

Special thanks to the following faculty and staff:

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7th ANNUAL CSL STUDENT CONFERENCE

Jan. 26 – Jan. 27, 2012

CONFERENCE PROGRAM

Sponsored by:

College of Engineering

Coordinated Science Laboratory

Department of Computer Science

Department of Electrical and Computer Engineering Trust Fund

Department of Mechanical Science and Engineering

IEEE Controls Systems Society

Thursday, Jan 26th

8:30 – 8:55	Breakfast and Registration
8:55 – 9:00	Welcome

Session 1: Communications and Information Theory, B02 CSL

9:00 – 10:00	Keynote: Coding Coin Flips into a Gaussian Process	Prof. Robert Gray <i>Stanford University</i>
10:00 – 10:10	<i>Break</i>	
10:10 – 10:30	Multimedia Fingerprinting for Content Identification: Model Based Decoding Metrics	Rohit Naini
10:30 – 10:50	MIMO Communications Over Multi-Mode Fibers	Peter Kairouz
10:50 – 11:10	Finite Block-Length Achievable Rates for Queuing Timing Channels	Thomas Riedl
11:10 – 11:20	<i>Break</i>	
11:20 – 11:40	Constant Weight Codes for Correcting Single Deletion	Daniel Cullina
11:40 – 12:00	A Class of Codes Capable of Correcting Multiple Deletion and Insertion Errors	Farzaneh Khajouei

12:00 – 13:30	Lunch, 301 CSL
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Session 2: Control and Power Systems, B02 CSL

13:30 – 14:30	Keynote: Optimal Demand Response and Power Flow	Prof. Steven Low <i>California Institute of Technology</i>
14:30 – 14:40	<i>Break</i>	
14:40 – 15:00	Efficiency and Pricing in Dynamic Markets with Friction	Ehsan Shafiee
15:00 – 15:20	One-Stage Control Over an Adversarial Channel with Finite Codelength	Abhishek Gupta
15:20 – 15:40	Distributed Averaging and Consensus Dynamics in Random Environment	Behrouz Touri
15:40 – 15:50	<i>Break</i>	
15:50 – 16:10	Symmetric Formulation of the Kalman-Yakubovich-Popov Lemma and Exact Losslessness Condition	Takashi Tanaka
16:10 – 16:30	Graph Model Reduction	Yunwen Xu
16:30 – 16:50	Controlled Sensing for Hypothesis Testing	Sirin Nitinawarat

16:50 – 18:30	Reception, 301 CSL
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Note: No food or drinks are allowed inside B02

Friday, Jan 27th

8:30 – 9:00	Breakfast
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Session 3: Networks, B02 CSL

9:00 – 10:00	Keynote: Cooperative Swarms	Prof. John Baras <i>Univ. of Maryland, College Park</i>
10:00 – 10:10	<i>Break</i>	
10:10 – 10:30	Efficient Random Access in Wireless Networks	Javad Ghaderi
10:30 – 10:50	Distance Oracles and Compact Routing: Old Stories, New characters	Rachit Agarwal
10:50 – 11:10	Local Phy + Global Routing: A Fundamental Layering Principle for Wireless Networks	Sreeram Kannan
11:10 – 11:20	<i>Break</i>	
11:20 – 11:40	Iterative Approximate Byzantine Consensus in Arbitrary Directed Graphs	Lewis Tseng
11:40 – 12:00	Partitioning Social Networks for Fast Retrieval of Time-dependent Queries	David Stein

12:00 – 13:00	Lunch, 301 CSL
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Session 4: Systems and Hardware Design, B02 CSL

13:00 – 14:00	Keynote: Low Power Design in Deep Sub-Micron System-On-Chip Electronic Devices	Dr. Karim Arabi <i>Qualcomm</i>
14:00 – 14:05	<i>Break</i>	
14:05 – 14:25	Mitigating and Correcting Phase Noise and Sampling Errors in Optical Coherence Tomography	Nathan Shemonski
14:25 – 14:45	Controlling Wild Mobile Robots Using Virtual Gates and Discrete Transitions	Leonardo Bobadilla
14:45 – 15:05	Stability of Digitally Interconnected Linear Systems	Taylor Johnson
15:05 – 15:10	<i>Break</i>	
15:10 – 15:30	Towards Coverage Closure: Using GoldMine Assertions for Generating Design Validation Stimulus	Lingyi Liu
15:30 – 15:50	Steering a Multi-Robot System With a Shared Control Signal	Aaron Becker

15:50 – 17:00	Panel Discussion, B02 CSL
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