

# Department of Computer Science



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## What's New....



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### From the Chair

The computing field needs people with varied backgrounds and skills. In recent years, less than 15% of the B.S. degrees in Computer Science have been awarded to women. Yet, study after study shows that products developed by diverse groups are superior. It is thus a national imperative to broaden the appeal of computing so that computing practitioners better reflect our society. The Computer Science Department at Montana State has embarked on several initiatives recently to address this issue:

- ◆ In Fall Semester 2015, we are delighted to welcome two female professors to the department: Brittany Fasy, who earned her Ph.D. from Duke University and Upulee Kanewala, who earned her Ph.D. from Colorado State University.
- ◆ We are helping our students build community and prepare for careers by providing travel opportunities. This past March, our ACM club organized a trip to visit exciting computer companies in the Bay Area and Boise. In October, a cohort of our female students will attend the Grace Hopper Celebration of Women in Houston.
- ◆ We are remodeling our student workspaces to be collaborative, comfortable and aesthetic.
- ◆ And more!

We look forward to increasing numbers of women and other underrepresented populations undertaking computational degrees. As computing continues to play a prominent role in creating the world's future, we need everyone at the table.

Happy Computing!

### What's Happening....

- The MSU Lunabotics team will travel to the Kennedy Space Center, Florida, for the 6th NASA Robotic Mining Competition, May 18-22, 2015. MSU team members include students majoring in computer science, computer and electrical engineering, and mechanical engineering. Follow the Lunabotics team on Facebook, <https://www.facebook.com/MSULunabotics2015>.
- Logan Warberg ('15), received an Award of Excellence by the MSU Alumni Association and the Bozeman Chamber of Commerce, February 17, 2015. He was one of 40 MSU seniors to be

recognized. He also received a Torley Award for community involvement. Congratulations Logan!

- The CS Department hosted a Homeschool Hackathon, January 10th, 2015. Fifteen students entered the competition. The event was hosted by Jason Taylor of Security Innovation.
- Mark your calendar for the American Computer and Robotics Museum's George R. Stibitz Computer & Communications Pioneer Awards, October 2, 2015. Honorees will be announced mid-May. For more information, please go to [compustory.com](http://compustory.com).

- Congratulations to all the Spring 2015 computer science graduates!

### Dr. Rocky Ross Retires



After 32 years of teaching and conducting research in the CS Department at MSU, Dr. Ross will be retiring at the end of Spring Semester, 2015. **Congratulations and Best Wishes to Dr. Rocky Ross!**

### 2015 CS Awards

*Congratulations to our faculty and graduate student award recipients!*

#### Outstanding Teaching Assistant

Melissa Dale

#### Outstanding M.S. Researcher

Rachel Luhr

#### Outstanding Ph.D. Researcher

Nathan Fortier

#### Outstanding Faculty Service

Dr. Clem Izurieta

#### Outstanding Faculty Researcher

Dr. John Sheppard

#### Professor of the Year

Patrick Donnelly

#### College of Engineering

#### Distinguished Professor Award

Dr. John Sheppard

#### College of Engineering

#### Excellence in Teaching Award

Hunter Lloyd

### Thank You Industry Affiliates!

**workiva** **ORACLE**

**Zoot**

**S2 CORPORATION**  
— THE SPECTRUM in a FLASH —

## Gianforte \$1 Million Gift

The CS Department would like to thank the Gianforte Family Foundation for their generous \$1 million dollar gift. The gift will be used to help the department continue to educate and graduate computer science majors to address the increasing demand for skilled professionals in the computing industry.

More specifically, the gift will be used to support start-up packages for three new faculty who were hired earlier this semester and who are introduced elsewhere in this issue. With these hires, the gift has been used as leverage to expand the number of faculty from 10 to 11, enabling us to better serve the growing numbers of students who want to learn about computing. In addition, the gift will support expanding the department's footprint, providing students with new spaces in which to learn and collaborate.

The CS Department is excited to develop and better prepare the growing number of CS students to meet the demand for highly skilled professionals in the technology industry.

## Software Factory - MSU



The Software Factory successfully collaborated with Zoot Enterprises. Four students, Mike Trenk, Hunter Lapp, Adam Koziol, and Connor Dannelson, developed a prototype with Zoot Enterprises engineers.

During the 2015-2016 school year, Zoot Enterprises will continue to support the Software Factory with another project. New partners for the upcoming school year include the Blackstone Launchpad and S2 Corporation.

In addition, CS students MacKenzie O'Bleness and Mike Trenk received a summer Undergraduate Scholars Program (USP) award to mentor two Bozeman High School students. They will develop animation techniques for algorithms.

For information or to visit the factory, please contact Dr. Clemente Izurieta, [clemente.izurieta@cs.montana.edu](mailto:clemente.izurieta@cs.montana.edu), 994-3720, or [bobcatsoftwarefactory.com](http://bobcatsoftwarefactory.com).

## CS Department

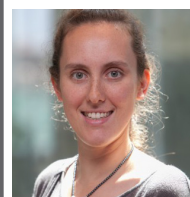
### Welcomes New Faculty

The CS Department welcomes three new faculty members to MSU! Dr. Upulee Kanewala and Dr. Brittany Fasy will join the department Fall semester, 2015, with Dr. David Millman arriving Fall Semester, 2016.

Dr. Kanewala received her Ph.D. in Computer Science from Colorado State University (2015), an M.S. in Electrical and Computer Engineering from Purdue University (2010), and B.S. in Computer Engineering from University of Peradeniya, Sri Lanka (2008). Her research areas include testing of scientific software, automated test oracle creation, and test automation. As a software engineering professor, Dr. Kanewala will join the Software Engineering Lab.



Dr. Brittany Fasy will be joining the CS Department after several years as a post-doctoral fellow at Tulane University (2014-2015) and Carnegie Mellon University (2013). She received her Ph.D. in Computer Science at Duke University (2012) and B.S. at Saint Joseph's University in Mathematics and Computer Science (2007). Dr. Fasy's research includes statistical computational topology, map construction and comparison, modes of Gaussian mixtures, curves in space, heat equation homotopy, and computer science education.



Dr. Millman received a Ph.D. in Computer Science from the University of North Carolina – Chapel Hill (2013), M.S. in Computer Science at the Courant Institute, New York University (2007), and a B.A. in Computer Science at Colgate University (2003). He is currently employed as the Engineering Team Lead at ProductionPro in New York. His research areas include computational geometry, parallel and scientific computing, and education in music and computational sciences.



Please join us in welcoming Dr. Kanewala, Dr. Fasy and Dr. Millman to Montana and MSU!

## AWC Hosts Inaugural CS Seminar Series



The Association for Women in Computing (AWC) is hosting a series of informal seminars

based on the common interest of computer science students attending MSU. The series aims

to provide skills or interest programs that are CS specific. The series is supported by the CS Department and Printing For Less.

For more information about AWC or the CS Seminar Series, please visit AWC's webpage, <http://www.cs.montana.edu/~awc/>.

## Demand Generation Initiatives Updates



A student from St. Labre Indian School, Ashland, MT, with Hunter and his robots enjoyed meeting all the students from St. Labre! Photo courtesy of Dan Burke.

### Robotics Outreach

Hunter Lloyd and Looney the Robot have continued to travel to schools giving the "How to Train Your Robot" assembly. Over 16,500 K-12 students from 94 schools watched the program during the 2014-2015 school year! The "tour" will continue through the 2015-2016 school year and is no-cost to schools through support from the Gianforte Family Foundation. If you are interested in hosting a program, please contact Sharlyn Gunderson-Izurieta, [Sharlyn.Izurieta@coe.montana.edu](mailto:Sharlyn.Izurieta@coe.montana.edu).

**Looney Challenges!** Kindergarten to 12th grade students can learn more about computing by participating in Looney Challenges.

The 2014-2015 Looney Challenges began September, 2014 and will continue through June, 2015. Students can complete a challenge at any time and in any order to earn points and win Looney prizes. The top twenty point earners will win a Raspberry Pi! ([www.raspberrypi.org](http://www.raspberrypi.org)).

### The Joy and Beauty of Computing

The *The Joy and Beauty of Computing* course has expanded and is being taught at Bozeman High School, Anaconda High School, Sidney High School, Belgrade and Big Sky High Schools, and the Montana Digital Academy. We hope to add more schools during the 2015-2016 school year.

### Computational Thinking

#### Course for Teachers

The CS Department will again offer, CSCI 591, *Computer Science in the Classroom: Computational Thinking for Teachers*. The course will be offered June 15-19, 2015 at Montana State University in Bozeman through the Master of Science in Science Education (MSSE) program. The two credit course is intended for 7-12th grade teachers who want to learn how to incorporate computational thinking into the classroom. The course provides teachers the option to potentially teach *The Joy and Beauty of Computing* as a dual enrollment course at their school. Partial stipend support is available to qualified participants.

The CS Department will also offer CSCI 592 for teachers who have already completed CSCI 591, *Teaching the Joy and Beauty of Computing*. The 1 credit course is available to teachers who have already completed the CSCI 591 course described above and will be offered during the same period. For more information, please contact Sharlyn at [Sharlyn.Izurieta@coe.montana.edu](mailto:Sharlyn.Izurieta@coe.montana.edu).

There is still time to take the 2015 Challenge!



Looney Challenges

For K-12 students to test their computing knowledge and win Looney prizes!

For more information:  
[looneychallenges@gmail.com](mailto:looneychallenges@gmail.com)  
[cs.montana.edu/looney-challenge](http://cs.montana.edu/looney-challenge)