



RESILIENCE WEEK

September 27-29, 2022
Washington, DC

Transforming the resilience
of critical infrastructure
systems and communities

In partnership with



TUESDAY SEPTEMBER 27, 2022



8:15 AM - 10:00 AM

Defense TechConnect Innovation Keynotes: DOD Leadership, SBIR, ATI Consortia Spotlights, Resilience Week

Woodrow Wilson
Ballroom A



US Armed Forces Color Guard, "The President's Own" US Marine Band Vocalist, U.S. Department of Defense
[Jennifer Rocha](#), Vice President, Strategic Partnerships, TechConnect Division, ATI

[Joe Bryan](#), Chief Sustainability Officer and Senior Advisor for Climate, U.S. Department of Defense

ATI Consortia Spotlights Keynote Panel: ADC, NSC, CREaTe, and RISE

Moderator: [Matthew Laudon](#), Vice President, TechConnect Division, ATI

[Vipin Arora](#), America's DataHub Consortium (ADC), Deputy Division Director, NCSES, NSF

[Joe Kochan](#), Executive Director, National Spectrum Consortium (NSC)

[Marty Ryan](#), Consortium for Rare Earth Technologies (CREaTe), Vice President for Naval Technologies, ATI

[Michael Wu](#), Executive Director, Resilient Infrastructure and Secure Energy Consortium (RISE)

[Caitlin Durkovich](#), Senior Director for Resilience and Response, National Security Council

[John Williams](#), Director of Innovation & Technology, Office of Investment & Innovation, U.S. Small Business Administration

10:00 AM - 10:30 AM

Coffee and Networking Break

Woodrow Wilson
Lobby



10:30 AM - 11:00 AM

Resilience Week: IEEE Papers I

Baltimore 3



[Timothy Farkas](#), Movement-based disruption estimators: Using mobile location data to predict community variation in disaster impacts, RS21

[Craig Bakker](#), Deception-Based Cyber Attacks on Hierarchical Control Systems using Domain-Aware Koopman Learning, Pacific Northwest National Laboratory

10:30 AM - 11:00 AM

Resilience Week: IEEE Papers II

Baltimore 4



[Mukesh Gautam](#), Post-Disaster Microgrid Formation for Enhanced Distribution System Resilience, University of Nevada, Reno

[Som Dhulipala](#), Efficient Interdependent Systems Recovery Modeling with DeepONets, Idaho National Laboratory

11:00 AM - 12:00 PM

Resilience Week: Catalyzing Resilience: A Conversation with Department of Defense Climate Advisors

Baltimore 3



Join Michael Wu, Executive Director of the Resilient Infrastructure and Secure Energy (RISE) Consortium, for a moderated conversation with senior climate officials from DoD. Attendees will learn about the evolving global strategic environment, threats to U.S. military missions and strategic interests related to climate, and innovations and investments to strengthen DoD's resilience posture.

Chair: [Michael Wu](#), Principal, Converge Strategies

[Will Rogers](#), Senior Climate Advisor, U.S. Army

[Rachel Ross](#), Deputy Chief Sustainability Officer, U.S. Department of Defense

[Annalise Blum](#), Senior Advisor for Climate, ASD Homeland Defense & Hemispheric Affairs, U.S. Department of Defense

| | | |
|---------------------|--|--|
| 11:00 AM - 12:00 PM | Resilience Week: States and Tribes Unlocking Historic Federal Investments in Resilience | Baltimore 4  |
| | <p>This session discusses how states and tribal governments are unlocking a historic amount of federal investment in energy resilience through opportunities such as the Infrastructure Investment and Jobs Act. The panelists will discuss how this opportunity can be leveraged to create a lasting transformation in resilience planning, which can thereby solidify a process for sustained, efficient, and effective energy resilience investment. Particular focus will be on understanding the analytical and informational needs of states and tribes as they embark on this transformation, and areas where the research community are poised to support these needs</p> <p>Chair: Bobby Jeffers, Program Manager V-Research, National Renewable Energy Laboratory Liz Weber, Project Manager IV-Research, National Renewable Energy Laboratory Kirsten Verclas, Managing Director, NASEO Stan Atcitty, Distinguished Member of Technical Staff, Sandia National Laboratory Dawn Davis, Environmental Justice Specialist, Idaho National Laboratory</p> | |
| 12:00 PM - 1:30 PM | Resilience Week Lunch (on own) |  |
| 1:30 PM - 2:30 PM | Resilience Week: Cybersecurity Nexus: National Security and the Private Sector | Baltimore 3  |
| | <p>The cybersecurity crossroads of national security and the private sector. Attendees will learn about the blurring battle space between critical infrastructure owner/operators and the mission assurance they support in the Department of Defense and how coordinated cyber defense is essential to staving off the worst consequences of global energy insecurity.</p> <p>Chair: Jonathon Monken, Principal, Converge Strategies, LLC Maggie Smith, Assistant Professor, Scientific Researcher, U.S. Army Cyber Institute Rebecca Gagliostro, Cybersecurity and Government Relations Advisor, Southern Company</p> | |
| 1:30 PM - 2:30 PM | Resilience Week: Community Instigators Forging Climate Resilience | Baltimore 4  |
| | <p>Superstorm Sandy, Hurricane Maria, Winter Storm Uri. No community is immune from the effects of extreme weather events caused by a changing climate. In this session, attendees will learn from organizations responsible for building our resilient future by designing infrastructure and planning criteria that prioritizes climate resilience.</p> <p>Chair: Dawn Davis, Environmental Justice Specialist, Idaho National Laboratory CP Smith, Executive Director, Cooperativa Hidroeléctrica de la Kevin Wright, Co-founder, President, ProtoGen David Riley, Co-Creator, Indigenized Energy Initiative</p> | |
| 1:30 PM - 2:30 PM | Resilience Week: Networking Space: Cybersecurity for Protective Relays over Serial and IP | Baltimore 5  |
| | <p>Chair: Ariel Stenger, Program Manager, Sierra Nevada Corporation Sean Bayless, Systems Engineer, Sierra Nevada Corporation Jake Gentle, Senior Power Systems Engineer, Idaho National Laboratory Steve Bukowski, Infrastructure Security, Idaho National Laboratory</p> | |
| 2:00 PM - 6:00 PM | Expo Hall Opens | Exhibit Hall B and C  |
| 2:30 PM - 3:00 PM | Resilience Week Break | Woodrow Wilson Lobby  |
| 3:00 PM - 4:00 PM | Resilience Week: The Road from Good Ideas to Fielded Tech Protecting the Energy System | Baltimore 3  |
| | <p>Too many good ideas hatched in research labs never make it to operational technology securing real systems. Why? Is the technology not the right solution at the right time? Are motivations and incentives misaligned between research and OEMs? Can it be solved through more demonstration? Is the gap less in the technology and more in the policy and/or market realities? Or is it a mix of all of these factors?</p> <p>Chair: Dan Herway, Vice President, Idaho Scientific Pete Fischer, Senior Director, Cyber Programs, Sierra Nevada Corporation Jim Plourde, Federal Sales Manager, Siemens Jordan Henry, Chief Cybersecurity Engineer, National Renewable Energy Laboratory Fowad Muneer, Acting Deputy Director, U.S. Department of Energy, Office of Cybersecurity, Energy Security, and Emergency Response (CESER)</p> | |
| 3:00 PM - 4:00 PM | Resilience Week: Calling on the Future to Protect the Mission: Methodology to Protect Critical Infrastructure | Baltimore 4  |

While mitigation – the reduction of greenhouse gas emissions – is getting a great deal of attention and capturing the majority of funds allocated in response to the climate crisis, infrastructure adaption and resilience is not adequately prioritized at present. Without a plan to identify and protect the most important infrastructure elements that undergird critical DHS missions, key USG functions will begin to experience unacceptable impairment and potentially, failure. In this interactive talk we will describe the three key elements of a pilot we're designing to address these challenges:

Chair: [Andy Bochman](#), Senior Grid Strategist, Idaho National Laboratory

[Ryan Hruska](#), Senior Infrastructure Analyst, Idaho National Laboratory

[Kyle Pfeiffer](#), Director of the National Preparedness Analytics Center, Argonne National Laboratory

4:00 PM - 6:00 PM **Defense Innovation, SBIR/STTR Pavilion, ATI Consortia Pavilion, Resilience Week, and Smart Cities Expo & Reception** Exhibit Hall B and C 

4:00 PM - 6:00 PM **SBIR/STTR Pavilion Agency Meet and Greet, Expo Hall** Exhibit Hall B and C 

4:00 PM - 6:00 PM [Defense Innovation Poster Session and Reception, Expo Hall](#) Exhibit Hall B and C 

4:00 PM - 6:00 PM **Resilience Week: Tech Transfer with Cyber CP Poster Sessions, Expo Hall** Exhibit Hall B and C 

WEDNESDAY SEPTEMBER 28, 2022 

8:15 AM - 10:00 AM **TechConnect Innovation Keynotes: DOD Leadership, ATI Consortia Spotlights, and Resilience Week** Woodrow Wilson Ballroom A 

[Roberto Guerrero](#), Deputy Assistant Secretary of the Air Force for Operational Energy, Office of the Assistant Secretary of the Air Force-IE&E, US Air Force

ATI Consortia Spotlight Keynote Panel: MTEC, CWMD, MCDC, SHIC, VLC

Resilience Week Keynote Panel:
Moderator: [Michael Wu](#), Executive Director, RISE and Principal, Converge Strategies
[Maria Robinson](#), Director, Grid Deployment Office, U.S. Department of Energy, Grid Deployment Office
[Sharon Burke](#), Founder, President, Ecospherics, LLC
[Liz Ramsay Dalton](#), Senior Vice President, Boundary Stone Partners

10:00 AM - 10:30 AM **Coffee and Networking Break** Woodrow Wilson Lobby 

10:30 AM - 12:00 PM **Resilience Week Special Session: The Cyber War: Cybersecurity and Critical Infrastructure Resilience** Baltimore 5 

Join CyberCP at Resilience Week 2022 for a special session dedicated to commercializing R&D for the Cyber War. The United States is under constant cyber attack from Russia, China, and other nation state adversaries. Cyberattacks are low cost missions that disrupt U.S. national security. The CyberWar has started. Protecting the most critical US infrastructure is paramount to maintaining the traditional military capabilities of the country. This panel explores the history, the best practices, capabilities and technologies developed for the US defense and intelligence community, bringing these to the critical infrastructure sectors to defend American Industry. Following this session, networking space will be provided for attendees to discuss technology transfer opportunities.

Chair: [Jason Gayl](#), Managing Partner, Cyber CP

[Craig Rieger](#), Chief Control Systems Research Engineer and a Directorate Fellow, Idaho National Laboratory
[Clif Triplett](#), Chairman of Technology Board, CyberCP
[Zach Tudor](#), Associate Laboratory Director for National Homeland Security, Idaho National Laboratory

10:30 AM - 11:00 AM **Resilience Week: IEEE Papers III** Baltimore 3 

[Nina Lopez](#), Supply Chain Risk Management: Data Structuring, Pacific Northwest National Laboratory
[Charles Prince](#), A Digital Twin System for Replaying Cyber Mission Data, NPS

10:30 AM - 11:00 AM **Resilience Week: IEEE Papers IV** Baltimore 4 

[Steven Foster](#), Organizational Adaptation to a Fundamental Surprise Event: The Case of Class Scheduling at a Large Academic Institution, Clemson University
[Mohammed Hussain](#), A Smart Grid Co-Simulation Platform for Virtual Device Simulation, West Virginia University

11:00 AM - 12:00 PM **Resilience Week: Evaluating Energy Resilience Exercises** Baltimore 3 

This session will dive deep into the when, why, and what it takes to execute three types of energy resilience exercises: tabletop, functional, and full-scale. Panelists will share their own real-world experiences to help the audience understand which exercise

type is best for their own organization's energy resilience goals and how the exercises can be complementary.

Chair: [Adair Douglas](#), Director, Converge Strategies, LLC

[Alex Pina](#), Director, Converge Strategies, LLC

[Amanda Sramek](#), Senior Manager, Security, American Gas Association

[Michael Savena](#), Director, Global Utility Operations, Naval Facilities Engineering Systems Command (NAVFAC) HQ

11:00 AM - 12:00 PM

Resilience Week: Technical Assistance Supporting Community Energy Resilience to Climate Risks

Baltimore 4 

This session will present and demonstrate technical assistance provided by national laboratories to support energy resilience in at-risk communities. The session will begin with an overview of the Microgrid Conceptual Design Methodology, which enables communities to identify and priorities the critical services necessary to be powered during a resilience event. This discussion will include some of the core resilience metrics used to evaluate and improve resilience, such as the social burden metric which quantifies the additional effort that people must expend to obtain critical services during an electric outage. Next, place-based examples of past and ongoing technical assistance in island and remote communities will be presented. To end, as an interactive effort, the audience members will be collectively work through an exercise, guided by the presenters, to prioritize critical loads and begin the design process of a microgrid on "Paradise Island," a fictional location with challenges reminiscent of the real-world locations the presenters have worked with.

Chair: [Birk Jones](#), Research and Development Scientist, Sandia National Laboratories

[Meredith Pringle](#), Director, Converge Strategies, LLC

Olga Hart, Principal Member of the Technical Staff, Sandia National Laboratories

[Robert Broderick](#), Principal Member of the Technical Staff, Sandia National Laboratories

[Andrea Mammoli](#), Principal Member of the Technical Staff, Sandia National Laboratories

12:00 PM - 1:30 PM

Resilience Week Lunch (on own)



Moderator: [Jennifer Rocha](#), Vice President, Strategic Partnerships, TechConnect Division, ATI

1:30 PM - 2:30 PM

Resilience Week: Valuing Resilience in Supply Chains

Baltimore 3 

Organizations must think beyond their "fenceline" in order to achieve mission assurance and business continuity. Disruptions to interdependent, complex supply chains increasingly result in cascading failures that impact multiple users across the energy system. This session will identify cutting edge processes and tools for analyzing your organization's supply chain.

Chair: [Eliza Hotchkiss](#), Senior Resilience Analyst and Technical Group Manager, National Renewable Energy Laboratory

[Lionel Toba](#), Research Engineer, System Dynamics and Modeling Group, Idaho National Laboratory

[Jessica McBroom](#), Director at National Security Council, National Security Council

[Phil Rausch](#), Solar Commercial Manager, Hemlock Semiconductors

1:30 PM - 2:30 PM

Resilience Week: Electrifying Transportation: EVs Resilience Assets

Baltimore 4 

This session will explore how the widespread adoption of electric vehicles (EVs) represents a unique opportunity to consider how the growth of electric vehicle supply equipment (EVSE) across cities, states, and transportation corridors can be designed to enhance resilience for the entire energy system.

Chair: [Lauren Gore](#), Principal, LDR Advisory Partners

[Benny Varghese](#), Research Engineer, Idaho National Laboratory

[Nicole Bulgarino](#), Executive Vice President, Ameresco

Amy McGuire, Director, Market Development, Highland Fleets

1:30 PM - 4:00 PM

Resilience Week: Networking and Speed Dating: Innovation, Workforce, and Infrastructure

Baltimore 5 

2:00 PM - 2:15 PM

DTC Break

Woodrow Wilson
Lobby 

2:00 PM - 6:00 PM

Expo Hall Opens

Exhibit Hall B and C 

3:00 PM - 4:00 PM

Resilience Week: Assessing Cascading Impacts to National Critical Functions

Baltimore 3 

As our critical infrastructure systems become more connected and more complex, risks to those systems become harder to identify, let alone mitigate. The cascading effects of an outage across our interdependent network of infrastructures and the full spectrum of the resulting physical and societal impacts have never been more relevant or more difficult to identify. Siloed models of physical infrastructure cannot fully answer the question of what critical services and institutions will be interrupted during or following a disaster, nor can they identify which weak links in our existing systems we need to reinforce. To address this need, the National Risk Management Center has supported development of interdisciplinary tools to track cascading impacts between National Critical Functions and underlying physical infrastructure assets, and the prioritization of cascading impacts due to logical dependencies. These novel approaches to system decomposition and functional dependency identification are the first critical, necessary steps towards building the capacity for massive cross-industry risk analyses.

Chair: [Chloe Applegate](#), Deputy Associate Program Leader for Cyber Systems Analysis, Lawrence Livermore National Laboratory
[Chel Samuels](#), Global Security Systems Analyst, Lawrence Livermore National Laboratory
[Rob Edsall](#), Program Manager, Geospatial Science Lead, Idaho National Laboratory
[Andrea Fendt](#), Risk Analyst, National Risk Management Center

3:00 PM - 5:00 PM **RISE Consortium: Catalyzing Resilience with the DoD R&D Community and RISE Member Meeting** Baltimore 4 

Join RISE Consortium Executive Director, Michael Wu, for a moderated panel discussion with leaders from the Department of Defense's energy R&D programs, including the Defense Innovation Unit (DIU), Environmental Security Technology Certification Program (ESTCP), and Operational Energy Capability Improvement Fund (OECIF). Together, these organizations are responsible for promoting the transfer of innovative technologies to the field and use/accelerate the adoption of leading commercial technology throughout DoD and the federal government. Attendees will hear first-hand from DoD R&D leaders about the latest energy, climate, and cyber resilience initiatives and opportunities for collaboration with the RISE Consortium.

Chair: [Michael Wu](#), Principal, Converge Strategies

RuthAnne Darling, Director of Operational Energy Innovation, Office of the Secretary of Defense
[Tim Tetreault](#), Program Manager for Energy and Water, Environmental Security Technology Certification Program
[Lee Robinson](#), Defense Engagement Lead - Energy, Defense Innovation Unit
[Eric Griesenbrock](#), Lead Principal Engineer, Air Force Research Laboratory

4:00 PM - 6:00 PM **Defense Innovation, SBIR/STTR Pavilion, ATI Consortia Pavilion, Resilience Week, and Smart Cities Expo & Reception** Exhibit Hall B and C 

4:00 PM - 6:00 PM **SBIR/STTR Pavilion Agency Meet and Greet, Expo Hall** Exhibit Hall B and C 

4:00 PM - 6:00 PM [Defense Innovation Poster Session and Reception, Expo Hall](#) Exhibit Hall B and C 

4:00 PM - 6:00 PM **Resilience Week Poster Sessions, Expo Hall** Exhibit Hall B and C 

THURSDAY SEPTEMBER 29, 2022 

8:30 AM - 9:30 AM **Resilience Week: Understanding the Infrastructure Bill and Other Congressional Funding** Baltimore 3 

Making sense of the \$1.7+ Trillion of congressional funding made available through the Infrastructure Bill, Inflation Reduction Act, Semiconductor Chip Act, and now Biden's student loan forgiveness efforts to help deploy the people, technologies, processes and standards needed to harden US Critical Infrastructure.

Chair: [Jason Gayl](#), Managing Partner, Cyber CP

[Paul Docette](#), Vice President of Government Relations and Public Policy, Battelle Energy Alliance
[Carl Kime](#), Principal, Innovative Federal Strategies

8:30 AM - 9:30 AM **Resilience Week: Distributed Energy Resources in a Resilient Community** Baltimore 4 

Chair: [David Walter](#), Technology Manager, U.S. Department of Energy, Solar Energy Technologies Office

[Samuel Bockenbauer](#), Grid Integration Lead, Water Power Technologies Office
[Sohom Datta](#), Power Systems Researcher, Pacific Northwest National Laboratory
[Fei Ding](#), Senior Research Engineer, National Renewable Energy Laboratory
[Megan Culler](#), Power Engineer, Idaho National Laboratory

9:45 AM - 10:45 AM **Resilience Week: Investor Appetite for Industrial Control Systems Cybersecurity Investments** Baltimore 3 

This panel serves as a collaborative call for participants to test emerging technologies and security solutions, as well as workforce development activities.

Chair: [Jason Gayl](#), Managing Partner, Cyber CP

[Thurston Cromwell](#), Vice President - Development and Innovation, Emerson
[Lucas Nelson](#), Litical Ventures

9:45 AM - 10:45 AM **Resilience Week: Cybersecurity State Awareness Tools and Methods for Energy Systems** Baltimore 4 

This special session aims to present the conceptual understanding of cybersecurity stateawareness (CSA), quantify its development through analytical methods and tools, and explore market pathways to integrate into the commercialization and industry adoption. This session will consist of invited talks, presentations, and panel discussions from national labs and an industry member to highlight the ongoing research and development (R&D) efforts and future direction of works that will enhance the security and resilience of energy systems.

Chair: [Vivek Singh](#), Researcher IV-Cyber Security & Resilience, National Renewable Energy Laboratory

[Justin Welch](#), Systems Engineer, Idaho National Laboratory

[Craig Rieger](#), Chief Control Systems Research Engineer and a Directorate Fellow, Idaho National Laboratory

[Zoe Dormuth](#), Cybersecurity Research Engineer, National Renewable Energy Laboratory

[Steve McElwee](#), Chief Information Security Officer, PJM Interconnection

11:00 AM - 12:00 PM

Resilience Week: Public/Private Call to Action: Collaboration in Test & Evaluation of Technologies

Baltimore 3 

This panel discussion focuses on the investor community's appetite for OT cyber investments.

Chair: [Jason Gayl](#), Managing Partner, Cyber CP

[Bill Kiser](#), Executive Vice President for Science and Technology, Indiana Innovation Institute

11:00 AM - 12:00 PM

Resilience Week: Cybersecurity Workforce Development: NRECA Keep/Grow Initiative

Baltimore 4 

The NRECA Threat Analysis Center (TAC) is the new Cooperative Operational Technology (OT) cybersecurity threat analysis and sharing platform, designed to improve the speed, coordination, and effectiveness of Co-op threat response. The TAC is designed to be both a tool and a community, enabling collaboration and assistance among cybersecurity professionals at NRECA, Co-ops, and the wider intelligence community. This vision is dependent on establishing a network of cybersecurity professionals across the Co-op space. Therefore, as part of the TAC program, NRECA will launch the Grow /Keep Initiative, a workforce development initiative to address many of the challenges Co-ops face in hiring and retaining cybersecurity professionals. As small, rural organizations, many Co-ops struggle to compete in the cybersecurity personnel marketplace. As electric utilities with expanding use of DER and IoT devices, Co-ops also require personnel who understand the critical infrastructure they serve and the associated risks of being compromised. Such "unicorns" are rare and expensive. The Grow/Keep Initiative will address these challenges by using the collective Co-op strength to compete in the marketplace while also growing cybersecurity expertise from the local Co-op communities. The resulting skilled and expansive network of professionals will act as a semi-shared resource, so every Co-op has the resources they need to resist and recover from threats.

Chair: [Emma Stewart](#), Chief Scientist, National Rural Electric Cooperative Association (NRECA)

[Ryan Newlon](#), Principal, Cybersecurity Solutions, National Rural Electric Cooperative Association (NRECA)

[Jim Steel](#), Information System Administrator, Sumter EMC



2022 SBIR/STTR Agency Partners



Department of Energy



Department of Defense



Defense Advanced Research Projects Agency



Army



Navy



National Oceanic & Atmospheric Administration



US Department of Agriculture



Missile Defense Agency (MDA)



Department of Homeland Security



US Small Business Administration



US Department of Education



National Science Foundation



AFWERX



US Special Operations Command



US Department of Transportation



National Aeronautics and Space Administration (NASA)

© Copyright 2022 TechConnect. All Rights Reserved. [Disclaimer](#) | [Privacy Policy](#) | [Terms of Use](#)
All Department of Defense speakers are subject to budget travel changes.

*Participation by any United States Federal Agency in any TechConnect activity or event does not constitute an expressed or implied endorsement of any cosponsor, donor, grantee, contractor or participant's opinions, products, or services.

Produced by



[About](#) / [Expo/Sponsor](#) / [Innovators](#) / [Register](#) / [Subscribe](#) / [Contact](#)
/ [Site Map](#)