

CPS Principal Investigator Meeting 2011

Gaylord National Hotel & Convention Center
National Harbor, Maryland, August 1-2, 2011

Program Schedule

Sunday, July 31, 2011

Time	Topic
6:00 AM – 9:00 AM	Registration

Monday, August 1, 2011

Time	Topic
7:00 AM – 5:00 PM	Registration
7:00 AM – 8:00 AM	Continental Breakfast
8:00 AM – 8:10 AM	<i>NSF Charge</i> , Helen Gill (CISE/CNS), Kishan Baheti (ENG/ECCS)
8:10 AM – 8:45 AM	<i>Opening Remarks/Presentation:</i> Dr. Farnam Jahanian (NSF/CISE AD), Dr. Thomas Peterson (NSF/ENG AD), Dr. Keith Marzullo (NSF/CISE/CNS DD), Dr. Robert Trew (NSF/ECCS/ENG DD)
8:45 AM – 9:30 AM	<i>Plenary Keynote:</i> Foundations of Cyber Physical Systems, Edward Lee (UC Berkeley)
9:30 AM – 9:45 AM	Break
9:45 AM – 11:00 AM	Session 1: CPS Foundations
9:45 - 10:00	Nancy Lynch (MIT): Mathematical Foundations for CPS
10:00 - 10:15	George Pappas (U Penn): Quantitative Analysis of Control Networks
10:15 - 10:30	Janos Sztipanovits (Vanderbilt): Science of Integration for CPS
10:30 - 11:00	Q&A and Panel Discussion Panelists: Edward Lee, Nancy Lynch, George Pappas, Janos Sztipanovits
11:00 AM – 11:30 AM	<i>Plenary Presenter:</i> Paul Eremenko (DARPA) - DARPA's Adaptive Vehicle Make Effort
11:30 AM – 12:00 PM	Lunch Pickup
12:00 PM – 1:15 PM	Conversation with Government and Industry: CPS S&T and Health and Medical CPS Government/Industry Panel Discussion
1:15 PM – 2:00 PM	Plenary Keynote: Biomedical Cyber Physical Systems You Can Bet Your Life ON Patrick Lincoln (SRI)
2:00 PM – 3:15 PM	Session 2: Health and Medical CPS
2:00 - 2:15	Jack Stankovic (U VA) and David Wentzloff (U Michigan): Body Area Nets
2:15 - 2:30	Blake Hannaford (U WA): Surgical Robotics
2:30 - 2:45	Insup Lee (U Penn): Assuring the Safety, Security, and Reliability of Medical Device CPS
2:45 - 3:15	Q&A and Panel Discussion Panelists: Blake Hannaford, Insup Lee, Patrick Lincoln, Jack Stankovic, David Wentzloff
3:15 PM – 5:30 PM	Poster Session ¹
5:30 PM – 7:30 PM	Dinner (On your own)
7:30 PM – 9:00 PM	Birds of a Feather Group Meetings
	1. Special Interest Group: CPS Foundations and Architectures I Discussion Lead: Bruce Krogh (CMU)
	2. Special Interest Group: Medical Devices Discussion Lead: Oleg Sokolsky (U Penn)
	3. Special Interest Group: CPS Education Discussion Lead: Richard Voyles (NSF)
	4. Special Interest Group: International Collaboration Discussion Lead: Chris van Buskirk (Vanderbilt)

¹ Posters will be available for viewing all day, but staffed at the designated times on the program schedule

Tuesday, August 2, 2011

Time	Topic
7:00 AM – 2:00 PM	Registration
7:00 AM – 7:45 AM	Continental Breakfast
7:45 AM – 8:00 AM	Opening Remarks
8:00 AM – 9:30 AM 8:00-8:45 8:45-9:30	Session 3: International Plenary Keynote: Complex Systems and CPS Research, Manfred Broy (Technical University, Munich) Joint Plenary: CPS-Related Research in Japan Teruo Higashino (Osaka U), Yuzuru Tanaka (Hokkaido U), Rin-ichiro Taniguchi (Kyushu U)
9:30 AM – 9:30 AM	Break
9:30 AM – 11:00 AM 9:45 - 10:00 10:00 - 10:15 10:15 - 10:30 10:30 - 11:00	Session 4: Transportation CPS Raj Rajkumar (CMU): Center for Autonomous Transportation System Umit Ozguner (OSU): Automotive CPS Hamsa Balakrishnan (MIT): NextGen Airspace Research Challenges Q&A and Panel Discussion Panelists: Claire Tomlin (UC Berkeley, moderator), Hamsa Balakrishnan, Manfred Broy, Umit Ozguner, Raj Rajkumar
11:00 AM – 12:00 PM	Special Joint Plenary Keynote: Challenges for NextGen Airspace Don Winter (VP Boeing), Bruce Holmes (NextGen AeroSciences) Moderators: Claire Tomlin (UC Berkeley), David Corman (Boeing)
12:00 PM – 12:30 PM	Lunch Pickup
12:30 PM – 1:30 PM	Conversation with Government and Industry: Transportation, Energy, and Manufacturing Government/Industry Panel Discussion
1:30 PM – 2:00 PM	<i>Plenary Presenter:</i> David Culler (UC Berkeley): CPS Tools for Sustainability
2:00 PM – 2:15 PM	Break
2:15 PM – 3:00 PM	Plenary Presenter: Energy and Sustainability for the Future Amory Lovins (Rocky Mountain Institute)
3:00 PM – 4:15 PM 3:00-3:15 3:15-3:30 3:30-3:45 3:45-4:15	Session 5: Energy Vijay Vittal (ASU): Architecture for Mega-Scale Smart Grids Marija Ilic (CMU): Complex Electric Power Networks Prabir Barooah (U Florida): High-Performance Buildings Q&A and Panel Discussion Panelists: Prabir Barooah, David Culler, Marija Ilic, Junshan Zhang (ASU)
4:15 PM – 4:30 PM	Break
4:30 PM – 6:30 PM	Poster Session
5:30 PM – 7:30 PM	Birds of a Feather Group Meetings 1. Special Interest Group: Transportation Discussion Lead: Raj Rajkumar 2. Special Interest Group: Energy Discussion Lead: Marija Ilic 3. Special Interest Group: CPS Foundations and Architectures II