UW Computer Science & Engineering
Computing Open House
Saturday, December 7th, 2013

* **Collect a sticker at each activity and mark them. Once you've collected 3 stickers or more, you can go to the giveaway table on the 3rd floor landing to show this program and receive prizes! Get prizes for reaching 3, 10, 15 and 20 stickers! You can visit the table just once to collect all 4 prizes or pick them up as you go. ***

On Twitter, Instagram, Facebook, etc? Use #csedweek and #uwcse

Room Activities in the Paul G. Allen Center

- **COMPUTER SECURITY AND THE MODERN CAR – OUTSIDE**
  The modern car has many computers inside. Could hackers break in to them? Find out how they might and what we're doing to stop them in this live demo. Presenters: Karl Koscher and Franzi Roesner, CSE Graduate Students. http://www.autosec.org/

- Rosie the robot – lab 014 (basement)

- **LEARN TO CODE! – LAB 002 (BASEMENT)**
  Get some hands on experience writing code. Try solving puzzles, creating games and making art. No experience needed. Presenters: Allison Obourn, CSE Lecturer, Stefan Dierauf and Cortney Corbin, UW Undergraduates. http://code.org/learn

- **FROM BITS TO BOTS: GOOGLE EXPLAINS COMPUTERS – 2ND FLOOR LANDING**
  Swing by our station and engage in discussions and activities that will give you a sense of how computers work from the microscopic scale to the "Google scale"! Presenters: Victoria Kirst, Gary Kacmarcik, Rita Sodt, Daniel Otero, Jeff Prouty, Software Engineers.

- **PLAY WORK STUDIOS – CSE 203**
  Learn to code with board games, pet robots and mobile apps! Great for elementary and middle school kids. Presenters: Adriana Moscatelli, CEO; Dan Tebbs, CTO; Renee Roub, Marketing at Play Works Studio. www.playworksstudio.com

- **PUZZLES – 3RD FLOOR LANDING**
  Computer science requires creativity, attention to detail and logical thinking. Come try out puzzles that will help you explore these important skills. Presenters: Molly Yoder and Autumn Johnson, UW Undergraduates.

- **MATHEMATICAL CARD TRICKS – CSE 303**
  Card tricks are a great way to explore the math that is used in computer science. Come and learn how to do tricks that are based on mathematical principles. We will be showing an algebraic card trick at any time, but if you want to learn a more complicated trick, please arrive at 1:30, 2:00, or 2:30 and plan to spend 30 minutes learning the trick. Presenter: Stuart Reges, CSE Principal Lecturer. http://homes.cs.uw.edu/~reges/

- **AMAZON NINJA CODER – 4TH FLOOR LANDING**
  Try solving coding questions and puzzles to earn Ninja-themed prizes! Amazon team: Jazz Bailey, Shirpaa Manoharan, Cari Copeland, Elizabeth Royalty, Remo Cocco, Eli Lindsey, Christopher Pitstick, and Mohammed Alabsi, Software Development Engineers and Lydia Fitzpatrick, Technical Program Manager.

- **MICROSOFT TOUCHDEVELOP - CREATE APPS ON THE GO! – CSE 403**
  Did you ever think about creating your own apps... on your phone or your tablet? With the TouchDevelop app, you can create mobile games and apps on the go. Swing by the station and write your first mobile game in minutes! Presenters: Michael Braun, Rainier Beach computer science teacher with students. http://touchdevelop.com/app

- **ROBOT BEHAVIOR SIMULATIONS – CSE 409**
  Wonder how humanoid robots think and move? Come check out simulated robots showing off some fancy moves! The brains we design for robots mostly do what we tell them, but not always... Presenters: Vikash Kumar, Tom Erez, Yuval Tassa, Svet, Kendall Lowrey – CSE Postdocs.
  http://homes.cs.washington.edu/~todorov/

CSE Atrium Stations

1. **MOBILE ACCESSIBILITY**
   Students will learn about accessible smartphone apps. Do you think you can use one completely eyes-free? Come try it out! Presenters: Lauren Milne, Catie Baker, Danielle Bragg, CSE Graduate Students; Pai Ruamviboonsuk and Ryan Drapeau, CSE Undergraduates. http://mobileaccessibility.cs.washington.edu/

2. **USING SMARTPHONES TO SOLVE PROBLEMS IN DEVELOPING COUNTRIES**
   At this station you will learn about how technology can improve the lives of underserved populations in developing countries. We are tackling some of the world's biggest problems - like diagnosing diseases and providing people with access to information and education. Visit us to check out fun demos and games! Presenter: Saloni Parikh, CSE Undergraduate Student. http://change.washington.edu

3. **CENTER FOR GAME SCIENCE**
   The Center for Game Science creates video games for early math learning and scientific discovery. Check out our latest games, chat with our team, and find out about our current research and projects! Presenters: Rowan Copley, Developer and Rahul Banerjee, CSE Graduate Student. http://centerforgamescience.org

4. **UPROXY - SHARE YOUR PATHWAY TO THE INTERNET**
   As great as the Internet is, it is sad fact that the Internet is less safe in certain parts of the world than others. Unsecured WiFi in public spaces invite people to snoop on your web traffic. People living in certain countries block websites like YouTube and Facebook. uProxy is a tool that lets you share your Internet pathway with your friends. Come try it out! Presenter: Raymond Cheng, CSE Graduate Student. https://uproxy.org

5. **PHYSICAL COMPUTING**
   Computers are everywhere, and are increasingly common in everyday life. Physical computing is the interaction between the physical world and the electronic world. Paul A, Software Engineer and Laura C, CSE Lecturer. http://egg-bot.com/ http://www.arduino.cc/ http://www.adafruit.com/ http://bespokebytes.com/

6. **STUDENTRND**
   Learn about participating in CodeDay Seattle presented by StudentRND! We will show off amazing apps, games, and websites that high school and college students made in just 24 hours. We will also have a quick demo of software that students unfamiliar with programming can use to make an awesome game in less than 24 hours at CodeDay. Presenters: . http://seattle.codeday.org, http://studentrnd.org

7. Gidget - A debugging game to teach novices programming concepts

At this station, you will play a computer-based puzzle game to help a broken robot named Gidget save animals and clean up a chemical spill. Along the way, you will learn essential skills in problem solving, debugging, and the scientific method. No experience necessary, so come by and have fun! Michael J. Lee, Information School Graduate Student. http://usegroup.ischool.uw.edu

8. Youth Apps Challenge and Apps for Good

The statewide Youth Apps Challenge is coming in June 2014! Learn more and find out how the Apps for Good curriculum can help you participate. Garfield students will demo their prototypes. Karen Manuel, Technology Alliance STEM Outreach Director; Earl Bergquist, Garfield CS Teacher, with students.

9. Human-Centered Design & Engineering

Ever wonder why Google's website is primarily white or how an airplane cockpit is designed for optimal use? Then come visit the HCDE booth and talk to our students! Learn more about our field that designs and engineers technology to be fun and easy to use. We will be featuring research projects, an interactive keyboard activity, and Max5, a bioinformatics game developed by HCDE students. Presenters: Stephanie White, Academic Advisor; Andrew Davidson, Faculty Advisor; HCDE students. http://hcde.uw.edu

10. Exploring Big Data through Twitter

We will show students how we can use analytics tools to explore big data by looking at live Tweets. Students can visualize live tweets as they are sent out across the globe or try to figure out from Twitter what makes Seattle and Boston different. Bring a friend to compete with: who can guess the most popular trending topic? Camille Cobb, CSE Graduate Student; Daniel Halperin, Postdoc, eScience Institute; Bill Howe, Director of Research, Scalable Data Analytics, eScience Institute.

11. Chat with a CSE undergraduate advisor

Stop by to ask your questions and learn more about the UW and majoring in CSE. What can you do now to prepare? What are the admissions requirements? What opportunities are available to UW students and CSE majors, specifically? Come with your questions and CSE Undergraduate Advisors will have the answers! http://www.cs.washington.edu/prospective_students/undergrad/

12. OneBusAway

OneBusAway started as a student project at UW and now provides real-time bus arrival information to over 100,000 riders per week in Puget Sound! See how OneBusAway can power public displays and works for blind riders. Contribute your ideas on what features would be especially useful for middle and high school students. Presenters: Caitlin Bonnar and Meg Campbell, CSE Graduate Students. http://onebusaway.org

13. The Power of Language: Computational Linguistics

This station will explore how language can be analyzed using computational methods. In particular, we will demonstrate the power of n-grams for unlocking all sorts of secrets in human language! Caitlin Harding, CSE Undergraduate and Luke Zettlemoyer, CSE Professor

14. Battery-free Computing

The Wireless Identification and Sensing Platform (WISP), is a sensor and computer that is both powered and read wirelessly. WISPs do not require batteries since they harvest their power from radio signals. The WISP is an open source, programmable sensor tag that has many interesting and fun uses! Presenters: Yi Zhao, Xingyi Shi, Aaron Parks, EE graduate students. http://sensor.cs.washington.edu/.

15. Brain-Computer Interfaces

In the future we'll be able to interact with our world using only our brains. Come get a taste of the future and play a computer game--with your brain! Presenters: Melissa Smith Graduate Students. http://neural.cs.washington.edu/

16. Inspiring Future Engineers & Improving Husky Quarterback Performance with Google Glass

Our team is attempting to improve the performance of Husky quarterbacks using glass as a video broadcasting and recording medium. We will demonstrate methods of communication between Glass and a tablet application. Jessica Tran, EE Graduate Student; Patrick Dugan, Human Computer Interaction Masters Student; Metta Yapurta, CSE Undergraduate; Eve Riskin, Professor of Electrical Engineering

17. Computing for Individuals with Disabilities

AccessComputing works to increase the participation of people with disabilities in computing careers. We'll bring examples of assistive technology that individuals with disabilities might use to access computers as well as information about our program and related resources. Brianna Blaser, Program Coordinator. http://uw.edu/accesscomputing

18. Living Computer Museum

19. Animation

The animation capstone explores the various parts of the animation production pipeline, involving exercises that teach the basics of modeling, shading, texturing, lighting, rigging, and animation using commercially-available 3D packages. These interdisciplinary exercises culminate in a final project in which students divide into teams and focus on developing aspects of the film to be produced. Alex Constant and Polina Kud, Undergraduates. http://www.cs.washington.edu/research/ap/index.html

20. UbiComp Lab

The UbiComp Lab focuses on many areas of ubiquitous computing including novel user interface technology, energy sensing, low-power sensing, health monitoring, and activity recognition. Our station will include cool hands-on activities for you to try! Ruth Ravichandran, Edward Wang, Tien-Jui Lee, EE Graduate Students; Alex Mariakakis, CSE Graduate Student. http://ubicomplab.cs.washington.edu/

21. A Bit of a Byte of Computer Science

While smart phones and laptops are getting smaller and more compact, come see why computer scientists often work on very large scales. We will explore some cool trivia about data, file sizes, storage, and more! Be sure to stop by and answer our riddle for a chance to win an ACM T-shirt! Presenters: Zorah Fung, Katlyn Edwards, Olga Zamaraeva, Mallika Mathur, Kim Sangwin, ACM-W Officers. http://www.cs.uw.edu/acmw/

22. MaKey MaKey

23. Solo Cups and Sorting Algorithms

All kinds of applications rely on sorted data - think you have what it takes to design an efficient sorting algorithm? Try your hand at it with a fun and simple game using plastic cups, and learn something new about algorithmic complexity while you're at it. Cool prizes await the teams that can come up with the most efficient method! David Bjelland, Sonja Khan, Tom Overton, and Hillary Prather, CSE Undergraduates.