Perspectives of a deaf computer scientist

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Background

- From Germany, came to US on Fulbright scholarship
- Ph.D. in computer science, University of Pennsylvania, 2003
  - Possibly first deaf student to complete Ph.D. in computer science in the USA
- Postdoc at Rutgers University in spring/summer 2003
- Research scientist at Gallaudet Research Institute, Gallaudet University, since fall 2003
3D face tracking on natural sign language sequences

Collaboration with computer scientists and linguists on sign language recognition, supported by NSF ITR grant

Summer College Transition Academy in Computing
Accessibility Issues

- The deaf community is very diverse! What works for one person may not work for another one
- Use multiple channels of information
  - Just as I do here

- Academics
- Social and conferences
Academics: Issues

- Terminology and subject knowledge a problem for sign language and CART interpreters

- Time lag between professor and interpretation/captioning
  - Especially a problem in math, and theory of computation
  - how do we know what equation/state/etc. the professor is pointing at
Academics: Some Solutions

- Use comprehensive slides/notes in class, and make them available pre-session
- Do as much online as possible; great equalizer
- Follow textbook
- Avoid writing on blackboard, write on slides with touch pen
- Pause briefly after pointing to give interpreter chance to catch up
- Offer one-on-one tutoring and notetaking in addition to sign language/CART interpreters
Social: Issues

- Most people don't know sign language
- Spoken language skills vary widely among deaf
- Group interactions especially problematic
- Deaf Ph.D. students need a small core group of fellow students to help one another pull through
- Requires patience, understanding, willingness to adjust communication patterns on all sides
Conferences: Issues

- No interpreters at international conferences
- Limited coverage at domestic conferences
  - Budget problems, often only presentations covered, not social events
- Deaf people need time to get used to talking to unfamiliar people
- Networking suffers
Social & Conferences: Solutions

- Finding a group requires a lot of effort and luck
- At conferences, have familiar faces go together with deaf person
  - Repeat for deaf person what he missed
- Conference organizers: Some funding agencies, e.g. NIH, have programs to help with costs for accommodations
  - But people need to know about them!
Awareness

- Departments can really help with that:
  - Positive attitudes count. Deaf people can do nearly anything on an equal footing, we just have some communication issues
- Make deaf students aware of peers/resources
  - Spread the word
- There is also a loose organization of deaf academics, but too many deaf students do not know of it yet.
  - http://www.deafacademics.org