

Next Generation Platforms and the Evolving Role of the Human

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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 than 100 years, NDIA and its predecessor organizations have been at the heart of the mission by dedicating their time, expertise, and energy to ensuring our warfighters have the best training, equipment, and support. For more information, visit NDIA.org

#### **Get Involved**

Learn more about NDIA's Divisions and how to join one at NDIA.org/Divisions



## **Human Systems**

Who We Are NDIA's Human Systems 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 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.



## JOIN THE CONVERSATION









Stuart Michelson, PhD

**Deputy Chair** 



## Welcome to the Human Systems Conference

On behalf of the NDIA Human Systems Division, we welcome you to the Human Systems Conference!

The mission of the NDIA Human Systems Division is to advocate for the expansion of research and development in areas related to the human as a system, particularly in contexts in which the human must be integrated into a "system of systems." This conference provides representatives from Government, industry, and academia the opportunity to exchange technical information, learn about ongoing HSI-related research and development efforts, discuss advocacy efforts, and advance human performance in air, land, sea, space, and cyberspace.

The theme for the 2024 conference is "Next Generation" Platforms and the Evolving Role of the Human." The role of the human within a system evolves as technology progresses. The ever-changing dynamic between humans and machines requires the involvement of the end-user across the entire product lifecycle, including concept development, implementation, delivery, and maintenance. This year, we will hear from several speakers about ongoing efforts to integrate consideration of the human in the technology-development process. Additionally, advances in policy to incorporate Human Systems Integration (HSI) planning in defense acquisition (such as the publication of DOD Instruction 5000.95) require supportive and informative discourse about how HSI can maximize the efficacy of DOD platforms across their lifecycles. This year, the conference will feature spoken presentations and panel discussions related to

the implementation of HSI within defense platforms. We will also feature a briefing on a collaborative effort between the Division and the DoD's Joint HSI Working Group to expand an "HSI Practitioners' Frequently Asked Questions" list hosted on the DAU website. This list offers HSI guidance for designers and members of the acquisition community. Finally, we will hear from industry, Government, and academic partners about ongoing HSI work and how the evolving role of humans leads to new dynamics between warfighters and the systems they use. Some of the topics we can look forward to hearing about include Trust in Artificial Intelligence, Human-Machine Interfaces/Interaction, Virtual Reality Training, and Physiological Monitoring. Throughout the conference agenda, we have provided ample time for in-person networking.

Whether you submitted an abstract, served as a featured speaker or panelist, or supported conference-planning activities, we appreciate your contribution to the 2024 conference program. As we look toward the division's activities in 2025, we will continue our efforts to provide a space for advocacy and the exchange of information regarding the state-of-the-art in human systems integration. Please reach out to Stuart Michelson if you are interested in supporting the division.

We, the members of the Division, our speakers, panelists, presenters, and the Human Systems community, hope you find this year's conference to be a stimulating and worthwhile experience!

Lillian Asiala, PhD

Chair, Human Systems Division

Stuart Michelson, PhD

Deputy Chair, Human Systems Division

## Schedule at a Glance

Thursday, March 21

**Keynote Address** 

8:45 - 9:30 am

**Advocacy & Metrics Panel** 

10:45 - 11:45 am

**Plenary Presentation on HSI Challenges** 

1:00 - 1:45 pm

**HSI Accessibility Panel** 

4:00 - 4:50 pm

Friday, March 22

**COI Overview** 

8:40- - 9:10 am

**PAE&T Session COI Brief** 

9:10 - 9:40 am

**PS&WP Session COI Brief** 

12:10 - 12:40 pm

SI&CP Human Systems COI Brief

2:10 - 2:40 pm

## **Event Information**

### Location

George Mason University Arlington Campus 3351 Fairfax Dr. Arlington, VA 22201

### WiFi

- 1) Connect to MASON wireless network using your device.
- 2) Go to itservice.gmu.edu The self-registration portal will open.
- 3) Create an account to get online.

## **Attire**

Civilian: Business

Military: Uniform of the Day

## Survey and Participant List

You will receive via email a survey and list of participants (name and organization) after the conference. Please complete the survey to make our event even more successful in the future.

### **Event Contact**

### Jenica Seguine

Meeting Planner (703) 247-2561 jseguine@NDIA.org

### Tommy Kienzle

Coordinator, Divisions (703) 247-2575 tkienzle@NDIA.org

## 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.

## **Event Code** of Conduct

NDIA's Event Code of Conduct applies to all National Defense Industrial Association (NDIA), National Training & Simulation Association (NTSA), Emerging Technologies Institute (ETI), and Women In Defense (WID) meeting-related events, whether in person at public or private facilities, online, or during virtual events. NDIA, NTSA, ETI, and WID are committed to providing a productive and welcoming environment for all participants. Visit NDIA.org/CodeOfConduct to review the full policy.

## **Antitrust** Statement

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.

## Agenda

## Thursday, March 21

7:30 am - 5:00 pm Registration

ART GALLERY

7:30 - 8:30 am Networking Breakfast

MULTIPURPOSE ROOM

8:30 - 8:45 am Welcome and Introductory Remarks

AUDITORIUM

Lillian Asiala, PhD

Chair Human Systems Division, NDIA Cognitive Scientist, Sonalysts, Inc.

8:45 - 9:30 am Keynote Address

AUDITORIUM

**Blaine Summers** 

Director, Joint Simulation Environment, Naval Air Warfare Center Aircraft Division

9:30 - 10:15 am Platform Highlight

**AUDITORIUM** 

Mary Quinn, PhD, PMP

Human Systems Chief Scientist, Leidos

10:15 - 10:45 am Networking Break

MULTIPURPOSE ROOM

10:45 - 11:45 am Advocacy & Metrics Panel

**AUDITORIUM** 

Ben Schwartz

Vice President of Human-Centered Engineering, Monterey Technologies, Inc. Moderator

Joseph Lyons, PhD

Senior Scientist for Human-Machine Teaming, Air Force Research Laboratory

CDR Brennan Cox, USN, PhD

Human Systems Integration Capability Manager, USSOCOM

Edwin Bundy, PhD

Program Manager (GS-15), Irregular Warfare Technical Support Directorate

## Networking Lunch MULITPURPOSE ROOM 11:45 am - 1:00 pm

Plenary Presentation on HSI Challenges 1:00 - 1:45 pm

Chris DeLuca

Director, Specialty Engineering, OUSD(R&E)

JHSIWG CBA Overview 1:45 - 2:30 pm

AUDITORIUM

Napoleon Gaither

Program Analyst, U.S. Army Futures Command, DEVCOM Science & Technology Directorate

Poster/Demo Session and Refreshment Break 2:30 - 3:30 pm

MULTIPURPOSE ROOM



#### HSD Support of the Joint HSI Working Group: HSI Frequently 3:30 - 4:00 pm **Asked Questions**

**AUDITORIUM** 

#### Hank Phillips

Director, LVC Simulation, Soar Technology

#### Scott Kozak

President, NeuroTracker

#### 4:00 - 4:50 pm

## Making HSI Accessible to Everyone - Why It Matters and How We Do It

**AUDITORIUM** 

#### Ana Borja

Human Systems Integration, Human Factors Engineering Technical Warrant Holder, Naval Information Warfare Systems Command

#### Daniel Wallace, PhD

Human Factors Engineering Technical Warrant Holder, Naval Sea Systems Command (NAVSEA) 05W

#### Jim Pharmer, PhD

Chief Scientist, Human Systems Engineering Department, Naval Air Warfare Center Training Systems Division

#### Gordon Gattie, PhD

Human Systems Integration Technical Warrant Holder, Naval Sea Systems Command

#### 4:50 - 5:00 pm

## Closing Remarks

AUDITORIUM

#### Lillian Asiala, PhD

Chair Human Systems Division, NDIA Cognitive Scientist, Sonalysts, Inc.

#### 5:00 - 6:30 pm

## **Networking Reception**

MULTIPURPOSE ROOM

## Friday, March 22

Registration 7:30 am - 3:45 pm

ART GALLERY

**Networking Breakfast** 7:30 - 8:30 am

MULTIPURPOSE ROOM

#### Welcome and Introductory Remarks 8:30 - 8:35 am

**AUDITORIUM** 

Brig Gen Guy Walsh, USAF (Ret) Executive Vice President, NDIA

## 8:35 - 8:40 am Introduction to Day's Proceedings

**AUDITORIUM** 

Stuart Michelson, PhD

Deputy Chair Human Systems Division, NDIA

Senior Research Scientist, Georgia Tech Research Institute

#### 8:40 - 9:10 am **COI Overview**

AUDITORIUM

Gaurav Sharma, PhD

Chief Scientist of the 711th Human Performance Wing, Air Force Research Laboratory,

Wright-Patterson Air Force Base

## Session 1: Personalized Assessment, Education, and Training (PAE&T)

**AUDITORIUM** 

Moderator: Hank Phillips, Director, LVC Simulation, Soar Technology

## 9:10 - 9:40 am PAE&T Human Systems COI Brief

AUDITORIUM

Elizabeth Uhl, PhD

PAE&T Subarea Lead, Human Systems COI

Senior Research Psychologist, U.S. Army Research Institute

## 9:40 - 10:00 am Enhancing Pilot Selection: Assessing a New Way to Measure

Spatial Orientation in the Test of Basic Aviation Skills

AUDITORIUM

Cadet Adedapo Adeboyejo, USAF

2024 Class President, United States Air Force Academy

Cadet Ryan Trevino, USAF

Cadet, United States Air Force Academy

### 10:00 - 10:30 am Networking Break

MULTIPURPOSE ROOM

## 10:30 - 10:50 am Algorithmic Scenario Generations for

Robust Human-Machine Interaction

AUDITORIUM

Stefanos Nikolaidis, PhD

Professor, University of Southern California

### 10:50 - 11:10 am SAE G-45 HSI Committee Process Standards at HSI

and Domain Levels

AUDITORIUM

Eric Stohr

Senior Human Factors System Engineer, Basic Commerce & Industries

### 11:10 am - 12:10 pm Networking Lunch

MULTIPURPOSE ROOM

## Session 2: Protection, Sustainment, and Warfighter Performance (PS&WP)

Moderator: Brad Chedister, Chief Technology and Innovation Officer, DEFENSEWERX

PS&WP Human Systems COI Brief 12:10 - 12:40 pm

**AUDITORIUM** 

Logan Williams, PhD

PS&WP Government Co-Chair, Human Systems Division, NDIA

Lead, Human Performance Medical Product Area, Air Force Research Laboratory

Understanding the Implications of Cyber-Relevant Cognitive 12:40 - 1:00 pm

Vulnerabilities and Their Impacts on Protecting Space and

Flight Systems from Cyber Attacks

AUDITORIUM

Lori Coombs

Senior Principal Technical Manager, NASA

A Scalable Architecture for Integration of Flexible Hybrid 1:00 - 1:20 pm

Electronics Into Smart Textiles to Support Warfighter Monitoring,

Communication, and Performance

**AUDITORIUM** 

Jeffrey Bergman

Engineering Manager, Nextflex

**Exoskeletons: Practical Defense Applications** 1:20 - 1:40 pm

for Wearable Robotics

AUDITORIUM

Tim Swift. PhD

Founder & CEO, Roam Robotics

**Networking Break** 1:40 - 2:10 pm

MULTIPURPOSE ROOM



## WOMEN IN DEFENSE **2024 National Conference**

September 24, 2024 | Arlington, VA WomenInDefense.net



## Session 3: System Interfaces & Cognitive Processes (SI&CP)

**AUDITORIUM** 

Moderator: Mary Quinn, PhD, PMP, Human Systems Chief Scientist, Leidos

SI&CP Human Systems COI Brief 2:10 - 2:40 pm

AUDITORIUM

Mark Draper, PhD

SI&CP Government Co-Chair, Human Systems Division, NDIA

Lead Adaptive Warfighter Interfaces Core Technical Competency, Air Force Research Laboratory

**Understanding Trust in Next-Generation Human** 2:40 - 3:00 pm

Systems Integration

AUDITORIUM

Janine Mator

Behavior Research Scientist, Leidos

Improving Individual Trust in AI Systems by 3:00 - 3:20 pm

**Exploiting Pre-Cooked Methods** 

AUDITORIUM

Stephen Gordon, PhD

Operations Manager, DCS Corporation

Creating a Cognitive Load Tool (COLT) for 3:20 - 3:40 pm

**Neuroadaptive Interfaces** 

**AUDITORIUM** 

Kyle Hickerson

Human Factors Intern, Leidos

Ethan Irby

Junior Data Scientist, Leidos

3:40 - 3:45 pm Closing Remarks

AUDITORIUM

Eric Sikorski

Lead Human Centered Engineer - Group Lead, MITRE

## 2024 MISSILE DEFENSE CONFERENCE and Ronald Reagan Missile Defense Award Ceremony REGISTER TODAY! April 16 – 17, 2024 | Washington, DC | NDIA.org/MDC



## TRAINING IN A DIGITAL WORLD

This year's theme, *Training in a Digital World*, highlights the Department of the Air Force's drive to upskill personnel through digital training. The goal of the M&S Summit is to gather Air Force and Space Force M&S experts to learn about new M&S initiatives and techniques, network across military services and with industry experts, and to hear our technological leaders' perspectives on how M&S can transition more training from the real world to digital.

The 2024 DAF M&S Summit will provide a forum for shared information, ideas, and connection of M&S professionals across the DoD, industry, academia, and international partners. The three-day summit agenda includes:

- Eminent Keynote Speakers from Military, Government, and Industry Leaders
- Distinguished Panel Discussions and Q&A sessions
- Track Session Presentation Focus Areas

- · VIP Tour for Distinguished Visitors
- M&S Industry Exhibition Hall
- · Classified M&S Briefing Sessions
- M&S Tool Overview



## Biographies



### **Blaine Summers**

Director, Joint Simulation Environment

Mr. Blaine Summers serves as the Director for the Joint Simulation Environment (JSE).

He leads a large cross-discipline team in the development of a high fidelity, Governmentowned digital battlespace. JSE currently enables F-35 Initial Operational Test and Evaluation and provides world-class training for F-35 Weapon Schools and operational squadrons. Blaine represents Navy equities in joint USN-USAF leadership forums, shaping multi-billion dollar investments in support of warfighter needs.

Blaine began his Federal career supporting numerous DoD and Intelligence Community partners, leading teams in the rapid development and deployment of communication systems to tens of thousands of worldwide users.

Blaine forged partnerships across the DoD, founding a Cross-Service Working Group with members from all military branches, enhancing collaboration and aligning DoD

investments in mobile technologies. Blaine's efforts resulted in a multi-platform flight clearance to enable rapid fielding of modified commercial technology to over 40 Naval aviation platforms. His accomplishments include delivering 715 mission planning and tactical execution assets to the F/A-18 community.

Blaine authored the Acquisition Strategy for an ACAT II unmanned systems program of record. His aggressive tailoring approach provided a strong foundation for program execution, ultimately securing \$225M in program funding across the FYDP.

Blaine then served as the Future Capabilities Lead in PMA-299, Multi-Mission Helicopters. He was responsible for warfare analysis, requirements identification, resource planning, and future capability development for multiple ACAT IC programs. Blaine served a key leadership role in negotiating a \$1.1B Capability Assurance Program with the Royal Australian Navy, establishing an international partnership to ensure continued investment in MH-60 tactical superiority.

Blaine most recently served as NAVAIR's Enterprise Deployment Lead for Systems Engineering Transformation. He was responsible for implementing digital engineering strategies across several Major Defense Acquisition Programs, leading an effort to transform Defense acquisition culture and dramatically increase the speed with which weapons systems are delivered to the fleet.

Blaine's education includes a Bachelor of Science degree in Computer Engineering from the University of Maryland Baltimore County, a Master of Science degree in Engineering Management from the Florida Institute of Technology, and a Graduate Certificate in Cyber Warfare from the Naval Postgraduate School. He is Defense Acquisition University Level 3 certified in Program Management and Engineering. Blaine is a graduate from the Executive Leadership Program and NAVAIR's Leadership Development Program.



#### Chris DeLuca

Director, Specialty Engineering, OUSD(R&E)

Mr. DeLuca has over 39 years of experience in DOD as a U.S. Army Colonel (R) and DoD GS-15/

NH-IV Civilian, Level III qualified in Program Management, Systems Engineering and Test and Evaluation. His current assignment includes the following Specialty Engineering disciplines: Reliability & Maintainability; Manufacturing & Quality; Human Systems Integration; System Safety; and, Value

Engineering. As a U.S. Army commissioned officer, he was in combat arms and acquisition, holding multiple command, leadership and staff positions including unit command, Army Program Acquisition Management Charters for Major (MDAP) and Non-Major (including rapid equipping and provisioning) Defense Acquisition Programs, and served on the Army Staff. As a DOD Civilian, Mr. DeLuca served as a Deputy Program Manager for a Major Automated Information System (MAIS)/

Defense Business System (DBS), directed systems engineering and developmental test and evaluation analysis teams at OSD for Space, Land Warfare and C4ISR MDAPs, MAIS and DBS programs, and served as the USD(R&E) Member of the Secretary of Defense Electromagnetic Spectrum Operations Cross Functional Team before his current assignment as Director, Specialty Engineering.

### CDR Brennan Cox, USN, PhD



### Human Systems Integration Capability Manager, USSOCOM

Commander Brennan D. Cox is the Human Systems Integration (HSI) Capability Manager for Special

Operations Forces, Acquisitions, Technology, and Logistics (AT&L), Science and Technology (S&T), at Headquarters, United States Special Operations Command. Here, he manages and supports biotechnology,

human performance, and future-oriented S&T activities. Cox previously served as Deputy Director of the Naval Aerospace Medical Research Laboratory at Naval Aerospace Medical Research Laboratory at Naval Medical Research Unit Dayton, Assistant Professor of Operations Research at the Naval Postgraduate School, Head of Research Operations at the Naval Health Research Center, and Division Officer

of Operational Psychology at the Naval Aerospace Medical Institute. Throughout his career, he has engaged in research, consultation, and applied practice of HSI, with expertise in the personnel and training domains. He holds a PhD in Industrial and Organizational Psychology and an Executive Master of Business Administration, along with several defense-oriented education certificates.



## Joseph Lyons, PhD

### Senior Scientist for Human-Machine Teaming, Air Force Research Laboratory

Joseph B. Lyons, a member of the scientific and professional cadre of senior executives,

is the Senior Scientist for Human-Machine Teaming, 711th Human Performance Wing, Human Effectiveness Directorate, Air Force Research Laboratory, Wright-Patterson AFB, Ohio. He serves as the principal scientific

authority and independent researcher in the research, development, adaptation, and application of Human-Machine Teaming.

Dr. Lyons began his career with the Air Force in 2005 in the Human Effectiveness Directorate, Wright-Patterson AFB, Ohio. Dr. Lyons has served as a thought leader for the DoD in the areas of trust in autonomy and Human-Machine Teaming. Dr. Lyons has published over 100 technical publications including 64 journal articles in outlets focused on human factors, human-machine

interaction, applied psychology, robotics, and organizational behavior. Dr. Lyons also served as Co-Editor for the 2020 book, Trust in Human-Robot Interaction. Dr. Lyons is an AFRL Fellow, a Fellow of the American Psychological Association, and a Fellow of the Society for Military Psychologists. Prior to assuming his current position, Dr. Lyons served as a Program Officer for the Air Force Office of Scientific Research and was a Principal Research Psychologist within the Human Effectiveness Directorate.



## Edwin Bundy, PhD

#### Program Manager (GS-15), Irregular Warfare Technical Support Directorate

Dr. Bundy manages the Explosive Ordnance Disposal/ **Explosives Operations** (EOD/EXO) Subgroup

for the Irregular Warfare Technical Support Directorate (IWTSD) within the U.S. Department of Defense. This directorate sits under the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict (ASD SO/LIC).

Dr. Bundy's current mission area focuses on developing advanced technologies for military Explosive Ordnance Disposal technicians and other personnel conducting high-risk explosives-related operations in irregular warfare and post-conflict environments. Dr. Bundy's expertise in the EOD, C-IED, UXO, and ERW arenas has been honed over a 40-year career spanning operational and research and development positions.

Dr. Bundy is an advisor to the International Association of Bomb Technicians and Investigators (IABTI) and U.S. Bomb Technician Association (USBTA), and a federal liaison to the National Bomb Squad Commander's Advisory Board (NBSCAB). Dr. Bundy is a Certified International Post Blast Investigator (CIPBI), former U.S. Army Master Explosive Ordnance Disposal (EOD) technician and holds PhDs. in both Education and Forensic Science.

## **Sponsor Descriptions**

## **BAE SYSTEMS**

#### **PREMIER**

BAE Systems, Inc. and its 35,000 people are part of a global defense, aerospace and security company with 89,600 employees worldwide in more than 40 countries. We deliver products and services for air, land, sea and space, as well as advanced electronics, security, information technology solutions, and customer support and services. Our dedication shows in everything we create and deliver—from advanced electronic systems to cyber operations and intelligence analysis, from combat vehicles to naval weapons, and from ship maintenance and modernization to vehicle upgrades and services. We push the limits of possibility to provide a critical advantage to our customers where it counts.



#### **REGISTRATION & LANYARD**

Monterey Technologies, Inc. is a human engineering and software services company focused on applying human-centered systems engineering to the design and development of complex, critical systems. Our unique and valuable expertise in human factors engineering, human systems integration, and mission planning software development, testing, and integration enables warfighters and end-users to make better decisions faster. Spanning the continuum of Research, Analysis, Design, and Development, our human-centered approach to problem-solving ensures that we understand the human dimension before recommending technology solutions.



#### Digital Adoption Platform

### **NETWORKING LUNCH**

WalkMe (WKME) pioneered the world's leading Digital Adoption Platform (DAP) so companies can effectively navigate the constant change brought on by technology. With WalkMe, organizations drive enterprise productivity and reduce risk by ensuring consistent, responsible, and efficient adoption of software and the workflows it powers. Our Al-driven platform sits on top of an organization's tech stack, identifies where people experience friction, and delivers the personalized guidance and automation needed to get the job done, right in the flow of work. Customers like IBM, Nestle, ThermoFisher Scientific, and the U.S. Dept. of Defense trust WalkMe to create the people-centric experiences required to boost the effectiveness of their workflows and maximize software ROI.



#### **NETWORKING RECEPTION**

Leidos is a Fortune 500® innovation company rapidly addressing the world's most vexing challenges in national security and health. The company's global workforce of 47,000 collaborates to create smarter technology solutions for customers in heavily regulated industries. Headquartered in Reston, Virginia, Leidos reported annual revenues of approximately \$15.4 billion for the fiscal year ended December 29, 2023. For more information, visit www.leidos.com.



#### **SMALL BUSINESS ELITE**

KPERFORM™ is a Brain Health & Longevity, Experiential & Exponential Technologies Company, which has introduced a new performance category integrating BRAINBODYVOICE™ (BBV) Systems for Operational Readiness. In simple terms, BBV Systems upgrades the human operating system by integrating the vocal process and is held to the highest thresholds and integrity of special operations warfighter performance, the most elite in human performance of our modern times. KPERFORM™ concentrates on human performance optimization, injury prevention and early disease intervention [HPOIPeDI] utilizing BBV Systems-based algorithms for the benefit of all, agnostic of age, gender, fitness level and belief systems.

## **Poster Session**

## Thursday, March 21

2:30 - 3:30 pm

**Analyzing Variability in Decision Making** in Complex Systems: A Case Study

Erica Barhorst-Cates, PhD Monterey Technologies, Inc.

**Initiative in Dyadic Bomb Defusal Task Using Granger Causality Methods** 

Kevin Kina **DCS** Corporation

**Physiological and Behavioral Synchronization** in Dyads Performing Complex Tasks

Stephen Gordon, PhD DCS Corporation

The Role of the Vocal Process in Human Performance **Optimization and Warfighter Operational Readiness** 

Veera Asher, PhD **KPERFORM** 

Using Emulation to Accelerate the **Development of Wearable Machines** 

Josh Caputo, PhD Humotech

**Shaping the Future of Personalized Assessments: The Virtual Reality Revolution** 

Tarcan Kiper Neo Auvra

Simulation of Laser Dazzle and Laser Eye **Protection Effects in Virtual Reality** 

Joseph Arizpe, PhD SAIC

Jake McKenna SAIC

Development and Evaluation of an AI/ML Engine that Rapidly Translates Data into Actionable Intelligence

Claire Hughes Design Interactive

**Repairing Trust Within AI Teaming** 

Cadet Benjamin Tat, USAF United States Air Force Academy

Applying the Theory of Graceful Extensibility to the Design and Development of Autonomy

Alex Morison, PhD Mile Two

Cognitive Augmentation at the 2040 Horizon: Industry's Take from the NATO NIAG SG-278 Study

Sylvain Bruni Aptima

**Human Centered Approach to Designing AI Teammates** 

Layla Akilan Mile Two

Sensor Interoperability for Cross Domain Decision Making

Nick Roder Tangram Flex

Neurophysiological-Auditory "Listen Receipts" for Enhanced Warfighter Communication

Christopher Smalt, PhD MIT Lincoln Laboratory

MBSE & UX: Improving Human Experience and Performance in Complex Systems

Laurvn Rodv Monterey Technologies, Inc.

Advanced Data Processing and the **Evolving Role of the Warfighter** 

Alec Leeseberg Velocity Explorations

# NDIN Leading the Way in Engagement, Networking, and National Defense

Plan Ahead for Success | 2024 Featured Meetings, Conferences, and Events



Dwight D. Eisenhower Award Dinner

April 3, 2024 | Arlington, VA



**MODSIM World 2024** 

May 20 - 22, 2024 | Norfolk, VA



Women In Defense 2024 National Conference

September 24, 2024 | Arlington, VA



2024 Missile Defense Conference

April 16 - 17, 2024\* | Washington, DC



Training & Simulation Industry Symposium (TSIS) 2024

June 12 - 13, 2024 | Orlando, FL



2024 Future Force Capabilities Conference & Exhibition

September 24 – 27, 2024\*\* (Distro D) | Virginia Beach, VA



DLA Supply Chain Alliance Conference & Exhibition

April 23 - 24, 2024 | Columbus, OH



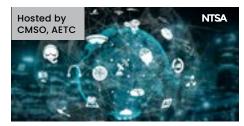
2024 CBRN Defense Conference & Exhibition

June 24 - 26, 2024 | Baltimore, MD



27<sup>th</sup> Annual Systems & Mission Engineering

October 27 - 31, 2024 | Norfolk, VA



Department of the Air Force Modeling & Simulation Summit 2024

May 7 - 9, 2024 | San Antonio, TX



Emerging Technologies for Defense Conference & Exhibition

August 7 - 9, 2024 | Washington, DC



I/ITSEC 2024

December 2 - 6, 2024 | Orlando, FL

\*All Classified | \*\*Partially Classified