

LOCATION

College Park Marriott Hotel & Conference Center
3501 University Blvd., East
Hyattsville, MD 20783
(301) 985-7300

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

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Meetings & Events
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SYMPOSIUM OVERVIEW

Disruptive military capabilities such as low observability, precise timing and location, and "owning the night" were developed through strategic DoD and industry IR&D investment. These advancements were in "outside the box" emerging technology development and demonstration efforts, which are proving difficult to continue under the changing climate and uncertain budgets. Everyone involved in science and engineering development must proactively pull together to show the decision-makers, requirement generators, and operators the immeasurable value in DoD S&T and industry IR&D. The value has been, and can continue to be, demonstrated through emerging operational concepts and rapid innovative prototyping.

Advanced technology is a force multiplier and has been leveraged to produce new or enhanced military capabilities. During this time of rapidly changing global security environment and a declining defense budget, it is increasingly important that we identify capabilities to meet future challenges and enable development of supporting technologies.

In the January 2012 "*Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*," U.S. Armed Forces were directed to rebalance operational forces from Iraq and Afghanistan to the Asia-Pacific region and to develop the capability to "Project Power Despite Anti-access/Area Denial Challenges." This direction supported the national desire to provide a secure environment in the Asia-Pacific region that encouraged economic prosperity. The DoD S&T program plays a critical role in developing technologies required for the military's presence in the Asia-Pacific region. The continued investment in advanced technology helps overcome the challenges associated with anti-access/area denial.

Irregular warfare and counter-insurgency operations, like those the U.S. Military encountered in Iraq and Afghanistan, are not likely to go away. Through newly created rapid reaction development, demonstration, and transition organizations, new technologically advanced military capabilities were rapidly employed during the Gulf War with impressive effectiveness. These advanced technologies gave the U.S. Military advantages in surveillance, precision targeting, communications, and navigation. However, in the advent of information-based warfare, such as social media, the emergence of irregular and insurgency warfare by non-state actors has grown. Irregular warfare and counter-insurgency operations remain the doctrine of choice for potential adversaries and the U.S. Military must also prepare for this threat.

It is anticipated that small units specializing in innovative, low-cost, and small-footprint operations will have increased utility in irregular warfare and counter-insurgency operations. Selecting the right irregular warfare/counter-insurgency capabilities is a critical first step in determining which technologies should receive investment priority. In the current budgetary environment, the challenge is meeting this objective while maintaining conventional and nuclear force structures.

At this year's conference, the Services will describe what capabilities are vital for the Joint Force to be successful in the evolving global security environment, with a focus on the Asia-Pacific region. Additionally, OSD, the Services, and Agencies will present their priorities for focusing technology initiatives, while maintaining the balance between conventional and irregular warfare/counter-insurgency capabilities. 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. They will also explain how they define "rapid prototyping" and their perspective on appropriately demonstrating emerging concepts and capabilities which enables them to make lucid acquisition decisions.

Speakers will be available in the “Speakers Corner” after each session. 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. There also will be opportunities for Industry and Academia to present ideas to Service representatives in one-on-one sessions.

TUESDAY, APRIL 8, 2014

7:00 AM – 6:30 PM

Conference Registration

Chesapeake Ballroom Foyer

7:00 AM – 8:00 AM

Continental Breakfast

Chesapeake Ballroom Foyer

8:00 AM – 8:15 AM

Welcome Remarks

Chesapeake Ballroom A/B

- ▶ MG Barry D. Bates, USA (Ret), Vice President of Operations, 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

Chesapeake Ballroom A/B

- ▶ The Honorable Frank Kendall, Under Secretary of Defense for Acquisition, Technology & Logistics

9:15 AM – 10:15 AM

Special Remarks: Science, Technology and Innovation for America's National Security - A Blueprint for Action

Chesapeake Ballroom A/B

- ▶ The Honorable Patricia Falcone, Associate Director for National Security & International Affairs, The White House Office of Science & Technology Policy

10:15 AM – 10:30 AM

Networking Break

Chesapeake Ballroom Foyer

10:30 AM – 2:00 PM

FY 2015 PRESIDENT'S BUDGET REQUEST AND OPPORTUNITIES FOR COLLABORATION SESSION

Chesapeake Ballroom A/B

Session Chair:

- ▶ Dr. Raj K. Aggarwal, Managing Director, Advanced Research & Technology, College of Engineering, Iowa State University

10:30 AM – 11:00 AM

FY 2015 President's Budget Request for DoD S&T Program

Chesapeake Ballroom A/B

- ▶ Mr. Robert W. Baker, Deputy Director, Plans & Programs, Office of the Assistant Secretary of Defense for Research and Engineering

11:00 AM – 11:30 AM

Rapid Fielding: A Path for Emerging Concept and Capability Prototyping

Chesapeake Ballroom A/B

- ▶ Mr. Earl Wyatt, Deputy Assistant Secretary of Defense, Rapid Fielding, Office of the Assistant Secretary of Defense for Research and Engineering

11:30 AM – 12:00 PM

The DoD T&E/S&T Program

Chesapeake Ballroom A/B

- ▶ Mr. Derrick Hinton, SES, Principal Deputy Director, Defense Test Resource Management Center

12:00 PM – 12:30 PM

Introduction to Poster Papers: Author Presentations

Chesapeake Ballroom A/B

Session Chair:

- ▶ Dr. Raj K. Aggarwal, Managing Director, Advanced Research & Technology, College of Engineering, Iowa State University

Authors will provide a short introduction to their poster papers. Posters will be displayed in the Exhibit Hall where Attendees will have the opportunity to speak with the Authors.

“Potential Gains from Upstream Fusion of SIGINT and MOVINT Data”

- ▶ Dr. Gregory Bottomley, Signal and Image Processing Engineer, Northrop Grumman

“Porting the UNG to IBM’s BICMOS8HP Technology”

- ▶ Mr. Matt Casper, NSMC

“Testing Starts at the Beginning”

- ▶ Mrs. Elfriede Dustin, Director, IDT

“Collaborative GPS Denied Navigation”

- ▶ Mr. Bill English, Vice President of Product Management, TRX Systems, Inc.

“Connect the Disconnected on The Edge”

- ▶ Ms. Christina Kang, Chief Operating Officer, IST Research

“ASSETT, Inc. Information Technology and Applications”

- ▶ Mr. Robert McCaig, Senior Vice President, ASSETT, Inc.

“Forward Repair Capability Provides a Shot Preening Solution for the Warfighter”

- ▶ Ms. Kelly McClurg, Materials Engineer, Avion Solutions, Inc.

“Advanced Compression of T&E and UAV Sensor Data to Offset Radio Link Constraints”

- ▶ Mr. Tejbir Phool, President, MiMoCloud

“Development of a Passive, Single-camera 3D Imaging System Using Light Field Technology”

- ▶ Dr. Ann Pitruzzello, Signal and Image Processing Engineer, Northrop Grumman

“Multi-INT Data Fusion for Sparse, Asynchronous, and Low Spatial Resolution Data”

- ▶ Dr. Ann Pitruzzello, Signal and Image Processing Engineer, Northrop Grumman

“Highly Conductive Carbon Nanotube Films”

- ▶ Mr. Colin Preston, PhD Candidate, University of Maryland

“Silicon Carbide Semiconductor Switch for Pulse Power Directed Energy Systems”

- ▶ Dr. Stanislav Soloviev, Senior Engineer, GE Global Research

“Commercial Turbomachinery Applications of Digital Thread Principles”

- ▶ Dr. Felipe Viana, Principal Engineer, GE Global Research

“Reshaping the Costs of Department of Defense Systems through Full Interoperability”

- ▶ Mr. Larrell Walters, Division Head Sensor Systems, University of Dayton Research Institute

“Technology as Dialect: Understanding Game Changing Technology”

- ▶ Mr. John Watts, Consultant, Noetic

“Verification and Validation of Unmanned Autonomous Systems”

- ▶ Dr. Michael Wicks, Endowed Chair of Sensor Exploitation Professor, University of Dayton

“Rethinking DoD Acquisition”

▶ Mr. Jeff Windham, Engineering Supervisor, U.S. Army, Armament Research, Development and Engineering Center (ARDEC)

“Transparent Paper for Flexible Electronics”

▶ Dr. Hongli Zhu, Post Doctorate Research Associate, University of Maryland

12:30 PM – 1:30 PM

Networking Lunch

Lower Level Concourse

1:30 PM – 2:00 PM

Technology Transfer to Industry from DoD Laboratories

Chesapeake Ballroom A/B

▶ Dr. John Fischer, Director, Defense Laboratories, Office of the Assistant Secretary of Defense for Research and Engineering

2:00 PM – 5:15 PM

AIR FORCE SCIENCE & TECHNOLOGY PROGRAM SESSION

Chesapeake Ballroom A/B

Session Co-Chairs:

▶ Mr. Michael C. Dudzik, Managing Director, Lingua Franca Group

▶ Mr. Chris Clay, Office of the Deputy Assistant Secretary of the Air Force for Science, Technology & Engineering

2:00 PM – 2:30 PM

Air Force Capability Requirements

Chesapeake Ballroom A/B

▶ Major General Paul T. “PJ” Johnson, USAF, Director, Operational Capability Requirements, Deputy Chief of Staff for Operations, Plans & Requirements

2:30 PM – 3:00 PM

Air Force S&T Priorities for the Future

Chesapeake Ballroom A/B

▶ Lieutenant Colonel Chuck Ormsby, USAF, Military Director, Office of the Deputy Assistant Secretary (Science, Technology and Engineering)

3:00 PM – 3:30 PM

Air Force Research Laboratory (AFRL): Addressing Air Force Capability Requirements with Emerging Technology Options

Chesapeake Ballroom A/B

▶ Mr. Jack Blackhurst, Director, Plans and Programs, Air Force Research Laboratory

3:30 PM – 3:45 PM

Networking Break & Exhibit Hall Open

Exhibit Hall - Potomac Ballroom

The exhibit hall features exhibits and poster papers. Attendees have the opportunity to network with exhibitors and poster presenters during exhibit hall hours.

3:45 PM – 4:15 PM

Air Force Munitions Technology

Chesapeake Ballroom A/B

▶ Dr. John Wilcox, Director, Munitions Directorate, Air Force Research Laboratory

4:15 PM – 4:45 PM

Human Systems Technology

Chesapeake Ballroom A/B

▶ Dr. Morley Stone, Chief Scientist, Human Effectiveness Directorate, Air Force Research Laboratory

4:45 PM – 5:15 PM

Air Force Affordability and Sustainment Technology

Chesapeake Ballroom A/B

▶ Mr. Joseph Baker, Deputy Capability Lead for Agile Combat Support, Materials and Manufacturing Directorate, Air Force Research Laboratory

5:15 PM – 6:30 PM

Networking Reception (CASH BAR)

Exhibit Hall - Potomac Ballroom

WEDNESDAY, APRIL 9, 2014

- 7:00 AM – 5:00 PM** **Conference Registration**
Chesapeake Ballroom Foyer
- 7:00 AM – 7:55 AM** **Continental Breakfast**
Chesapeake Ballroom Foyer
- 7:55 AM – 8:00 AM** **Opening Remarks**
Chesapeake Ballroom A/B
▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; Chairman, Science & Engineering Technology Division, NDIA
- 8:00 AM – 9:00 AM** **Keynote Address**
Chesapeake Ballroom A/B
▶ Mr. Brett Lambert, Senior Fellow, NDIA; Former Deputy Assistant Secretary of Defense, Manufacturing & Industrial Base Policy
- 9:00 AM – 12:30 PM** **NAVY SCIENCE & TECHNOLOGY PROGRAM SESSION**
Chesapeake Ballroom A/B
Session Chair:
▶ Dr. Al Emondi, Deputy Chief Technology Officer, SPAWAR Systems Center, Atlantic
- 9:00 AM – 9:25 AM** **Naval Capability Requirements Briefing**
Chesapeake Ballroom A/B
▶ Rear Admiral Herman Shelanski, USN, Director, Assessment Division (OPNAV N81)
- 9:25 AM – 9:50 AM** **Overview of Naval Science & Technology**
Chesapeake Ballroom A/B
▶ Rear Admiral Matthew Klunder, USN, Chief of Naval Research, Office of Naval Research
- 9:50 AM – 10:15 AM** **Future Naval Capabilities Program**
Chesapeake Ballroom A/B
▶ Dr. Thomas Killion, Director of Technology, Office of Naval Research
- 10:15 AM – 10:40 AM** **Disruptive Naval Technologies**
Chesapeake Ballroom A/B
▶ Mr. Robert Smith, Director for Disruptive Technologies, Office of Naval Research
- 10:40 AM – 11:05 AM** **Networking Break**
Exhibit Hall - Potomac Ballroom
- 11:05 AM – 11:30 AM** **Affordability Initiatives**
Chesapeake Ballroom A/B
▶ Mr. John Carney, Director, Affordability Initiatives, Office of Naval Research
- 11:30 AM – 12:00 PM** **Training Initiatives**
Chesapeake Ballroom A/B
▶ Dr. Terry Allard, Head, Warfighter Performance Department, Office of Naval Research
- 12:00 PM – 12:30 PM** **RF Systems Technology Initiatives**
Chesapeake Ballroom A/B
▶ Dr. Michael Pollock, C4ISR Department, Office of Naval Research
- 12:30 PM – 1:30 PM** **Networking Lunch**
Exhibit Hall - Potomac Ballroom

1:30 PM – 5:00 PM

ARMY SCIENCE & TECHNOLOGY PROGRAM SESSION

Chesapeake Ballroom A/B

Session Co-Chairs:

- ▶ Dr. Walter F. “Rick” Morrison, WFM Consulting
- ▶ Ms. Nancy Harned, Executive Director, Strategic Plans & Program Planning, Office of the Deputy Assistant Secretary of the Army (Acquisition, Logistics & Technology)

1:30 PM – 1:55 PM

Army Required Capabilities: Enabling Strategic Land Power

Chesapeake Ballroom A/B

- ▶ Mr. Rickey E. Smith, Director, Army Capabilities Integration Center (Forward)

1:55 PM – 2:25 PM

Army S&T Program Overview

Chesapeake Ballroom A/B

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

2:25 PM – 2:50 PM

Networking Break (LAST CHANCE TO VIEW EXHIBITS)

Exhibit Hall - Potomac Ballroom

2:50 PM – 3:40 PM

Army S&T Investment Portfolios

Chesapeake Ballroom A/B

- ▶ Ms. Catherine Hurley, Director for Soldier/Squad Portfolio, Office of the Deputy Assistant Secretary of the Army (Research & Technology)
- ▶ Mr. Keith Jadus, Acting Director for Ground Maneuver Portfolio & Director for Lethality, Office of the Deputy Assistant Secretary of the Army (Research & Technology)

3:40 PM – 4:30 PM

Army S&T Investment Portfolios

Chesapeake Ballroom A/B

- ▶ Mr. Kristopher Gardner, Director for C3I Portfolio, Office of the Deputy Assistant Secretary of the Army (Research & Technology)
- ▶ Mr. Todd Turner, Director for Air Portfolio, Office of the Deputy Assistant Secretary of the Army (Research & Technology)

4:30 PM – 5:00 PM

Army Basic Research

Chesapeake Ballroom A/B

- ▶ Mr. Jeff Singleton, Director for Basic Research, Office of the Deputy Assistant Secretary of the Army (Research & Technology)

5:00 PM

Adjourn for the Day

THURSDAY, APRIL 10, 2014

7:00 AM – 12:00 PM

Conference Registration

Chesapeake Ballroom Foyer

7:00 AM – 8:00 AM

Continental Breakfast

Chesapeake Ballroom Foyer

8:00 AM – 8:05 AM

Opening Remarks

Chesapeake Ballroom A/B

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

8:05 AM – 10:00 AM

INTERNATIONAL SCIENCE & TECHNOLOGY PROGRAM SESSION

Chesapeake Ballroom A/B

Session Co-Chairs:

- ▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; Chairman, Science & Engineering Technology Division, NDIA
- ▶ Dr. Michael Frame, Director of Strategic Corporate Partnerships, University of Maryland

8:05 AM – 8:25 AM

United Kingdom Perspective

Chesapeake Ballroom A/B

- ▶ Mr. Rob Easton, Counsellor Defence Acquisition & Technology, British Embassy, Washington, DC

8:25 AM – 8:45 AM

Canadian Perspective

Chesapeake Ballroom A/B

- ▶ Dr. Rick Williams, Counsellor Defence Research & Development, Embassy of Canada, Washington, DC

8:45 AM – 9:05 AM

Australian Perspective

Chesapeake Ballroom A/B

- ▶ Dr. David Gamble, Defence Science & Technology Organisation, Australia

9:05 AM – 10:00 AM

International Science & Technology Perspectives Panel

Chesapeake Ballroom A/B

- ▶ Moderator: Dr. Michael Frame, Director of Strategic Corporate Partnerships, University of Maryland
- ▶ Mr. Robert W. Baker, Deputy Director, Plans & Programs, Office of the Assistant Secretary of Defense for Research and Engineering
- ▶ Mr. Rob Easton, Counsellor Defence Acquisition & Technology, British Embassy, Washington, DC
- ▶ Dr. David Gamble, Defence Science & Technology Organisation, Australia
- ▶ Mr. Greg Hill, Senior Director, Export/Import Operations & Regulatory Affairs, DRS Technologies, Inc.
- ▶ Mr. Brandt Pasco, Attorney, Kaye Scholer, LLP
- ▶ Dr. Rick Williams, Counsellor Defence Research & Development, Embassy of Canada, Washington, DC

10:00 AM – 10:15 AM

Networking Break

Chesapeake Ballroom Foyer

10:15 AM – 11:45 AM

EXTENDED INSIGHTS ON SCIENCE & TECHNOLOGY SESSION

Chesapeake Ballroom A/B

Session Chair:

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

10:15 AM – 11:00 AM

The DARPA Science & Technology Program

Chesapeake Ballroom A/B

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

11:00 AM – 11:45 AM

Defense Technical Information Center (DTIC)

Chesapeake Ballroom A/B

▶ Mr. Christopher E. Thomas, Administrator, Defense Technical Information Center (DTIC)

11:45 AM – 12:00 PM

Best Poster Announcement & Closing Remarks

Chesapeake Ballroom A/B

▶ MG Barry D. Bates, USA (Ret), Vice President of Operations, NDIA

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

12:00 PM

Conference Adjourns