

SAVE THE DATE!

2013 REU SEMINAR SERIES



The REU Seminar Series is an educational and developmental opportunity for REU participants. Attendance at the seminars is required for all REU interns. Speakers will discuss their research or work, provide educational and career advice, and share their knowledge with you. There will be a questions and answer period at the end of each talk. Light refreshments are provided at each seminar. If you believe you may need accommodations during the seminar series, please contact us at reu@ee.stanford.edu so that we may find a way to accommodate your needs.

We look forward to seeing you at the 2013 REU Seminar Series!

Tuesday, June 25, 2013

10:00 A.M. – 11:00 A.M.
CIS-X Auditorium

Chris Cole

Director, Transceiver
Engineering Group
Finisar Corporation

Fiber Optic Communication in Practice

Chris Cole, director of the Transceiver Engineering group at Finisar Corps, will overview fiber optic communications, which is used for carrying all internet backbone data traffic. He will place optical communication in historical context and discuss current optics approaches for 1Gb/s and 10Gb/s interfaces. He will then discuss future optics technologies for interface rates from 40Gb/s to 1.6Tb/s, including parallel channels, wavelength division multiplexing, and higher order modulation.

Tuesday, July 9, 2013

10:00 A.M. – 11:00 A.M.
CIS-X Auditorium

Bob Zeidman

President
Zeidman Consulting

Intellectual Property Protection – Why You Should Care

In this talk, entrepreneur, writer and Stanford alumnus Bob Zeidman, President of Zeidman Consulting, will discuss the importance of intellectual property protection, and his experience founding and managing a company. He will begin with an overview of intellectual property—specifically copyrights, patents and trade secrets. He will then discuss how IP laws protect your inventions, how to utilize them to your advantage, and include personal experiences on some of the largest cases of the last few decades. He will also talk about the challenges and rewards of starting your own company, and give advice on entrepreneurship.

Tuesday, July 16, 2013

10:00 A.M. – 11:00 A.M.
CIS-X Auditorium

Anika Green

Director, Educational
Programs at VPGE
Stanford University

The REU Program: You're Here, You've Settled In... Now What?

Undergraduate research programs (like the Stanford EE REU) are seen as one of the most effective ways to promote research early on in the college career, but how can one gain the most out of an REU program? Anika Green, the director of educational programs at the Stanford Office of the Vice Provost for Graduate Education, has worked with numerous REU programs in the past. She will provide guidance on how to use your REU experience into a stepping stone toward a future in research, how to interact with your faculty advisor and peers, what you should take away from the experience, and how to plan your next steps if you are interested in pursuing a graduate education. Bring your questions!

2013 REU SEMINAR SERIES



Scanning Children with MRI

Tuesday, July 23, 2013
10:00 A.M. – 11:00 A.M.
CIS-X Auditorium

Prof. John Pauly
Faculty, Magnetic
Resonance Systems
Research Lab
Stanford University

Anyone who has been around small children knows they won't hold still for long. In Magnetic Resonance Imaging (MRI), the patient must remain motionless for several periods of 5 to 10 minutes each. As a result, children are often studied with X-Ray CT, which comes with a dose of ionizing radiation, or the MRI is performed under anesthesia. Both of these have their risks. At Stanford, we have been collaborating with Pediatric Radiology to develop faster MRI methods that only require a few minutes for the entire study. This presentation will describe the compressed sensing method, one of several recent advances in MRI, which allows images to be reconstructed from a fraction of the data that would otherwise be required. This is currently being used clinically here at Stanford, and has resulted in a significant increase in the use of MRI, the reduction of the need for anesthesia, as well as a reduction in the diversion of these patients to CT.

Research Area:
Bio-EE

There will be an optional tour of the MRI facilities at Stanford from 11am-12pm after the talk, led by Professor Nishimura. Space is limited to the first 12 students who sign up. If interested, please RSVP to David Hsu at REUworkshopcoord@ee.stanford.edu.

Tuesday, August 6, 2013
10:00 A.M. – 11:00 A.M.
CIS-X Auditorium

Prof. Andreas Weigend
Director, Social Data Lab
Stanford University

Data is the New Oil: How Big Data Changes Big Decisions

The explosion of social data in recent years has dramatically altered the map of decision making. In this talk, Andreas Weigend, director of the Social Data Lab and previously the Chief Scientist at Amazon.com, will talk about the social data revolution that is taking place around us. The concept of social data, and its differences to transactional data, will be introduced. He will then discuss a broad range of topics relating to social data, including how it is collected, how it can be leveraged for analytics and decision-making, and provide examples of companies which have leveraged social data to great success.

Research Area:
Data/Information Systems

Tuesday, August 13, 2013
10:00 A.M. – 11:00 A.M.
Packard 202

Dr. Jared Starman
Senior Associate
Exponent Consulting

Taking a Ph.D into Consulting: My Experiences and Case Studies

With over 350 Ph.D consultants, Exponent Consulting has one of the largest groups of expert technical consultants anywhere on the planet. Dr. Jared Starman, a Stanford alumnus who obtained his Ph.D in advanced X-Ray imaging systems, will talk about how Exponent operates, the ins and outs of consulting, and how a Ph.D degree has contributed to his career. Past cases that he has worked on, including failure analysis, patent litigation support, and safety reviews, will be discussed. He will conclude with advice on how interested undergraduate and graduate students can start planning for a career in consulting.

Tuesday, August 20, 2013
10:00 A.M. – 11:00 A.M.
CIS-X Auditorium

Chris Pohalski
Assistant Director, Career
Development Center
Stanford University

The Academia vs. Industry Debate – How an Internship can Make a Difference

It's a question many University researchers ask: a career in academia or industry? It may be one of the biggest decisions in life, yet many make a decision without having explored the other side. In this talk, Chris Pohalski, the Assistant Director of the Career Development Center at Stanford, will talk about the role of an internship in clarifying your future career options, what resources are available at Stanford to help you decide on a career path, and next steps to take if you are interested in an internship.