

ARO Workshop on Cyber-Physical Systems Security

August 26-27, 2009

Sponsored by Dr. Cliff Wang, ARO Information Assurance Program Director

Workshop Location: Aug. 26th in Room AE108, [Paul Allen Center Building](#),
Aug. 27th in Room EEB 403, [Electrical Engineering Building](#)

Contact Radha Poovendran (206-605-8540) or Krishna Sampigethaya (206-890-8516) for workshop related questions

PROGRAM AND SCHEDULE OF EVENTS

Wednesday – August 26, 2009

Venue: Room AE108, Paul Allen Center building, University of Washington, Seattle, WA

- 8:30–8:40am** Opening remarks about ARO and the workshop
Cliff Wang, ARO, Program Director, Information Assurance
- 8:40–8:50am** Workshop agenda setting
Radha Poovendran, University of Washington
- 8:50–9:20am** “A summary of 2008 ARO/UCI workshop on security and privacy in cyber-physical systems”
Gene Tsudik, University of California at Irvine
- 9:20–9:40am** “What is CPS security and what are the research issues?”
Kang Shin, University of Michigan
- 9:40–10:00am** “Securing cyber-physical systems: a case study”
Bruno Sinopoli, Carnegie Mellon University
- 10:00–10:10 am Break**
- 10:10–10:30am** “Safety and security of aerospace systems”
Natasha Neogi, University of Illinois
- 10:30–10:50am** “CPS for CP(H)S: Cyber-physical security solutions for cyber-physical (human) systems”
Sandeep Gupta, Arizona State University
- 10:50–11:10am** “A systems-theoretic approach for securing cyber-physical systems”
Alvaro Cardenas, University of California, Berkeley
- 11:10am–12:10pm** Commercial aviation CPS panel
11:10–11:30am – “Net-enabled global commercial aviation,” **Sudhakar Shetty**, Boeing
11:30–11:50am – “Keeping the user in mind in aviation CPS,” **Chuck Royalty**, Boeing
11:50am–12:10pm – All-hands discussion
- 12:10–12:30 pm** “Control of decentralized stochastic systems”
Eric Klavins, University of Washington
- 12:30–12:35 pm** **Photo Break**

12:35–1:30 pm Working Lunch (box lunches available)

1:30–1:50pm	“Quantitative trust management” Oleg Sokolsky , University of Pennsylvania
1:50–2:10pm	“Cross-layer mechanisms for cyber-physical system security” Narayan Mandayam , Rutgers University
2:10–2:30pm	“Enabling secure coordination of cyber-physical systems” Loukas Lazos , University of Arizona
2:30-2:45 pm Break	
2:45–4:30 pm	All-hands discussion: “CPS fundamental requirements, problems & applications for DoD”
5:30–7:30pm	Dinner at Ivar’s at Lake Union (optional)

Thursday – August 27, 2009

Venue: EEB 403, Electrical Engineering building, University of Washington, Seattle, WA

8:30–8:50am	“Secure CPS operation and network QoS” Geir Dullerud , University of Illinois, Urbana Champaign
8:50–9:10am	“Field demonstration of a ground UAV wireless ad-hoc network” Claudiu Danilov , Boeing
9:10–9:30am	“CORE: A real-time network emulator” Jeff Ahrenholz , Boeing
9:30-9:40am Break	
9:40–10:40am	All-hands discussion: “CPS security and performance research for Army applications”
10:40am–12:00pm	Summary and recommendations of the workshop
12:00 pm	Adjourn

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 University of Washington,
 Seattle, WA 98195-2500