



# SIGNATURE EVENT

MONDAY, 29 NOVEMBER 2021 • 1030 – 1200 • ROOM 330ABCD

## Congressional Modeling and Simulation Caucus

SELECT MEMBERS OF CONGRESS WILL PARTICIPATE IN THIS I/ITSEC EVENT

This special event invites everyone attending the conference or exposition to hear from the training and simulation leaders in Congress. It is also a great opportunity for you to interact with Congressional Members on issues of importance to you or your company and to impress upon them your priorities. With defense budgets constantly in flux, this forum provides you an opportunity to advocate for the value of training and simulation in support of national security. Attendees will hear from the leadership of the Modeling and Simulation Congressional Caucus on their perspective of the situation in Washington and have the opportunity to make their case for timely investments in modeling and simulation. With every budget dollar being scrutinized, strong advocacy for training and readiness has never been more important.



### CONGRESSIONAL MODELING AND SIMULATION CAUCUS MEMBERS

**BOBBY SCOTT**  
Caucus Co-Chair  
Virginia 3rd District

**JOHN RUTHERFORD**  
Caucus Co-Chair  
Florida 4th District

**STEPHANIE MURPHY**  
Caucus Co-Chair  
Florida 7th District

**JACK BERGMAN**  
Caucus Co-Chair  
Michigan 1st District

**ROBERT ADERHOLT**  
Alabama 4th District

**GUS BILIRAKIS**  
Florida 12th District

**MO BROOKS**  
Alabama 5th District

**VERN BUCHANAN**  
Florida 16th District

**KEN CALVERT**  
California 42nd District

**JOHN CARTER**  
Texas 31st District

**STEVE COHEN**  
Tennessee 9th District

**MIKE CONAWAY**  
Texas 11th District

**SUSAN DAVIS**  
California 53rd District

**VIRGINIA FOXX**  
North Carolina 5th District

**DOUG LAMBORN**  
Colorado 5th District

**ELAINE LURIA**  
Virginia 2nd District

**SCOTT PETERS**  
California 52nd District

**BILL POSEY**  
Florida 8th District

**MARTHA ROBY**  
Alabama 2nd District

**C.A. DUTCH RUPPERSBERGER**  
Maryland 2nd District

**JOE WILSON**  
South Carolina 2nd District

**ROBERT WITTMAN**  
Virginia 1st District

Session Chair:  
Jennifer McArdle, CMSP, Improbable



## I/ITSEC Fellow 2021



**LTC FREDERICK E. HARTMAN,  
USA (RET.)**



### About the 2021 Fellow

Frederick E. (Fred) Hartman (LTC USA, Retired), graduated from the U. S. Military Academy with a commission in Field Artillery (FA). After a tour as an FA Battery Commander, he was selected for flight training and qualified as an Army aviator in both fixed- and rotary-wing aircraft before flying radio research missions in Vietnam. After receiving an MS in operations research from the Naval Postgraduate School, Fred completed several Army analytic assignments before leaving active duty in 1981. Fred joined CACI, Inc. as an analyst and over the next ten years progressively grew from department manager to executive vice president by building a software development and analysis business group consisting of professionals in operations research, software engineering, software development, logistics engineering, and financial analysis. After a brief stint as the Chief Operating Officer of Cyber Communications Technologies (CCT), Fred was founding partner of Applied Solutions International, Inc., a technology applications and analysis company. Fred became an IDA adjunct to support training and readiness, and subsequently was appointed as an IPA with OSD as a technical advisor to the Army PEO STRI for the Joint Simulation System (JSIMS) program. He had concurrent duties in OSD as the DMSO Enterprise Division Manager. Fred later returned to OSD in the Office of the USD (Personnel and Readiness) to serve as co-lead of the Training Capabilities Analysis of Alternatives, and Director, Training Transformation Joint Assessment and Enabling Capability. He also served as Deputy Director, Readiness and Training (Policy and Programs). Fred has served as a member of the Army Science Board, led a study panel for the National Academy of Sciences, Board on Army Science & Technology; was an Executive Committee Member of the Simulation Interoperability Standards Organization (SISO); and is a past President and Fellow of the Military Operations Research Society (MORS).

### Come See the I/ITSEC Fellow Presentation

Frederick E. (Fred) Hartman has focused his I/ITSEC Fellows paper on his many years of M&S experience in the training and acquisition domains. Due to the great progress made over the years, many persistent M&S technical issues have been resolved and we are within the grasp of providing reliable simulation capabilities across the entire DoD both efficiently and effectively. Current and emerging technologies will assist the M&S community to lower both technical risk and cost of future M&S systems and applications. This paper and presentation are relevant to multiple M&S domains across the spectrum of applications. Fred provides a number of personal examples taken from his vast professional experiences and describes how multiple technological improvements and innovations have resulted in the robust set of M&S capabilities that are available today and provides insights into future opportunities.

Session Chair:  
Roy Scrudder, Applied Research Labs,  
The University of Texas at Austin

## Senior Leader Panel

### MODERATOR

**REAR ADMIRAL JAMES A. ROBB, USN (RET.)**

President, National Training and Simulation Association

### SENIOR LEADERS

**LIEUTENANT GENERAL KEVIN M. IIAMS, USMC**

Commanding General, Training and Education Command

**LIEUTENANT GENERAL ROBERT L. MARION, USA**

Principal Military Deputy to the Assistant Secretary of the Army (Acquisition, Logistics and Technology) and Director, Army Acquisition Corps Army Pentagon, Washington, D.C.

**MAJOR GENERAL ALBERT G. MILLER, USAF**

Director of Training and Readiness, Deputy Chief of Staff for Operations, Headquarters U.S. Air Force

**REAR ADMIRAL PETER GARVIN, USN**

Commander, Naval Education and Training Command

**BRIGADIER GENERAL ILMARS A. LEJINS, LVA**

Latvian Army, Assistant Chief of Staff Joint Force Development



RADM ROBB, USN (RET.)



LTGEN IIAMS, USMC



LTG MARION, USA



MAJ GEN MILLER, USAF



RADM GARVIN, USN



BG LEJINS, LVA

Global forces continue to be challenged by erratic budgets and complex threats. Services continue to prepare for a wide array of missions that range from disaster assistance to the return of great power competition. Additionally, Nations continue to deal with the opportunities and challenges of accelerating technology and cybersecurity. Our Senior Officer panel will address current and future environments within the context of this year's conference theme, *"Innovating and Accelerating Training: Adapting to an Unexpected Future!"* This year's panel will include senior representatives from all U.S. Military Services and NATO. Following opening remarks, the audience will interact with the panel through an on-line chat Q&A feature. All attendees will also have the chance to submit questions in advance. Don't miss the opportunity to hear from national leaders on the way ahead.

Session Chair:

Tara Kilcullen, Training and Readiness Accelerator, NSTXL





# SIGNATURE EVENT

TUESDAY, 30 NOVEMBER 2021 • 1400-1530 • ROOM 330BCD

## U.S. Navy Flag Officer Panel

PERSPECTIVES ON INNOVATING AND ACCELERATING TRAINING IN AN UNEXPECTED FUTURE

### MODERATOR

**REAR ADMIRAL JAMES A. ROBB, USN (RET.)**

President, National Training and Simulation Association

### FLAG OFFICERS

**VICE ADMIRAL JOHN MUSTIN, USN**

Chief of Navy Reserve N095 Office of the Chief of Naval Operations

**REAR ADMIRAL JOHN MEIER, USN**

Commander Naval Air Force Atlantic

**REAR ADMIRAL WILLIAM DILLON, USN**

Commander Naval Air Warfare Center Weapons Division  
Assistant Commander for Test and Evaluation Naval Air Systems Command

**REAR ADMIRAL ROBERT WESTENDORFF, USN**

Chief of Naval Air Training

**REAR ADMIRAL SUSAN BRYER JOYNER, USN**

Director Office of the Chief of Naval Operations Navy Cyber Security Division



RADM ROBB, USN (RET.)



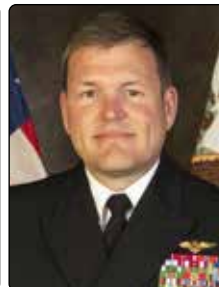
VADM MUSTIN, USN



RADM MEIER, USN



RDML DILLON, USN



RDML WESTENDORF, USN



RDML BRYER JOYNER, USN

*"A larger, more lethal, more ready fleet manned by the world's greatest Sailors is required to maintain our advantage at sea and protect America for years to come." – CNO NAVPLAN January 2021*

These words from the CNO 2021 Tri-service maritime strategy highlights I/ITSEC 2021's theme: *Innovating and Accelerating Training: Adapting to an Unexpected Future!* In this special event Navy Flag Officers will discuss how the U.S. Navy plans to meet this unexpected future while deploying forward to engage our long term competition for the freedom of the seas.

The U.S. Navy looks to ensure our Sailors can outthink and outfight any adversary while remaining the best trained and educated naval force. Deterrence is not merely in raw capability, we must demonstrate the skill and will to win the fight. Making sure that both lethality and readiness are maintained as part of our core training goals is critical to this ability. And we must do this while maintaining a responsible plan for funding and acquiring these capabilities.

The Sailors who serve today are the most well-trained naval force in history and are critical to the Navy's ability to meet its mission. This panel of senior Navy leaders will provide insight from acquisition, research and technology and mission readiness perspectives into how to optimize the human performance of U.S. Navy Sailors so that they can be counted upon to succeed in the face of the unexpected future. Adm. Michael Gilday, Chief of Naval Operations reminds us, "The long-term global maritime contest we face today requires us to adopt competitive and sustainable approaches to deliver the Integrated All-Domain Naval Power America needs to win. The decision and investments we make this decade will set the maritime balance of power for the rest of this century."

Session Chair:  
Robert Wallace, 29 Training System Squadron

TUESDAY, 30 NOVEMBER 2021 • 1600-1730 • ROOM 330BCD

## Modernizing Army Training Mission and Operations Panel

ARMY'S FUTURE TRAINING CAPABILITY IS THE SYNTHETIC TRAINING ENVIRONMENT

### MODERATOR

**JOE B. PARSON JR.**  
Synthetic Training Environment  
CFT

### PANELISTS

**BRIGADIER GENERAL WILLIAM R. GLASER, USA**  
Director, STE CFT

**MAJOR GENERAL DAVID J. FRANCIS, USA (INVITED)**  
Commanding General, U.S. Army  
Aviation Center of Excellence

**BRIGADIER GENERAL LARRY BURRIS, USA**  
Chief of Infantry and Director,  
Soldier Lethality CFT

**BRIGADIER GENERAL CHARLES LOMBARDO, USA**  
Deputy Commanding General,  
U.S. Army Combined Arms  
Center – Training

**BRIGADIER GENERAL JETH B. REY, USA**  
Director, Network Cross-Functional  
Team

**BRIGADIER GENERAL WILLIAM M. BORUFF, USA (INVITED)**  
Joint Program Executive Officer  
Armaments & Ammunition and  
Commanding General, Picatinny  
Arsenal Joint Center of Excellence  
for Lethality



The Army's future training capability is the Synthetic Training Environment (STE). The STE will revolutionize Army training by leveraging the virtual and gaming industries to provide the repetition necessary at the Point of Need to improve Soldier lethality and survivability. The STE will provide the Army and services a usable, realistic, and complex training environment that will allow units to improve readiness through repetition, achieving mastery of warfighting skills from Soldier and squad through the highest Army echelons. The synthetic environment will replicate the full range of operations; weapon systems; unit, civilian, and enemy behaviors; environmental conditions; and Mission Command processes. This capability will address the challenges of training to fight in multiple domains (land, air, maritime, space, and cyberspace). STE will converge current live, virtual, constructive, and gaming environments to enable units to train at home station, institutions, armories, deployed locations, and other points of need. It will adhere to common standards, open architecture, common terrain, and authoritative data, ensuring the ability to more easily integrate new and better technologies over time.

Session Chair:  
David Roberts, Booz Allen  
Hamilton





# SIGNATURE EVENT

TUESDAY, 30 NOVEMBER 2021 • 1600-1730 • ROOM 330EF

## Chief Data Officer Executive Roundtable

### MODERATOR

**SAE SCHATZ, PH.D.**  
Director, ADL Initiative

### PANELISTS

**TOM SASALA, SES**  
Chief Data Officer, Department of the Navy

**COLONEL RYAN KEYHOE, USAF**  
Deputy Chief Data Officer,  
Department of the Air Force

**ERICA L. DRETZKA**  
Director of Data Management and  
Analytic Infrastructure, Chief Data  
Office, Strategic Integration  
Department of Defense

**PORTIA CROWE, PH.D.**  
Chief Data Strategist, Accenture  
Federal Services



DR. SCHATZ



MR. SASALA, SES



COL KEYHOE, USAF



MS. DRETZKA



DR. CROWE

This event will focus on the critical aspects of data management and its integral role in the DoD's digital modernization strategy. It will provide an opportunity for I/ITSEC participants to engage directly with DoD Chief Data Officers—the senior executives responsible for overseeing the Department's transformation into a data-dominant enterprise. This panel discussion will provide participants with insights into the changing roles and responsibilities Chief Data Officers face, and it will address specific policies, standards, and requests for the Defense industrial base as they develop, modernize, and implement new technology across the full spectrum of functional areas.

Session Chair:  
Ray Compton, LMI

WEDNESDAY, 1 DECEMBER 2021 • 0830-1000 • ROOM 310AB

## Future Application of Extended Reality and Artificial Intelligence to Enable Mission Command

INTEGRATING SOF MISSION COMMAND SYSTEMS AND COMMON OPERATING PICTURE THROUGH EMERGING TECHNOLOGIES

### MODERATOR

**AIR COMMODORE HARVEY REYNOLDS, RAAF**

Deputy Director of Operations,  
U.S. Special Operations Command,  
Royal Australian Air Force

### PANELISTS

**BRIGADIER GENERAL JUSTIN R. HOFFMAN, USAF**

Director, Strategic Plans,  
Programs, and Requirements  
Air Force Special Operations  
Command

**COLONEL JOHN J. LYNCH II, USMC**

Deputy Commander, Marine  
Forces Special Operations  
Command

**MAJOR GENERAL SEAN M. FARRELL, USAF**

Deputy Commanding General,  
Joint Special Operations  
Command

**BRIGADIER GENERAL STEVEN M. MARKS, USA**

Deputy Commanding General,  
United States Army Special  
Operations Command

**CAPTAIN CHRISTIAN A. DUNBAR, USN**

Director, Future Concepts and  
Innovation, Naval Special Warfare  
Command



AIRCDORE REYNOLDS, RAAF



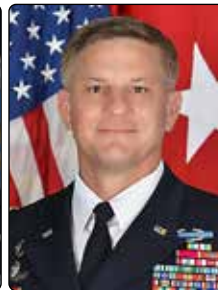
BRIG GEN HOFFMAN, USAF



COL LYNCH, USMC



MAJ GEN FARRELL, USAF



BG MARKS, USA



CAPT DUNBAR, USN

To become more lethal, trans-regionally integrated, and effective in contested domains (air, ground, maritime, and cyber), Special Operating Forces (SOF) must have a capability to rapidly understand the battlespace and make timely decisions to shape the information environment. Mission Command Systems (MCS) provide a comprehensive, near real-time operational picture across all domains while synchronizing coordinating authorities, efforts, joint functions and core missions. USSOCOM recently validated a requirement for MCS. SOF MCS is a suite of integrated tools to assist with battlefield situational awareness and information sharing to stimulate the Common Operating Picture (COP) and Common Intelligence Picture (CIP). Extended Reality and Artificial Intelligence Technologies, machine and deep learning, and hybrid cloud computing are poised to assist with leap-ahead capabilities to integrate into MCS. The focus of the SOF senior panel will be on cross-program integration of MCS/COP/CIP tools to stimulate and/or simulate Mission Planning Systems, Data Production for Mission Planning and Tactical Assault Kits, and other emulation and simulation tools used in training, exercises, and rehearsal, like Synthetic Intelligence Surveillance and Reconnaissance, and AI-enabled globally integrated operations.

Session Chair:  
Marryam Chaudhry, XR2LEAD



# SIGNATURE EVENT

WEDNESDAY, 1 DECEMBER 2021 • 1030-1200 • ROOM 310AB

## USMC GO Panel

### MAINTAINING MOMENTUM WHILE ADAPTING

#### MODERATOR

**REAR ADMIRAL JAMES A. ROBB, USN (RET.)**

President, National Training and Simulation Association

#### PANELISTS

**MAJOR GENERAL JULIAN D. ALFORD, USMC**

Commanding General, Training Command

**MAJOR GENERAL AUSTIN E. RENFORTH, USMC**

Commanding General, Marine Air Ground Task Force Training Command and the Marine Corps Air Ground Combat Center

**BRIGADIER GENERAL ARTHUR J. PASAGIAN, USMC**

Commander, Marine Corps Systems Command

**BRIGADIER GENERAL MATTHEW T. MOWERY, USMC**

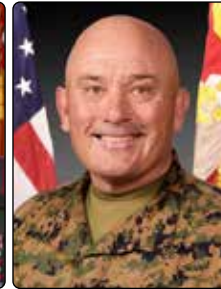
Assistant Deputy Commandant for Aviation, Headquarters Marine Corps, Department of Aviation



RADM ROBB, USN (RET.)



MAJGEN ALFORD, USMC



MAJGEN RENFORTH, USMC



BRIGGEN PASAGIAN, USMC



BRIGGEN MOWERY, USMC

This event will provide an opportunity for I/ITSEC participants to hear from U.S. Marine Corps General Officers on current issues. This discussion will enable the panelists to share their insights on the conference theme and discuss how their organizations are contributing to the modernization of the Marine Corps in line with the Commandant of the Marine Corps' planning guidance and Marine Corps Force Design 2030.

Session Chair:  
Brian Vogt, CMSP, SAIC



WEDNESDAY, 1 DECEMBER 2021 • 1400-1530 • ROOM 310AB

## A New American Way of Training

### MODERATOR

**CHRISTOPHER DOUGHERTY**  
Senior Fellow, Center for a New  
American Security

### PANELISTS

**JENNIFER McARDLE, CMSP**  
Adjunct Senior Fellow, Center for a  
New American Security  
Product Strategist, Improbable

**ADMIRAL JOHN RICHARDSON,  
USN (RET.)**  
Former Chief of Naval Operations

**GENERAL PAUL E. FUNK, USA**  
Commanding General, U.S. Army  
Training and Doctrine Command

**GENERAL MIKE HOLMES, USAF  
(RET.)**  
Former Commander, Air Combat  
Command

**KIMBERLY JACKSON**  
Deputy Assistant Secretary of  
Defense for Force Readiness



MR. DOUGHERTY



MS. McARDLE



ADM RICHARDSON,  
USN (RET.)



GEN FUNK, USA



GEN HOLMES, USAF  
(RET.)



MS. JACKSON

During the Cold War, protracted peacetime competition, sporadically interrupted by cycles of intense combat, inspired a series of paradigm shifts in the U.S. military's approach to training. These gave birth to a wide range of training innovations, ranging from the U.S. Navy's Top Gun School, to the U.S. Air Force's Red Flag exercise, and later the U.S. Army's Combat Training Centers. A new level of stress and rigor was introduced through radical transformations of training regimens—helping to ensure American warfighters subsequent tactical and operational dominance.

Today, the U.S. requires a similar rethink in the way it trains its armed forces. The technological capabilities and asymmetric strategies of key potential adversaries risk largely invalidating the current American Way of War—a way of war that is largely predicated on power projection, the capacity to continuously operate from sanctuaries, and overwhelming technological superiority. To preserve American military superiority, the U.S. must reimagine not only how it plans to fight, but also how it trains. Drawing on representatives from industry, the defense policy community, the services, and government, this panel describes how the U.S. should reconceptualize training—innovating and accelerating into the future—towards “A New American Way of Training.”

Session Chair:  
Kelly Hale, Draper



# SIGNATURE EVENT

WEDNESDAY, 1 DECEMBER 2021 • 1400-1530 • ROOM 330EF

## Building a Comprehensive Modeling & Simulation Body of Knowledge

### MODERATOR

#### STEPHANIE POSSEHL

Acting Deputy Director for Engineering (DD, ENG) and Director of Engineering Policy and Systems, Office of the Under Secretary of Defense for Research and Engineering

### PANELISTS

#### RICHARD TEMPALSKI

Chief Modeling & Simulation Officer, Department of the Air Force

#### THOMAS IRWIN, PH.D.

Executive Director, Joint Force Development and Design, Joint Staff

#### AMY HENNINGER, PH.D.

Senior Advisor for Software and Cybersecurity, Office of the Director, Operational Test & Evaluation, Office of the Secretary of Defense

#### STEVEN STODDARD, PH.D.

Director, Center for Army Analysis and Army Modeling and Simulation Office, U.S. Army

#### COLONEL MARK ZAIS, PH.D.

U.S. Army Chief Data Scientist, Command Data Office U.S. Special Operations Command



MS. POSSEHL



MR. TEMPALSKI



DR. IRWIN



DR. HENNINGER



DR. STODDARD

In the mid-2000s, a consolidated effort, led by the Joint/DoD Modeling & Simulation Workforce Development Working Group, developed the first version of the M&S Body of Knowledge (BoK). This BoK applied to all sectors of the DoD ModSim workforce at the awareness, management, and executive levels. At that time, models were usually massive, specific use programs focusing on specific functions or supporting specific programs. Networking simulations was in its early stages and took large amounts of time, effort, and funds to accomplish. And the models themselves were, for the most part, physics-based requiring large computational systems.

Fast forward to today, and the world of modeling and simulation has changed drastically and is even more critical to DoD efforts. Simulations have become more immersive. Distributed simulation events are more prevalent and easier to accomplish. And the models now include digital artifacts, digital twins, and other non-computational methods. With the dramatic changes in modeling and simulation, the Modeling and Simulation BoK is due for a significant update.

The purpose of this panel is to provide Senior Leader insight into what knowledge is critical for developers, users, and managers of ModSim efforts to possess in order to increase the use and utility of modeling and simulation. We will hear from Senior Leaders representing a cross section of the ModSim user community.

Session Chair:  
Monique Brisson, USAF

WEDNESDAY, 1 DECEMBER 2021 • 1530-1730 • DESTINATION LOUNGE

## The TalX – XR Acceleration

### MODERATOR

**BOB KLEINHAMPLE, CMSP**

Vice President, Immersive  
Technologies, SAIC

### PANELISTS

**DANIEL ROBINSON**

Founder and Chief Executive  
Officer, Red 6

**WILL ROPER, PH.D.**

Advisory Board Member, Red 6

**DAVE RHODES**

Senior Vice President, General  
Manager of Digital Twin, Unity

**NATHAN THOMAS**

Vice President of Sales Unreal  
Engine, Epic Games



MR. KLEINHAMPLE



MR. ROBINSON



DR. ROPER



MR. RHODES



MR. THOMAS

Extended realities (AR/VR/MR) will be as ubiquitous as laptops and mobile devices in the 3 - 5 year horizon, and the training and simulation community is currently experiencing an increasing trend towards the adoption of these technologies. How do we adapt and adopt to take full advantage of this pending expansion of technology to realize maximum value? Engage with an industry recognized cast of thought leaders in the XR market to gain fresh perspectives and be positioned to accelerate the use of extended realities.

The presenters will use a presentation technique similar in style to “TED Talks.” We are calling these presentations “The TalX” where the X stands for what’s new. The presentations are sure to be thought provoking, inspiring, and will motivate us all to accelerate the adoption of XR to achieve high levels of human performance.

This event is part of I/ITSEC’s newly formed Next Big Thing initiative which explores and presents to the community future trends and innovations for which we need to be prepared for and embrace.

### NEXT BIG THING SPONSORED BY

SAIC | Epic Games | Design Interactive | InVeris | Microsoft | Aero Simulation

Session Chair:  
Teresa Speck, Soar Technology, Inc.





## Talent Data

### DOD SENIOR LEADERS ARE EMPHASIZING DATA-DRIVEN EVERYTHING

#### MODERATOR

**SAE SCHATZ, PH.D.**  
Director, ADL Initiative

#### PANELISTS

**LORA MUCHMORE, SES**  
Chief Innovation Officer, Office of the Department of Defense Chief Information Officer

**LIEUTENANT COLONEL KRISTIN SALING, USA**  
Chief Analytics Officer, Army Talent Management Task Force and Acting Director, Army People Analytics

**CHIEF MASTER SERGEANT ERIK C. THOMPSON, USAF**  
Command Chief Master Sergeant Air Education and Training Command, Joint Base San Antonio – Randolph

**JASON R. WEISS**  
Chief Software Officer, Department of Defense

**NAOMI O. SZEKERES**  
Principal, Pensarus, Senior Advisor, Public Consulting Group



DR. SCHATZ



MS. MUCHMORE, SES



LTC SALING, USA



CMSGT THOMPSON, USAF



MR. WEISS



MS. SZEKERES

Data underpins digital modernization and is the fuel for advanced decision-making. The DoD Data Strategy describes an ambitious approach for transforming the Department into a data-driven organization. Similarly, Personnel and Readiness Strategy for 2030 emphasizes a data-centric approach to how Defense civilians and military members are educated, trained, prepared, and managed. A data-driven personnel system enables adaptive systems and affords new opportunities for career field management, workforce planning, responsive training, and other talent management function. Data can also empower artificial intelligence (particularly, machine learning) to optimize the talent management system for employees, supervisors, and senior leaders, as well as organizational outcomes.

One ripe area for data modernization is within personnel readiness (aka talent management or Manpower, Personnel, Training, and Education).

To become a data-dominant enterprise, DoD must be powered by a robust technical infrastructure, data management and business processes, and a thoughtful policy framework that enables the rapid analysis and flow of relevant, trustworthy, ethical, and secure information. However, DoD's talent management system is complex, and there are inherent challenges to accommodating interoperability across the Department's diverse organizations and their heterogeneous systems. However, solving this challenge will pay dividends, and not only for the military. This interest in data-driven talent extends beyond DoD, to include Federal-wide initiatives, such as the Chamber of Commerce's efforts to modernize America's workforce, the Institute of Electrical and Electronics Engineers (IEEE) new standards groups around learner records, as well as recent popular news articles about personal data, technology-enabled learning, and personal data privacy, security, and equity. This special event includes senior leaders from across DoD and beyond to discuss the driving need to create a data-dominant talent system.

Session Chair:  
Scott Schutzmeister, Institute for Defense Analyses

## CMSP 3.0 – Reinvention!

### MODERATOR

**IVAR OSWALT, PH.D., CMSP**  
Senior Modeling and Simulation  
Analyst, The MIL Corporation



DR. OSWALT

Modeling and simulation is a vibrant and growing community, so it's more important now than ever to distinguish yourself from the crowd. Becoming a Certified M&S Professional (CMSP) does just that. It shows your commitment to superior professionalism, upholding industry standards, and to continued learning above and beyond even a terminal M&S degree.

This special event describes CMSP; the motivators behind its creation, its evolution, and the current version. After providing a quick snapshot of CMSP's pedigree, a recent CMSP awardee will summarize the use of a Learning Management System to improve the certification process, introduce the new examination (including sample questions), and describe the improved infrastructure that includes on-line preparation materials and in-person mentorship. Finally, information will be provided on future CMSP offerings (e.g., sub-certifications) and on how interested individuals can start the process to achieve their certification.

After that, an around-the-room discussion will provide additional details and answer any questions.

Session Chair:  
Fuzzy Wells, CMSP, MITRE



## DoD Modeling & Simulation and Digital Engineering Relationship

### MODERATOR

#### PHILOMENA ZIMMERMAN

Deputy Director, Engineering Tools and Environments, Office of the Under Secretary of Defense (Research and Engineering)

### PANELISTS

#### MICHAEL GULLY

Lead Systems Engineer-Digital, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology)

#### MICHAEL DOCTOR

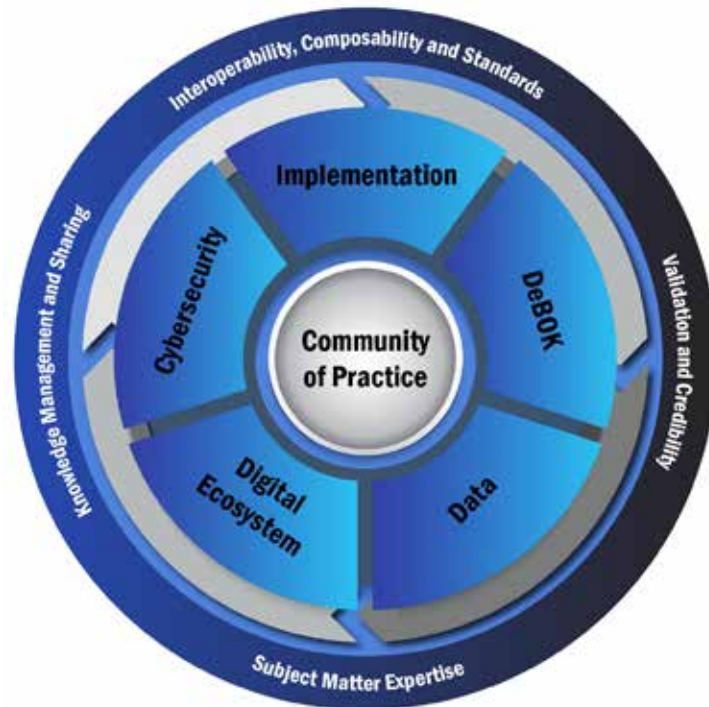
Director of Systems Engineering, Office of the Deputy Assistant Secretary of the Navy Research, Development and Acquisition

#### BRETT TELFORD

Director, Modeling and Simulation Office, Marine Corps Combat Development Command

#### RICHARD TEMPALSKI

Chief Modeling & Simulation Officer, Department of the Air Force



There are some similar capabilities and limitations within the communities of practice for Digital Engineering and Modeling and Simulation. GS15/O-6 leadership representatives from the Services, MDA, and OSD (Research and Engineering) have begun technical exchanges about the overlaps, gaps, and support between these two communities of practice to explore opportunities for collaboration. This panel will further those discussions within a broader audience and welcome participation and questions from the I/ITSEC attendees.

The moderator will provide basic context for a general understanding of the terms and definitions and developing capabilities. Both Digital Engineering and Modeling & Simulation share the basis of definitions of models, data, architecture, and validation. Using this baseline, how can each body of knowledge inform the other community of practice? Panelists will give a brief overview from their organizational perspective of the touchpoints and linkages for the relationship between Digital Engineering and Modeling & Simulation. This will be followed by a moderated discussion of the panelists and questions from the audience.

Session Chair:  
Marty Bink, Ph.D., University of Georgia



TUESDAY, 30 NOVEMBER 2021 • 1600-1730 • ROOM 310AB

## The Innovation Match Game

MATCHING SUCCESSFUL TRAINING PROTOTYPES TO NEW USERS

### HOST

**MARGARET MERKLE, PMP**

Innovation Technology Chief,  
Simulators Division, Agile Combat  
Support Directorate, Air Force Life  
Cycle Management Center

### CO-HOSTS

**DYLAN GRECO**

Deputy Program Manager for  
Innovation, Simulators Division,  
Agile Combat Support Directorate,  
Air Force Life Cycle Management  
Center

**MARILYN EVANS**

SAIC, Supporting Program  
Manager, Simulators Division,  
Agile Combat Support Directorate,  
Air Force Life Cycle Management  
Center

**EMILY EDMISTON**

Tangram Flex, Supporting  
Program Manager, Simulators  
Division, Agile Combat Support  
Directorate, Air Force Life Cycle  
Management Center



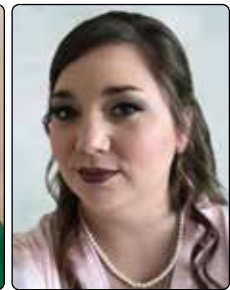
MS. MERKLE, PMP



MR. GRECO



MS. EVANS



MS. EDMISTON

Over the past few years, Pitch Day and Shark Tank competitions have been the focus of much fanfare – but what happens next? How do we move beyond experimental uses and match successful prototypes with real world users? In this event we will match up three USAF training units with three successful prototypes in an exploration of possible solutions to real world training needs. Modeled after the TV show “House Hunters”, each prototype vendor will present a pitch, and after a short Q&A, the audience can pick their favorite! As an added bonus, vendor submissions will be highlighted on the Expo floor to give everyone an opportunity to meet the vendors!

Session Chair:

Jeremy Lanman, Ph.D., PEO  
STRI



TUESDAY, 30 NOVEMBER 2021 • 1600-1730 • ROOM 320GH

## Navy Vision from the Training Systems' Program Managers

### MODERATOR

#### MICHAEL MERRITT

Acquisition Director, Naval Air Warfare Center Training System Division (NAWCTSD)

### PANELISTS

#### CAPTAIN DAN COVELLI, USN

Commanding Officer, Naval Air Warfare Center Training System Division (NAWCTSD)

#### CAPTAIN LISA SULLIVAN, USN

Program Manager, PMA-205 NAVAIR

#### JIMMY LEE (INVITED)

Director, Submarine Training NAVSEA 07TR



MR. MERRITT



CAPT COVELLI, USN



CAPT SULLIVAN, USN

Each year at I/ITSEC, a panel of Navy captains and senior civilian leaders representing the Navy's training acquisition organizations convenes to discuss the year's highlights and share their strategic vision. I/ITSEC participants are welcome and encouraged to attend to hear about the state of the Navy's Training Systems.

WEDNESDAY, 1 DECEMBER 2021 • 0830-1000 • ROOM 310C

## Cloud-based Simulation Developments in Europe

### MODERATOR

#### WIM HUIKAMP

Chief Scientist Modelling,  
Simulation and Gaming, TNO  
Defence Research; ETSA Vice-  
Chair

### PANELISTS

#### ANDY SMITH

ETSA Chairman, Halldale  
Publishing

#### ROBERT SIEGFRIED, PH.D.

Senior M&S Consultant and  
Managing Director, Aditerna  
GmbH, Germany  
Chair of the NATO Modelling and  
Simulation Group (NMSG)

#### LIEUTENANT COLONEL MARCO BIAGINI

CD&E Branch Chief, NATO  
Modelling & Simulation Centre of  
Excellence, Rome, Italy

#### BHARAT PATEL

Fellow Defence Science and  
Technology Laboratory (Dstl), UK  
Ministry of Defence

#### LARS JANSSEN

Project Engineer, Swedish Defence  
Materiel Administration (FMV)



MR. HUIKAMP



MR. SMITH



DR. SIEGFRIED



LTC BIAGINI



MR. PATEL



MR. JANSSEN

Cloud based technology has become a new way of delivering services in the civilian domain. Amazon, Google, Microsoft, Netflix, and others have been trailblazers for the technology and provided on-demand services and applications to customers around the globe. NATO nations have investigated the application of M&S as a Service in a cloud based environment. The results and initial implementations of this capability are now appearing in Europe. Several interesting military applications have been demonstrated and are being deployed. This session will provide insights in technical, cultural, and economic aspects that are relevant for current and future cloud based simulations in the military domain.

The European Training and Simulation Association (ETSA) (“The European Voice” of the Modelling, Simulation & Training community) has invited representatives from several European armed forces to discuss the national vision on the use of Military Cloud Based Simulation (MCBS). The Industry presenters will provide an overview of current capabilities and share examples of applications that leverage the advantages of MCBS. The evolution and mid-term plans will be discussed as well as the partnerships (NATO, EDA, R&D, Industry) that are in place or desired to further develop current capabilities.

The ETSA special event panel session will engage with the audience on the way ahead towards cloud based simulation applications and discuss how to engage with ETSA and leverage its partnership agreements with NTSA, EDA, and Industry.

Session Chair:  
Gordon King, RSI Visual  
Systems





## Navy Acquisition Menagerie

THERE IS MORE TO ACQUISITION THEN THE FAR

### MODERATOR

**BRIGADIER GENERAL FRANK KELLEY, SES, USMC (RET.)**

Vice President, Defense Acquisition University

### PANELISTS

**CAPTAIN BEN "NUT" VANBUSKIRK, USN**

Director, NavalX

**WHITNEY TALLARICO**

Director, NavalX Tech Bridges

**HALLIE BALKIN, ESQ.**

Learning Director Other Transactions, Defense Acquisition University

**BRIAN SERRA (INVITED)**

Contracting and Acquisition Guy, Defense Acquisition University



Join us for great conversation with a cast of not-your-usual characters. Members of NavalX, Naval Tech Bridges, and DAU will go on an exploration of non-FAR based options. From OTAs to PIAs, explore a sea of acquisition acronyms not found in the FAR. Retired Marine Corps Brig. Gen. Frank Kelley, now Vice President of DAU, leads this diverse panel as we discuss new ways for Navy acquisition to stretch out and reach new seas.

WEDNESDAY, 1 DECEMBER 2021 • 0830-1000 • DESTINATION LOUNGE

## The TalX – XR Technical

PUTTING XR TO WORK IN DEFENSE

### MODERATOR

**JOHN CUNNINGHAM**

Head of Government Solutions,  
Unity

### PANELISTS

**MIKE CANNIZARRARO**

Technical Development Division  
Chief, U.S. Army Future  
Command STE CFT

**MAJOR MEGHAN 'SLACQ'  
BOOZE, USAF**

F-15 E Instructor, Pilot 391st  
Fighter Squadron

**MAJOR SEAN 'POTUS' LIPKIN,  
USAF**

F-15E Instructor Pilot, Seymour  
Johnson AFB

**SHELLY PETERSON**

Associate Fellow, Lockheed Martin  
Corporation

**MATTHEW STONE**

Team Lead, Human Systems  
Engineering Augmented Reality  
(HSEAR) Group, NAWCAD  
Human Systems Engineering



MR. CUNNINGHAM



MR. CANNIZARRARO



MAJ BOOZE, USAF



MAJ LIPKIN, USAF



MS. PETERSON



MR. STONE

Meet and listen to industry technical leaders in Extended Realities (XR). Presentations will use the TED talk format and will be in a new to I/ITSEC venue called the Next Big Thing lounge. Come and be engaged, listen to new perspectives on cutting edge XR and be part of the conversation on how we accelerate XR and realize value. This event is part of I/ITSEC's newly formed Next Big Thing initiative which explores and presents to the community future trends and innovations for which we need to be prepared for and embrace.

### NEXT BIG THING SPONSORED BY

SAIC | Epic Games | Design Interactive | InVeris | Microsoft | Aero Simulation

Session Chair:

Mindy Hoover, Ph.D., Iowa  
State University



## AF Gaming: Advancing M&S thru Gaming Industry

### MODERATOR

**CHIEF MASTER SERGEANT IAN EISHEN, USAF**  
SEL, CSAF's Strategic Studies Group

### PANELISTS

**RICHARD TEMPALSKI**  
Chief Modeling & Simulation Officer, Department of the Air Force

**ROBERT CHANDLER SWALLOW, SES**  
Principal Deputy Director, Studies, Analyses and Assessments, U.S. Air Force Headquarters

**LISA COSTA, PH.D., SES**  
Chief Technology and Innovation Officer, U.S. Space Force

**ADAM ROSEN**  
Chief Executive Officer, Rally Cry (Gaming Industry)

**CAPTAIN OLIVER PARSONS**  
Founder, Air Force Gaming



MR. TEMPALSKI



MR. SWALLOW, SES

The Department of the Air Force's Chief Modeling and Simulation Office is proud to spotlight the Air Force Gaming team as a great initiative on building the workforce of the future and sense of community.

Gaming? A waste of time? Join the and Air Force Gaming team while they debunk the various negative perceptions that cloud the world of gamers and the technologies they love. This event will feature the founders of Air Force Gaming, their story, and a panel focused on embracing and unleashing gamers in the DoD and beyond. Oh, and of course, a little friendly competition.

TIME	ACTIVITY
5 MIN	DAF CMSO EVENT INTRODUCTION – MR. RICHARD TEMPALSKI
15 MIN	TED STYLE TALK ON AFG ORIGINS AND THE RISE OF GAMERS – CAPT ZACHARY BAUMANN
30 MIN	PANEL MEMBER OPENING COMMENTS
20 MIN	Q&A WITH MODERATED DISCUSSION
20 MIN	GAME SHOWDOWN

Session Chair:  
Deri Draper-Amason, Ph.D.,  
VMASC



WEDNESDAY, 1 DECEMBER 2021 • 1030-1200 • ROOM 310C

## Exploring Haptics and its Role in the Learning Process for Medical-Related Training & Simulation

### MODERATOR

**BASIEL MAKLED, MSBME**

Engineer, Science & Technology  
Manager, U.S. Army Combat  
Capabilities Development  
Command - Soldier Center

### PANELISTS

**SHANE TABER, CSPO**

Vice President, Development  
Director, Engineering & Computer  
Simulations, Inc.

**JOE MICHAELS**

Chief Revenue Officer, HaptX

**BRENT WINSLOW, PH.D.**

Chief Scientist, Design Interactive,  
Inc.

**HARU OKUDA, M.D., FACEP,  
FSSH**

Executive Director, USF Health  
Center for Advanced Medical  
Learning and Simulation  
Assistant Vice President, USF  
Health Office of Interprofessional  
Education and Practice  
President Elect, Society for  
Simulation in Healthcare

**MACIEJ PIETRUSINSKI, PH.D.**

Senior Engineer, Triton Systems,  
Inc.

**CHRIS TAYLOR**

Chief Executive Officer, VRgluv



MR. MAKLED



MR. TABER



MR. MICHAELS



DR. WINSLOW



DR. OKUDA



DR. PIETRUSINSKI



MR. TAYLOR

This event provides I/ITSEC attendees an opportunity to hear from a diverse panel of experts in the field of haptics. Experts from academia, research, technology integrators, and haptic device companies will describe the role of haptics in the learning process for training and simulations across a variety of domains to include medical, maintenance, flight simulation, automotive, and weapon familiarization. The latest trends in haptics will be discussed during the panel from multiple perspectives. This event serves as a one-stop shop for I/ITSEC attendees interested in haptics, and audience members will have the opportunity to ask panelists questions and be directed to visit booths for demonstrations.

Session Chair:  
Alysson Hursey, SAIC



## USMC Large Scale Exercises

### LEADING THE LARGE SCALE EXERCISE

#### MODERATOR

##### JOHN TAYLOR

Deputy Program Manager,  
Training Systems Marine Corps  
Systems Command

#### PANELISTS

##### COLONEL RONALD D. STORER, USMC

Assistant Chief of Staff, Training  
Marine Air Ground Task Force  
Training Command and Marine  
Corps Air Ground Combat Center

##### COLONEL FRIDRIK FRIDRIKSSON, USMC

USMC Director Tactical Training  
Exercise Control Group

##### COLONEL SCOTT A. GEHRIS, USMC

Commanding Officer, Marine  
Corps Tactics and Operations  
Group

##### COLONEL AARON A. ANGELL, USMC

Commanding Officer, Marine  
Corps Logistics Operations Group

##### COLONEL DANIEL J. WITTNAM, USMC

Commanding Officer, Marine  
Corps Mountain Warfare Training  
Center

##### CAPTAIN NEIL A. KRUEGER, USN

Director of Training,  
Expeditionary Warfare Training  
Group, Pacific



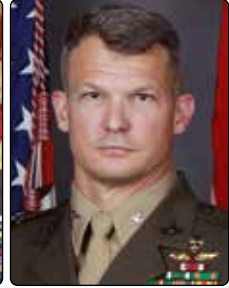
MR. TAYLOR



COL STORER, USMC



COL FRIDRIKSSON, USMC



COL GEHRIS, USMC



COL ANGELL, USMC



COL WITTNAM, USMC



CAPT KRUEGER, USN

This event will provide an opportunity for I/ITSEC participants to engage directly with U.S. Marine Corps Large Scale Exercise Leaders on current issues. Large Scale Exercises are a critical area for Marine Corps Training and Readiness. The stakeholders for this event will provide updated training data to inform industry of future training needs. This panel discussion will enable the speakers to share their perspectives on the conference theme from their viewpoints.

Session Chair:  
Brian Stensrud, Ph.D., Soar  
Technology, Inc.

WEDNESDAY, 1 DECEMBER 2021 • 1400-1530 • ROOM 329

## The Spider in the Urinal: A Panel on AI Ethics, Unpredictable Secondary Events, and AISs

### MODERATOR

**JEANINE A. DeFALCO, PH.D.**  
Research Psychologist (Adaptive Training), Army Futures Command, DEVCOM-STTC, Orlando

### PANELISTS

**SHELLY BLAKE-PLOCK**  
President and Chief Executive Officer, Yet Analytics, Inc.

**OZLEM ULGEN, PH.D.**  
Associate Professor in Law, School of Law, University of Nottingham, UK

**JORDAN RICHARD SCHOENHERR, PH.D.**  
Assistant Professor, Concordia University  
Adjunct Research Professor, Department of Psychology and the Institute for Data Science, Carleton University

**ANDREW J. HAMPTON, PH.D.**  
Assistant Professor of Psychology, Behavioral Sciences Department, Christian Brothers University

**RICHARD TONG**  
Chief Architect, Squirrel AI Learning



DR. DeFALCO



MR. BLAKE-PLOCK



DR. ULGEN



DR. SHOENHERR



DR. HAMPTON



MR. TONG

This panel will discuss ethical considerations and recommended best practices in the design of artificial intelligence driven adaptive instructional systems (AISs), including: Mistakes Made By A.I. and Regulation of A.I.

Panel members will present the efforts of the IEEE working group P2247.4 on developing recommended practices that can be used to provide guidance in ethical design to engineers and consumers of training and learning systems.

AISs have been established as effective training and education systems and have been deployed in military, commercial, and open-source versions. Senior defense officials have emphasized the need to adhere to laws and values while mitigating risks associated with AI driven systems, but there is little codified guidance on how to address and remedy these concerns. This panel will bring informed discussion on ethical considerations for AI driven learning and training systems.

This panel will be of interest to acquisition decision makers who are concerned with AI driven products that do not violate the DoD's recently adopted (2/2020) ethical principles for AI. In addition, commercial vendors—who understand the business value to the DoD stakeholder—will be interested in understanding that ethically designed AISs will limit exposure to workplace litigation, enhance diversity strategies, and help align AI to the resilience and culture goals that support the DoD mission.

Attendees will walk away with insights and information on how to ensure AI driven technologies address ethical concerns devised from theoretical frameworks.

Session Chair:  
William Pike, U.S. Army DEVCOM-SC  
STTC





## Learning to Learn Together: How Will Human-AI Teams Achieve Mastery?

### MODERATOR

**DANIEL SERFATY**

Chairman and Chief Executive  
Officer, Aptima, Inc.

### PANELISTS

**MICHAEL VAN LENT, PH.D.**

President and Chief Executive  
Officer, Soar Technology, Inc.

**GREG ZACHARIAS, PH.D.**

Chief Scientist for Director of  
Operational Test and Evaluation,  
Office of the Secretary of Defense

**FREDERICK DIEDRICH, PH.D.**

Consultant



## LEARNING TO LEARN TOGETHER



MR. SERFATY



DR. VAN LENT



DR. ZACHARIAS



DR. DIEDRICH

Artificial intelligence (AI) is making its way into more environments, workplaces, and missions. With the goal to augment and improve how we humans perform our jobs, how are we preparing for this new reality? What sort of training will be needed—for both humans and AI—to ensure human-AI teams optimally work together? How will training be designed and apportioned for the human and the AI? What about joint training for the total system? Or, conversely, will humans and AI adapt and evolve regardless? This eclectic panel of five innovators from across the military and civilian domains such as aviation, space exploration, first responders, command & control, next-generation transportation, and healthcare, will explore innovations in training to ensure that human-AI teams attain mastery in order to achieve optimal performance. Led by Daniel Serfaty, the panel will examine which skills and competencies will be needed by humans to work with AI, and those needed by AI to work effectively with humans. The panel will explore this unfolding partnership of human expertise and artificial intelligence, and the radically new demands on learning and training required to ensure a successful human-AI future.

WEDNESDAY, 1 DECEMBER 2021 • 1600-1730 • ROOM 320GH

## Air Combat Cross Services Training Ranges Panel

### MODERATOR

**MICHAEL MERRITT**

Acquisition Director, NAWCTSD

### PANELISTS

**CAPTAIN LISA "PEPPY" SULLIVAN, USN**

USN Program Manager PMA-205  
NAVAIR

**CAPTAIN BRENT "STRETCH" BLACKMER, USN**

USFFC N72 Training Technologies  
and LVC

**COLONEL SCOTT "GIMLI" KOECKRITZ, USAF**

Chief, Test & Training Division,  
Headquarters Air Combat  
Command



This event will include a discussion on air combat training ranges across services and how industry can help the various warfighters in connecting their ranges and ultimately providing the best training possible to the United States military.

Session Chair:  
Marty Bink, University of Georgia



WEDNESDAY, 1 DECEMBER 2021 • 1600-1730 • ROOM 310AB

## Black Swan – Ransomware Hits Wall Street!

HOW CRYPTOCURRENCY AND RANSOMWARE HAVE AFFECTED OUR INVESTMENTS

### MODERATOR

#### ALEX HOOVER

Associate Director for Physical and Cyber Security Engineering, Office of Science and Engineering Systems Engineering & Standards Division Science and Technology Directorate, Department of Homeland Security (DHS)

### PANELISTS

#### ANDREW SEKELA

Acting Supervisory Special Agent, Federal Bureau of Investigation, Tampa Division

#### DAMON MCCOY, PH.D.

Associate Professor Computer Science and Engineering, Department Tandon School of Engineering, New York University



MR. HOOVER



MR. SEKELA



DR. MCCOY

Entering the seventh year of this special event series and after a true Black Swan pandemic last year, we are changing gears to focus on a different kind of virus. We investigate the world of Cryptocurrency and Ransomware with the Black Swan theme where a virus infects the Dow Jones and NASDAQ servers. Ransomware hits Wall St.!

We are bringing together industry experts and security professionals to inform our I/ITSEC audience on what exactly is Ransomware and how to avoid it. Why is Cryptocurrency so popular with criminals and is it the new digital currency of the future? The security professionals will also discuss typical industry vulnerabilities and how to build resiliency to these computer viruses. Please join us for this engaging session!

The term Black Swan is used to describe a low probability/high impact event which could profoundly affect our future. The term comes from the 2007 book, *The Black Swan: The Impact of the Highly Improbable* by Nassim Nicholas Taleb, where he presents various world-changing events and advocates anti-fragility to not only survive but thrive during crises. We believe modeling and simulation can play a major part in exploring these events to find cures and better prepare us for similar crises in the future.

Session Chair:

M. Beth Pettitt, Ph.D., CCDC  
Soldier Center, STTC



THURSDAY, 2 DECEMBER 2021 • 0830-1000 • ROOM 320GH

## Future of Army Training Enterprise Architecture

### A MODULAR OPEN SYSTEMS APPROACH

#### MODERATOR

**JEREMY LANMAN, PH.D.**  
Chief Technology Officer, PEO STRI

#### PANELISTS

**JEANNETTE EVANS-MORGIS, SES**  
Chief Systems Engineer, ASA(ALT)

**MATTHEW SIPE**  
Director of MOSA Transformation,  
PEO AVN

**MACAM DATTATHREYA, PH.D.**  
Chief Engineer, PEO GCS

**RANDY YOUNG**  
Deputy Director Technical  
Management Division, PEO C3T

**CHRISTINE MOULTON**  
Lead Architecture and Open  
Standards, PEO IEWS

**HARRY SOTOMAYOR**  
Director of Engineering, PEO STRI



DR. LANMAN



MS. EVANS-MORGIS, SES



MR. SIPE



DR. DATTATHREYA



MR. YOUNG



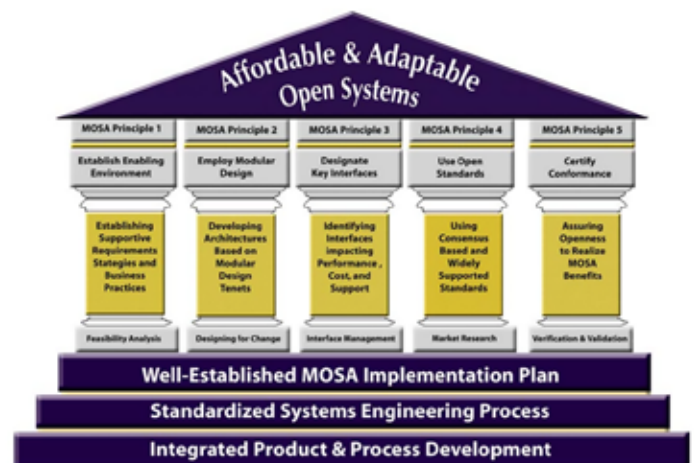
MS. MOULTON



MR. SOTOMAYER

A Modular Open Systems Approach (MOSA) is an acquisition and engineering tactic focused on achieving lifecycle goals for a product or family of products. These lifecycle goals should address both business and technical needs in support of Army acquisition strategies. An effectively applied MOSA results in reduced total ownership cost and can be quickly customized, analyzed, modified, extended, and certified throughout the product lifecycle in response to changing user requirements and technology obsolescence management or advancement. Modular, open architectures enable rapid, more efficient capability development, upgrades, and technology insertion. Army Enterprise Architecture efforts will employ MOSA and common modular open architectures that include strategic commodity plans, the use of common data & interface standards, and facilitate shared reuse opportunities for key commodities (e.g., hardware, software, data, edge devices, etc.). The Army Training Enterprise Architecture will integrate and interoperate across PEO enterprise product lines and operational capabilities with the Synthetic Training Environment to enhance Soldier training realism and the user experience.

### Modular Open Systems Approach: The Fundamental Building Block of Joint Integrated Warfare Systems



Session Chair:  
Luis Velazquez, Marine Corps  
Systems Command



## Tech Vision – Innovation Megatrends

### MODERATOR

**CHARLES ONSTOTT**

Vice President & Chief Technology Officer, CALIBRE

### PANELISTS

**ALETHEA DUHON, PH.D., SES**

Associate Director for Analysis, Department of Homeland Security National Risk Management Center Cybersecurity and Infrastructure Security Agency (CISA)

**SANJAY SARDAR**

Senior Vice President, Digital and IT Modernization, SAIC

**DANIEL ROBINSON**

Founder and Chief Executive Officer, Red 6

**GENERAL MIKE HOLMES, USAF (RET.)**

Chairman of the Board, Red 6



### Innovation Megatrends



MR. ONSTOTT



DR. DUHON



MR. SARDAR



MR. ROBINSON



GEN HOLMES, USAF (RET.)

Envision the future! Engage with technology leaders in the industry to gain their perspectives on the technology megatrends which will influence our market. A lot of people are enamored with the amazing amount of innovation going on in the commercial and consumer markets. The possibilities for innovation in the United States government missions are just as exciting because the technology is fresh, the challenges are complex, and the results are meaningful and impactful. Listen and begin the process of posturing yourself and your organizations to be in an advantageous position.

### NEXT BIG THING SPONSORED BY

SAIC | Epic Games | Design Interactive | InVeris | Microsoft | Aero Simulation |

Session Chair:

Tara Kilcullen, Training and Readiness Accelerator, NSTXL

## Cyber ‘King of the Hill’

### MODERATOR

#### KEVIN ROGERS

Managing Partner, Cyber Advisory Partners

### PANELISTS

#### JONATHAN HARRIS, PH.D.

Lead Cybersecurity Engineer,  
Naval Air Warfare Center Training  
System Division (NAWCTSD)

#### JOHN MELLUSI

Cybersecurity Engineer, ManTech  
International Corporation

#### JACOB MIRACLE

Cybersecurity Tech Expert, USAF  
Simulators Program Office



MR. ROGERS



DR. HARRIS



MR. MIRACLE

This event provides an opportunity to develop the Cybersecurity workforce of the future in a “King of the Hill” (KotH) cybersecurity competition designed to give high school student teams experience performing and defending against penetration testing. Each of the 5-person teams will conduct both offensive and defensive operations on their network, and scoring will be based on the “scorebot” in the open source KotH kit. Panelists will provide interactive After Action Review with each team, allowing the audience understand the defensive and offensive the approaches utilized by each team. The event will award prizes to: 1) the team with the most points; 2) the team with the most innovative attacking technique(s); and 3) the team with the most innovative defensive technique(s).

Session Chair:  
Fuzzy Wells, CMSP, MITRE





THURSDAY, 2 DECEMBER 2021 • 1030-1200 • ROOM 329

## Research Foundations and Findings Supporting Augmented and Virtual Reality (AR/VR) Implementation in the Wild

### MODERATOR

**WINK BENNETT, PH.D.**

711 Human Performance Wing,  
Airman Systems Directorate,  
Readiness Product Line Lead

### PANELISTS

**MAYOWA OLONILUA**

Defence Science and Technology  
Laboratory (DSTL)

**WIM HUISKAMP**

Chief Scientist Modelling,  
Simulation and Gaming, TNO  
Defence Research

**KAY STANNEY, PH.D.**

President, Design Interactive, Inc.

**JELTE BOS, PH.D.**

TNO Human Performance

**JONATHAN ALLSOP, PH.D.**

R&D Psychologist, Royal Air Force  
Central Flying School

**JIM BELANICH, PH.D.**

The Institute for Defense Analyses  
(IDA)



DR. BENNETT



MR. OLONILUA



MR. HUISKAMP



DR. STANNEY



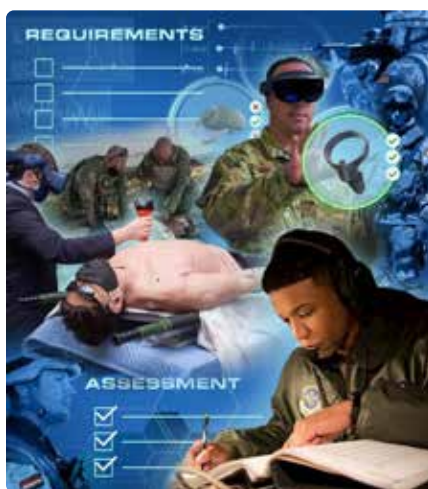
DR. BOS



DR. ALLSOP



DR. BELANICH



Given the continued explosion of advanced technology options for military education and training, their application can be viewed as an opportunity and a risk. The opportunity is taking advantage of the latest commercial technology for more realistic mission training at substantially lower costs.

The risks can come from a couple of key things we see happening today. There is usually a lack of a principled approach to requirements definition in the acquisition of training and educational systems to perform specific tasks. Further, there is typically a lack of comparisons among alternative solutions to meet those requirements. Audience members will connect with a group of multinational innovators who are working to increase the rigor applied to the fuller life-cycle of technology selection, implementation, evaluation, and feedback. Event participants will also have a chance to

hear about panel member's process, successes, and continuing challenges in research explorations happening in the real world. Audience members will also come away with a much better understanding of what approaches and methods have been shown to work and to provide "decision-quality" findings.

Session Chair:

Mindy Hoover, Ph.D., Iowa  
State University

THURSDAY, 2 DECEMBER 2021 • 1030-1200 • ROOM 330EF

## Accelerating Change or Lose: How Airmen are Leading the Innovative Change Required to Secure our Nation Tomorrow

### 06 PANEL

#### MODERATOR

**COLONEL TIMOTHY BEERS, USAF**

Commander, Air Force Agency for Modeling and Simulation

#### PANELISTS

**COLONEL NICK YATES, USAF**

Chief, Operational Training Infrastructure Division, Headquarters Air Force

**COLONEL SCOTT KOECKRITZ, USAF**

Chief, Test & Training Division, Headquarters Air Combat Command

**COLONEL JOSEPH BONNER, USAF**

Chief, Aircrew Tactics & Training Division, Headquarters Air Mobility Command

**COLONEL MATTHEW LEARD, USAF**

Chief, Pilot Training Transformation

**COLONEL CAMERON DADGAR, USAF**

Commander, Nevada Test and Training Range

**JAY FISHER, USAF**

Chief, Training Systems, Headquarters Air Force Special Operations Command



COL BEERS, USAF



COL YATES, USAF



COL KOECKRITZ, USAF



COL BONNER, USAF



COL LEARD, USAF



COL DADGAR, USAF



MR. FISHER, USAF

This event will provide an opportunity for participants to hear from Air Force leaders regarding current and future activities related to the Air Force Chief of Staff, Gen Brown's Accelerate Change, or Lose and the need for innovative Airmen to secure our nation in the 21st century. Participants in this panel will be senior leaders representing the Headquarters Air Force, Air Force Major Commands (MAJCOMs), Air Force Agency for Modeling and Simulation (AFAMS) and Nevada Test and Training Range (NTTR).

Each panelist will share insights as to how their command is preparing for the return of great power competition; how they are changing policies, processes, capabilities and mindsets in their training and modeling/simulation portfolio; how technology is being applied to accurately emulate the battlespace; how they are working with our sister services and allies. This will include a short presentation as well as a Question and Answer session. These presentations will include examples of how each command is turning concepts into reality.

The panel discussion will also enable the speakers to share their perspectives on the conference theme as well as the opportunities and challenges to accelerate change to remain the most dominate and respected Air Force of the world now and in the future from their respective commands.

Session Chair:  
Wendy Johnson, Ph.D., USAF



## Iron Dev

### HOSTS

**BRIAN VOGT, CMSP**

Solutions Architect, SAIC

**ALETHEA DUHON, PH.D., SES**

Associate Director for Analysis,  
Department of Homeland Security  
National Risk Management Center  
Cybersecurity and Infrastructure  
Security Agency (CISA)

### JUDGES

**GARFIELD "GARY" JONES**

Associate Chief, Strategic  
Technology, Office of the Chief  
Technology Officer, Cybersecurity  
and Infrastructure Security Agency

**JOHN MEYERS, SES**

Executive Director, Naval Air  
Warfare Center Training Systems  
Division

**DAVID STARGEL, PH.D.**

Technical Director, Air Force  
Agency for Modeling & Simulation  
(AFAMS)

**PAUL THURKETTLE**

Education & Training  
Technologies Manager, NATO  
ACT

**AMY PECK**

Chief Executive Officer,  
EndeavorVR



**I**ron Dev is a team competition similar to competitive cooking shows, where teams will be given a challenge and “secret ingredient” to develop a distributed AR/VR training, education, or operational solution to improve warfighter readiness. Teams consist of diverse members with skills in AR/VR development, simulation networking/distribution, graphic design, simulation development, and training development. Teams have 50+ days to develop their solution and then demonstrate them on the final day of I/ITSEC in front of a fun and engaging panel of judges. Awards will be given to the Best Overall Solution, Most Innovative Solution, and People’s Choice.

This is the third annual Iron Dev competition at I/ITSEC. Each year brings new, innovative, and intriguing solutions relevant to the needs of all of the services!



THURSDAY, 2 DECEMBER 2021 • 1030-1200 • ROOM 320GH

## Joint Cyber Warfighting Architecture Cyber Panel

### MODERATOR

**LIEUTENANT COLONEL DANIEL RODRIGUEZ, USA**

Product Manager, Cyber Resiliency & Training, PEO STRI

### PANELISTS

**REAR ADMIRAL CHRISTOPHER BARTZ, USCG**

Chief of Exercises & Training, U.S. Cyber Command

**COLONEL COREY HEMINGWAY, USA**

Project Manager Cyber, Test, and Training

**COLONEL BENJAMIN RING, PH.D., USA**

Director, Joint Cyber Warfighting Architecture Capability Management Office

**STEVEN D. REHN**

Chief Technology Officer, U.S. Army Cyber Command and Director, ARCYBER Technical Warfare Center

**KHOI NGUYEN**

Technical Director, U.S. Marine Corps Forces Cyberspace Command



The Cyber domain contains to achieve greater importance in not only the national security domain but in all facets of society including the financial, health, and infrastructure sectors. As a result, there is a glut of options and capabilities coming to the forefront to manage and mitigate an ever increasing onslaught of attacks and threat vectors. This has led for a call to build integrated an integrated framework that effectively leverage the expanse of cyber tools as well as future capabilities – enter the Joint Cyber Warfighting Architecture (JCWA).

The U.S. Cyber Command's JCWA is a concept to bring together existing cyber systems under development in the various military services into an integrated system of systems or unified platform. Cyber forces can then go into one platform to perform a wide range of tasks from training to accessing command and control decision systems. The JCWA is broken into five elements, which include common firing platforms for a comprehensive suite of cyber tools, a unified platform that will integrate and analyze data from offensive and defensive operations, joint command-and control mechanisms for situational awareness, sensors that support defense of the network and drive operational decisions, and a persistent cyber training environment.

This panel will bring together JCWA principals and explore how this concept is envisioned and moving forward.

Session Chair:  
James Frey, Ph.D., JANUS  
Research Group



THURSDAY, 2 DECEMBER 2021 • 1330-1500 • ROOM 310C

## Digital Twin/Digital Engineering: Multinational Perspectives on Digital Engineering and the M&S Enterprise

### MODERATOR

**WINK BENNETT, PH.D.**  
711 Human Performance Wing,  
Airman Systems Directorate,  
Readiness Product Line Lead

### PANELISTS

**WIM HUISKAMP**  
Chief Scientist Modelling,  
Simulation and Gaming  
TNO Defence Research

**JEAN-LUC GARNIER**  
Thales Research & Technology

**RICK GRAVES**  
Air Vehicle Digital Engineering  
Team Lead, Aerospace Systems  
Directorate, U.S. Air Force  
Research Lab

**AGATINO MURSIA**  
Investments & Technology Plan  
Governance, CTIO Leonardo  
Electronics Division, ITA

**ROXANNE CONSTABLE**  
Bioeffects Division Senior Engineer/  
Product Line Lead, Airman  
Systems Directorate



DR. BENNETT



MR. HUISKAMP



MR. GARNIER



MR. GRAVES



MR. MURSIA



MS. CONSTABLE



The U.S. and our Multinational partners are investing heavily in the development of model-based systems engineering and digital engineering capabilities to increase their concept exploration agility and analyses of alternative potential solutions in very detailed software models as opposed to expensive hardware prototypes. This Focus Event will take a broad innovation application perspective on digital twinning and digital engineering, and will examine trends at the multinational level with several national use cases. Given the growing trend toward more model based engineering and exploration, it is clear that different national interests drive this trend in strikingly different and exciting ways. In many cases, remarkable efficiencies have been realized and the process of moving from digital models to actual fieldable hardware has substantially decreased the time from idea to actual fielding by several years! Several SMEs who are actively involved in their country's digital engineering enterprise discuss their successes, challenges, and potentials for digital engineering today and in the near future.

Session Chair:  
Gernai Bledsoe, USAF AFLCMC/WNS -  
Simulator Program Office

THURSDAY, 2 DECEMBER 2021 • 1330-1500 • ROOM 310AB

## From the Trenches: An OTA Retrospective

### MODERATOR

#### TARA KILCULLEN

Director, TReX Consortium  
NSTXL

### PANELISTS

#### JOHN T. McCABE

Branch Chief, U.S. Army  
Contracting Command

#### DON WAGONER

Branch Chief, Charlie Division,  
U.S. Army Contracting Command

#### NATHAN JONES

Government Solutions Architect  
Problem Solutions LLC, An Allen  
Interactions Company

#### HARRY BUHL

Program Manager, Emerging  
Programs, Raytheon Technologies

#### IAIN SKEETE

Principal, Acquisition, NSTXL



MS. KILCULLEN



MR. McCABE



MR. WAGONER



MR. JONES



MR. BUHL



MR. SKEETE

The Training and Readiness Accelerator (TReX) Other Transaction Authority (OTA) has been executed by the Army's PEO STRI for over 4 years with acquiring government customers ranging across the DoD spectrum. This event is intended to be a retrospective providing I/ITSEC participants an opportunity to engage directly with the Army TReX OTA government representatives from both PEO STRI and ACC-Orlando, as well as industry representatives who have direct experience working within the TReX OTA. The panelists each bring a unique perspective to the conversation. The discussion will also allow the government team to provide their views regarding how they see OTAs shaping the acquisition landscape, why they're here to stay, what changes are happening, and how they see these effecting the future of TReX.

Session Chair:  
John Burwell, Varjo  
Technologies





# COMMUNITY OF INTEREST EVENT

CAREER FAIR LIVE • WEDNESDAY, 1 DECEMBER • 1200-1700 • ROOM 331C

CAREER FAIR VIRTUAL • WEDNESDAY, 1 DECEMBER

[HTTPS://APP.CAREERFAIRPLUS.COM/LOGIN](https://app.careerfairplus.com/login)

## NTSA Career Fair at I/ITSEC

### COORDINATOR

**JEFFREY A. RAVER**

Business Development Director,  
Naval Business Unit, SAIC

Linking top talent with leading companies in the training, modeling and simulation community is what the I/ITSEC Career Days are all about. Firms across our industry are struggling to identify resources and fill positions while at the same time early career and transitioning veterans are looking for opportunities where they can make a real difference for the warfighter. During this event, a total of up to 30 companies will be available in person and online to interview candidate, answer questions, and fill jobs. Candidates will also have the opportunity to participate in workshops on topics such as resume writing, interviewing skills, and the state of the modeling and simulation industry. All candidates, both virtual and live, will have the opportunity to engage with all recruiters, both onsite and virtual. Recruiting organizations will be added to the website as they are confirmed. We look forward to seeing you.

**CAREER FAIR LIVE**

Wednesday, 1 December • 1200 – 1700 • Room 331C

**CAREER FAIR VIRTUAL**

Wednesday, 1 December • <https://app.careerfairplus.com/login>

Participating Organizations will be added as they are confirmed, please visit the I/ITSEC website for the most up to date information.



# COMMUNITY OF INTEREST EVENT

WEDNESDAY, 1 DECEMBER 2021 • 1600-1730 • ROOM 329

## IEEE Adaptive Instructional Systems (AIS) Consortium

### MODERATOR

#### ROBERT A. SOTTILARE, PH.D.

Director of Learning Sciences, Soar Technology, Inc., Chairman of the Board & Executive Director, AIS Consortium

### PANELISTS

#### MICHELLE BARRETT, PH.D.

Vice President, Research and Learning Engineering, Edmentum, Inc., Director, AIS Consortium

#### CHRYSO CHRISTODOULOU, PH.D.

Founder & Chief Executive Officer, Digipro Education Limited; Director, AIS Consortium

#### XIANGEN HU, PH.D.

Professor, University of Memphis Institute for Intelligent Systems; Director, AIS Consortium

#### ROBERT MCCORMACK, PH.D.

Director, Intelligent Analytic Technologies, Aptima, Inc.

#### RICHARD TONG

Chief Architect, Squirrel AI Learning by Yixue Education Group; Director, AIS Consortium

#### ROBBY ROBSON, PH.D.

CEO, Eduworks, Inc.; Director, AIS Consortium



DR. SOTTILARE



DR. BARRETT



DR. CHRISTODOULOU



DR. HU



DR. MCCORMACK



MR. TONG



DR. ROBSON



The Adaptive Instructional Systems (AIS) Consortium is non-profit industry alliance (US 501.c.6 – business association) formed under the IEEE Industry & Standards Organization (ISTO) in December 2020. The mission of the AIS Consortium is to promote the development and adoption of effective AIS solutions and to support the industry and organizations that produce them. This special event provides a unique opportunity to become situationally aware of the AIS marketplace and the industry and academic partners within the AIS Consortium who specialize in adaptive instructional products, services, and enabling capabilities (tools and methods). What is Adaptive Instruction? Adaptive instruction is any training or educational experience that is tailored to their capabilities, learning gaps, and interests) of an individual learner or team of learners with the goal of optimizing the efficiency and effectiveness of their learning experience and transferring developed skills to operational environments. The members of the AIS Consortium include companies and universities in North America, Asia-Pacific, Europe, and the Middle East and is continuing to grow. The strength of the consortium is in the diversity of its members, the broad AIS marketplace (e.g., pre-K, K-12, adult learning, military training), and its open resource repository. The AIS Consortium Open-Source Resource Repository provides open access to tools that can be used for commercial development of adaptive instruction. In year one (2021), the consortium will be migrating an open source version of the well-known Generalized Intelligent Framework for Tutoring (GIFT) to support AIS development. Organizational memberships are available in the AIS Consortium (<https://aisconsortium.com/membership/>). Our members participate in outreach events (conferences, hack-a-thons), shared resource development (e.g., reference implementations), and certification methods and services for the evaluation of AIS standards and best practices.

Session Chair:

Jennifer Murphy, Ph.D., Quantum Improvements Consulting



# COMMUNITY OF INTEREST EVENT

THURSDAY, 2 DECEMBER 2021 • 0830-1000 • ROOM 310C

## NMSG and SISO Partnership in Simulation Interoperability Standards Development

### MODERATOR

#### WIM HUIKAMP

Chief Scientist Modelling,  
Simulation and Gaming, TNO  
Defence Research; NATO M&S  
Group (NMSG) Scientific Advisor

### PANELISTS

#### PATRICK ROWE

Executive Director, Simulation  
Interoperability Standards  
Organization (SISO)

#### GRANT BAILEY

Defence Modelling and Simulation  
Coherence (DMaSC) Technical  
Authority, UK MoD

#### BJÖRN MÖLLER

President and Co-founder, Pitch  
Technologies, Sweden

#### KATHERINE L. MORSE, PH.D., CMSP

Principal Professional Staff, Johns  
Hopkins University Applied  
Physics Laboratory (JHU/APL)

#### COLONEL KENNETH 'CRASH' KONWIN, USAF (RET.)

Program Manager, Booz Allen  
Hamilton



MR. HUIKAMP



MR. ROWE



MR. BAILEY



MR. MÖLLER



DR. MORSE



COL KONWIN, USAF (RET.)

Standards provide interoperability and reduce time and cost to deliver effective solutions. This is especially true in areas like modeling, simulation, and training where a mix of existing and/or newly developed components often need to be integrated in a short timeframe.

M&S standardization leads from NATO and the Simulation Interoperability Standards Organization (SISO) will describe their standardization processes. You will hear from leads and proponents of three NMSG/SISO standards at different points in the standardization process—concept exploration for a new standard, a recently published standard, and a well-established, supported standard.

You will gain renewed appreciation for the value of standards and more in-depth understanding of how they are developed, adopted, supported, and maintained. If you attended the NMSG-SISO session last year, plan to attend again this year to get an update of NATO and SISO standards program information.

Session Chair:  
Robyn Ingerham, USMC PM TRASYS



# COMMUNITY OF INTEREST EVENT

THURSDAY, 2 DECEMBER 2021 • 1330-1500 • ROOM 330EF

## Sea Services Live Virtual Constructive Training Environment

WE'RE GOING LIVE, VIRTUAL, AND CONSTRUCTIVE

### MODERATOR

#### PAUL BOURGEOIS

Assistant Program Manager,  
Engineering Program Manager,  
Training Systems Marine Corps  
Systems Command

### PANELISTS

#### CAROL BYERS-BENDLE

Project Team Lead - Live  
Virtual Constructive Training  
Environment, Program Manager,  
Training Systems, Marine Corps  
Systems Command

#### ERIC JARABAK

Chief Engineer, Synthetic Training  
Systems, Program Manager,  
Training Systems, Marine Corps  
Systems Command

#### LUIS VELAZQUEZ

Future Capabilities & Innovation  
Branch Head, Marine Corps  
Systems Command

#### RON KETER

Program Manager, Navy  
Continuous Training Environment  
(NCTE), NSWC Corona

#### LIEUTENANT COLONEL

#### MICHAEL DONALDSON, USMC

Synthetic Training and Integration  
Management Branch, Range and  
Training Programs Division,  
Training and Education Command



MR. BOURGEOIS



MS. BYERS-BENDLE



MR. JARABAK



MR. VELAZQUEZ



MR. KETER



LTCOL DONALDSON, USMC

This event will provide an opportunity for I/ITSEC participants to engage directly with USMC and Navy leaders regarding current and planned activities related to the Live Virtual Constructive Training Environment and the Navy Continuous Training Environment (NCTE). Panelists will be Team Leads, Requirements Managers and Chief Technical Officers representing the Program Manager for Training Systems, Training and Education Command, Synthetic Training Integration Management Branch and NCTE Program Office. This panel discussion will enable the panelists to share their perspectives on the conference theme from their viewpoints.

Session Chair:  
Marryam Chaudhry, XR2LEAD



# COMMUNITY OF INTEREST EVENT

THIS EVENT HAPPENS THROUGHOUT THE WEEK ON THE EXHIBIT FLOOR • SEE SCHEDULE BELOW

## Air Force Gaming & Esports Across the Military

### GAMING & ESPORTS IN THE MILITARY

#### MODERATOR

##### CHIEF MASTER SERGEANT IAN EISHEN, USAF

Senior Enlisted Advisor, Air Force Gaming Senior Enlisted Leader, CSAF Strategic Studies Group

#### PANELISTS

##### CAPTAIN OLIVER PARSONS, USAF

Founder, Air Force Gaming Chief, Innovative Programs Branch

##### CAPTAIN ZACH BAUMANN, USAF

Co-Founder, Air Force Gaming AFPC Personnel Research Analyst

##### MASTER SERGEANT MARIO JARAMILLO, USAF

Operations Manager, Air Force Gaming & Innovative Programs Branch

##### TECHNICAL SERGEANT ERIN RICH, USAF

Sustainment Manager, Air Force Gaming & Innovative Programs Branch

##### IAN PIERCE

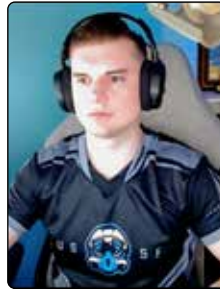
USAF Esports Manager, Air Force Gaming F-22 Crew Chief, Edwards Air Force Base, CA

##### ADAM ROSEN

Founder, Chief Executive Officer, Rally Cry



CMSGT EISHEN, USAF



CAPT PARSONS, USAF



CAPT BAUMANN, USAF



MSGT JARAMILLO, USAF



TSGT RICH, USAF



MR. PIERCE



MR. ROSEN

Air Force Gaming is a new program founded to digitally connect Airmen and Guardians through their shared love of gaming. Housed under the Air Force Services Center, AFG is focused on supporting the Department of the Air Force's resiliency and retention efforts through the creation of a global esports effort that brings Airmen and Guardians together through community experiences and competitive leagues. AFG's program is powered by Rally Cry, a company dedicated to delivering esports to everyone through recreational sports leagues for video games.

We invite all within the defense community to stop by throughout the week to learn about gaming within the military and join us for some fun events. Visitors will be able:

- Learn about the important role of gaming within the service branches
- Watch epic esports competition between the military's top players, including cross-branch competition
- Participate in daily challenges for gaming-related prizes
- Meet and connect with players from around the country

#### SCHEDULE

MONDAY, 29 NOVEMBER	1400 – 1800
TUESDAY, 30 NOVEMBER	1200 – 1830
WEDNESDAY, 1 DECEMBER	0930 – 1800
WEDNESDAY AFG SPECIAL EVENT	1030 – 1200
THURSDAY, 2 DECEMBER	0930 – 1430

# COMMUNITY OF INTEREST EVENT

TUESDAY, 30 NOVEMBER 2021 • 1000-1200 & 1300-1600 DEMOS • ROOM 319  
WEDNESDAY, 1 DECEMBER 2021 • EXHIBIT HALL

## xTechBOLT

### MODERATOR

**AMY D'AGOSTINO, PH.D.**

xTech Program Manager, Strategic Partnerships Office, Army Combat Capabilities Development Command, Army Research Laboratory



DR. D'AGOSTINO

DR. FRYE

### EVALUATORS

**DARRIN FRYE, M.D.**

Medical Simulation Portfolio Manager, Army Medical Research & Development Command, Medical Simulation

**LIEUTENANT COLONEL TODD COLLINS, USA,**

Attending Veterinarian, Army Training & Doctrine Command Medical Center of Excellence

**HAYLEY FOO, PH.D.**

Contract Management Specialist, U.S. Navy Community College

**MATT HACKETT, PH.D.**

Army Combat Capabilities Development Command, Simulation and Training Technology Center

**SERGEANT MAJOR JOHN FISCHETTI, USA**

SOCOM - Special Warfare Medical Group (Airborne)

**CAPTAIN TRAVIS POLK, USA**

Medical Simulation Army Training & Doctrine Command Medical Center of Excellence

**ANNABELLE SINGER**

McCamish Foundation Early Career Professor

ONE OF THESE 5 FINALISTS WILL RECEIVE A \$500,000 CASH PRIZE:

SkillPower



Berkeley  
UNIVERSITY OF CALIFORNIA



VANDERBILT  
UNIVERSITY



### GUEST SPEAKER

**SGM JOHN FISCHETTI**

Special Warfare Medical Group (A)  
Operations SGM



The U.S. Army Medical Research and Development Command (USAMRDC) launched the xTech Brain Operant Learning Technology (xTechBOLT) prize competition offering \$1 Million in prizes. xTechBOLT aims to understand the effects of emotion and empathy on learning and memory and the functional roles played by various brain regions and their mutual interactions in relation to emotional and empathetic processing and effect on both implicit and explicit learning outlining the use of one or more tools to locate, track, and trace four types of learning traits.

The goals for this competition are to understand the effects of emotion and empathy on learning and memory and the functional roles played by various brain regions and their mutual interactions in relation to emotional and empathetic processing and effect on both implicit and explicit learning. Understanding these effects will help build the United States Military of the future, by revolutionizing how we teach and train Warfighters, how we build better medical providers, and how we utilize novel brain operant learning technologies.

### SCHEDULE • TUESDAY 30 NOVEMBER

1000 - 1010	INTRODUCTION BY DR. FRYE
1010 - 1020	GUEST SPEAKER: SERGEANT MAJOR FISCHETTI
1020 - 1100	SPARK NEURO PRESENTATION
1120 - 1200	SKILLPOWER PRESENTATION
1320 - 1400	VANDERBILT UNIVERSITY PRESENTATION
1420 - 1500	DREXEL UNIVERSITY PRESENTATION
1520 - 1600	UNIVERSITY OF CALIFORNIA AT BERKELEY PRESENTATION

**WEDNESDAY WINNER ANNOUNCEMENT, WITH A TOP PRIZE OF \$500K!**  
INNOVATION SHOWCASE AT 1400 (BOOTH 2588)





# PROGRAM BRIEFS

**TUESDAY  
30 NOVEMBER 2021  
1400-1530  
ROOM 310AB**

## U.S. Air Force Acquisition Update

Session Chair:  
Brian Holmes, ManTech  
International Corporation

This Special Event will provide the latest information from the U.S. Air Force regarding acquisition initiatives, focus areas, and upcoming training systems acquisition actions. It will feature remarks from Colonel Lea Kirkwood, the Air Force Program Executive Officer (PEO) for Agile Combat Support (ACS). Col Kirkwood will share her perspective on the current state of the Air Force acquisition process along with ongoing initiatives, as they apply to the I/ITSEC community. Colonel John Kurian, the Senior Materiel Leader for the Simulators Division, will follow the PEO's presentation. Col Kurian will provide an update on Air Force simulator business opportunities, as a follow on to the Simulation and Training Community Forum (STCF) held in August.

### MODERATOR

**PENNY MASON**  
Deputy, Simulators Division

### PANELISTS

**COLONEL LEA KIRKWOOD, USAF (INVITED)**  
Program Executive Officer, Agile Combat Support  
Directorate

**COLONEL JOHN KURIAN, USAF (INVITED)**  
Senior Material Leader, Simulators Division

**TUESDAY  
30 NOVEMBER 2021  
1600-1730  
ROOM 310C**

## U.S. Marine Corps Acquisition Update

Session Chair:  
Perry McDowell, MOVES  
Institute

### MODERATOR

**JOHN TAYLOR**  
Deputy Program Manager, Training Systems Marine  
Corps System Command

### PANELISTS

**COLONEL LUIS "LOU" LARA, USMC**  
Program Manager, Training Systems  
Marine Corps Systems Command

**LIEUTENANT COLONEL JON MOHLER, USMC**  
Product Manager, Range Training Systems  
Program Manager, Training Systems  
Marine Corps Systems Command

**LIEUTENANT COLONEL TROY PETERSON, USMC**  
Product Manager, TS4  
Program Manager, Training Systems  
Marine Corps Systems Command

**ELIZABETH SHIRLEY**  
Product Manager, Synthetic Training Systems  
Program Manager, Training Systems  
Marine Corps Systems Command

WEDNESDAY  
1 DECEMBER 2021  
0830-1000  
ROOM 330BCD

## U.S. Army PEO STRI I

Session Chair:  
Tara Kilcullen, Training and  
Readiness Accelerator, NSTXL

The U.S. Army Program Executive Office Simulation, Training and Instrumentation (PEO STRI) Training and Simulation Industry Symposium (TSIS) updates at I/ITSEC will provide the latest information regarding current and future PEO STRI business opportunities. This will be an update from the June 2021 TSIS and will include presentations from the Project Managers and Project Leads, as well as the Army Contracting Command – Orlando and Program Manager Medical Simulation and Training, Defense Health Agency.

### MODERATOR

**STEVE LUSHER**

U.S. Army PEO STRI Director, Strategic Communications

### PANELISTS

**TIM BISHOP, SES**

Deputy Program Executive Officer, Simulation, Training and Instrumentation (PEO STRI)

**COLONEL CORY BERG, USA**

Project Manager Soldier Training (PM ST), PEO STRI

**SCOTT PULFORD**

Project Manager Synthetic Environment (PM SE), PEO STRI

**BOB WOLFINGER**

Project Lead TADSS Support Operations (PL TSO), PEO STRI

**JUDE TOMASELLO**

Program Manager Medical Simulation and Training (PM MST), Defense Health Agency (DHA)

WEDNESDAY  
1 DECEMBER 2021  
1600-1730  
ROOM 330BCD

## U.S. Army PEO STRI II

Session Chair:  
Mark Parsons, SAIC

The U.S. Army Program Executive Office Simulation, Training and Instrumentation (PEO STRI) Training and Simulation Industry Symposium (TSIS) updates at I/ITSEC will provide the latest information regarding current and future PEO STRI business opportunities. This will be an update from the June 2021 TSIS and will include presentations from the Project Managers and Project Leads, as well as the Army Contracting Command – Orlando and Program Manager Medical Simulation and Training, Defense Health Agency.

### MODERATOR

**STEVE LUSHER**

U.S. Army PEO STRI Director, Strategic Communications

### PANELISTS

**COLONEL COREY HEMINGWAY, USA**

Project Manager Cyber, Test and Training (PM CT2), PEO STRI

**DALE WHITTAKER**

Project Lead International Programs Office (PL IPO), PEO STRI

**MIKE HARRIS**

Executive Director/SCO, U.S. Army Contracting Command – Orlando (ACC-O)

THURSDAY  
2 DECEMBER 2021  
0830-1000  
ROOM 310AB

## Program Brief for the Navy

Session Chair:  
Kelly Hale, Ph.D., Draper

### MODERATOR

**MIKE MERRITT**

Acquisition Director, Naval Air Warfare Center Training Systems Division (NAWCTSD)

### PANELISTS

**CAPTAIN JOHN "NILES" SCHIAFFINO**

Program Manager for F-35 Training Systems & Simulation, F-35 Lightning II Joint Program Office (JPO)

**KEVIN HUNT**

Deputy Program Manager, PMS-339 Surface Training Systems Division, Naval Sea Systems Command

**SEAN WORRELL**

Live Virtual Constructive for Training (LVCT) Branch Head & LVCDOC Lab Manager, Naval Air Warfare Center Training Systems Division (NAWCTSD)



# INTERNATIONAL EVENTS



**INTERNATIONAL ATTENDEES • INTERNATIONALE TEILNEHMER •  
LES PARTICIPANTS INTERNATIONAL • INTERNATIONAL DELTAKERE  
• INTERNATIONELL DELTAGARE • INTERNATIONAL DEELNEMERS**

## INTERNATIONAL PAVILION

International attendees can meet and connect with counterparts from around the world. Limited private meeting space is available on a first-come, first-served basis to our international participants and may be scheduled at the International Pavilion's Welcome Desk. Additional information about the many international activities throughout I/ITSEC is readily available in the International Pavilion.

International registrants should register at the dedicated international check-in station positioned near the main registration desk in the south concourse. International conference attendees' meeting bags will be avail-

## ROOM S310E

able for pick-up at the main registration desk this year. Other materials of interest for international attendees will be available in the International Pavilion.

## INTERNATIONAL PAVILION HOURS OF OPERATION

Monday, 29 November	0800 – 1800
Tuesday, 30 November	1200 – 1800
Wednesday, 1 December	0800 – 1800
Thursday, 2 December	0800 – 1500





# INTERNATIONAL EVENTS

INTERNATIONAL ATTENDEES • INTERNATIONALE TEILNEHMER • LES  
PARTICIPANTS INTERNATIONAL • INTERNATIONAL DELTAKERE •  
INTERNATIONELL DELTAGARE • INTERNATIONAL DEELNEMERS



## SPECIAL EVENTS

WEDNESDAY, 1 DECEMBER • 0830 – 1000 • ROOM 310C • PAGE 31

**Focus Event:** Cloud Based Simulation Developments in Europe

THURSDAY, 2 DECEMBER • 1030 – 1200 • ROOM 329 • PAGE 44

**Focus Event:** Research Foundations and Findings Supporting Augmented and Virtual Reality (AR/VR) Implementation in the Wild

THURSDAY, 2 DECEMBER • 0830 – 1000 • ROOM 310C • PAGE 52

**Community of Interest:** NMSG and SISO Partnership in Simulation Interoperability Standards Development

THURSDAY, 2 DECEMBER • 1400 – 1530 • ROOM 310C • PAGE 48

**Focus Event:** Digital Twin/Digital Engineering: Multinational Perspectives on Digital Engineering and the M&S Enterprise

## TUTORIALS

### FRANCE

MONDAY, 29 NOVEMBER • 0830 – 1000 • ROOM 329

21004 • TU7: EMPLOYING M&S • PAGE 65

**An Introduction to RIEDP Concepts for Environmental Data Sharing**

### SWEDEN

MONDAY, 29 NOVEMBER • 1245 – 1415 • ROOM 320A

21019 • TU1: LVC 2 • PAGE 66

**Introduction to HLA**

## PAPERS

### CANADA

21173 • WEDNESDAY, 1 DECEMBER • 0830 • ROOM 320B

TRN3: AR/VR IS IT REAL...

**Scanning Analysis of Novice and Experienced Hoist Operators: Simulation Using a Virtual Reality Hoist Training System**

21354 • WEDNESDAY, 1 DECEMBER • 0900 • ROOM 320B

TRN3: AR/VR IS IT REAL...

**Evaluating Human Performance in Offshore Oil and Gas Emergencies using Training Simulators**

21270 • WEDNESDAY, 1 DECEMBER • 0930 • ROOM 320D

ED3: WIKIHOW: THE UNDERPINNINGS OF AUTOMATED ASSESSMENT

**How To Build Adaptive Training Amid A Future of Uncertainty**

21267 • THURSDAY, 2 DECEMBER • 0830 • ROOM 320D

ED6: SCAFFOLDING THE FUTURE: CONTESTED AND COMPLEX

BATTLESPACE

**Case Studies: Ensuring Objective, Consistent, and Actionable Evaluation of Simulation**

### GERMANY

21159 • TUESDAY, 30 NOVEMBER • 1630 • ROOM 320C

SIM2: GLOBALLY ORIENTED AUGMENTED TRAINING AND SIMULATION

**Logistic Simulation to Support Military Rescue Chains**

21111 • WEDNESDAY, 1 DECEMBER • 1130 • ROOM 320C

ECIT 5: UNDER THE HOOD

**Blockchains for Achieving Data Awareness and Enabling Data Sharing**

21241 • WEDNESDAY, 1 DECEMBER • 1130 • ROOM 320A

ECIT 4: DATA ARCHITECTURE FOR TOMORROW'S ANALYTICS

**Streamlining 3D Data Integration with Standardized Web APIs**

21238 • WEDNESDAY, 1 DECEMBER • 1700 • ROOM 320B

TRN5: TRAINING ENHANCEMENT THROUGH DATA ANALYTICS

**Providing Better Feedback to Aviators through Automated Human Performance Analysis**

21143 • THURSDAY, 2 DECEMBER • 1430 • ROOM 320A

ECIT 10: AI AND IT'S APPLICABILITY FOR SIMULATIONS

**Enhancing Operations by Applying Constructive Simulation and Artificial Intelligence**

### NETHERLANDS

21180 • TUESDAY, 30 NOVEMBER • 1500 • ROOM 320C

SIM1: AI CONTRIBUTIONS TO ADVANCED TRAINING SIMULATION

**Are We Machine Learning Yet? Computer Generated Forces with Learning Capabilities in Military Simulation**

21119 • TUESDAY, 30 NOVEMBER • 1630 • ROOM 320B

TRN2: IMPROVING AVIATION TRAINING ON THREE CONTINENTS

**Design of a Reference Training for Simulator Specification and Syllabi Optimization for the Defence Helicopter Command**

### NORWAY

21132 • WEDNESDAY, 1 DECEMBER • 1600 • ROOM 320D

ED5: FLIPPIN' LEARNING ROCKS THE SCHOOLHOUSE!

**Digital Learning Resources Will Not Make Teachers Obsolete, But What about the Classroom Lecture?**

### TURKEY

21109 • TUESDAY, 30 NOVEMBER • 1700 • ROOM 320C

SIM2: GLOBALLY ORIENTED AUGMENTED TRAINING AND SIMULATION

**Agent Based Simulation of Naval Tactics with Effectiveness Analysis Features**

### UKRAINE

21222 • WEDNESDAY, 1 DECEMBER • 1100 • ROOM 320B

TRN4: LEARNER-CENTERED TRAINING IN DEFENSE

**Enhancing Military Exercise Team Performance with Diversified xAPI Instrumented eLearning**

### UNITED KINGDOM

21218 • TUESDAY, 30 NOVEMBER • 1500 • ROOM 320A

ECIT 1: EMERGING CONCEPTS IN VR

**Development of an Immersive Virtual Reality Trainer for Diving Teams**

21265 • TUESDAY, 30 NOVEMBER • 1500 • ROOM 320E

PSMA1: LOCK IT DOWN: VALIDATING AND SECURING THE FUTURE OF TRAINING

**'In through the Out Door' – Security and Identity Concerns for Military Digital Twins**

21120 • WEDNESDAY, 1 DECEMBER • 1130 • ROOM 320B

TRN4: LEARNER-CENTERED TRAINING IN DEFENSE

**Personalisation of Learning: Developing the Case for Implementation within Defence Learning Establishments**

21270 • WEDNESDAY, 1 DECEMBER • 0930 • ROOM 320D

ED3: WIKIHOW: THE UNDERPINNINGS OF AUTOMATED ASSESSMENT

**A Future Vision for the Defence Learning Ecosystem**

21158 • THURSDAY, 2 DECEMBER • 0830 • ROOM 320F

HPAE5: TEAMWORK MAKES THE DREAM WORK

**Teamwork Assessment and Development: Methodological Challenges and Solutions**

21254 • THURSDAY, 2 DECEMBER • 0930 • ROOM 320E

PSMA5: TAKING THE GUESSWORK OUT OF ROI

**Business Challenges Faced by Modelling and Simulation Defence Cloud Systems**

