

**NDIA**

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# 2018 HUMAN SYSTEMS CONFERENCE

HUMAN SYSTEMS IN EMERGING DOMAINS: AUTONOMY, HUMAN  
AUGMENTATION, AND CYBER



March 13 – 14, 2018

Waterford at Springfield

Springfield, VA

[NDIA.org/HumanSystems18](http://NDIA.org/HumanSystems18)

# WELCOME TO THE 2018 HUMAN SYSTEMS CONFERENCE

Welcome. The 2018 Conference of the NDIA Human Systems Division (HSD) is designed to serve the Department of Defense and strengthen the defense industry. This is the mission of the NDIA and its members: 1,600 corporations and 85,000 individuals. The HSD conference supports the mission by bringing DoD S&T leadership, representatives of industry, and other guests into discussion over accomplishments of DoD human systems research and development, gaps in DoD human systems, and emerging research and technology that can bridge those gaps. This conference is a small and vital forum for all of us to learn, to envision new solutions, and to build the relationships and opportunities to collaborate.

The NDIA Human Systems Division is chartered to support the DoD Human Systems Community of Interest (HS COI). Our subcommittee structure (represented by the list of technical sessions in this program) is identical that of the HS COI, with the exception of one addition: this Division has established a subcommittee on Human Systems Metrics to help assess and promote the value of human systems research and development, techniques, and technologies. The leaders of our five subcommittees plan this conference, participate in

studies for DoD, and grow the Human Systems community. I urge you to join one of the Division's subcommittees. To pursue that opportunity, contact NDIA, or talk to any of the Human Systems Division subcommittee co-chairs at this conference.

Thanks to the team that organized our conference: the conference co-chairs, LCDR Jacob N. Norris, Ph.D., and Eric Jones; their team members on the HSD sub-committee co-chairs; and the professional staff of NDIA. Thanks also to the representatives of the DoD Human Systems Community of Interest, who have joined us at this event. A special note of appreciation to our sponsors: Ball Aerospace, Rockwell Collins, and DCS Corporation. Finally, welcome to all of you who have come here to understand, improve, and accelerate the research and development of better human systems for the Department of Defense.

Respectfully,



**Jared Freeman, Ph.D.**  
*Chair, NDIA Human Systems Division*  
Chief Scientist, Aptima, Inc.

## SCHEDULE AT A GLANCE

### TUESDAY, MARCH 13

#### **General Session**

Singleton/Miller Ballroom  
8:00 am – 5:00 pm

#### **Networking Poster and Demonstration Session**

von Sternberg/Hazel Ballroom  
1:15 – 3:15 pm

#### **Networking Reception**

Waterford Foyer  
5:00 – 6:30 pm

### WEDNESDAY, MARCH 14

#### **General Session**

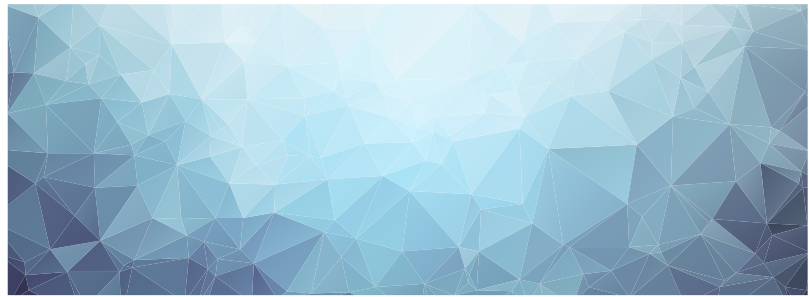
Singleton/Miller Ballroom  
8:00 am – 5:00 pm

#### **Round Table Discussion**

Singleton/Miller Ballroom  
3:15 – 4:45 pm

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## WHO WE ARE

The National Defense Industrial Association is the trusted leader in defense and national security associations. As a 501(c)(3) corporate and individual membership association, NDIA engages thoughtful and innovative leaders to exchange ideas, information, and capabilities that lead to the development of the best policies, practices, products, and technologies to ensure the safety and security of our nation. NDIA's membership embodies the full spectrum of corporate, government, academic, and individual stakeholders who form a vigorous, responsive, and collaborative community in support of defense and national security. For more information, visit [NDIA.org](http://NDIA.org)



# HUMAN SYSTEMS DIVISION

## WHO WE ARE

NDIA's Human System Division promotes the exchange of technical information and discussions between government, industry and academia, and the expansion of research and development in areas related to the human as a system whose performance must be integrated into any military system of systems. To this end, the division will serve as an infrastructure by providing a variety of ways for government, industry and academia to collaborate to advance human performance in air, land, sea, space and cyberspace through research, education and consultation.

## LEADERSHIP AND COMMITTEES

### Dr. Jared Freeman

Human Systems Chair  
Chief Scientist, Aptima, Inc.

### BG Peter Palmer, USA (Ret)

Human Systems Vice Chair  
President, P2 Consulting Services

### Scott Kozak

Human Systems Deputy Chair  
Managing Director, CogniSens  
Applied Research Center

# EVENT INFORMATION

## EVENT WEBSITE

NDIA.org/HumanSystems18

## EVENT CONTACT

**Andrea Lane**  
Meeting Planner  
(703) 247-2554  
alane@ndia.org

## EVENT THEME

Human Systems in Emerging Domains: Autonomy, Human Augmentation and Cyber

## CONFERENCE LEADERSHIP

**Eric Jones**  
Industry Chair

**LCDR Jake Norris, USN**  
Government Chair

## SESSION CHAIRS

**Brad Chedister**  
Industry Co-Chair, PS&WP

**Dr. James McCarthy**  
Industry Co-Chair, PAE&T

**George Salazar**  
Government Lead, HSM

**Glenn Gunzelmann**  
Government Co-Chair, PAE&T

**Dr. Todd Nelson**  
Government Co-Chair, SI&CP

**Peter Squire**  
Government Co-Chair, PS&WP

**Dr. Kelly Hale**  
Industry Lead, HSM

**CDR Henry Phillips, USN**  
Government Co-Chair,  
HI3Lead

## SURVEY AND PARTICIPANT LIST

A survey and list of attendees (name and organization only) will be emailed to you after the conference. NDIA would appreciate your time in completing the survey to help make our event even more successful in the future.

## HARASSMENT STATEMENT

NDIA is committed to providing a professional environment free from physical, psychological and verbal harassment. NDIA will not tolerate harassment of any kind, including but not limited to harassment based on ethnicity, religion, disability, physical appearance, gender, or sexual orientation. This policy applies to all participants and attendees at NDIA conferences, meetings and events. Harassment includes offensive gestures and verbal comments, deliberate intimidation, stalking, following, inappropriate photography and recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome attention. Participants requested to cease harassing behavior are expected to comply immediately, and failure will serve as grounds for revoking access to the NDIA event.

# AGENDA

**TUESDAY, MARCH 13**

7:00 am – 6:00 pm

## **REGISTRATION**

VON STERNBERG/HAZEL FOYER

7:00 – 8:00 am

## **NETWORKING BREAKFAST**

MILLER/VON STERNBERG FOYER

8:00 – 8:15 am

## **WELCOME AND INTRODUCTORY REMARKS**

SINGLETON/MILLER BALLROOM

### **Dr. Jared Freeman**

Human Systems Division Chair  
Chief Scientist, Aptima, Inc.

8:15 – 9:00 am

## **KEYNOTE ADDRESS**

SINGLETON/MILLER BALLROOM

### **Dr. Brian Pierce**

Office Director, Information Innovative Office (I2O)  
Defense Advanced Research Projects Agency (DARPA)

9:00 – 10:30 am

## **PANEL: HUMAN SYSTEMS INTERFACE RESEARCH AND DEVELOPMENT CHALLENGES – GOVERNMENT PERSPECTIVE**

SINGLETON/MILLER BALLROOM

### **LCDR Peter Walker, USN**

Military Deputy, Human and Bioengineered Systems, Code 341, Office of Naval Research  
*Moderator*

### **Laurie Fenstermacher**

Principal Research Lead Open Source Analysis, 711 HPW/RHXM

### **Glenn Gunzelmann**

Senior Research Psychologist, Air Force Research Laboratory

### **Dr. Todd Nelson**

Division Chief, 711 HPW/AFRL

### **Peter Squire**

Program Officer, Office of Naval Research

10:30 – 11:00 am

## **NETWORKING BREAK**

MILLER/VON STERNBERG FOYER

11:00 – 11:05 am

## **INTRODUCTION TO TECHNICAL SESSION**

SINGLETON/MILLER BALLROOM

**Eric Jones**

Conference Industry Chair, NDIA Human Systems Division

Human Systems Architect, The Charles Stark Draper Laboratory, Inc.

11:05 am - 12:15 pm

## **SESSION 1: PROTECTION, SUSTAINMENT AND WARFIGHTER PERFORMANCE (PS&WP)**

SINGLETON/MILLER BALLROOM

### **Collaboration for Breakthrough Innovation in Human Performance Monitoring for the Warfighter**

**Dr. Melissa Grupen-Shemansky**

SEMI-Flex, Tech

### **FitForce Planner: Optimizing USMC Physical Fitness**

**Timothy Clark**

Aptima, Inc.

### **Transitioning Laboratory Neuroscience to the Real-World through Deep Learning: Using Evoked Potentials to Assess State**

**Dr. Stephen Gordon**

DCS Corporation

### **Optimizing Future Soldier Systems through the Incorporation of Human Aspects into the Soldier as a System Domain using the Systems Modeling Language**

**Sean Pham**

U.S. Army ARDEC

12:15 – 1:15 pm

## **NETWORKING LUNCH**

VON STERNBERG/HAZEL BALLROOM

1:15 – 3:15 pm

## **NETWORKING POSTER AND DEMONSTRATION SESSION**

VON STERNBERG/HAZEL BALLROOM

3:15 – 3:30 pm

## **REFRESHMENT BREAK**

MILLER/VON STERNBERG FOYER

3:30 – 4:40 pm

## **SESSION 2: HUMAN SYSTEMS METRICS (HSM)**

SINGLETON/MILLER BALLROOM

### **Human Systems Metrics Applied to Optimize Warfighter Capability**

**Sarah Orr**

711 HPW/HP

### **Realizing Our Collective Vision by 2025: Leveraging Advances in Artificial Intelligence and Autonomy with Human Systems Advances in Human–Machine Symbiosis to Realize Our Roadmap to the Future**

**Dr. Dylan Schmorrow**

Soar Technology, Inc.

### **Usability Scorecard**

**Deidrick Capers**

Millennium Corporation

**Julia Ruck**

PM DCGS-A

### **HSI T&E Methods and Metrics to Assess User–Automation Interaction**

**Dr. Janae Lockett-Reynolds**

DHS

4:40 – 5:00 pm

## **DAY 1 WRAP UP**

SINGLETON/MILLER BALLROOM

**Dr. Jared Freeman**

Human Systems Division Chair

Chief Scientist, Aptima, Inc.

5:00 – 6:30 pm

## **NETWORKING RECEPTION (CASH BAR)**

WATERFORD FOYER

## **WEDNESDAY, MARCH 14**

7:00 am – 3:00 pm

## **REGISTRATION**

VON STERNBERG/HAZEL FOYER

7:00 – 8:00 am

## **NETWORKING BREAKFAST**

MILLER/VON STERNBERG FOYER

8:00 – 8:05 am

## WELCOME REMARKS

SINGLETON/MILLER BALLROOM

### Dr. Jared Freeman

Human Systems Division Chair  
Chief Scientist, Aptima, Inc.

8:05 – 9:00 am

## PLENARY ADDRESS

SINGLETON/MILLER BALLROOM

### Dr. Paul Zablocky

Division Director, Complex Hybrid Warfare Sciences Division, Expeditionary Maneuver Warfare and Combating  
Terrorism Science and Technology Department, Office of Naval Research

9:00 – 10:10 am

## PANEL: HUMAN SYSTEMS INTEGRATION METRICS

SINGLETON/MILLER BALLROOM

### Dr. John Tangney

Director, Human & Bio-Engineered Systems, Office of Naval Research  
*Moderator*

### Rick Craft

Systems Analyst & Principal Member of the Technical Staff, Sandia National Laboratory

### Dr. Kelly Hale

Senior Vice President, Technical Operations, Design Interactive, Inc.

### BG Peter Palmer, USA (Ret)

President, P2 Consulting Services

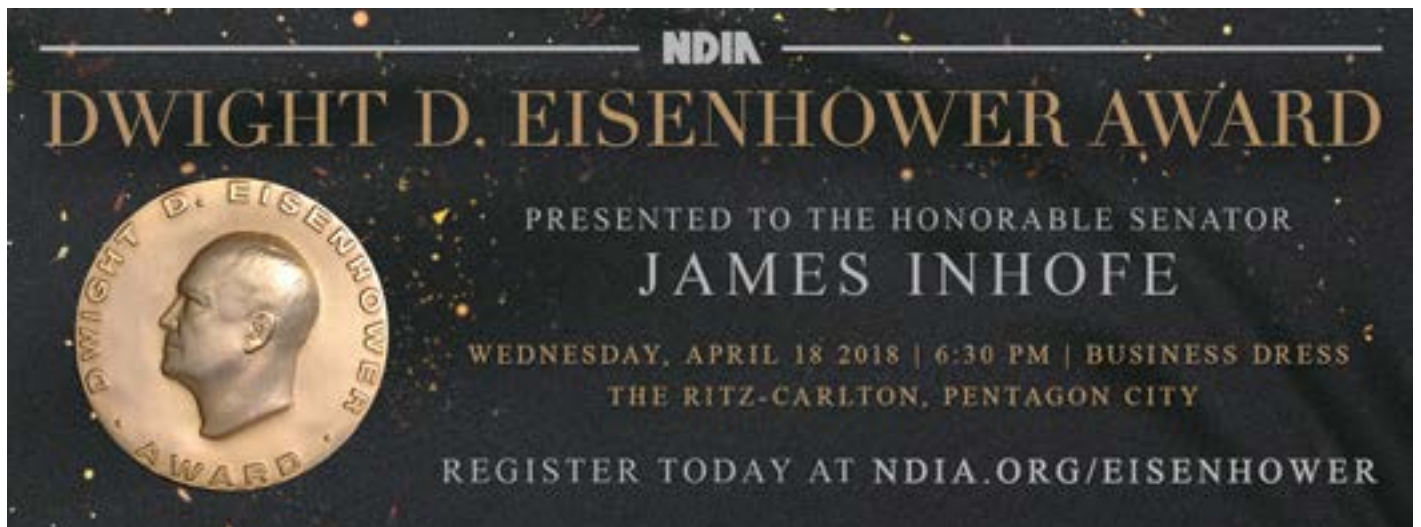
### John Plaga

Aerospace Engineer, 711 HPW/HPIF

10:10 – 10:40 am

## NETWORKING BREAK

MILLER/VON STERNBERG FOYER





10:40 – 11:50 am

### **SESSION 3: PERSONALIZED ASSESSMENT, EDUCATION & TRAINING (PAE&T)**

SINGLETON/MILLER BALLROOM

#### **Virtual and Augmented Reality for Training and Cognitive Aides**

**Peggy Wu**

United Technologies Research Center

#### **Developing a Predictive Model of Army Marksmanship Performance**

**Dr. Gregory Goodwin**

U.S. Army Research Laboratory

#### **Man vs. Machine: Comparing Traditional versus Big Data and Machine Learning to Predict Expertise**

**Dr. Krista Ratwani**

Aptima, Inc.

#### **Perceptual–Cognitive and Physiological Assessment of Training Effectiveness**

**Amy Diderksen**

Rockwell Collins Simulation & Training Solutions

11:50 am – 12:45 pm

### **NETWORKING LUNCH**

VON STERNBERG/HAZEL BALLROOM

12:45 – 1:55 pm

### **SESSION 4: SYSTEMS INTERFACE AND COGNITIVE PROCESSING (SI&CP)**

SINGLETON/MILLER BALLROOM

#### **Towards Natural Dialogue with Robotics: ARL Bot Language**

**Dr. Matthew Marge**

U.S. Army Research Laboratory

#### **VR Technologies for Next–Generation Battle Management Command and Control**

**Dr. Erin Cherry**

Northrop Grumman Mission Systems

#### **Developing an Autonomous Task Manager for Intelligence, Surveillance, and Reconnaissance Human–Machine Teams**

**Jennifer Lopez**

711 HPW/RHXM

#### **Seeing into the Black Box: Using Eye Tracking in User–Driven Workflows to Better Understand Decision–making Processes**

**Dr. Kristin Divis**

Sandia National Laboratories

1:55 – 3:00 pm

## **SESSION 5: HUMAN INFORMATION, INTERPRETATION AND INFLUENCE (HI3)**

SINGLETON/MILLER BALLROOM

### **Panel: Operations in the Information Environment**

**Laurie Fenstermacher**

Principal Research Lead Open Source Analysis, 711 HPW/RHXM

*Moderator*

**Dr. Rebecca Goolsby**

Program Officer, Office of Naval Research

**Eric Wallace**

Chief, Concepts & Requirements, Joint Information Operations Warfare Center/Enterprise Operations Division

3:00 – 3:15 pm

## **REFRESHMENT BREAK**

MILLER/VON STERNBERG FOYER

3:15 – 4:45 pm

## **ROUNDTABLE DISCUSSIONS**

SINGLETON/MILLER BALLROOM

### **Protection, Sustainment and Warfighter Performance (PS&WP)**

### **Human Systems Metrics (HSM)**

### **Personalized Assessment, Education & Training (PAE&T)**

### **Systems Interface and Cognitive Processing (SI&CP)**

### **Human Information, Interpretation and Influence (HI3)**

4:45 – 5:00 pm

## **CLOSING REMARKS**

SINGLETON/MILLER BALLROOM

**Dr. Jared Freeman**

Human Systems Division Chair

Chief Scientist, Aptima, Inc.

5:00 pm

## **CONFERENCE ADJOURNS**

The NDIA has a policy of strict compliance with federal and state antitrust laws. The antitrust laws prohibit competitors from engaging in actions that could result in an unreasonable restraint of trade. Consequently, NDIA members must avoid discussing certain topics when they are together at formal association membership, board, committee, and other meetings and in informal contacts with other industry members: prices, fees, rates, profit margins, or other terms or conditions of sale (including allowances, credit terms, and warranties); allocation of markets or customers or division of territories; or refusals to deal with or boycotts of suppliers, customers or other third parties, or topics that may lead participants not to deal with a particular supplier, customer or third party.

# BIOGRAPHIES



## DR. BRIAN PIERCE

*Office Director, Information Innovation Office*  
 Defense Advanced Research Projects Agency (DARPA)

Dr. Brian Pierce joined DARPA in 2014 and serves as the director of the DARPA Information Innovation Office (I2O).

Dr. Pierce has 30 years of experience developing advanced technologies in the aerospace/defense industry. Prior to joining DARPA, he was a technical

director in Space and Airborne Systems at the Raytheon Company. During his first tour at DARPA, he served as the deputy office director of the Strategic Technology Office from 2005 to 2010. From 2002 to 2005, he was executive director of the Electronics Division at Rockwell Scientific Company in Thousand Oaks, California. From 1983 to 2002, he held various engineering positions at Hughes Aircraft

Company and Raytheon in southern California.

Dr. Pierce earned a Doctor of Philosophy degree in chemistry, a Master of Science degree in chemistry and a Bachelor of Science degree in chemistry and mathematics from the University of California at Riverside. He has more than 20 U.S. patents.



## DR. PAUL ZABLOCKY

*Division Director, Complex Hybrid Warfare Sciences Division, Expeditionary Maneuver Warfare and Combating Terrorism Science and Technology Department*  
 Office of Naval Research

Dr. Paul G. Zablocky currently serves at the office of Naval Research (ONR) as the Division Director of the Complex Hybrid Warfare Sciences Division (Code 301) within the Expeditionary Maneuver Warfare and Combating Terrorism Science and Technology Department. He is responsible for leading and directing an integrated portfolio of basic research, applied research, and advance technology development science and technology (S&T) efforts in support of the United States Marine Corps (USMC) and Naval Special Warfare.

Dr. Zablocky served as the Director of the US Army Communications Electronics Research Development and Engineering Center (CERDEC) Intelligence and Information Warfare Directorate (I2WD) from April 2015 to April 2016 and as

the Director of Space and Terrestrial Communications Directorate (S&TCD) from June 2013 to April 2015. In both organizations he provided leadership and guidance to approximately 800 government civilians and contractors who executed S&T programs, developed prototypes, and provided systems engineering support for Army programs in the areas of communications, Electronic Warfare (EW), and intelligence. Prior to that Dr. Zablocky served as the Senior Research Scientist for EW Technology (ST) at CERDEC I2WD where he was responsible for developing, planning, coordinating, and executing the Army's EW S&T portfolio. Paul started his government career in 2005 designing and developing prototype EW systems that transitioned to Army Programs of Record. He has over 30 years of research and development experience in Electrical Engineering working in both defense and

commercial industries. He served in the Navy from 1985 to 1989 achieving the rank of Lieutenant.

Dr. Zablocky received a Professional Master of Business Administration from the University of Massachusetts, a Doctor of Philosophy Electrical Engineering from the University of Pennsylvania, a Master of Science Electrical Engineering from the University of Central Florida and Bachelors of Science in Electrical Engineering and Physics from Fairleigh Dickinson University.

He is married to Barbara. Their daughter, Amanda, graduated from the Naval Academy and is now a pilot in Helicopter Sea Combat Squadron Eight assigned to the USS Nimitz. Their son, Daniel, is a recent graduate of The United States Military Academy and is in the Army Basic Officer Leader Course at Fort Benning, GA.

# POSTER & DEMONSTRATION SESSION

## **Mixed Reality Environment for the Study of Human-UAV Interaction**

**Dr. Zhuming Ai**  
Naval Research Lab

## **Dynamic Robot Operator Interface (DROID) Assessment, Guidance, and Engineering Tool (AGENT)**

**Lisa Baraniceki**  
AnthroTronix, Inc.

## **Preliminary Job Task Analysis of a Cyber Kill Chain and its Application to Cyber Defense**

**Doron Becker**  
Department of Homeland Security

**Marianne Paulsen**  
Department of Homeland Security

## **The Effect of a Powered Lower-Body Exoskeleton on Physical and Cognitive Warfighter Performance**

**Blake Bequette**  
Massachusetts Institute of Technology

## **Facial Emotional Expression Recognition Study (FEERS)**

**Gregory Black**  
Electric Boat Corporation

## **Human Machine Interaction Interface Display Design: A Perceptual Approach in Hilbert Space**

**Dr. Mustafa Canan**  
U.S. Army Research Laboratory

## **Impact of Torso-borne Load Redistribution on Soldier Biomechanics, Metabolics, and Comfort**

**Marina Carboni**  
Natick Soldier Research Development & Engineering Center

## **Initial Evaluation of Adaptive Language Learning Technology**

**Dr. Alan Carlin**  
Aptima, Inc.

## **Adaptive Automation in Sensemaking**

**Dr. Daniel Cassenti**  
U.S. Army Research Laboratory

## **Interactive Next-generation Testbed Environment for Retention and Assessment of Computer-based Training (INTERACT)**

**Ian Coffman**  
AnthroTronix, Inc.

## **Perceptual-Cognitive & Physiological Assessment of Training Effectiveness**

**Amy Dideriksen**  
Rockwell Collins Simulation & Training Solutions

## **Cognitive Operations Gear Pack (COG Pack™): A Capability for Realizing Real-Time Cognitive Performance Assessment in Air Force Operations**

**Allen Dukes**  
711 HPW/RHCPA

## **Confined Spaces Monitoring System**

**Kevin Durkee**  
Aptima, Inc.

## **Wearable Tactile Display for Hands-Free Covert Communications with Semi-Autonomous Systems**

**Dr. Linda Elliott**  
U.S. Army Research Laboratory

**Topside - Unmanned System Command and Control for Mission Planning, Piloting, and Analysis**

**Thomas Fulton**

Naval Undersea Warfare Center Division Newport

**Robust Personalization of Training and Assessment through the Generalized Intelligent Framework for Tutoring (GIFT)**

**Dr. Benjamin Goldberg**

U.S. Army Research Laboratory, HRED

**Characterizing Tactical Decisions through Exploratory Multivariate Analysis**

**Dr. Chris Hale**

Georgia Tech Research Institute

**Analyzing Expert Marksmanship from the Human Centered Perspective**

**Dr. Leif Hasselquist**

Natick Soldier Research Development & Engineering Center

**Using Artificially Intelligent Computer Based Training for more Sophisticated Learning Needs**

**Cenetra Johnson**

The George Washington University

**Laser Eye Protection: Balancing Protection and Performance**

**Dr. Julie Lovell**

711th HPW / Bioeffects Division, Optical Radiation Branch

**Ambient Activity Monitors (AAMs) to Display Hidden Computer System Information**

**Dr. Jamie Lukos**

SPAWAR Systems Center Pacific

**Training a Traditional High Risk Organization in Resilience Engineering**

**Dr. Christopher Nemeth**

Applied Research Associates, Inc.

**Personnel Optimization for Human-Machine Teaming in the Maritime Domain**

**LCDR Jacob Norris, USN**

SPAWAR Systems Center Pacific

**Intelligent Humans Systems Integration – Could we have helped prevent the McCain and Fitzgerald Collisions at sea?**

**Dr. Nandakumar Ramanujam**

ASSETT, Inc.

**Enhancing Mission Performance: Design Heuristics for Augmented Reality**

**Kimberly Ryan**

The Charles Stark Draper Laboratory, Inc.

**Using Work Models to Derive Assessment Measures for Cyber Protection Teams**

**Dr. Stoney Trent**

U.S. Army War College

**Measuring Coordination in Multi-Agent Reinforcement Learning**

**Michael Walton**

SPAWAR Systems Center Pacific

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## BALL AEROSPACE

### PREMIER SPONSOR

Ball Aerospace pioneers discoveries that enable our customers to perform beyond expectation and protect what matters most. We create innovative space solutions, enable more accurate weather forecasts, drive insightful observations of our planet, deliver actionable data and intelligence, and ensure those who defend our freedom go forward bravely and return home safely.

Ball Aerospace located near Wright-Patterson Air Force Base, supports the missions of the Air Force Research Laboratory (AFRL), the National Space Intelligence Center (NASIC), and several Air Force Life Cycle Management Center (AFLCMC) Program Executive Officer's programs. Ball is a prime contractor providing research and development in partnership with the Airman Systems Directorate (RH) and AFRL to discover, develop, and integrate affordable technologies to improve Warfighter performance, exploit autonomous systems and enhance Airman-machine teaming in Air, Space and Cyberspace. In collaboration with RH, Ball provides the Special Forces and Intelligence Communities with innovative,

human-centered solutions to complex customer challenges and creates new warfighting capabilities. We work with RH and AFRL across multiple research programs to ensure that future Airmen – through training and technology - will work effectively and responsively with autonomous teammates in highly-contested, dynamic environments leveraging integrated, multi-domain operations.

Ball's innovative technology can be found anywhere, from right here on Earth to millions of miles in deep space. An industry leader with proven quality and performance, Ball develops spacecraft and space-based instruments, tactical defense products and geospatial information solutions. Be it space exploration, Earth and space science, commercial remote sensing or national security and intelligence, we deliver end-to-end capabilities for mission success.

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Our capabilities and solutions include:

- Training and publications development
- Operator and maintenance training solutions
- Virtualized avionics and procedural training
- Developmental simulation framework Helmet Mounted Displays (HMDs) and soldier display systems
- Visual system solutions including: image generation, displays, projection systems and correlated sensors
- Tactical Air Combat Maneuver Instrumentation systems
- Live and virtual, augmented and mixed reality training applications





## **MARK YOUR CALENDAR!**

### **ARMY SCIENCE & TECHNOLOGY SYMPOSIUM AND SHOWCASE**

**Emerging technologies for the future force**

August 21–23, 2018

Washington Convention Center, Washington DC

[NDIA.org/Army-Science](http://NDIA.org/Army-Science)



## **MARK YOUR CALENDAR!**

### **2018 GROUND ROBOTICS CAPABILITIES CONFERENCE & EXHIBITION**

April 10 – 11, 2018

Waterford at Springfield, Springfield, VA

[NDIA.org/Robotics](http://NDIA.org/Robotics)

