

## LOCATION

### Waterford at Springfield Conference Center

6715 Commerce Street  
Springfield, VA 22150  
(703) 719 - 5700

## ATTIRE

Appropriate dress for the conference is business, coat & tie for civilians and Class A uniform or uniform of the day for military personnel.

## ID BADGE

During conference registration, each Attendee will be issued an identification badge. Please be prepared to present a valid picture ID. Badges must be worn at all conference functions.

## SPEAKER DONATION

In lieu of Speaker gifts, a donation will be made to the Fisher House Foundation. For additional information, please visit: <http://www.fisherhouse.org>

## ADVERTISE

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## SYMPOSIUM OVERVIEW

This year's annual NDIA S&ET Division Conference focuses on the 17 DoD Science & Technology (S&T) Communities of Interest (CoIs). These CoIs were established as a mechanism to encourage multi-agency coordination and collaboration in cross-cutting technology focus areas with broad multi-Component investment. CoIs provide a forum for coordinating S&T strategies across the Department, sharing new ideas, technical directions and technical opportunities, jointly planning programs, measuring technical progress, and reporting on the general state of health for specific technology areas.

Each CoI is led by a steering group comprised of senior technical leaders with common technology interests; drawn from the Services, Joint Staff, Defense Agencies, and the Office of the Secretary of Defense. The principal outputs of CoIs are strategic plans and roadmaps with a 10 year horizon that capture technical goals and mission impact. Their analyses identify common S&T needs and show where they are being addressed or where there are gaps or future opportunities.

The impending implementation of the budget sequestration is of great concern to the Department of Defense and to the Defense Industrial Base. The objective of the CoI steering groups is to develop a roadmap that clearly defines the strategic direction of these 17 critical technology areas, including gaps that provide opportunities for government, industry, academia, and international investment.

Attendees at this year's conference will be provided the unique opportunity to not only meet with the DoD teams who are developing and executing the respective roadmaps, but to have one-on-one sessions with key DoD members of the CoI steering groups to review on-going IR&D efforts, ideas, and related work that may be of benefit to the CoIs.

S&T leaders from the Services and Combatant Commands will describe what capabilities are vital for the Joint Force to be successful in the evolving global security environment. Additionally, OSD, the Services, and Agencies will present their priorities for focusing technology initiatives. Given the realities to reduce lifecycle costs, Service and Agency Speakers will discuss which technologies must be matured in the near term and in the future.

Again this year, the conference will feature poster paper sessions with Authors who will be available for discussion and interaction on emerging concepts and technology.

## TUESDAY, MARCH 24, 2015

- 7:00 AM – 6:00 PM**                      **Conference Registration**  
*Foyer*
- 7:00 AM – 8:00 AM**                      **Continental Breakfast**  
*Foyer*
- 8:00 AM – 8:15 AM**                      **Welcome Remarks**  
*Singleton Combo Ballroom*  
▶ General Craig McKinley, USAF (Ret), President & CEO, NDIA  
▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; Chairman, Science & Engineering Technology Division, NDIA
- 8:15 AM – 9:15 AM**                      **Keynote Address: Technical Superiority**  
*Singleton Combo Ballroom*  
▶ Mr. Alan R. Shaffer, Principal Deputy Assistant Secretary of Defense (Research & Engineering)
- 9:15 AM – 12:00 PM**                      ***FY 2016 PRESIDENT'S BUDGET REQUEST AND OPPORTUNITIES FOR COLLABORATION SESSION***  
*Singleton Combo Ballroom*  
**Session Chair:**  
▶ Dr. Raj Aggarwal, Director, Engineering Research Institute, College of Engineering, Iowa State University
- 9:15 AM – 9:45 AM**                      **FY 2016 President's Budget Request for DoD S&T Program**  
*Singleton Combo Ballroom*  
▶ Mr. Robert W. Baker, Deputy Director, Plans & Programs, Office of the Assistant Secretary of Defense (Research & Engineering)
- 9:45 AM – 10:00 AM**                      **Networking Break**  
*Foyer*
- 10:00 AM – 10:30 AM**                      **Prototyping: A Path to Agility, Innovation and Affordability**  
*Singleton Combo Ballroom*  
▶ Mr. Earl Wyatt, Deputy Assistant Secretary of Defense, Emerging Capability & Prototyping, Office of the Assistant Secretary of Defense (Research & Engineering)
- 10:30 AM – 11:00 AM**                      **The DoD Test & Evaluation / Science & Technology Program**  
*Singleton Combo Ballroom*  
▶ Mr. George Rumford, Test & Evaluation/Science & Technology Program Manager, Defense Test Resource Management Center
- 11:00 AM – 11:30 AM**                      **Introduction to Poster Papers: Author Presentations**  
*Singleton Combo Ballroom*  
**Session Chair:**  
▶ Dr. Raj Aggarwal, Director, Engineering Research Institute, College of Engineering, Iowa State University  
*Authors will provide a short introduction to their poster papers. Posters will be displayed in the Poster & Table Top Display Hall where Attendees will have the opportunity to speak with the Authors.*
- 11:30 AM – 12:30 PM**                      **Networking Lunch**  
*Poster & Table Top Display Hall - Hazel Combo Ballroom*  
The table top display hall features table top displays and poster papers. Attendees have the opportunity to network with displayers and poster presenters, including all 17 CoIs, during the Poster and Table Top Display Hall hours.

12:30 PM – 1:30 PM

## The DARPA Science & Technology Program

*Singleton Combo Ballroom*

▶ Mr. Ellison “Dick” Urban, Special Assistant for Strategic Execution & Analysis, Defense Advanced Research Projects Agency (DARPA)

1:30 PM – 5:00 PM

## **SERVICE SCIENCE & TECHNOLOGY PROGRAM SESSIONS**

### Session Chair:

▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; Chairman, Science & Engineering Technology Division, NDIA

1:30 PM – 2:30 PM

## Army Science & Technology Program

*Singleton Combo Ballroom*

▶ Ms. Mary J. Miller, Deputy Assistant Secretary of the Army (Research & Technology)

2:30 PM – 3:00 PM

## Networking Break

*Poster & Table Top Display Hall - Hazel Combo Ballroom*

3:00 PM – 4:00 PM

## Naval Science & Technology Program

*Singleton Combo Ballroom*

▶ Dr. Lawrence Schuette, Acting Director of Research, Office of Naval Research (ONR)

4:00 PM – 5:00 PM

## Air Force Science & Technology Program

*Singleton Combo Ballroom*

▶ Colonel Chuck Ormsby, USAF, Military Deputy, Office of the Deputy Assistant Secretary of the Air Force (Science, Technology & Engineering)

▶ Mr. Jack Blackhurst, Director, Plans and Programs, U.S. Air Force Research Laboratory (AFRL)

5:00 PM – 6:00 PM

## Networking Reception (CASH BAR)

*Poster & Table Top Display Hall - Hazel Combo Ballroom*

## WEDNESDAY, MARCH 25, 2015

7:00 AM – 5:00 PM

## Conference Registration

*Foyer*

7:00 AM – 7:55 AM

## Continental Breakfast

*Foyer*

7:55 AM – 8:00 AM

## Opening Remarks

*Singleton Ballroom*

▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; Chairman, Science & Engineering Technology Division, NDIA

8:00 AM – 8:30 AM

## The Role of Communities of Interest (ColS)

*Singleton Ballroom*

▶ Dr. John M. Stubstad, Director, Space & Sensor Systems, Office of the Deputy Assistant Secretary of Defense (Research)

8:30 AM – 8:40 AM

## Networking Break

*Foyer*

8:40 AM – 11:00 AM

## **CONCURRENT COMMUNITIES OF INTEREST (COIs) SESSIONS**

*Singleton Ballroom and Miller Ballroom*

### Session Co-Chairs:

▶ Dr. Michelle Atchison, Associate Vice Chancellor for Federal Relations, The University of Texas System

▶ Mr. James Peddell, Attaché, Defence Research & Technology, British Embassy

**8:40 AM – 10:40 AM**

**Autonomy Col Presentation**

*Singleton Ballroom*

▶ Dr. Jonathan Bornstein, Chief, Autonomous Systems Division, U.S. Army Research Laboratory (ARL)

**8:40 AM – 10:40 AM**

**Engineered Resilient Systems Col Presentation**

*Miller Ballroom*

▶ Dr. Jeffery Holland, SES, Director, U.S. Army Engineer Research and Development Center (ERDC); Chief Scientist, U.S. Army Corps of Engineers

**10:40 AM – 11:00 AM**

**Networking Break**

*Poster & Table Top Display Hall - Hazel Combo Ballroom*

**11:00 AM – 11:30 AM**

**Technology Domain Awareness Initiative**

*Singleton Ballroom*

▶ Mr. Christopher Zember, Director of the DoD Information Analysis Centers, Defense Technical Information Center (DTIC)

**11:30 AM – 11:45 AM**

**Best Poster Announcement**

*Singleton Ballroom*

▶ Dr. Raj Aggarwal, Director, Engineering Research Institute, College of Engineering, Iowa State University

**11:45 AM – 12:30 PM**

**Networking Lunch**

*Poster & Table Top Display Hall - Hazel Combo Ballroom*

**12:30 PM – 5:00 PM**

**CONCURRENT COMMUNITIES OF INTEREST (COIs) SESSIONS (CONTINUED)**

*Singleton Ballroom and Miller Ballroom*

**Session Co-Chairs:**

▶ Dr. Michelle Atchison, Associate Vice Chancellor for Federal Relations, The University of Texas System  
▶ Mr. James Peddell, Attaché, Defence Research & Technology, British Embassy

**12:30 PM – 2:30 PM**

**Sensors & Processing Col Presentation**

*Singleton Ballroom*

▶ Dr. Michael Grove, Principal Deputy for Technology and Counterintelligence, U.S. Army Communications-Electronics Research, Development and Engineering Center (CERDEC), Night Vision and Electronic Sensors Directorate

**12:30 PM – 2:30 PM**

**Energy & Power Technology Col Presentation**

*Miller Ballroom*

▶ Dr. Richard Carlin, Head, Sea Warfare and Weapons Department, Office of Naval Research (ONR)

**2:30 PM – 3:00 PM**

**Networking Break (LAST CHANCE TO VIEW POSTERS & TABLE TOP DISPLAYS)**

*Poster & Table Top Display Hall - Hazel Combo Ballroom*

**3:00 PM – 5:00 PM**

**Human Systems Col Presentation**

*Singleton Ballroom*

▶ Dr. Laurel Allender, Director, Human Research and Engineering Directorate, U.S. Army Research Laboratory (ARL)

**3:00 PM – 5:00 PM**

**C4I Col Presentation**

*Miller Ballroom*

▶ Mr. John Willison, SES, Director, U.S. Army Communications-Electronics Research, Development and Engineering Center (CERDEC), Command, Power, & Integration

**5:00 PM**

**Adjourn for the Day**

## **THURSDAY, MARCH 26, 2015**

- 7:00 AM – 12:00 PM**      **Conference Registration**  
*Foyer*
- 7:00 AM – 8:00 AM**      **Continental Breakfast**  
*Foyer*
- 7:55 AM – 8:00 AM**      **Opening Remarks**  
*Singleton Combo Ballroom*  
▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; Chairman, Science & Engineering Technology Division, NDIA
- 8:00 AM – 8:30 AM**      **DoD Partnering with the Independent Research & Development (IRAD) Program**  
*Singleton Combo Ballroom*  
▶ Mr. Jaymie Durnan, Senior Advisor to the Principal Deputy, Office of the Assistant Secretary of Defense (Research & Engineering)
- 8:30 AM – 12:00 PM**      ***CAPABILITIES NEEDED BY THE COMBATANT COMMANDERS SESSION***  
*Singleton Combo Ballroom*  
**Session Co-Chairs:**  
▶ Mr. Mike Knollmann, Director, Joint Operations Support, Office of the Under Secretary of Defense for Research & Engineering (Acquisition, Technology & Logistics)  
▶ Mr. Kurt Kratz, Associate Director, Joint S&T Support, Office of the Under Secretary of Defense for Research & Engineering (Acquisition, Technology & Logistics)
- 8:30 AM – 8:50 AM**      **USCENTCOM**  
▶ Mr. Martin Drake, Science Advisor, USCENTCOM
- 8:50 AM – 9:10 AM**      **USSOCOM**  
▶ Mr. Anthony Davis, Director, Science and Technology, USSOCOM
- 9:10 AM – 9:30 AM**      **USPACOM**  
▶ Mr. Greg Vandiver, Science Advisor, USPACOM
- 9:30 AM – 9:50 AM**      **USSOUTHCOM**  
▶ Mr. Juan Hurtado, Science Advisor, USSOUTHCOM
- 9:50 AM – 10:10 AM**      **Networking Break**  
*Foyer*
- 10:10 AM – 10:30 AM**      **USTRANSCOM**  
▶ Mr. Lou Bernstein, Research, Development, Test & Evaluation Program Director, USTRANSCOM
- 10:30 AM – 10:50 AM**      **USSTRATCOM**  
▶ Dr. Mark Brown, Science & Technology Advisor, USSTRATCOM
- 10:50 AM – 11:10 AM**      **USAFRICOM**  
▶ Mr. C. Van Anderson, Science & Technology Advisor, USAFRICOM
- 11:10 AM – 11:30 AM**      **USNORTHCOM**  
▶ Mr. Rob Brunner, Chief Engineer, Science & Technology Directorate, USNORTHCOM
- 11:30 AM – 11:50 AM**      **USEUCOM**  
▶ Mr. James Wiltz, Science Advisor, ECJ8-Q HQ, USEUCOM

**11:50 AM – 12:00 PM**

**Closing Remarks & Conference Adjourns**

▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; Chairman, Science & Engineering Technology Division, NDIA

## TABLE TOP DISPLAY PROFILES

Listed in Alphabetical Order, As of 3-18-15

### **Cask Technologies, LLC**

#1

Founded in 2004, Cask Technologies, LLC (“Cask”) is a Small Business Administration (SBA)-certified 8(a) and Economically Disadvantaged Woman Owned Small Business (EDWOSB) that provides a portfolio approach to business and technology management services across the acquisition, financial management, engineering, and technology domains. Cask provides expert client support taking an agile approach to services: their design, process improvement and development, governance strategy, resource planning, cost and performance measurement, maturity assessments, and outsourcing valuation. Cask’s diversified customer base includes commercial companies, the Federal Government (civilian and military), higher-education institutions, and state and local governments. Cask has been recognized by Consulting Magazine as one of the top 15 Best Small Firms to Work For in 2011 - 2014. In addition, Cask has made the 2011, 2012 and 2013 Inc. 500|5000 list of the fastest-growing private companies in America. Cask possesses insight and experience to address our clients’ most critical needs and complex challenges including: • Compliance • Service Management • Project Management • Decision Support • Risk Management • Process Improvement • Performance Management • Requirements Management. Our practitioners draw upon deep functional expertise while working in small teams to serve as valuable resources to our clients during all phases of a project’s lifecycle. Our experts guide clients through the known and unknown difficulties of program management using a systems thinking perspective grounded in experience working with some of the world’s largest organizations.

### **Consortium for Command, Control, Communications and Computer Technologies**

#2

The Consortium for Energy, Environment and Demilitarization (CEED) and the Consortium for Command, Control, Communications and Computer Technologies (C5) each operates under a Section 845 Other Transaction Agreement with the Department of the Army to offer a rapid, cost-effective and collaborative acquisition vehicle for companies, nonprofits and academic institutions seeking to do business with the Federal Government. As an alternative to FAR-based contracts, CEED and C5 provide their memberships and Federal agencies a flexible and user-friendly partnership path to simplify and accelerate fulfillment of the Government’s technology needs in support of the Warfighter and our national defense.

### **Defense Systems Information Analysis Center (DSIAC)**

#3

DSIAC is the newest component of the DoD Information Analysis Center (DoD IACs) enterprise, established on January 1, 2014 as the consolidation of six legacy IACs and a product of Better Buying Power 2.0. With access to vast repositories of DoD scientific and technical information (STI) and a network of subject-matter experts, DSIAC supports the defense systems community by researching and answering technical questions, performing customized literature searches, and retrieving limited distribution and classified reports to improve the productivity of engineers, scientists, researchers, and practitioners in the greater defense systems community. The first four hours of inquiry support are free, and a Core Analysis Task IDIQ delivery order vehicle is available for more extensive support. DSIAC publishes the quarterly DSIAC Journal and supports nine communities of practice, including Advanced Materials; Autonomous Systems; Directed Energy; Energetics; Military Sensing; Non-lethal Weapons; Reliability and Maintainability; Survivability and Vulnerability; and Weapon Systems. More information on DSIAC can be found at <http://www.dsiac.org>.

### **Defense Technical Information Center (DTIC)**

#4

The Defense Technical Information Center (DTIC®) serves the DoD community as the largest central resource for DoD and government-funded scientific, technical, engineering, and business related information available today. DTIC has served the information needs of the Defense community for more than 65 years. DTIC reports to the Assistant Secretary of Defense For Research and Engineering ASD(R&E).

### **Schweitzer Engineering Laboratories**

#5

Schweitzer Engineering Laboratories, Inc. (SEL) is a privately held, 100-percent-employee-owned U.S. based company that designs, manufactures and supports a complete line of products and services for electric power systems, ranging from generator and transmission protection to distribution automation and control systems. As a trusted supplier to government agencies, SEL offers solutions for microgrids, critical infrastructure, and cybersecurity, to help ensure the security, safety, and reliability of electric power at the US government. Our high-accuracy systems and communications capabilities enable the government to conserve energy and lower expenses.

### **U.S. Army RDECOM-ARL**

#6

The U.S. Army Research Laboratory (ARL) of the U.S. Army Research Development and Engineering Command (RDECOM) is the Army’s central laboratory. Its diverse assortment of unique facilities and dedicated workforce of government and private sector partners make up the largest source of world-class integrated research and analysis in the Army. ARL’s program consists of basic and applied research and survivability/ lethality and human factors analysis. ARL also applies the extensive research and analysis tools developed in its direct mission program to support ongoing development and acquisition programs in the Army Research, Development & Engineering Centers (RDECs), Program Executive Offices (PEOs)/Program Manager (PM) Offices, and Industry. ARL has consistently provided the enabling technologies in many of the Army’s most important weapons systems.

### **University of Dayton Research Institute**

#7