CSIIRW 2011 Program

Final   1/30/12

Wednesday

TIME	12-Oct-11	12-Oct-11	12-Oct-11
	Transportation Provided from Comfort Inn to ORNL (Departing at 7:00am) Badges will be available at the hotel until bus leaves and upon arrival at the conference center. **Working Breakfast (7:30-8:00) Topic: Key Questions for the Day on Security Assurance and Risk Assessment**		
8:00-8:05	Introductory Remarks: **Thom Mason, ORNL Director (Introduced by Joe Trien, CSIIR Group Leader)**		
8:05-8:50	Plenary Keynote Speaker: **Patricia Hoffman, DOE**		
8:50-9:30	Plenary Speaker: **Carol Hawk, DOE**		
9:30-9:45	Break		
	ROOM A	**ROOM B**	**ROOM C**
	Security Assurance for EDS	**Wide Area Monitoring/Protection**	**Security Risk Assessment**
	Chair: **Axel Krings**	Chair: **Edward Talbot**	Chair: **Michael Grimaila**
9:45-10:15	Shan Liu, Xianyong Feng, Deepa Kundur, Takis Zourntos and Karen Butler-Purry. A Class of Cyber-Physical Switching Attacks for Power System Disruption	Marco Carvalho and Carlos Perez. An Evolutionary Multi-Agent Approach to Anomaly Detection and Cyber Defens	Jackson R. Mayo and Robert C. Armstrong. Tradeoffs in Targeted Fuzzing of Cyber Systems by Defenders and Attackers
10:15-10:45	Daniel Bilar, James Solderitsch and Elvis Hovor. Monitoring Smart Grid Operations and Maintaining Mission Assurance through Adaptive Computer Network Defenses	Ning Lu, Pengwei Du, Patrick Paulson, Frank Greitzer, Xinxin Guo and Mark Hadley. A Predictive Defense System for the Smart Grid	Zhi Chen, Meikang Qiu and Lei Zhang. ILP Security Optimization Method for Embedded Systems with Timing Constraints
10:45-11:15	Douglas A. Creager and John Mchugh. Verified workflow-based software development for intrastructure sensing and control applications	William Pottenger and Becker Polverini. Using Clustering to Detect Chinese Censorware	Dipankar Dasgupta, Robert Abercrombie, Bob Schlicher, Frederick Sheldon and Marco Carvalho. Bio-Inspired Signaling in Cyber Defense
11:15-1:00	Working Lunch (Provided) Plenary Keynote Speaker: **Robert Osborn, DOE/NNSA**		
1:00-1:45	Plenary Speaker: **Doug Maughan, DHS**		
1:45-2:00	Break		
	ROOM A	**ROOM B**	**ROOM C**
	Security Assurance for EDS	**Malware**	**Security Risk Assessment**
	Chair: **Manimaran Govindarasu**	Chair: **Axel Krings**	Chair: **Ambareen Siraj**
2:00-2:30	Arun Velagapalli and Mahalingam Ramkumar. Minimizing the TCB for Securing SCADA Systems	Rich Nolan and Peter Chen. Supporting Velocity of Investigation with Behavior Analysis of Malware	Michael Duren, Anthony Frazier, Tracy Ricci, Sam Kerr, Elisa Bertino, Michael Kirkpatrick, Frederick Sheldon and Robert Abercrombie. Designing and Operating Through Compromise
2:30-3:00	Aditya Ashok, Adam Hahn and Manimaran Govindarasu. A Cyber-Physical Security testbed for Smart Grid: System Architecture and Studies	Jason Carter. An Architecture for Concordia	Jason Jaskolka, Ridha Khedri and Khair Eddin Sabri. A Formal Test for Detecting Information Leakage via Covert Channels
3:00-3:30	Jonathan Kirsch, Stuart Goose and Yair Amir. Toward Survivable SCADA	Rick Linger, Mark Pleszkoch, Stacy Prowell and Kirk Sayre. Behavior Computation for Smart Grid Software Analysis	Zhanshan Sam Ma, Jiajin Zhang, Hongju Daisy Chen, Douglas Yu and Axel Krings Can You Afford to Ignore Cheap-talk Cyber Threats?
3:30-3:45	Break (No Food Until Reception)		
3:45-4:30	Plenary Keynote Speaker: **Joe Jarzombek, DHS**		
4:30-5:30	Reception and Poster Session **Cash Bar (5:00-6:30)**		
5:30-6:30	Plenary Speakers: **Jennifer Silk, White House and Matthew E. Luallen, SANS** **Transportation Provided to Comfort Inn from ORNL** **(Departing 6:45)**		

Note: All presentations and posters will be published by ACM avalable at http://www.acm.org/publications/icp_series

CSIIRW 2011 Program

Final   10/28/11

Thursday

TIME	13-Oct-11	13-Oct-11	13-Oct-11
	Transportation Provided from Comfort Inn to ORNL (Departing at 7:00am) Badges will be available upon arrival at the conference center. **Working Breakfast (7:30-8:00) Topic: Key Questions for the Day on Wide Area Monitoring, Protection and Control**		
8:00-8:05	Introductory Remarks: **Brent Park, ALD GSD**		
8:05-8:50	Plenary Keynote Speaker: **Rear Admiral Michael A. Brown, DoD/DSH**		
8:50-9:30	Plenary Speaker: **S. Shankar Sastry, UC Berkeley**		
9:30-9:45	Break		
9:45-12:00	**Government Panel** Panel Moderator: **Carol Hawk, DOE** **Robert Erbacher (ARL), Deborah Frincke (NSA), Douglas Maughan (DHS), Ernest McDuffie (NIST), Victor Piotrowski (NSF), and Rand Waltzman (DARPA)** **Working Lunch (Provided) Topic: Key Questions for the Day on Cryptographic Key Management**		
12:00-12:30	**Supercomputing Center Tour**		
	Room A	**Room B**	**Room C**
	Cyber Physical Security	**Wide Area Monitoring/Protection**	**Security Risk Assessment**
	Chair: **Dipankar Dasgupta**	Chair: **Ray Vaughn**	Chair: **Li Yang**
12:30-1:00	Thoshitha Gamage, Ravi Akella, Thomas Roth and Bruce Mcmillin. Information Flow Security in Cyber-Physical Systems	Richard Brooks and Chen Lu. Botnet Traffic Detection Using Hidden Markov Models	Aaron Mishtal, Craig Shue and Stephen Kelley. A System for Intelligent Substitution of Named Entities with Applications to the Automatic Generation of Honey Tokens
1:00-1:30	Thomas Edgar, David Manz, Thomas Carroll, David Mckinnon, Bora Akyol, Paul Skare, Cody Tews and Jason Fuller. Towards an Experimental Testbed Facility for Cyber-Physical Security Research	Bhavani Thuraisingham. Identity Management for Cloud Computing: Developments and Directions	Erik Ferragut and Nicole Braden. System Log Summarization via Semi-Markov Models of Inter-arrival Times
1:30-2:00	Josef Allen, Sereyvathana Ty, Xiuwen Liu and Ivan Lozano. Preventing Cascading Event: A Distributed Cyber-Physical Approach	Bereket Mathewos, Marco Carvalho and Fredric Ham. Network Traffic Classification Using A Parallel Neural Network Classifier Architecture	Alan Michaels and Josef Allen. Physical-Layer Encryption for Enhanced Cyber-Physical Security
2:00-2:15	Break		
	Room A	**Room B**	**Room C**
	Security Assurance for EDS	**Cryptographic Key Management**	**Security Risk Assessment**
	Chair: **Mohammed Eltoweissy**	Chair: **Richard Brooks**	Chair: **Jinyuan (Stella) Sun**
2:15-2:45	Gyan Ranjan and Zhi-Li Zhang. How to Glue a Robust Smart-Grid?	Timothy Calver, Michael Grimaila and Jeffrey Humphries. An Empirical Analysis of the Cascade Error Reconciliation Protocol for Quantum Key Distribution	Janusz Zalewski, Steve Drager, William Mckeever and Andrew Kornecki. Can We Measure Security and How?
2:45-3:15	Clive Blackwell. Formally Modeling the Electricity Grid with Bigraphs	Robert Abercrombie, Frederick Sheldon, Hal Aldridge, Mike Duren, Tracy Ricci, Elisa Bertino, Athula Kulatunga and Uditha Navaratne. Secure Cryptographic Key Management System (CKMS) Considerations for Smart Grid Devices	Matthew Butler, Peter Hawrylak and John Hale. Graceful Privilege Reduction in RFID Security
3:15-3:45	Thomas Morris, Shengyi Pan, Jeremy Lewis, Jonathan Moorhead, Bradley Reaves, Nicholas Younan, Roger King, Mark Freund and Vahid Madani. Cybersecurity Risk Analysis of Substation Phasor Measurement Units and Phasor Data Concentrators	Kevin Benton, Juyeon Jo and Yoohwan Kim. SignatureCheck: A Protocol to Detect Man-In-The-Middle Attack in SSL	Curtis Taylor and Craug Shue. Implementing a "Moving Target" System to Protect Servers
3:45-4:00	Break		
4:00-5:30	**National Laboratory Panel** Panel Moderator: **Debra Frincke, NSA** **Edward Talbot (SNL), Mohamed Eltoweissy (PNL), Everett Wheelock (LLNL), Julio Rodreguez (INL) and Frederick Sheldon (ORNL)**		
5:30-6:30	Poster Session		
6:30-8:30	Buffet Banquet (Chicken, Beef, Vegetarian) Plenary Speaker: **Gregory Neal Akers, CISCO** **Transportation Provided to Comfort Inn from ORNL (Departing 8:45)**		

CSIIRW 2011 Program

Final   10/28/11

		Friday	
TIME	**14-Oct-11**	**14-Oct-11**	**14-Oct-11**
	Transportation Provided from Comfort Inn to ORNL (Departing at 7:00am) Badges will be available upon arrival at the conference center. **Working Breakfast (7:30-8:00) Topic: Key Questions for the Day on Use Cases and Attack Scenarios for Cyber Physical Systems**		
8:00-8:05	Introductory Remarks: **Brian Worley, CSED Director**		
8:05-8:50	Plenary keynote Speaker: **Major General George J. Allen, J5, US Cyber Command**		
8:50-9:30	Plenary Speaker: **John Bumgarner, U.S. Cyber Consequences Unit**		
9:30-9:45	Break		
	ROOM A	**ROOM B**	**ROOM C**
	Cyber Physical Security	**Wide Area Monitoring/Protection**	**Use Cases and Attack Scenarios**
	Chair: **Nate Paul**	Chair: **Rick Linger**	Chair: **Greg Peterson**
9:45-10:15	Mark R. Heckman, Roger R. Schell and Edwards E. Reed. Using a High Assurance TCB for Infrastructure Security	Axel Krings, Ahmed Abdel-Rahim, Victor Balogun, Saad Alshomrani and Mike Dixon. A Measurement-based Design and Evaluation Methodology for Embedded Control Systems	Wade Gasior and Li Yang. Network Covert Channels on the Android Platform
10:15-10:45	Mohamed Azab and Mohamed Eltoweissy. Towards A Cooperative Autonomous Resilient Defense Platform for Cyber-Physical Systems	Robert Erbacher, Anupama Biswas and Trent Cameron. A Novel Data Reduction Technique	George Louthan, Phoebe Hardwicke, Peter Hawrylak and John Hale. Toward Hybrid Attack Dependency Graphs
10:45-11:15	Lucille Mcminn, Jonathan Butts and David Robinson. Exploiting the Critical Infrastructure via Nontraditional System Inputs	Vimalathithan Subramanian, Remzi Seker, Jiang Bian and Nitin Kanaskar. Collaborations, Mergers, Acquisitions, and Security Policy Conflict Analysis	Rajeshwar Katipally, Li Yang and Anyi Liu. Attacker Behavior Analysis in Multi-stage Attack Detection System
11:15-1:00	Working Lunch (Provided) Plenary Keynote Speaker: **Ernest McDuffie, NIST**		
1:00-1:45	Plenary Speaker: **Victor Piotrowski, NSF**		
1:45-2:00	Break		
	ROOM A	**ROOM B**	**ROOM C**
	Security Assurance for EDS	**Smart Grid Advanced Concepts**	**Anti-Tamper Devices/Architecture**
	Chair: **Erik Ferragut**	Chair: **Yoohwan Kim**	Chair: **Robert Abercrombie**
2:00-2:30	Aniket Rodrigues, Tish Best and Ravi Pendse. SCADA Security Device: Design and Implementation	Miodrag Mihaljevic, Hideki Imai, Michael David, Kazukuni Kobara and Hajime Watanabe. On Advanced Cryptographic Techniques for Information Security of Smart Grid AMI	Jiayin Li, Daigu Zhang and Meikang Qiu. Security Protection on Smart Phones against Differential Power Analysis Attacks
2:30-3:00	William Sousan, Robin Gandhi, Qiuming Zhu and William Mahoney. Using Anomalous Event Patterns in Control Systems for Tamper Detection	Hai Su. Jamming-Resilient Multi-Radio Multi-Channel Multihop Wireless Network for Smart Grid	Jeffrey Mcdonald, Yong Kim and Daniel Koranek. Deterministic Circuit Variation for Anti-Tamper Applications
3:00-3:30	Thomas Morris, Rayford Vaughn and Yoginder S. Dandass. A Testbed for SCADA Control System Cybersecurity Research and Pedagogy	Claire Vishik, Anand Rajan, Chris Ramming, David Grawrock and Jesse Walker. Defining Trust Evidence: Research Directions	Jinpeng Wei, Calton Pu and Keke Chen. Flying Under the Radar: Maintaining Control of Kernel without Changing Kernel Code or Persistent Data Structures
3:30-3:45	Concluding Remarks: **Frederick Sheldon**		
3:45-4:30	**Supercomputing Center Tour** **Transportation Provided to Comfort Inn from ORNL** **(Departing 4:45)**		