Professional Opportunities

information for at least three referees. Applicants should ask their referees to forward A ref reference to the address above. Applications will be considered as soon as possible after they are

The Universit of Wate applications from all qualified individuals, including women, members of visible minorities, native peoples, and persons with disabilities. All qualified candidates are citizens and permanent residents will be give priority.

## University of Wisconsin-Madison

Computer Sciences Departmen
Faculty Position/Professor
The Computer Sciences Department at the University of Wisconsin-Madison, consistently ranked among the top ten departments in the nation, has embarked on a multi-year effort to significantly enhance the strengths of the department. As part of this endeavor we have multiple faculty positions available beginning August 2005.
We invite applications from outstanding Applicants should have a Ph. Din Computer Applicants should have a Ph.D. in Comp demonstrated strength in scholarly research Appointment will be at Assistant Professor level, exceptional candidates at the senior level (Associate or Full Professor) will also be considered. Successful candidates will be expected to teach at the undergraduate and graduate level, in addition to establishing a significant and highly-visible research program.

Applicants should submit a curriculum vitae, a statement of research objectives and sample publications, and arrange for at least
Chair Faculty Recruiting Conmittee Computer Sciences Department University of Wisconsin-Madison 1210 W. Dayton Street
Madison, WI 53706-1685
Applicants are encouraged to submit their applications (along with supporting material) as soon as possible, but no later than January 24, 2005 .

The University is an Equal Opportunity/ Affirmative Action employer and encourages women and minorities to apply. Unless confidentiality is requested in writing, information regarding the applicants must be released on request. Finalists cannot be guaranteed confidentiality.

For further information, send mail to

## University of Wisconsin- <br> \section*{Milwaukee}

Department of Electrical Engineering \&
Faculty Recruitment in Computer Science The Computer Science Program in the Department of Electrical Engineering \& Computer Science is continuing its development and growth. Our Program has established a strong good record in recruiting outstanding junior faculty and in providing them with a nurturing, as well as stimulating environment for their career development. Several of ou farIY Maper Computer Science fohe Awards. The romputch in many areas including Artificia Intelligence, Theory, Cryptography and Data Security, Distributed Systems, Networks, Programming Languages, Software Engineering, and Medical Informatics. We are also engaged in collaborative efforts with several academic units at our University as well as other institutions, including the Medical College of Wisconsin with whom we have developed an interdisciplinary Ph.D. program in Medical Informatics
We invite applications for faculty position from strong candidates in the following areas of Computer Science: Software Engineering, Databases, and Computer Graphics. Recentl
collaborative grant in Cyber Security that campuses. We are the lead institution in this project. All candidates should have a demonstrated promise for excellence in research and in teaching. Candidates for senior positions should have excellent research credentials
Our University is located in a pleasant residential neighborhood of Milwauke
to the shores of Lake Michigan. Our o the shores of Lake Michigan. Our metropolitan location facilitates each industries and affords numerous cultural and recreational activities. Applicants should send a hard copy of a vitae by regular mail. We also request that at least three references be asked to send letters by regular mail to:
Faculty Recruitment Coordinator for
Computer Science
Department of Electrical Engineering \&
Computer Science
University of Wisconsin-Milwaukee
PO Box 784
Milwaukee, WI 53201-0784
E-mail: recruit@cs.uwm.edu (for inquiries only)

Evaluation of all candidates will begin on November 1, 2004 and will continue until the position is filled. Women and minority candidates are strongly encouraged to apply Additional information about our Program may be obtained by visiting our website at
http://www.cs.uwm.edu.
UM is an equal opportunity institution
University of WisconsinMilwaukee
Department of Electrical Engineering \& Computer Science
Faculty Recruitment in Computer Science The Computer Science Program in the Department of Electrical Engineering Computer Science is continuing its established a strong good record in recruiting outstanding junior faculty and in providing them with a nurturing, as well as stimulating environment for their career development. Several of our faculty have been the recipient of the NSF EARLY CAREER Awards. The Computer Science faculty is engaged in research in many areas including Artificial Intelligence, Theory, Cryptography and Data Security, Distributed Systems, Networks, Programming Languages, Software Engineering, and Medical Informatics. We are also engaged in collaborative efforts with several academic units at our University Medical College of Wisconsin with wh have develege of Wisconsin with whom we program in Medical Informatics.
program in Medical Informatics.
We invite applications for faculty positions from strong candidates in the following areas of Computer Science: Data and Computer Security. Recently our university received major NSF collaborative grant in Cyber Security that involves several university of Wisconsin campuses. We are the lead institution in this project. All candidates should have a demonstrated promise for excellence in research and in teaching. Candidates for senior positions should hav xcellent research credentials.
Our University is located in a pleasant to the shores of Lake Michigan. Our to the shores of Lake Michigan. Our metropolitan location facilitates each industries and affords numerous cultural and recreational activities. Applicants should send a hard copy of a vitae by regular mail. We also equest that at least three references be asked
to send letters by regular mail to:
Faculty Recruitment Coordinator for Computer Science
Department of Electrical Engineering \& Computer Science
University of Wisconsin-Milwaukee PO Box 784
Milwaukee, WI 53201-078

CRA-W Distributed Mentor Project 2005

## Nomination Deadline <br> February 15, 2005

For details see:
http://www.cra.org/Activities/craw/dmp/index.php

## E-m

en all candidates will begin on Nover 1, 2004 and will continue until the position is filled. Women and minority candidates are strongly encouraged to apply Additional information about our Program may be obtained by visiting our website at
http://www.cs.uwm.edu. http://www.cs.uwm.edu
portunity institution

## Washington State University,

 Vancouver
## Computer Science Departn

Ph.D. in Computer Science or closely elated field. Please click on the link to see
the complete notice at:
http://www.va
position.htm

## Washington University in Saint Louis <br> Department of Computer Science and Engineering

## .ositions Available

Building upon the impressive recruiting rack faculty), the Department continues to eek outstanding candidates likely to develop synergistic relationships with existing areas of research excellence. Only candidates having an exceptionally strong record of research accomplishments and a deep commitment to eaching will be considered. Candidates whose esearch focuses on computer security will
eceive preferential consideration.
The Department enjoys a great research eputation and impressive levels of research activity, e.g., annual research expenditures in the range of $\$ 250,000$ to $\$ 450,000$ per faculty member. Our doctoral graduates have been industrial research centers. Notewh ndustrial research centers. Noteworthy estrepreneurial endeavors attest to a highly culture. Strict limits on undergraduate enrollments and the increasing popularity Washington University allow us to offer small classes and close personal attention to a
diverse student body of exceptional quality A faculty known for its friendly, accepting and upportive nature provides a welcoming and mentoring environment for new arrivals. A supportive administration reaches out to cademic couples seeking to co-locate. Finally, progressive fiscal policies reward esearch, teaching, and innovation and foster readiness to invest in promising new

Applicants should hold a doctorate in Computer Science, Computer Engineering or a closely related field. Qualified applicants hould submit a complete application (cove etter, curriculum vitae, research statement, teaching statement, and names of at least three references) electronically to recruiting@cse.wustl.edu. Other communications may be directed to

Dr. Catalin Roman, Chairman
Department of Computer Science and Engineering
Campus Box 1045 Washington University One Brookings Drive
St. Louis, MO 6311 0 -489
Applications will be considered as they are 2005, may not be given full consideration
Washington University is an equal portunity/affirmative action employer

## Wayne State University

## Faculty Position

The Department of Computer Science of Wayne State University invites applications or a tenure-track faculty position at the Assistant/Associate Professor level in the area of Computer System Security and Medical mage Processing. Excellent candidates from ther areas of Computer Science will also be
Candidates should have a Ph.D. in Computer science or related area. A successful candidate will have a strong interest in and trong publication record in their area, and strong publication record in their area, research funding. Senior applicants will have demonstrated a strong publication and funding record.
The Depatsent of Computer Science fers B.S., M.S., and Ph.D. degrees. Federal agencies as well as industries support a variety The department also maintains active collaborative relationships with the School of Medicine and other centers and departments within the university. Wayne State Univers
located in Detroit's Cultural Center, is an
urban research university serving over 33,000 tudents. Many outstanding residential monities and some of the nation's top 5\% chool districts are nearby. The Universit ffers excellent benefits and a competitiv
All ation package.
All applicants must apply to the
niversity's Online Hiring System at:
https://jobs.wayne.edu.
Look under "Search Postings" then Create Application."
Applicants should attach to their online pplication a letter of intent, a statement of contact information for at least three references.
Review of applications will begin on anuary 10,2005 and will continue until the position is filled.
Wayne State University is an equal

## Worcester Polytechnic Institute

 Computer Science Department Tenure-track Faculty position - (startingAugust 2005)
Do you want the combination of a research university teaching load with a liberal arts college environment? Do you like ngaging undergraduates together with Would you enjoy doing interdisciplinary search, experiencing the interplay betw technology and society, and helping students pply their technical skills in global settings? If so, you should consider joining the faculty at WPI!
WPI is an elite national university with an enrollment of 3,700 , including 1000 graduate tudents. It has a core focus on engineering, science and the management of technology, and grants degrees in more than 30 disciplines Wry acclaimed and long-standing project-解 y professional societies as a model program. That curriculum, combined with a signific raduate program, offers faculty a unique

The Computer Science Department epects to recruit tenure-track faculty at the Assistant Professor level for the Fall of 2005. Our current search priorities are in Networking (including Mobile Systems) and nteractive Media (including Multimedia and Game Development). However, outstanding candidates at any rank and in any area will eceive full consideration. Candidates should ave a PhD in Computer Science, or a closely lated field, and the potential for excellence
research and teaching.
The department grants $\mathrm{BS}, \mathrm{MS}$, and PhD degrees in Computer Science, and is among majors and roughly 100 full-time MS and PhD tudents). Faculty research is funded by deral agencies (such as NSF, NIH, NSA ONR, and DARPA) and industrial collaborators.
The department currently has 18 tenure rack faculty. We expect to maintain the exceptionally close-knit, collegial atmosphere e currently enjoy. Please refer to our web site www.cs.wpi.edu for complete information.
WPI is in Worcester, Massachusetts, the second largest city in Massachusetts and the hird largest in New England. It is pproximately one hour from both Boston and
Providence; cultural and recreational resources
 Center and large number of technology companies, colleges and universities in th mmediate area make it ideal for dual caree families.
To apply, submit a letter of application, which includes detailed Research and Teaching Statements, vitae, and the names, ostal addresses and email addresses of at least hree references to:

Recruiting Committee
Computer Science Department
WPI
00 Institute Road
Worcester, MA 01609-2280, USA
Questions about the hiring process, as well
as electronic application
o: csrecruit@cs.wpi.edu
For full consideration, applications should
received by $01 / 14 / 2005$,
To enrich education through diversity,
WPI is an affirmative action, equal opportunity employer.


[^0]:    Patricia J. Teller, Chair of the Coalition o Diversify Computing, is an Associate Professor in the Department of
    Computer Science at The University of Texas at El Paso.

