Welcome to CSE @ Michigan!
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- **Our Environment:**
  - Collaborative, collegial, and intellectually enriching

- **Our Research:**
  - Deep in addressing fundamental issues
  - Broad in interdisciplinary perspective

- **Our Alumni:**
  - Changing the World …
A Growing, Active, & Accomplished Faculty

- **45 Faculty:**
  - 9 ACM Fellows, 12 IEEE Fellows, 7 AAAI Fellows, 4 AAAS Fellows
  - 28 National Science Foundation CAREER Award winners
  - 4 Sloan Research Fellows, 1 MacArthur Fellow
  - 8 Young Investigator Awards
  - Numerous ACM, IEEE and USENIX national awards

- **25 Faculty with joint appointments in CSE:**
  - Electrical Engineering, School of Information, Medical School, Math…
Your Future Colleagues

- 276 graduate students, Fall 2012
- 90+ MS and PhD degrees granted last year
An Abundance of Support for Research

Expenditures of $15+ million per year.

**Government Sponsors:**
- National Science Foundation
- National Institute of Health
- Department of Homeland Security
- Department of Defense
  - AFOSR
  - ARO
  - DARPA
  - ONR
  - TARDEC
- Department of Energy
- Department of Interior
- NASA
- National Security Agency
- State of Michigan

**Industry Sponsors:**
- American Heart Association
- ARM, Boeing Company
- Cisco, Ford, General Electric
- General Motors, Google,
- Hewlett Packard,
- Honeywell International, Intel
- IBM, Lockheed Martin
- Microsoft
- Network Appliance Inc.
- Soar Technologies
- SRI International
- Toyota, Yahoo!
Research Opportunities in CSE at U-M

- Core and emerging areas of CSE
- Extensive collaboration with other units, including:
  - Medical School: Physical Medicine and Rehabilitation, Human Genetics, Otolaryngology
  - School of Information
  - LS&A: Linguistics, Mathematics, Biology, Psychology, Statistics, Economics, Physics
  - Bioinformatics Program
  - Center for Complex Systems
  - Numerous industry R&D labs
Breadth, Depth, and an Interdisciplinary Perspective

5 Laboratories:
- Artificial Intelligence
- Computer Architecture
- Interactive Systems
- Software Systems
- Theory of Computation

Areas of Research:
- Bioinformatics & medical
- Robust, low-power computing
- Pervasive and mobile computing
- Robotics
- Security and privacy
- Cognitive agents
- “Green” & cloud computing
- Self-healing systems
- Quantum computing
- Machine learning
- Human computer interfaces
- Socially relevant applications
- Technology in performance arts
- …
Advanced Computer Architecture Lab

Faculty:
Austin, Bertacco, Brehob, Chen, Davidson, Dutta, Hayes, Mahlke, Markov, Mazumder, Mudge, Narayanasamy, Papaeftymiou, Sakallah, Sylvester, Wenisch
Artificial Intelligence Lab

Faculty:
Baveja, Durfee, Essl, Kieras, Kuipers, Laird, Lee, Mower Provost, Olson, Radev, Syed, Wellman
Interactive Systems Lab

Faculty:
Ackerman, Adar, Essl, Kieras, Mower
Provost, Soloway, Wakefield
Interactive Systems Research

Collaborative Systems

Audio

Graphics

Interface Design

Systems that are easier and more fun to use
Software Systems Lab

Faculty:
Bailey, Cafarella, Chen, Chesney, Dutta, Essl, Flinn, Fu, Halderman, Honeyman, Jagadish, Jahanian, Jamin, Lee, LeFevre, Mao, Narayanasamy, Noble, Prakash, Shin, Stout, Syed
Theory of Computation Lab

Faculty:
Compton, Hayes, Markov, Pettie, Schoenebeck, Shi, Stout, Strauss

\[ \|T\|_\diamond = \min \left\{ \| \sum_t A_t^\dagger A_t \| \cdot \sqrt{\| \sum_t B_t^\dagger B_t \|} : A_t, B_t \in \mathbb{L}(\mathcal{N}), T = \sum_t A_t \cdot B_t^\dagger \right\} \]
How is U-M Doing in the Current Economic Climate?

- Enviable financial position
- $6+ Billion Endowment
- $1.4 Billion Research Budget
What About CSE?

- 7 new faculty over the last 3 years
- Fully-funded 5-year offers to all incoming graduate students
- Student enrollment and research continues to grow
Where Do Our PhD Grads Go?

- Faculty - Academia

- Carnegie Mellon University
- Duke University
- University of Wisconsin-Madison
- Purdue University
- Georgia Tech
- University of Toronto
- University of Illinois
- UMass Amherst
- Stanford University
- Johns Hopkins University
- University of Maryland

Computer Science and Engineering
Where Do Our PhD Grads Go?

- Industrial R&D Labs

![Logos of various companies including IBM, HP, Yahoo, AMD, Google, Intel, Apple, Microsoft, ARM, AT&T, Texas Instruments, Ford, and Cadence.](image)
Where Do Our PhD Grads Go?

- Startups

SOARTECH
mobiata
twilio
twitter
facebook
SimpleScalar LLC
PANDORA internet radio
ZATTOO
Cyclos Semiconductor
ARBOR NETWORKS
go know
Our Students Are in the News!

Hot Tub On Roof Of University Of Michigan Building Is Mystery

Bye, Bye, Bubbler

Some things are just too good to last. Such was the case with the Bob and Betty Boyter Bubbler, a hot tub that mysteriously appeared on a fourth-floor balcony at the North Campus of the University of Michigan at Ann Arbor and then disappeared just as mysteriously two days later.

In recognition of a $10-million gift to the College of Engineering by J. Robert Boyter, founder of the research-and-engineering company IACI, Michigan regents agreed on February 16 to rename the Computer Science and Engineering Building for him and his wife. "Some people thought it would be amusing if they also installed a hot tub to the glory of the students," said a software-systems graduate student who asked to be identified only as "ZTM." The following Saturday, an unknown group placed the tub and a plaque (pictured) on the balcony after obtaining none of the proper permissions.

"At its peak, we fit eight people in it, including two professors," said ZTM, adding...
Some of Our Alumni

- Larry Page – Co-Founder of Google
- Tony Fadell – Inventor of iPod
- Bill Joy – Co-Founder of SUN
- Jennifer Rexford – Professor at Princeton University
- Kunle Olukotun – Professor at Stanford University
- Rob Malan – CTO at Arbor Networks
- Thomas Knoll – Inventor of Photoshop
- Bob Muglia – President of Server & Tools at Microsoft
- Usama Fayyad – VP at Yahoo!
- Greg Joswiak – VP of iPod & iPhone Marketing at Apple
- Kevin O’Conner – Founder of DoubleClick
- Tim Howes – LoudCloud, HP, and RockMelt
- Mark Abel – Director of Solutions Architecture at Intel
- Michael Stonebraker – Professor at MIT
Some of Our Alumni

Julie Brame
Dreamworks

Greg Joswiak
Apple

Thomas Knoll
Photoshop
Some of Our Alumni

Kevin O’Connor
Doubleclick

Kunle Olukotun
Stanford

Tony Fadell
iPod
Some of Our Alumni

Jennifer Rexford
Princeton

Bill Joy
SUN

Larry Page
Google
I WANT YOU FOR U-M CSE
Questions? Please Ask!