Monday, September 18		**Jones**
	1:30 – 5:00	**Encompassing Resilience Throughout the Entire Enterprise** Chair: Alan Updike, DOE Kansas City National Security Campus (KSCNSC) managed by Honeywell FM&T **Moderator:** Dr. Starnes Walker, Founding Director, University of Delaware Cybersecurity Initiative **Panelists** ▪ Jason Christman, Honeywell, Cyber Security Chief, Product Security and Privacy, *Product Design for IoT* ▪ Paul Ferrillo, Weil Litigation, Chief Counsel, *Enterprise Governance and Legal Implications* ▪ John Abeles, System 1 Inc., President and CEO, Supply Chain Cyber Security, *Trusted Supply Chain and the Cyber Framework Policy* ▪ Stu McArthur, Sr. Director, Mission Assurance, DOE Kansas City National Security Campus (KSCNSC) managed by Honeywell FM&T, *Insider Threat* ▪ Gregory Conti, Director of Research, IronNet Cybersecurity, *Future Threats*
		Governors' Hall
	5:30 – 7:00	Registration and KCP-sponsored Reception

		Governors' Hall / Christina Ballroom		
Tuesday, September 19	7:00	Registration and Full Breakfast		
	7:30	**Resilience Week History and Welcome:** Zachary Tudor, Idaho National Laboratory		
	7:50	**Resilience Week Welcome and Plenary Introduction:** Starnes Walker, University of Delaware		
	8:00 – 9:00	**Symposium Opening Plenary:** Richard Mroz, Chairman of the Critical Infrastructure Committee for the National Association of Regulatory Utility Commissioners (NARUC)		
		Harlan & Hollingsworth	**Pusey & Jones**	**Lobdell**
		Social/Community Resilience Chair: Daniel Aldrich, Northeastern Univ.	**Resilience Models and Measures** Chairs: David Manz, PNNL; Michael Haney, UI	**Resilient Critical Infrastructure** Chairs: David Alderson, NPS; Cherrie Black, INL
	9:00 – 10:30	**Moderator:** Daniel Aldrich **Panelists** ▪ Daniel Aldrich, Director of the Security and Resilience Studies Program and Professor, Northeastern University ▪ Kimberly Gill, Research Scientist, Disaster Research Center at the University of Delaware ▪ Stephanie Haeffele-Balch, Senior Research Fellow, Deputy Director of Academic and Student Programs, Mercatus Center at George Mason University ▪ Duane Gill, Regents Professor of Sociology and Director of the Center for the Study of Disasters and Extreme Events, Oklahoma State University	**Panel:** *Cyber resilience for Buildings to Grid (B2G) infrastructure* **Moderators:** Sid Sridhar & Aditya Ashok, Pacific Northwest National Laboratory **Panelists** ▪ Ankit Tiwari, Associate Director, United Technologies Research Center ▪ Mark Rice, Senior Cyber Controls Engineer, Pacific Northwest National Laboratory	**Keynote Speaker:** Stephen Flynn, Ph.D., Director, Global Resilience Institute, Northeastern University, *Leveraging Disasters to Advance Critical Infrastructure Resilience*
	10:30	**Morning Break**		

Tuesday, September 19	11:00 – 12:00	**Keynote Speaker:** Daniel Aldrich, Northeastern University, *How Social Infrastructure Drives Resilience*	**Avoiding Skynet – Humans Interacting with Autonomy** Chairs: David Scheidt, Weather Gage Tech, Julie Marble, JHUAPL **Keynote Speaker:** Julie Marble, Senior Human Factors Scientist, Johns Hopkins University Applied Physics Laboratory	**Lightning Talks** *Community and Regional Resilience, Part II* Chair: John Hummel - Paul Lewis, *Climate Change Adaptation Cost Curves for Resilient Community Development* - Allison Reilly, *Transforming FEMA's Public Assistance Program: Implications to States and local recipients* - Gina Tonn, *Insurance and Incentives for Strengthening Critical Infrastructure Resilience* - Jennifer Schneider, *Pulling a String: creating laddered metrics for community resilience management* - Robert Jeffers, *Lessons learned through urban resilience analysis*
	12:00	**No-host Lunch**		
	1:30 – 3:00	**Resilience Models and Measures** Chairs: David Manz, Pacific Northwest National Laboratory; Michael Haney, University of Idaho **Invited Speaker:** Scott Mix, Senior Grid Cyber Security Project Manager, Pacific Northwest National Laboratory, *NERC CIP Standards: A 15-Year Retrospective* **Guided Audience Discussion:** *Are cyber measures a myth?*	**Panelists** - Bill Lawless, Paine University - Phil Bennett, Sandia National Laboratory - Andy Novicin, University of Delaware	**Lightning Talks** *Infrastructure Interdependencies and Assessments* Chair: Paul Lewis *(1:30 – 2:30)* - Yuanchi Liu, *Infrastructure Resilience: Exploring and Interpreting Measures for Roads and Bridges* - Hussam Mahmoud, *A New Finite Element Tool for Quantifying Community Resilience* - Andrey Lokhov, *Detection of cyber-physical faults and intrusions from physical correlations* - Kevin Stamber, *Identifying "Tipping Points" in the Function of Electricity-Dependent Infrastructures* **Lightning Talks** *Student Competition* Chair: Dave Alderson *(2:30 – 4:00)* - Charlie Bruer, *Developing a Balanced Fuel-mix in US Electric Power Generation: Securing a more resilient future* - Linan Huang, *Distributed and Optimal Resilient Control of Large-Scale Interdependent Critical Infrastructures* - Chloe Johansen, *Probabilistic vulnerability analysis of interdependent infrastructure systems with case study of Atlanta's water and power distribution systems* - Abdel Rahman Eldosouky, *On the Resilience of transportation Systems to Flooding in Coastal Cities: A Game-Theoretic Perspective* - Hisham Sherif, *Implementation of the Corbin-Strauss Model and Principles of Resilience Engineering in Improving Clinical Decision Making* - Daniel Eisenberg, *Robustness and Extensibility in the Near-Breaching of the Oroville Dam*
		Governors' Hall		
	3:00 – 6:00	ANL-sponsored Reception and Poster Session		

		Governors' Hall / Christina Ballroom		
	7:15	Registration and Full Breakfast		
	7:40	Student Competition Winners		
	7:55	**Plenary Introduction:** Starnes Walker, University of Delaware		
	8:00 – 9:00	**Plenary Speaker:** John McDonald, Director, Technical Strategy and Policy Development for GE Energy's Digital Energy		
		Harlan & Hollingsworth	**Lobdell**	**Pusey & Jones**
Wednesday, September 20		**Cyber** Chairs: David Manz, PNNL; Michael Haney, UI	**Control** Chairs: Frank Ferrese, NAVSEA; David Scheidt, Weather Gage Tech.	**Resilient Critical Infrastructure** Chairs: David Alderson, NPS; Cherrie Black, INL
	9:00 – 10:30	▪ Aunshul Rege, Tem.U, *Using Simulators to Assess Knowledge and Behavior of "Novice" Operators of Critical Infrastructure under Cyberattack Events* ▪ ***Arif Sarwat, FIU, *A Distributed Intelligent Framework for Electricity Theft Detection Using Benford's Law and Stackelberg Game*** ▪ John Cavazos, UDel., *Large-Scale Exploration of Feature Sets and Deep Learning Models to Classify Malicious Applications* ▪ Sherif Hussein, UId., *VANET Clock Synchronization for Resilient DSRC Safety Applications*	▪ ***Morteza Sarailoo, Bing.U, *An Optimal Algorithm for Resilient Upgrade of PMU Networks*** ▪ Matthew O'Kelly, UPenn., *AVCAD: Computer-Aided Design for Safe Autonomous Vehicles* ▪ Daniel Marino Lizarazo, VCU, *Data Driven Decision Support for Reliable Biomass Feedstock Preprocessing* ▪ Hao Xu, UNev., *Robust Adaptive Event-triggered Consensus Control for Multi-Agent Systems in Presence of Uncertain System Dynamics*	**Panel:** *Visualizing Data, Communicating Information, and Promoting Insight in CI Resilience* **Moderator:** Rob Edsall, INL **Panelists** ▪ Jennifer Schneider, Ph.D., RIT ▪ Kameron Baumgardner, CTO, RS21 ▪ Ellie Graeden, Ph.D., Talus Analytics ▪ Rob Edsall, Ph.D., INL
	10:30	**Morning Break**		
	11:00 – 12:00	▪ Kiyoshi Nakayama , NEC Laboratories, *Energy Management Systems with Intelligent Anomaly Detection and Prediction* ▪ Aditya Ashok, PNNL, *A Testbed Environment for Buildings-to-Grid Cyber Resilience Research & Development*	▪ Tim McJunkin, INL, *Electricity Distribution System Resilient Control System Metrics* ▪ Eva Wu, Bing.U, *An Ellipsoidal Expansion Algorithm for Estimating an Representing Regions of Attraction for Enhanced Resilience of Large Power Systems* ▪ Will Parker, UIda., *Identifying Critical Resiliency of Modern Distribution Systems with Open Source Modeling*	**Lightning Talks** *Community and Regional Resilience, Part II,* Chair: Paul Lewis ▪ Stacey Stanchfield, *International Focus on Regional Resilience* ▪ Marilee Orr, *Hitting the Accelerator: How will Electric Vehicles Affect Grid Resilience?* ▪ Neza Vodopivec, *Quantifying the Impacts of Disruption on Transportation-Communication System Resilience for Diverse Populations* ▪ Ming Xiao, *Human-Infrastructure Interdependencies in Response to Extreme Events* ▪ Thomas Sharkey, *Measuring the impact of decentralized decision-making in interdependent infrastructure restoration*
		Christina Ballroom		
	12:00	**Serving Hosted Lunch**		
	12:25	**Plenary Introduction:** Zach Tudor, Idaho National Laboratory		
	12:30	**Hosted Lunch with Plenary Speaker:** Patricia Hoffman, Acting Assistant Secretary, DOE-OE		

Wednesday, September 20	1:30 – 2:30	**Keynote Speaker:** John-Francis Mergen, Chief Scientist, Raytheon BBN		1:30 – 2:00	**Keynote Speaker:** Scott Breor, Dir., Protective Security Coordination Division, DHS Office of Infrastructure Protection, *Perspectives on Infrastructure Resilience*
		Harlan & Hollingsworth	**Lobdell**	2:00 – 3:30	**RRAP Panel** **Moderators:** Dan Genua, DHS **Panelists** ▪ Will McNamara, DHS ▪ Mia Steinemann, DHS ▪ Paul Lewis, ANL ▪ Peter Fitzmaurice, INL
	2:30 – 3:30	**Communications** Chairs: Krishna Kant, Temple U., Gurdip Singh, SU Alberto Jonathan, UMinn., *Ensuring Reliability in Geo-Distributed Edge Cloud* **Invited Speaker:** Taieb Znati, University of Pittsburgh, *Energy-Aware computational resilience models for compute- and data-intensive applications at scale*	**Cognitive** Chairs: Roger Lew, UI; Phil Bennett, SNL ▪ ***Judi See, SNL, *Incorporating Human Readiness Levels at Sandia National Laboratories*** ▪ Aunshul Rege, Tem.U, *Using a Critical Infrastructure Game to Provide Realistic Observation of the Human in the Loop by Criminal Justice Students*		
	3:30	**Afternoon Break**			
	4:00 – 5:30	**Invited Speaker:** George Owen Mohler, IUPUI, *Real-time algorithms and software systems for heterogeneous data driven policing of social harm* **Communications Panel:** *Network Resilience in Smart Cities* **Moderator:** Gurdip Singh, SU **Panelists** My Thai, UFL Tarek Abdelzaher, UIUC Taieb Znati, Pitt Fan Ye, Stoneybrook	▪ Roger Lew, UId., *Applications of the Rancor Microworld Nuclear Power Plant Simulator* **Human Dimension Abstract Presentation** ▪ Mark Rice, *Enabling Situation Assessment/Awareness for Utility Operators and Cybersecurity Professionals: Phase 2* **Invited Speaker:** Phil Bennett, SNL, *Human Dimension work at the National Laboratories*	**Owner/Operator Panel** **Moderator:** Cherrie Black, INL **Panelists** ▪ Bill Robinson, PBF Energy ▪ Christopher O'Shea, Passaic Valley Sewerage Commission ▪ Joseph Picciano, NYU Langone Medical Center ▪ Mark DeVoti, PSE&G	
	5:30	**Adjourn Meetings**			
		Firestone Roasting House, 110 South West Street			
	6:30 - 8:30	**Claroty-sponsored Reception Highlighting Best Papers**			

*Best Paper in Track

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Resilience Week 2017

		Governors' Hall / Christina Ballroom	
Thursday, September 21	7:15	Registration and Continental Breakfast	
	7:35	**Claroty Presentation:** Detecting Threats Early in the "Kill Chain" Across Generation and Transmission Control Systems	
	7:50	**Panel Introduction:** Paul Stockton, Sonecon	
	8:00 – 9:00	**Cyber Security Panel of Utilities** **Moderator:** Paul Stockton, Sonecon **Panelists:** Jonathon Monken, PJM Interconnection; Mikhail Falkovich, Con Edison; Jamey Sample, Ernst & Young LLP	

		Harlan & Hollingsworth		Pusey & Jones
		Resilient Critical Infrastructure R&D Papers **Chair:** Nii Attoh-Okine, University of Delaware		**Resilient Critical Infrastructure** Chairs: John Hummel, Paul Lewis, and Frederic Petit, ANL
	9:00 – 10:30	9:00	**Keynote Speaker:** Sandeep Neema, DARPA, *Building Resilient Software Systems*	**Lightning Talks** *Response and Recovery in Disrupted Systems* Chair: Vanessa Vargas ▪ Chris Dyer, *Recovery from Large-Scale System Events Using Oasis Microgrids* ▪ Edgar Portante, *Scenario Development Activities in Support of MISO's Emergency Planning and Power System Restoration Group* ▪ Vanessa Vargas, *2017 RDD Consequence Study* ▪ Walter Beyeler, *Preparing Medical Laboratory Networks for Outbreak Response* ▪ Quanyan Zhu, *A framework to understand energy and transportation interdependencies with combined co-location and co-functionality interconnections for disabling urban transit systems* ▪ Rae Zimmerman, *The Water Nexus with Multiple Infrastructures*
		10:00	**Invited Speaker:** Nii Attoh-Okine, University of Delaware, *The Diversity of Graphical Models in Addressing the Resilience of Critical Infrastructure*	
	10:30	**Morning Break**		
	11:00 – 1:00	▪ Jacob Ulrich, ISU, *A Symmetric Address Translation Approach for a Network Layer Moving Target Defense to Secure Power Grid Networks* ▪ ***Bradley Potteiger, Vand.U**, ***Evaluating the Effects of Cyber-Attacks on CPS using a HIL Simulation Testbed*** ▪ Aiden Ferdowsi, V.Tech, *Game Theory for Secure Critical Interdependent Gas-Power-Water Infrastructure* ▪ Yachen Tang, MTU, *Switching Reconfiguration of Fraud Detection within An Electrical Distribution Network* ▪ Mark Hereld, ANL, *Disaster = Infrastructure + Hazard* ▪ Saqib Hasan, Vand.U, *Heuristics-Based Approach for Identifying Critical N - k Contingencies in Power Systems*	11:00	**Keynote Speaker:** Tom Seager, Ph.D., School of Sustainable Engineering & the Built Environment, Arizona State University, *Resilience Lessons from the Oroville Dam: Dynamic Robustness and Graceful Extensibility*
			12:00	**RCI Wrap-up** David Alderson, NPS Cherrie Black, INL
	1:00	Adjourn Symposium		
		Constitution Yards, 308 Justison Street		
	4:30	No-host Social		

Best Paper in Track

		Optional Tour – University of Delaware: Pick up/Drop off at DoubleTree Downtown
Friday, September 22	8:00 – 12:30	UD STAR Campus BADER Consortium GoBabyGo The Grid-Integrated Vehicle with Vehicle to Grid Technology ISE Lab UD Nanofabrication Facility Cyber iSuite