

COMPUTER SCIENCE COLLOQUIUM

THURSDAYS 12:00 NOON SALAZAR 2016

SEP.06	<u>Gerald Friedland, International Computer Science Institute</u> CYBERCASING THE JOINT: ON THE PRIVACY IMPLICATIONS OF INTERNET POSTS This talk aims to raise awareness for a rapidly emerging privacy threat that we termed "cybercasing": leveraging information available online to mount real-world attacks. Based on the initial example of geo-tagging, I will show that while users typically realize that sharing information, e.g., on social networks, has some implications for their privacy, many users 1) are unaware of the full scope of the threat they face when doing so, and 2) often do not even realize when they publish such information. The threat is elevated by recent developments that make systematic search for information (either posted by humans or by sensors) and inference from multiple sources easier than ever before. This talk presents a set of scenarios demonstrating how easy it is to correlate data, especially those based on location information, with corresponding publicly available information for compromising a victim's privacy.
SEP.13	<u>Toby Tyler, PG&E</u> THE SMART GRID: TOO SMART FOR THE REST OF US? The electric grid in the United States has been suffering from chronic under-investment and is unlikely to support future demands without deployment of new technologies. Smart Grid technologies promise to improve the reliability and efficiency of the grid in a less expensive and more sustainable way than traditional energy infrastructure investment. Energy utilities are deploying Smart Energy Home Area Networks that enable two-way communication between the utility and the home. But the response from consumers so far has been mixed. This presentation will examine the opportunities for more efficient operation of the energy grid and the barriers to doing so from both a technology and a consumer perspective.
SEP.20	<u>Ban Bangert, Groovie</u> GETTING HIRED WITH OPEN-SOURCE PROGRAMMING Despite the overall job economy not being that great, it's remarkably easy to get hired for software development if you know the places to go and things to know. Learn how open-source projects add valuable experience to your resume and how the new resume is increasingly becoming a list of open-source projects hosted on distributed version control (DVCS) sites like Github and Bitbucket. This talk covers background material such as: What is a distributed version control system? What is open-source? How do I get involved in an open-source project? Where do I meet people in the open-source community? How does open-source help me get a job? Mentoring and apprenticeship via open-source programming.
SEP.27	<u>Jacob Mattingley, Ubalo</u> COMBINING WEB TECHNOLOGIES WITH NUMERICAL COMPUTING While working on my PhD I decided to offer my optimization research software, CVXGEN, as a web service. Rather than require users to download and maintain a complicated software stack just to try CVXGEN, I opted to provide it as an application available in the web browser. This means a lot more people use my software, and it's much easier for me to maintain it and support the community. In this talk I'll discuss how to combine very different aspects of software development, and talk about the benefits of using modern technologies alongside serious research. I'll give demos and talk about some of the pitfalls along the way.
OCT.04	<u>Vladimir Baculyn, Light Communications</u> CONTACT CENTERS (CC) OF THE 21-ST CENTURY An industry overview. Computer Software evolution in CCs over the past 20 years. Optimization of a real-time 'Person-Computer' model in CC operations. Cloud Computing and Social Networks in modern day CCs.
OCT.11	<u>Aye Moah and Alex Moore, Baydin</u> STARTING UP: FROM "HEY, WANT TO BUILD THIS?" TO "PROFIT!!" Moah and Alex are two of the founders of Baydin, an email productivity company. We'll talk you through the first steps that we'd take if we had the beginnings of an idea and wanted to build a startup from it, knowing what we know now. We'll share some war stories from our experiences taking Baydin from the seed of an idea to a profitable startup company, and we'll talk about the technology decisions that we've made along the way.
OCT.18	<u>Jason Shankel, The Stupid Fun Club</u> THE QUANTIFIED SELF PIZZA AFTER TALK IN DARWIN 28 The combination of mobile computing and social networking has created a new platform for consumer software development. In this talk, I will outline the elements of the Quantified Self movement and describe why the emerging geo/local/social application industry is poised to be the next big growth area for computing.
OCT.25	<u>Allan B. Cruse, University of San Francisco</u> WHAT EVERY CS STUDENT SHOULD KNOW ABOUT ROMANIA College students in the U.S. have not been kept informed of the extent to which our familiar high-tech firms, like Microsoft and Adobe, have established vigorous corporate footholds in former communist nations of Eastern Europe, such as Romania, in order to take advantage of the youth, energy, creativity, and ambition, now unleashed in that previously suppressed part of the world. But utilizing the internet, we can make a "virtual visit" to meet people, and glimpse current projects, from the other side of our globe.
NOV.01	<u>Philip Guo, Stanford University</u> ONLINE PYTHON TUTOR: WEB-BASED PROGRAM VISUALIZATION FOR CS EDUCATION The Online Python Tutor (www.onlinepythontutor.com) is a web application where the user can type Python scripts directly into the web browser, execute those scripts, and single-step forwards and backwards through execution in order to view the state of run-time data. Using this application, teachers and students can write small Python code snippets together and see what happens to the data structures when the code gets executed. These visualizations have been embedded within digital textbooks, used by professors as part of university computer science courses and educational research, and used by students to improve their mental models of programming. In this talk, I will cover the design philosophy of the Online Python Tutor, some implementation details that might be more broadly useful, and directions for future work.
NOV.08	<u>Andru Luvisi, Sonoma State University IT</u> SOME COMPUTER PREHISTORY AND EARLY HISTORY This talk will superficially breeze through a few thousand years of computing and calculating history, discuss some ideas and technologies that played key roles in early computing, and describe some features of a few early computing devices. Special emphasis will be given to the ENIAC and some issues related to base ten arithmetic.
NOV.15	<u>Jason Berg, Wolfram Research</u> MATHEMATICA IN RESEARCH AND EDUCATION This talk will show aspects of Mathematica that are useful for students to visualize concepts in computer science/engineering/math/business courses and projects. Researchers will see the basics of the programming language in Mathematica and useful ways to analyze data, create parallel programs (CPU or GPU hardware), and create models or simulations. Faculty teaching courses will also learn how to author slideshows with nicely formatted text/formulas along with live calculations in the same environment. Specific focus will be given to the new free-form input capabilities in Mathematica (a real-time tutor for the Mathematica language), creating simulations or models that show varying parameters in any type of calculation, creating publication-quality graphics, symbolic and numeric calculations. Each attendee will receive an electronic copy of the examples to use as a guide for projects or course examples. No prior knowledge of Mathematica is required.
NOV.22	THANKSGIVING (No Lecture)
NOV.29	STUDENT PRESENTATIONS / SHORT PRESENTATIONS OF RESEARCH CARRIED OUT BY SONOMA STATE COMPUTER SCIENCE STUDENTS PIZZA DURING TALK IN SAL 2016
DEC.06	END OF SEMESTER CELEBRATION / AWARDS PRESENTED TO SONOMA STATE COMPUTER SCIENCE MAJORS PIZZA DURING TALK IN SAL 2016



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