

## SERDP AND ESTCP SYMPOSIUM 2019 EDITION

*DoD's Environmental Research Programs*

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### THE SERDP AND ESTCP 2019 SYMPOSIUM SPECIAL HEADLINES EDITION



The 2019 Strategic Environmental Research and Development Program (SERDP) and Environmental Security Technology Certification Program (ESTCP) Symposium will be held December 3-5, 2019 at the Marriott Wardman Park Hotel in Washington, D.C. Each year, the Symposium gathers over 1,000 attendees from the Department of Defense (DoD), industry and academia to discuss environmental and energy installation issues within the Defense community. Attendees are provided with a variety of educational sessions designed to showcase the cutting-edge environmental research and technologies being deployed to address these challenges.

The articles below provide more information about the Symposium. For further details, please visit the Symposium [website](#) or go to the [registration page](#) to register. Please note the hotel room block will be closing on November 19, 2019. To reserve your room, please visit the [hotel reservation page](#).

### PLENARY SESSION: CELEBRATING 25 YEARS OF ESTCP

This year celebrates 25 years of ESTCP projects, so the Symposium plenary session will involve speakers with a long history with SERDP and ESTCP who will lay out their perspectives on the future environmental challenges of the DoD.

The first speaker will be the Hon. Al Shaffer, Deputy Under Secretary of Defense for Acquisition and Sustainment (A&S). Mr. Shaffer was associated with SERDP for many years during his service as the Principal Deputy Assistant Secretary of Defense for Research and Engineering (ASD(R&E)).

Following Mr. Shaffer will be a group of speakers involved in the creation and growth of ESTCP. Leading off this group, Dr. Jeffrey Marqusee, the longtime Director of ESTCP, will provide his perspective as he introduces the Hon. Sherril Goodman, Senior Fellow at the Wilson Center's Environmental Change and Security Program and Polar Institute, and the Hon. Alex Beehler, Assistant Secretary of the U.S. Army for Installations, Energy and Environment (IE&E). Ms. Goodman began her DoD career serving as the Deputy Under Secretary of Defense (Environmental Security) where, among many accomplishments, she began ESTCP. Before joining IE&E, Mr. Beehler served in the Office of the Under Secretary of Defense for Installations and Environment where he oversaw ESTCP.

The final presentation will be from Dr. Susan Hockfield, President Emerita and Professor of Neuroscience at Massachusetts Institute of Technology (MIT). Dr. Hockfield will discuss her recent book *The Age of Living Machines: How the Convergence of Biology and Engineering Will Build the Next Technology Revolution*, which will give the audience an appreciation of how biology is coming together with engineering to produce an array of almost inconceivable technologies with the potential to be every bit as revolutionary as the twentieth century's digital wonders.

The plenary session will close with the presentation of the Project-of-the-Year Awards by the SERDP and ESTCP Program Managers. [MORE](#)

### SHORT COURSES AND FUNDING OPPORTUNITIES

We are excited to offer seven short courses this year, as well as the popular information session on SERDP and ESTCP funding opportunities. Registration for these short courses is available through the Symposium [registration page](#). Attendance is limited, so register early! The session on **Funding Opportunities: How to Partner with SERDP & ESTCP** will be presented at 12 PM on Thursday; registration is not required for this session.

Led by Dr. Andrea Leeson and Ms. Carmen Lebrón, the short course titled [Guidance and Tips for Preparing Preproposals and Proposals](#) will include but is not limited to how to structure the proposal, a description of essential content to include, common pitfalls that may be encountered, and other considerations. The course is ideal for those relatively new to the proposal writing process.

Two short courses are focused on providing cybersecurity Risk Management Framework (RMF) training. The first [course](#) will take an in-depth look into the DoD's RMF requirements and the process to attain the Authority to Operate. A hands-on demonstration of a Microsoft Excel-based tool developed by an ESTCP project team to reduce the time and cost of the RMF process is covered in the second [course](#).

Infrastructure resilience and resource conservation are the topic of two additional short courses. The first [course](#) covers infrastructure resilience planning in the face of climate change with a focus on DoD installation planning practitioners at coastal installations. The second [course](#) provides insight into the use of Unmanned Aerial Vehicles (UAVs) for natural resource management on DoD lands.

The short course, [TSCA and Reach Regulatory Developments](#) will provide several perspectives on the regulatory impacts of the Toxic Substances Control Act (TSCA) and the European Union's (EU) Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation specific to U.S. Department of Defense (DoD) issues including cleanup, supply chain, material availability, sustainment, and operations.

Finally, a new web-based tool will be introduced in the short course titled [New Tools for Sustainability Analysis: Capturing Life Cycle Costs and Impacts in Defense Acquisition](#). [MORE](#)

### TECHNICAL SESSIONS

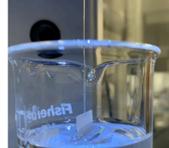
There are 12 technical sessions at the Symposium this year covering the breadth of research and demonstrations funded through SERDP and ESTCP. A brief description of each technical session is provided below.

#### ENERGY RESILIENCE

Energy resilience is covered in a two-part session titled [Energy Resilience Session 1: Outlook and Applications of Distributed Energy Resources](#) and will highlight the role of Distributed Energy Resources (DERs) in enabling installations to prepare for and recover from energy disruptions that could impact mission assurance. This session will include a panel of subject matter experts from industry and the DoD who will discuss and explore the policy surrounding DERs; its outlook, applications, and solutions; and challenges in microgrid implementations. The second part, [Energy Resilience Session 2: Building Energy and Water Efficiency Solutions](#), will follow on Wednesday morning and will showcase a variety of established incubator and accelerator programs to enable technology transfer and solution scaling. [MORE](#)

#### CONTAMINATED SOILS AND WATERS

The issue of contaminated soils and water is covered through three sessions at the Symposium. [Field Demonstrations of Technologies for Treatment of Contaminated Groundwater Plumes](#) will present the DoD perspective of groundwater treatment and provide an overview of several demonstration projects that have been transitioned for use throughout the DoD. Issues addressed will include remedial amendment delivery, treatment of complex media, and characterization degradation pathways for the evaluation of natural attenuation.



[Recent Advancements in Management of Contaminated Sediments and Stormwater](#) will highlight the regulatory and restoration project manager perspective of contaminated sites and provide an overview of best management practices and innovative approaches for site characterization and treatment of sediment contamination and stormwater runoff.

The final two-part technical session, [PFAS: State-Of-The-Art Research and Development in Sampling, Analysis, Treatment and Effects](#), will highlight recent successful projects addressing per- and polyfluoroalkyl substances (PFAS) issues in the environment. Specifically, this session will discuss issues such as mixed contaminants, investigative derived waste removal, in situ remediation technologies, and source zone characterization. This session will be held on Wednesday afternoon and Thursday morning. [MORE](#)

#### UNDERWATER UXO

Two technical sessions will highlight projects advancing the development and demonstration of innovative technologies that detect, characterize, and remediate military munitions in underwater sites.

The first technical session, [Underwater UXO - Classification and Detection](#), will cover the development of sensors and systems to find and identify unexploded and discarded munitions underwater. Presenters in this session will describe several sensor modalities that can detect and discriminate underwater munitions both proud of the seafloor and buried in the sediment. Experimental measurements using acoustic and electromagnetic sensors and modeling of the resulting data will be presented.



[Underwater UXO: Environmental Characterization for Burial and Mobility Modeling](#) will delve into active and former military installations that have ranges and training areas with unexploded ordnance (UXO) contamination in water environments. Storm waves or currents can cause underwater munitions to become unburied and move into new, potentially dangerous locations. SERDP researchers have conducted experimental studies to simulate and track how these energetic events can cover, uncover, and move UXO, and model this movement. [MORE](#)

#### RESOURCE CONSERVATION AND RESILIENCY



Technical sessions addressing resource conservation and resiliency possess three themes: natural and built infrastructure; improved management of threatened, endangered, at-risk, and invasive species; and ecosystem dynamics. The first technical session, [Infrastructure and Resilience](#), will review research efforts associated with the management of infrastructure critical for the maintenance and improvement of DoD capabilities. Speakers at the [Threatened, Endangered and Invasive Species](#) session will report on the research and progress to better understand the conditions of important species on more than 25 million acres of lands that the DoD manages. Finally, the [Ecosystem Dynamics](#) session will examine research efforts currently underway to understand how the value of the ecosystem service benefits the nation and the DoD accrue from the natural infrastructure. [MORE](#)

#### SUSTAINABLE MILITARY FINISHING SYSTEMS

At the [Latest Innovations in Materials and Removal Processes for Sustainable Military Finishing Systems](#) session, experts from several Navy, Air Force, and Army materiel and systems commands will discuss technologies developed to advance the performance, implementation, and removal of finishing systems and to comply with environmental regulations. Featured projects include non-chromated paint primers, copper-free antifouling coatings, and environmentally-friendly technologies designed to protect against corrosion. [MORE](#)

#### EMULSIONS IN SHIPBOARD WASTEWATER STREAMS

[Making and Breaking Boundaries in Emulsions](#) will cover the environmental and operational issues associated with oil-water emulsions formed in shipboard wastewater streams. Speakers will address how fundamental studies supporting development of new strategies to minimize emulsion formation and maximize emulsion breaking, inform bilge management practices, and impact recommended chemicals for shipboard use. [MORE](#)

#### INNOVATIVE MANUFACTURING METHODS

Revolutionary manufacturing methods and technology will be examined during two sessions: [Expeditionary Additive Manufacturing for Operational Readiness](#) and [The Future of Energetic Formulation, Characterization, and Manufacturing](#).



Speakers will discuss the basic research being performed regarding the realm of the possible of additive manufacturing at the point of need, as well as efforts that have been made to make this a reality. In addition, the synthesis of novel "green" energetics and new synthesis methodologies, formulating for environmental benefits and characterization methods will be described. [MORE](#)

### CALENDAR

- November 21: ESTCP Supplemental Solicitation Due
- December 3-5: SERDP and ESTCP Symposium
- January 7: SERDP FY 2021 Solicitation Pre-Proposals Due

### ANNOUNCEMENTS

SERDP and ESTCP Webinar Series: [View Schedule](#)

### RELATED EVENTS

- [December 9-13](#)  
American Geophysical Union (AGU) Fall Meeting 2019, San Francisco, CA
- [February 5-6](#)  
2020 Military Additive Manufacturing Summit and Technology Showcase, Tampa, FL
- [February 25-27](#)  
Navy RPM Training Workshop, Port Hueneme, CA
- [March 8-13](#)  
North American Wildlife and Natural Resources Conference, Omaha, NE