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EVENT INFORMATION

SLIDO	We will be using Slido to submit questions for some sessions. Website: Slido.com Code: MODSIM23
SOCIAL MEDIA	Follow us on social media and be sure to post througout the conference! Use #MODSIMWorld
SURVEY & PARTICIPANT LIST	You'll receive a survey and list of attendees (name and organization) via email a few days after the conference. Please complete the survey to make MODSIM World even more successful in the future.
DRESS CODE	Army: ACUs or Duty Uniform Marine Corps: Service "C" Navy: Service Khaki, Navy Service Uniform Air Force: Short or Long Service Blues Coast Guard: Tropical Blue Long Civilian: Business Casual

Dear MODSIM World 2023 Guests,

On behalf of the conference committee, it is my great pleasure to welcome you to the 15th Annual MODSIM World Conference! We are thrilled to have you join us for this exciting event, which promises to be an excellent opportunity for learning, networking, and exchanging ideas with fellow professionals in the modeling and simulation community. With your presence, we hope to create a dynamic and engaging environment that fosters collaboration and drives innovation. The committee has worked relentlessly to prepare a program that is relevant and rich with content from a diverse set of fields, and so I am once again pleased to welcome you to MODSIM World.

This year's conference theme, *Make It Happen*, is inspired by the famous quote by Michael Jordan, "Some people want it to happen, some wish it would happen, others make it happen," which aptly captures the spirit of the event. As technology professionals, we are all committed to turning our ideas into reality, and this year's theme serves as a call to action for us to take the necessary steps to achieve our goals. It reflects the determination and perseverance of those who make things happen, and we are excited to have you all here to contribute your own expertise and knowledge towards this goal.

I am honored to welcome an outstanding lineup of keynote speakers and panelists who will highlight this year's theme from multiple perspectives. The planning committee and I are extremely grateful to each speaker and to their teams for juggling very busy schedules and working diligently to bring their perspectives to the conference. We believe you will find each speaker engaging, insightful, and knowledgeable about the ways M&S is affecting their business, agency, or branch. I truly appreciate the time these speakers have set aside to join us at MODSIM World 2023 and to share their visions with us.

We are also fortunate to have a diverse group of presenters comprising the technical program. We have a rich agenda anchored by distinguished participants from government, defense, industry, and academia, covering a wide range of topics in defense, industry, training, and education.

This year, in keeping with our theme, we have put an emphasis on the ways the community is advancing the field of M&S, as well as how they are using traditional M&S tools and techniques, alongside emergent technology such as artificial intelligence (AI), machine learning (ML), and others to make a tangible impact on the world. While we are maintaining focus on the defense space with both the Department of Defense (DoD) and NATO, which continue to embrace the technologies of M&S, we are also focusing on how industries far removed from the defense space are seeing revolutionary change in capabilities, empowered by simulation professionals. We are also aiming to provide insights that will allow the community to continue to make change for the better.

In closing, I would like to thank the sponsors and exhibitors whose support has been invaluable, as well as our presenters and speakers for being part of such an exceptional program. I am incredibly proud and appreciative of the hard work the committee has done this last year to create a captivating event. I would also like to thank NTSA for their dedication and tireless efforts, without which, this event would not be possible; their commitment to promoting the use of modeling and simulation in education and training has been instrumental to the community. Thank you for attending, welcome to MODSIM World, and let's "Make It Happen" together!
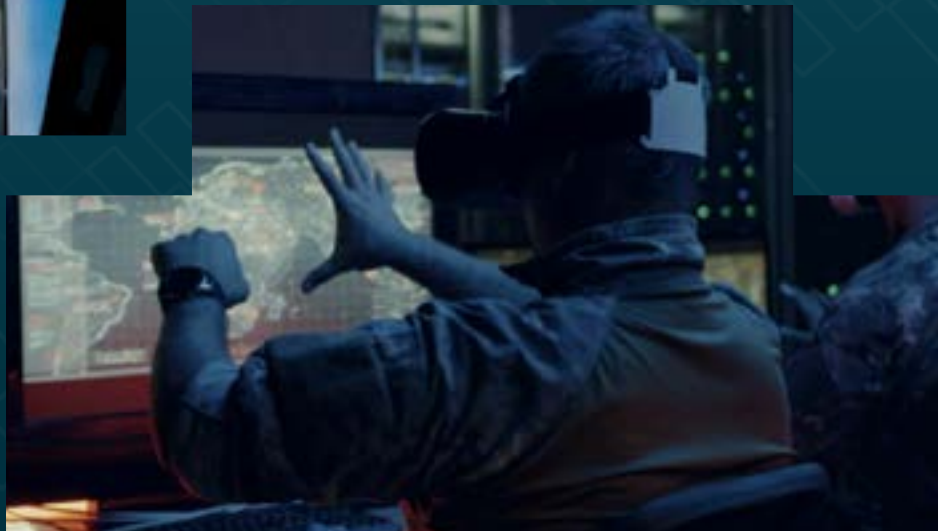

Sincerely,

Stefani Brigham
Newport News Shipbuilding
Conference Chair, MODSIM World 2023

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SCHEDULE AT A GLANCE

Monday, 22 May

Registration Open
Granby Ballroom Foyer
0700 – 1600

Continental Breakfast
Granby Ballroom Foyer
0700 – 0800

Exhibits Open
Granby Ballroom Foyer
0800 – 1730

General Session
Granby Ballrooms ABCD
0800 – 0900

Special Event
Granby Ballrooms ABCD
0900 – 1030

Networking Break
Granby Ballroom Foyer
1030 – 1045

Paper Session I
See Agenda for Rooms
1045 – 1200

Lunch & Exhibits
Granby Ballroom E & Foyer
1200 – 1300

Paper Session II
See Agenda for Rooms
1300 – 1415

Networking Break
Granby Ballroom Foyer
1415 – 1430

Special Event
Granby Ballrooms ABCD
1430 – 1600

Networking Event & Exhibits
Granby Ballroom Foyer
1600 – 1730

Tuesday, 23 May

Registration Open
Granby Ballroom Foyer
0700 – 1500

Continental Breakfast
Granby Ballroom Foyer
0700 – 0800

Exhibits Open
Granby Ballroom Foyer
0800 – 1600

General Session
Granby Ballrooms ABCD
0800 – 0900

Special Event
Granby Ballrooms ABCD
0900 – 1030

Networking Break
Granby Ballroom Foyer
1030 – 1045

Paper Session III
See Agenda for Rooms
1045 – 1200

STEM Event
Granby Ballroom Foyer
1045 – 1200

Lunch & Exhibits
Granby Ballroom E & Foyer
1200 – 1300

Paper Session IV
See Agenda for Rooms
1300 – 1415

Networking Break
Granby Ballroom Foyer
1415 – 1430

Special Event
Granby Ballrooms ABCD
1430 – 1600

Closing Remarks & Adjourn
Granby Ballrooms ABCD
1600

CONGRESSIONAL KEYNOTE

Monday, 22 May | 0815 – 0830 | Granby Ballrooms ABCD

REP BOBBY SCOTT

Congressman, VA-03

Congressman Robert C. "Bobby" Scott has represented Virginia's third congressional district in the U.S. House of Representatives since 1993. Prior to his service in Congress, he served in the Virginia House of Delegates from 1978 to 1983 and in the Senate of Virginia from 1983 to 1993.

During his tenure in the Virginia General Assembly, Congressman Scott successfully sponsored laws critical to Virginians in education, employment, health care, social services, economic development, crime prevention and consumer protection. His successes in the state legislature included laws that increased Virginia's minimum wage, created the Governor's Employment and Training Council and improved health care benefits for women, infants and children.

Congressman Scott has the distinction of being the first African-American elected to Congress from the Commonwealth of Virginia since Reconstruction and only the second African-American elected to Congress in Virginia's history. Having a maternal grandfather of Filipino ancestry also gives him the distinction of being the first American with Filipino ancestry to serve as a voting member of Congress.

Congressman Scott currently serves as the Chairman of the Committee on Education and Labor. In this capacity, he is advancing an agenda that focuses on improving equity in education, freeing students from the burdens of crippling debt, protecting and expanding access to affordable health care, ensuring workers have a safe workplace where they can earn a living wage free from discrimination, and guaranteeing that seniors have a secure and dignified retirement.

From 2015-2018, he served as the ranking member of what was then called the Committee on Education and the Workforce and developed a strong record of working across the aisle to pass critical legislation. In 2015, he was one of the four primary authors of the Every Student Succeeds Act, which reauthorized the Elementary and Secondary Education Act for the first time in 13 years and replaced the No Child Left Behind Act. Additionally, in 2017, he worked to secure passage of legislation to reform and update our nation's career and technical education system, as well as the juvenile justice system in 2018, which were both signed into law by President Donald Trump. The latter legislation, the Juvenile Justice Reform Act, contained core tenets of Congressman Scott's Youth Prison Reduction through Opportunities, Mentoring, Intervention, Support, and Education (Youth PROMISE) Act, which he had introduced in every Congress since 2007.

INDUSTRY KEYNOTE

Monday, 22 May | 0830 – 0900 | Granby Ballrooms ABCD

IRIN HALL

Director of Engineering, Newport News Shipbuilding (NNS)

Irin Hall is a Director of Engineering at Newport News Shipbuilding (NNS), a division of Huntington Ingalls Industries (HII). She has BS in Mathematics from John Carroll University, MS in Modeling and Simulation (M&S) from University of Central Florida and MBA in Management from Strayer University. Throughout her career, Hall has managed various aspects of Modeling and Simulation, including the privilege of chairing MODSIM World 2014. Her experience in M&S has been highly influential as she pivoted to nuclear shipbuilding and overhaul work. Today, she leads a talented team working on the nation's mightiest warships, promoting digital transformation and analytical tools.

GOVERNMENT KEYNOTE

Tuesday, 23 May | 0815 – 0900 | Granby Ballrooms ABCD

FRED ENGLE

Director, Military Training, Office of the Assistant Secretary of Defense for Readiness

Mr. Engle is the Director, Military Training, in the Office of the Assistant Secretary of Defense for Readiness, Office of the Secretary of Defense (OSD). In this role, he oversees the development of policies and plans for military training and training capabilities. His responsibilities include Service and joint training policy, cyber training policy, training capability modernization, and enabling access to the land, air, and sea live training domains. He co-chairs the planner-level Defense-wide Military Training Capabilities Group. During the 2021 transition of administrations, he served as the Acting Deputy Assistant Secretary of Defense for Force Education & Training.

Mr. Engle leads a team of subject matter experts responsible for analyzing training readiness and advocating for interoperable training. In 2020, his team produced the Secretary of Defense Joint Operational Training Infrastructure Strategic Plan, the first DoD enterprise-wide plan for multi-domain and interoperable training capabilities. Mr. Engle co-chairs the NATO Training Group's Steering Group and works with the Swedish Ministry of Defence to implement the 2019 U.S.-Sweden bilateral training MoU.

Mr. Engle is a retired U.S. Navy Master Chief Submariner with 30 years of active and reserve service specializing in integrated submarine and strike group operations. His military awards include two Defense Meritorious Service medals, three Navy Commendation medals, and the enlisted Submarine Warfare Insignia (Silver Dolphins). In 2015, he was awarded the OSD Medal for Exceptional Civilian Service for his work on the Secretary of Defense Nuclear Enterprise Review.

Prior to assuming duties in the DoD, Mr. Engle was a researcher and curator at the Smithsonian Institution where he led satellite remote sensing projects. He was an instructor at George Mason University where he taught a writing intensive course on environmental policy in developing countries. He holds an AS degree in Marine Technology from Florida Institute of Technology, BA and MA degrees in Geography from the State University of New York at Albany, and he is a Fellow of the Royal Geographical Society in London. Mr. Engle also leads a technical SCUBA diving and maritime archaeology not-for-profit/non-governmental organization specializing in surveys of WWI and WWII Battle of the Atlantic shipwrecks.

NTSA LEADERSHIP

RADM JAMES ROBB, USN (RET.)

President, National Training & Simulation Association (NTSA)

Rear Admiral Jim Robb is the President of The National Training and Simulation Association (NTSA). NTSA is a non-profit corporation that provides a portfolio of events allowing the training, simulation, and gaming industries to engage national security markets. NTSA advocates the use of advanced simulation technologies, such as artificial intelligence, virtual reality, and serious gaming, to support training, education, and analysis. NTSA also runs the largest Training Systems Conference and Exposition in the world (IITSEC.org).

Before assuming his current position, Admiral Robb provided consulting and strategic planning services to large and small businesses in the defense market. He transitioned from the U.S. Navy in 2006, after a 34 year career in Naval Aviation where he deployed nine times across the globe and accumulated over 5,000 hours in the air and survived over 1,000 carrier landings at sea. He is a recognized expert in training and simulation, having spent much of his naval career instructing in fighter tactics and threat simulations. His notable training tours included flying captured Russian MIG fighters against U.S. forces in the Nevada desert and command of the Navy Fighter Weapons School, also known as TOPGUN. Admiral Robb also commanded a fighter squadron, a carrier air wing, and a carrier strike group.

Admiral Robb graduated from Rensselaer Polytechnic Institute with a BS in Mechanical Engineering and from the University of West Florida with a Masters degree in Aeronautical Systems.

AGENDA

MONDAY, 22 MAY

0700 – 1600 **REGISTRATION OPEN**
GRANBY BALLROOM FOYER

0700 – 0800 **CONTINENTAL BREAKFAST**
GRANBY BALLROOM FOYER

0800 – 1730 **EXHIBITS OPEN**
GRANBY BALLROOM FOYER

0800 – 0815 **MODSIM WORLD 2023 WELCOME & OPENING REMARKS**
GRANBY BALLROOMS ABCD

Welcome & Opening Remarks
Stefani Brigham
2023 Conference Chair, Newport News Shipbuilding

Scholarship Awards Presentation
RADM James Robb, USN (Ret.)
President, National Training & Simulation Association (NTSA)

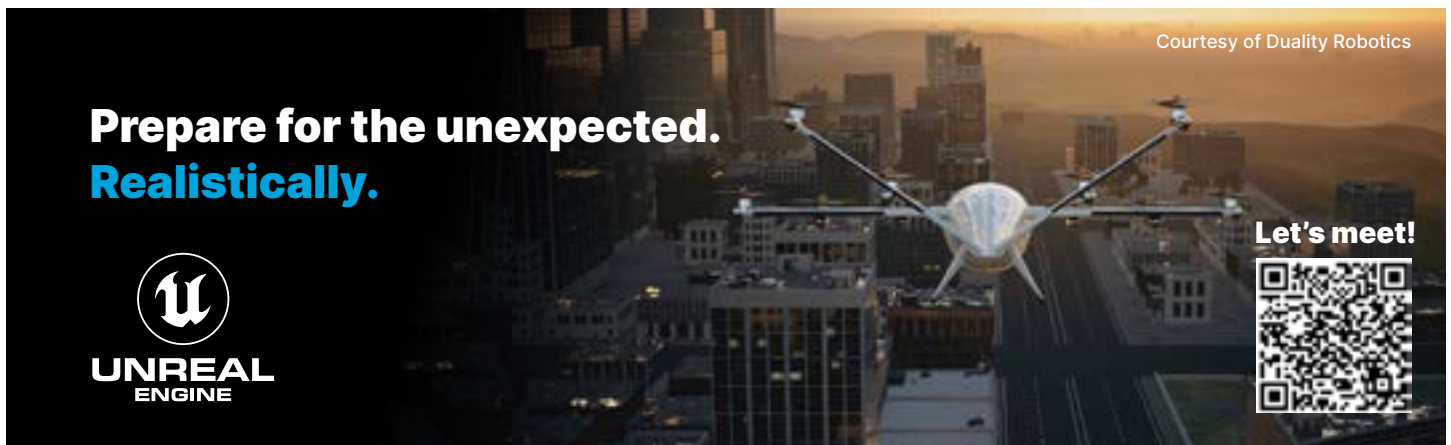**Introduction of Congressional Keynote Speaker**
RADM James Robb, USN (Ret.)
President, NTSA

0815 – 0830 **CONGRESSIONAL KEYNOTE ADDRESS**
GRANBY BALLROOMS ABCD

Rep. Bobby Scott
Congressman, VA-03

0830 – 0900 **INDUSTRY KEYNOTE ADDRESS**
GRANBY BALLROOMS ABCD

Irin Hall
Director of Engineering, Newport News Shipbuilding (NNS)

0900 – 1030

SPECIAL EVENT: NATO JOINT FORCE DEVELOPMENT – LEVERAGING THE STATE–OF–THE–ART WHILE ENVISIONING THE ART OF THE POSSIBLE THRU NEXT GENERATION M&S AND WARGAMING
GRANBY BALLROOMS ABCD

The Joint Force Development Directorate at the NATO Headquarters Supreme Allied Command Transformation is committed to delivering NATO's Warfare Development Agenda. Modelling & Simulation and Wargaming are two critical areas that are being developed in order to ensure that concepts are transformed to capabilities for NATO. NATO HQ SACT's Joint Force participation in MODSIM World 2023 will explore these areas in this unique Senior Leadership panel.

Ulf Jinnestrand
Sr. Subject Matter Expert Military Training & Simulation,
Virginia Modeling Analysis Simulation Center/ODU
Moderator

MAJ Stephen Nelson
Program Director, NATO Next Generation M&S Capability
Introduction

VADM Placido Torresi
Deputy Chief of Staff, Joint Force Development

BG Moschos Voudouris
Assistant Chief of Staff, Joint Force Development

COL Mark Madden, USA
Branch Head, M&S, Learning Technologies Branch,
Joint Force Development

Col N. D. "Wally" Waldron, USMC
Branch Head, Experimentation and Wargaming Branch,
Joint Forces Development

Paul Cummings, Ph.D.
Chief Architect, Unity Government & Aerospace

Alethea Duhon, Ph.D.
Executive Vice President of Product, Istari, Inc.

Sébastien Lozé
Unreal Engine Business Director, Simulation, Epic Games

1030 – 1045

NETWORKING BREAK & DEDICATED EXHIBIT TIME
GRANBY BALLROOM FOYER

PAPER SESSION I – DEFENSE TRACK: STRATEGIC MODELING AND ANALYSIS IN DEFENSE
ENERGY

1045 – 1110

Re-Engineering Aviation Training: Applying Human-Focused Learning Engineering Processes to Modernize Training Pathways, Interventions, and Use of Simulation

JJ Walcutt, Ph.D.
SAIC

LT Nicholas Armendariz, USN
Naval Aerospace Medical Institute

1110 – 1135

Modeling Audio Attributes of Deepfakes for Detecting Tampered Speech

Benjamin Bell, Ph.D.
Eduworks Corporation

Ewald Enzinger, Ph.D.
Eduworks Corporation

1135 – 1200

Data-Driven Modeling and Simulation to Test the Internet of War Things

Jeremy Werner
Office of the Secretary of Defense

PAPER SESSION I – INDUSTRY TRACK: INDUSTRY FOCUSED MODELING AND SIMULATION
FUSION

1045 – 1110

BEST PAPER NOMINEE

Modeling Complex Engineering Problems with a Neural Network

Kate Cloutier
Old Dominion University

Mileta Tomovic, Ph.D.
Old Dominion University

1110 – 1135

Adaptive Real-Time External Labeling for Interactive Visualization

Shan Liu
Old Dominion University

Yuzhong Shen, Ph.D.
Old Dominion University

1135 – 1200

Modeling the Deployment of a Passive CubeSat Solar Array

Mileta Tomovic, Ph.D.
Old Dominion University

John Nelson
Old Dominion University

PAPER SESSION I – TRAINING & EDUCATION TRACK: IMMERSIVE LEARNING AND THE METAVERSE
MOMENTUM

1045 – 1110

Ready Trainer Too: The Trials, Tribulations, and Technical Troubles of Bringing the Classroom and Immersive Training to the Metaverse

Andrew Hollis
Emerging Technology Support, LLC

1110 – 1135

Digital Twins and the Future State with AI and Metaverse/Immersive Learning

Ravi Garimella
C² Technologies, Inc.

Cody Caddell
C² Technologies, Inc.

1135 – 1200

Game Engine Modeling & Simulation (M&S) Implementations to Evaluate Human Performance in Transportation Engineering

Kevin Hulme, Ph.D., CMSP
University at Buffalo

Prajit Kumar
University at Buffalo

Roman Dmowski
Robert Bosch sp. z o.o.

Rachel Su Ann Lim
University at Buffalo

Rajyavardhan Karra
University at Buffalo

Meredith Finn
University at Buffalo

1200 – 1300

LUNCH & DEDICATED EXHIBIT TIME
GRANBY BALLROOM E & GRANBY BALLROOM FOYER

PAPER SESSION II – DEFENSE TRACK: ADVANCED SIMULATION IN DEFENSE
ENERGY

1300 – 1325   **Weaving the Extensible Bills of Materials (xBOM) Fabric**

Erica Dretzka
Chief Digital & Artificial Intelligence Office

Nathaniel Fuller, Ph.D.
Chief Digital & Artificial Intelligence Office

Brent Smith
The Advanced Distributed Learning (ADL) Initiative

1325 – 1350   **Using Red Teaming Tools for Model Development: A Six Step Process to Develop a Better International Decision Model**

Nathan Colvin
Old Dominion University

1350 – 1415   **Virtual System of Systems Analysis of Advanced Technologies for Joint All Domain Command and Control (JADC2)**

Matt Crozier
BAE Systems, Inc.

Stephen Jameson
BAE Systems, Inc.

PAPER SESSION II – MIXED TRACK: EXTENDED REALITY IN INDUSTRY, TRAINING, AND DEFENSE
FUSION

1300 – 1325   **A Methodology to Implement a Virtual and Augmented Reality Solution to the Engineering, Maintenance, and Control Phases of HVDC System**

Gerson Flavio Mendes de Lima, Ph.D.
CGW – Virtual Reality / Amazon

Edgard Lamounier, Ph.D.
Federal University of Uberlandia

Febian Martins Silva
CGW – Virtual Reality / Amazon

Lilian Ferreira Queiroz
Eletronorte, Eletrobras

Alexandre Cardoso, Ph.D.
Federal University of Uberlandia

Davidson Campos
Eletronorte, Eletrobras

1325 – 1350   **Xtended Reality – Applying Immersive Technologies**

Craig Clark
Kratos Defense

1350 – 1415   **Developing Augmented Reality for Interactive Visualization of Intercontinental Ballistic Missile Data**

Samuel Bushell
BAE Systems, Inc.

Matthew Pittard
BAE Systems, Inc.

Scott Nowlin, Ph.D.
BAE Systems, Inc.

PAPER SESSION II – TRAINING & EDUCATION TRACK: DIGITAL TRAINING AND AUTOMATED ASSESSMENT
MOMENTUM

1300 – 1325

Best Practices and Lessons Learned for Digital Training Asset Repositories

Richard Ayers, Ph.D.
Booz Allen Hamilton

Jeffrey Beaubien, Ph.D.
Aptima, Inc.

Rick Keithley
CymSTAR, LLC

Michael Bates
CymSTAR, LLC

Winston "Wink" Bennett Jr., Ph.D.
Air Force Research Laboratory

1325 – 1350

Calibrating for Performance: The Science of Interpreting Trust Indicators While Using Decision-Making Aids

Audrey Reinert
Aptima, Inc.

Valarie Yerdon
Aptima, Inc.

Daniel Nguyen
Aptima, Inc.

Summer Rebensky
Aptima, Inc.

Maria Chaparro Osman, Ph.D.
Aptima, Inc.

1350 – 1415   **A Novel Approach to Automated Assessment Generation Using Semantic Extraction**

Terry Patten, Ph.D.
Charles River Analytics

Rachel Amey, Ph.D.
U.S. Army Research Institute for the Behavioral and Social Sciences

Joanne Barnieu
ICF

Clarence Dillon
ICF

Jennifer Harvey, Ph.D.
ICF

Sean Shiverick, Ph.D.
ICF

Michael Smith
ICF

Steve Hookway
Charles River Analytics

1415 – 1430   **NETWORKING BREAK & DEDICATED EXHIBIT TIME**
GRANBY BALLROOM FOYER

1430 – 1600   **SPECIAL EVENT: "THE SIMULATION CENTURY" – GENERATIVE AI, THE METAVERSE, AND THE FUTURE**
GRANBY BALLROOMS ABCD

This is our eleventh annual session to address the growing issue of managing the human/machine interface as we hurtle towards the Singularity and the Metaverse. We will continue our discussion of how to achieve fluency with smarter balance between humans and machines to optimize outcomes. The Simulation Century Panel presentations this year will focus on technologies and methods for implementing the right human/machine balance in the accelerating age of generative AI.

I Prompt, Therefore I am. Design in the Era of Generative AI
Richard Boyd
CEO, Tanjo, Inc.
Moderator

New Learning, New Pathways: The Future of Education
Joe Ableidinger
Executive Director, SparkNC

Steve Isaacs
Education Program Manager, Epic Games

The Fourth Estate and the Deal from Hell
James O'Shea
Chairman of the Board, Middle East Broadcast Network

Implementing EveryDay AI
Kyle Shannon
Founder, Agency.com; Creator, AI Artists Salon

1600 – 1730   **ATTENDEE ONSITE NETWORKING EVENT**
GRANBY BALLROOM FOYER

MODSIM World reception is a networking event for industry, academia, and government attendees involved in the modeling and simulation community. This standing reception will have appetizers and beverages served throughout the foyer of the Hilton. Participants will have the chance to network and visit exhibitor tables to discover the latest in M&S technology.

Welcome Remarks
Stefani Brigham
2023 Conference Chair, Newport News Shipbuilding

Networking Reception Sponsor
VMASC

TUESDAY, 23 MAY

0700 – 1500   **REGISTRATION OPEN**
GRANBY BALLROOM FOYER

0700 – 0800   **CONTINENTAL BREAKFAST**
GRANBY BALLROOM FOYER

0800 – 1600   **EXHIBITS OPEN**
GRANBY BALLROOM FOYER

0800 – 0815   **DAY TWO WELCOME & OPENING REMARKS**
GRANBY BALLROOMS ABCD

Opening Remarks
Stefani Brigham
2023 Conference Chair, Newport News Shipbuilding

Introduction of Government Keynote Speaker
RADM James Robb, USN (Ret.)
President, NTSA

0815 – 0900   **GOVERNMENT KEYNOTE SPEAKER**
GRANBY BALLROOMS ABCD

Fred Engle
Director, Military Training, Office of the Assistant Secretary of Defense for Readiness

0900 – 1030   **SPECIAL EVENT: DIGITAL TWINS – THE BUILDING BLOCKS OF THE METAVERSE**
GRANBY BALLROOMS ABCD

Over the last year, the Metaverse has been a focus of so many conversations across the DoD, industry, and just about every other market – from real estate to retail. And while just what the Metaverse is and what it will look like is still being debated, we can look to Digital Twin technologies and applications for inspiration. Often referred to as the building blocks of the Metaverse, Digital Twin technologies are being used now to create real value and solve real problems. This panel will define, in very clear terms, what digital twins are, how they are being used to solve problems, the evolution of the digital twin market, and how digital twins fit into the broader discussion of the Metaverse.

Luke DeVore
Senior Manager, Strategy & Partnerships,
Government & Aerospace, Unity Technologies
Moderator

Paul Cummings, Ph.D.
Chief Architect, Unity Government and Aerospace

Chris Hample
Director, Booz Allen Hamilton

Robert Herman
Co-founder & CEO, REscan

Matt Zimmerman
CEO, Beast Code

1030 – 1045   **NETWORKING BREAK & DEDICATED EXHIBIT TIME**
GRANBY BALLROOM FOYER

PAPER SESSION III – DEFENSE TRACK: SOLVING DEFENSE PROBLEMS WITH MACHINE LEARNING
ENERGY

1045 – 1110 **Predictive Analysis: Reading the Enemy's Mind**

Enrico Raue
MASA Group

Ariane Bitoun
MASA Group

James Appleby
MASA Group

Aurélien Brucher
EMAT

Hans ten Bergen
MASA Group

1110 – 1135 **BEST PAPER NOMINEE**

Using Machine Learning for Defect Characterization

Victoria Gerardi
DEVCOM – Armaments Center

Antonio Aguirre
DEVCOM – Armaments Center

Yvan Christophe
DEVCOM – Armaments Center

1135 – 1200 **Ensemble Modeling: Using Advanced Learning Techniques for Naval Risk Analysis and Prediction**

Ashlee Edwards
Frontier Technology, Inc.

Jason Orender
Frontier Technology, Inc.

Spencer Smith
Frontier Technology, Inc.

Yanhua Feng
Naval Safety Command

Cristina Rider
Naval Safety Command

PAPER SESSION III – INDUSTRY TRACK: ADVANCED SIMULATION IN INDUSTRY
FUSION

1045 – 1110

Analysis of Centralized and Distributed Air Traffic Management Systems via Mixed Integer Linear Programs

Rex Kincaid, Ph.D.
William & Mary

Logan Wolf
William & Mary

Cameron Curtis
William & Mary

1110 – 1135

Finite Element Analysis of Polymer Based Additive Manufacturing: A Derived Approach

Robert Larson
Old Dominion University

Yuzhong Shen, Ph.D.
Old Dominion University

Bihui Li
Old Dominion University

1135 – 1200

Integration of an Autonomous Driving Simulator into V2X Simulation Framework for Testing Connected Vehicles

Defu Cui
Old Dominion University

Yuzhong Shen, Ph.D.
Old Dominion University

PAPER SESSION III – TRAINING & EDUCATION TRACK: VIRTUAL REALITY IN TRAINING & EDUCATION
MOMENTUM

1045 – 1110

Integrated Learner Assessment for Readiness Tracking Within Virtual Reality Medical Simulation

Karthik Sarma, Ph.D.
SimX, Inc.

Tyler Andre, MD
SimX, Inc.

Michael Poppe, MD
SimX, Inc.

Michael Barrie, MD
SimX, Inc.

Col John Dorsch DO, USAF (Ret.)
SimX, Inc.

Jennifer Polson, Ph.D.
SimX, Inc.

Talia Weiss
SimX, Inc.

Ryan Ribeira, MD
SimX, Inc.

1110 – 1135

Haptic and Virtual Reality Glove Comparison

Madison Quinn
Engineering & Computer Simulations, Inc.

David Fahr
Engineering & Computer Simulations, Inc.

Shane Taber
Engineering & Computer Simulations, Inc.

Matthew Becchio
Engineering & Computer Simulations, Inc.

Justin Welzien
Engineering & Computer Simulations, Inc.

Edwin Cardalda
Engineering & Computer Simulations, Inc.

1135 – 1200

Modeling and Simulation of Electronic Instruments in Virtual Labs

Yiyang Li
Old Dominion University

Charles Sukenik, Ph.D.
Old Dominion University

Yuzhong Shen, Ph.D.
Old Dominion University

1045 – 1200

SPECIAL EVENT: STEM EVENT
GRANBY BALLROOM FOYER

The MODSIM STEM event provides a unique opportunity to contribute directly to the school experience of youth who are beginning to formulate their dreams for the future. During the MODSIM STEM event, approximately 75 local high school students will get the opportunity to see firsthand the world of M&S. Students will rotate through hands-on M&S demonstrations provided in the exhibit hall to see STEM in action.

1200 – 1300

LUNCH & DEDICATED EXHIBIT TIME
GRANBY BALLROOM E & GRANBY BALLROOM FOYER

PAPER SESSION IV – DEFENSE TRACK: DOD MODELING & SIMULATION
ENERGY

1300 – 1325

Strategic Analytics: Modeling and Simulation for National Defense and International Security

Greg Parlier, Ph.D.
U.S. Army Retired

1325 – 1350

Diagnosing Critical Incidents During Army Battle Drills

Michael King, Ph.D.
Quantum Improvements Consulting

Gregory Goodwin, Ph.D.
Combat Capabilities Development Command

Eric Sikorski, Ph.D.
Quantum Improvements Consulting

1350 – 1415

Realtime System Integration Lab: Active Protection System Case Study

Matthew Kursar
DEVCOM – Armaments Center

Michael Greco
DEVCOM – Armaments Center

PAPER SESSION IV — MIXED TRACK: MODELING & SIMULATION ACROSS ORGANIZATIONS
FUSION

1300 – 1325

CANCELLED: Emulate, Apply, Evaluate, and Explain (EA2E): A Year One Emulate vs Simulate Effort

Tashara Cooper
Naval Air Warfare Center Training Systems Division

Rodney Myers
Naval Air Warfare Center Training Systems Division

1325 – 1350

Implementation of a Proof-of-Concept Virtual Reality Medical Simulation Training Capability for USAF Pararescuemen

Karthik Sarma, Ph.D.
SimX, Inc.

Tyler Andre, MD
SimX, Inc.

Jennifer Polson, Ph.D.
SimX, Inc.

Michael Barrie, MD
SimX, Inc.

Col John Dorsch DO, USAF (Ret.)
SimX, Inc.

Ryan Ribeira, MD
SimX, Inc.

Talia Weiss
SimX, Inc.

1350 – 1415

Generation and Utilization of Synthetic Data to Enhance Type I and Type II Error Resistance for Small Datasets

Jason Orender
Frontier Technology, Inc.

Matthew McCombs
Frontier Technology, Inc.

Ralitsa Maduro
Naval Safety Command

Brock Spencer
Naval Safety Command

PAPER SESSION IV — TRAINING & EDUCATION TRACK: CONSTRUCTIVE MODELING & SIMULATION
MOMENTUM

1300 – 1325

Large-Scale Online Constructive Simulation as a Response Training and Education Platform

David Spriggs
Applied Training Solutions, LLC

Schawn Thropp
Applied Training Solutions, LLC

1325 – 1350

Employing Metrics to Balance Live, Virtual, and Constructive Simulation to Meet Training Objectives

Tim Cooley, Ph.D.
DynamX Consulting

Ivar Oswalt, Ph.D., CMSP
The MIL Corporation

1350 – 1415

BEST PAPER NOMINEE

Taking a Constructivist Approach to Human-AI Co-Learning Design

Julian Abich IV, Ph.D.
Quantum Improvements Consulting

Eric Sikorski, Ph.D.
Quantum Improvements Consulting

1415 – 1430 **NETWORKING BREAK & DEDICATED EXHIBIT TIME**
GRANBY BALLROOM FOYER

1430 – 1600 **SPECIAL EVENT: SBIRS – GETTING BEYOND PHASE II (TALES FROM THE TRENCHES)**
GRANBY BALLROOMS ABCD

The SBIR program came under a lot of Congressional scrutiny late last year, but ultimately the program was reauthorized – but with new changes. What are those changes and how do they affect the program? While many are familiar with the SBIR program, getting beyond Phase II is still an elusive goal for many small businesses. Government leaders, SBIR law experts, and industry pros who have fought – and won – in the SBIR trenches. Hear where the pitfalls are and how to optimize your business' chances of moving beyond Phase II towards real commercialization.

Luke DeVore
Senior Manager, Strategy & Partnerships,
Government & Aerospace, Unity Technologies
Moderator

Paul Reid
Army SBIR Portfolio Manager, U.S. Army, DEVCOM – ARL,
Strategic Partnerships Office

Brian Shipley
SBIR/STTR Commercialization Program Manager,
Department of the Navy

Rick Stone
Founder, Stone Solutions + Research Collective, LLC

Josh Sutliff
Senior Director, Capture – Innovation,
Slingshot Aerospace, Inc.

1600 **CLOSING REMARKS & ADJOURN**
GRANBY BALLROOMS ABCD

MODSIM WORLD SCHOLARSHIP

The Annual RADM Fred Lewis Postgraduate MODSIM World Scholarships are offered to stimulate student interest and university participation in preparing individuals for leadership in the Modeling & Simulation, Training, and Education communities. RADM Fred Lewis served as the NTSA President from 1995 – 2012 and initiated important core programs to identify and credential a professional workforce and established educational programs to stimulate interest in M&S careers at all grade levels. RADM Lewis knew by investing in our future workforce, these scholarships will encourage expansion of the community and promote innovation through direct investment in our community's future leaders.

GRANT MEADOWS

Modeling and Simulation Engineering, Old Dominion University

DOROTHY (DORIE) PARRY

Computational Modeling and Simulation Engineering, Old Dominion University

Monday, 22 May | 0900 – 1030 | Granby Ballrooms ABCD

ULF JINNESTRAND

Sr. Subject Matter Expert Military Training & Simulation, Virginia Modeling Analysis Simulation Center/ODU

Ulf Jinnestrand is the Senior Expert on Military Operations, Training and Simulation with Allies & Partners at VMASC. In this role, , Ulf is also acting as a Senior Adviser to the Office of Deputy Assistant Secretary of Defense for Force Education and Training. Ulf is accountable for interaction with DoD Joint and Services forces, like Joint Staff J7 and Army PEOSTRI, also with NATO Allies and other Partners. The interaction is mainly about developing training and wargaming capabilities, using modeling, analysis, and simulation. Ulf also serve as Project Manager for various military training related DoD/OSD projects, like the next generation electronic warfare constructive simulation. Before joining VMASC, Mr. Jinnestrand served with the Swedish Armed Forces for thirty years in various tactical positions in the Amphibious Corps. Ulf developed and implemented several Command Post training environments, like the VIKING CAX concept, building Partner capacity, in cooperation with U.S. JFCOM. Ulf has served as the National representative in the NATO Modeling and Simulation Group. Ulf is heavily engaged in supporting and connecting with Ukraine.

MAJ STEPHEN NELSON

Program Director, NATO Next Generation M&S Capability

MAJ Nelson serves as the program director of NATO's Next Generation of M&S capability. MAJ Nelson has served in assignments from the tactical to strategic level and deployed three times to Afghanistan. He is a NATO Professional Doctorate fellow.

VADM PLACIDO TORRESI

Deputy Chief of Staff, Joint Force Development

Rear Admiral Placido Torresi is native of Bari (Jan 13 1968). He graduated from the Italian Naval Academy in 1990, with the rank of Ensign.

From 1990 to 1992 he attended the U.S. Navy flight schools in Pensacola (Florida) and Corpus Christi (Texas), where he got his wings as naval aviator for aircraft (December 1991) and helicopters (July 1992).

Back to Italy, he served as Air Operations Officer of the 1st Helicopter Squadron in NAS Luni and afterwards he reported on board the ITN Aircraft Carrier ITS GARIBALDI as Air Operations and Training Officer.

From September 1998 to September 1999 he was appointed Commanding Officer of the Patrolling Vessel ITS SPICA, mostly engaged in Fisheries Patrol Operations in the Mediterranean Sea.

His first tour as Staff Officer was at the "Studies and New Programmes" Office at the Naval Aviation Department of the Italian Navy General Staff in Rome (Sept. 1999 – Dec 2002), where he became the NH-90 Helicopter Project Manager.

At the end of this tour, he served in France at the NAHEMA NATO Agency for the management of the NH-90 Helicopter

programme, being responsible, from 2003 until 2005, of the "Mission system and Weaponry" section. In July 2004 he was promoted to the rank of Commander.

During his second staff assignment at the Naval Aviation Department of the Italian Navy General Staff in Rome (Jan. 2006 – Jul. 2007), he was appointed as project manager for the JSF (Joint Strike Fighter) programme and, from August 2006 to February 2007, he attended the 109th Senior Course of the NATO Defense College in Rome.

From July 2007 to September 2008 he served as Commanding Officer of the Anti-Submarine Frigate ITS ZEFFIRO.

From September 2008 to October 2012, he reported again to the Naval Aviation Department of the Italian Navy General Staff in Rome to become Chief of the "Studies and New Programmes" Office. Later, from October 2012 to September 2013, he was appointed Deputy Chief of the Naval Aviation Department of the Italian Navy General Staff. From October 2013 to July 2015 he reported on board the aircraft Carrier ITS GARIBALDI as Commanding Officer and between July 2015 and June 2016 he served as Commanding Officer of NAS Grottaglie (MARISTAER).

From June 2016 to September 2017, he served as Commander of the Italian Navy First Naval Division (COMDINAV UNO) in La Spezia

Naval Base and promoted to the rank of Rear Admiral as of 01 July 2016.

He was appointed Task Group 425 Commander for the single service national operation "MARE SICURO", from September to October 2016 and, again, from June to August 2017.

From October 2017 to July 2021, he became the Chief of the Italian Naval Aviation, serving as Director of the Naval Aviation Department (Italian Navy General Staff) and Commander of the Italian Fleet Air Arm.

From September 2021 to September 2022 he served as commander of MIASIT, the Italian assistance and support mission in Libya before he was appointed as Deputy Chief of Staff Joint Force Development at NATO Supreme Allied Command Trasformation in Norfolk (USA).

Rear Admiral Torresi has a bachelor degree in "Maritime and Naval Sciences" from Pisa University.

During his career, he flew about 1600 flight hours onboard T-34 e T-44 aircrafts and TH-57, SH-3D, AB-212, SH-90A and MH-90A helicopters, with 338 successful deck landings, of which 130 at night.

Rear Admiral Torresi is married and he has two sons.

BG MOSCHOS VOUDOURIS

Assistant Chief of Staff, Joint Force Development

Brigadier General Moschos Voudouris was born in Serres, Greece, on the 28th of March 1969. He joined the Hellenic Army Academy in 1986 and graduated in 1990 commissioned as an Artillery Second Lieutenant.

He was promoted to Lieutenant in 1993, to Captain in 1998, to Major in 2003, to Lieutenant Colonel in 2009, to Colonel in 2015 and to Brigadier General in 2020.

His command assignments include command of Battery A in 110th Field Artillery Battalion, command of HQ Battery in 98th Air Defence Artillery Battalion, command of 181st Air Defence Artillery Battalion ("HAWK"). He also served as Deputy Commander of the Hellenic Army Artillery School.

His staff assignments in the Artillery Units include Battalion S–2 and S–3 for 110th Field Artillery Battalion, Battalion S–4 for 98th Air Defence Artillery Battalion and Chief Ops/Plans for 181st Air Defence Artillery Battalion ("HAWK"). Upon his graduation from the Hellenic Joint War College he served as Chief Plans/Current Ops for the 88th Military Command (Brigade level) and later as Staff Officer NATO Education and Training Facilities in the Joint Education Training and Exercises (JETE) Division at HQ SACT (2008-2011), and Military Assistant to COM NRDC–GR (2013-2015). In 2017 he was assigned as ACOS J2 at HQ NRDC–GR where he contributed to the successful evaluation of the organisation as JTF HQ during Exercise TRJR18. He later served as Executive Assistant to COM NRDC-GR and upon his promotion to BGEN he was appointed as the Director of the Evaluations Directorate at the Hellenic Army General Staff (HAGS). During his time at HAGS he led the national evaluation of NRDC-GR in the role of Multi Corps Land Component Command (MC LCC). In March 2021 he was appointed as DCOS SPT at NRDC-GR and had the opportunity to participate in the demanding Exercise STLE21.

He successfully completed all national courses for Field and Air Defence Artillery as well as a number of NATO Education & Training related courses. He is a graduate of the Hellenic Army Command and Staff College, the Hellenic Joint War College and the Hellenic National Defence College. He also holds a MA in Strategic Security Studies from Panteion University in Athens.

His military awards include the Medal for Military Valour (Class A), the Golden Cross of the Order of Merit, the Golden Cross of the Order of Phoenix, the Army Meritorious Command Commendation Medal (Class A) and the Staff Officer Service Commendation Medal (Class A).

BGen Voudouris is married to Anna Peiou and they have two daughters, Eleni and Evangelia and a son, Georgios.

COL MARK MADDEN, USA

Branch Head, M&S, Learning Technologies Branch, Joint Force Development

Colonel Mark Madden graduated from St. Cloud State University as a Distinguished Military Graduate (DMG) where he received his commission as an armor officer in 1996. He holds a Master Degree from Central Michigan University in Mount Pleasant Michigan.

COL Madden transitioned into the Functional Area 57 (FA57) in June 2006 where he has held numerous staff assignments including: Lead, Mission Command Training Program (DAMO-TRS) G-3/5/7 Training; Chief, Environment Branch, Joint Staff J7, Suffolk, Virginia.

COL Madden is currently assigned as the Branch Head, Modeling and Simulations, Learning Technologies Branch (MSLT) within Joint Force Development (JFD) North Atlantic Treaty Organization, Allied Command Transformation (NATO-ACT).

COL N. D. "WALLY" WALDRON, USMC

Branch Head, Experimentation and Wargaming Branch, Joint Forces Development

Colonel (Col) Nicholas D. Waldron is a 2000 graduate of the University of Rochester. While completing his undergraduate degree in Political Science, he earned his commission through the Naval Reserve Officer Training Corps as a Second Lieutenant in May of 2000.

Col Waldron attended The Basic School in 2000 and Naval Flight Officer Training in February 2001, earning his Naval Flight Officer wings in June 2002. Upon winging, Col Waldron reported to VAQ-129, Whidbey Island, WA for EA-6B Prowler training from July 2002 – November 2003.

In December 2003, Col Waldron reported to Marine Tactical Electronic Warfare Squadron-3 (VMAQ- 3), where he served as Responsible Officer, Embarkation Officer, Powerline Officer, Pilot/Electronic Countermeasures Training Officer, Weapons and Tactics Instructor (WTI), Assistant Operations Officer and Operations Officer. He deployed with VMAQ-3 to Bagram AB in support of OPERATION ENDURING FREEDOM and twice to Al Asad AB in support of OPERATION IRAQI FREEDOM, amassing over 1200 combat flight hours.

In December of 2008 Col Waldron reported to MAWTS-1 for duty as an EA-6B Instructor, Night Systems Instructor Standardization Head, and subject matter expert for Communications Electronic Attack, Defensive Tactics and Threat Reaction, and Radar-guided Surface to Air Missile Systems. He also served as the Aviation Development Tactics & Evaluation Electronic Warfare (EW) Specialist, where he was a primary stakeholder in the development of the MAGTF EW Concept of Operations and the development of the Intrepid Tiger II MAGTF EW aviation payload.

In June of 2012, Col Waldron reported to the U.S. Naval War College in Newport, RI, where he graduated in June 2013. Upon graduation, Col Waldron reported to Marine Aviation Training Systems Site, Cherry Point, NC where he served as the Operations Officer and Officer in Charge.

In August of 2015, Col Waldron reported to the VMAQ-2 "Death Jesters," where he served as the Executive Officer. In July of 2016, Col Waldron reported again to MAWTS-1, where he has served as the Spectrum Warfare Department Head from 2016 to 2018, introducing Information Operations, Space, Cyberspace, and Special Technical Operations to Weapons and Tactics Instructor (WTI) students as part of the WTI course. Col Waldron was designated additional MOS's of Space Operations Staff Planner (0540) and Special Technical Operations Planner (8016).

In August of 2018, Col Waldron joined 3D Marine Expeditionary Brigade, Camp Courtney Okinawa, where he served as the Information Management Officer. In June of 2019, Col Waldron assumed Command of America's Finest, Marine Wing Headquarters Squadron 1, where he served as Commanding Officer

until June of 2021. Following Command, Col Waldron attended the U.S. Naval War College for Top Level School before being assigned to his current position as NATO SACT Experimentation and Wargaming Branch Head in the Joint Forces Development Directorate.

Col Waldron has over 2300 flight hours and has held all available qualifications in the EA-6B. His decorations include the Meritorious Service Medal with two Gold Stars, 19 Strike/Flight Air Medals, the Navy and Marine Corps Commendation Medal with Gold Star, and various unit and campaign awards. He holds a B.A. in Political Science from the University of Rochester, M.A. with Distinction in National Security and Strategic Studies from the Naval War College, and M.B.A. from New England College.

PAUL CUMMINGS, PH.D.

Chief Architect, Unity Government and Aerospace

Dr. Paul Cummings, Chief Architect for Unity Government and Aerospace, has spent his 25-year career developing transformational technology solutions with an emphasis on simulation and training, metaverse, digital twins, Live, Virtual and Constructive (LVC) simulators, and distributed simulations. Dr. Cummings is a seasoned technical leader helping to support digital transformation internal to the organization as well as across multiple teams. Dr. Cummings has built and led teams of program managers, designers, engineers, subject matter experts, and educational content professionals toward the success of large and small businesses. He is a member of the Interservice/ Industry Training, Simulation, and Education Conference (IITSEC) emerging concepts committee and is a published author on topics including LVC, explainable AI, intelligent tutoring, computational data science, and training transformation. Dr. Cummings is also on the Presidential Advisory Board for the George Mason University Fuse Center, supporting high technology innovation through federal, commercial, and university collaboration.

ALETHEA DUHON, PH.D.

Executive Vice President of Product, Istari, Inc.

Dr. Alethea Duhon is the Executive Vice President of Product at Istari, Inc, where she leads a team domestically and internationally representing the company's commercial, defense, space, and government portfolios. She is responsible for the strategic product direction, strategically aligning products and projects with business and engineering goals and maintaining customer relationships that align Istari's products with customer mission requirements, capturing new business and achieving business growth.

Dr. Duhon, previously a member of the Senior Executive Service, was the Associate Director for Analysis, National Risk Management Center (NRMC) within the Cybersecurity and Infrastructure Security Agency (CISA) at the Department of Homeland Security. Dr. Duhon's portfolio included leading the NRMC's efforts to take the next step in realizing the vision of the Risk Architecture (backed by the Modeling Capability Transition Environment (MCTE)); building data analysis capabilities to support the architecture via government and commercial solutions; and applying data, models, and technology to develop risk analysis and support risk management decisions around topics such as Supply Chain Security, Foreign Investment risk, and Systemic Risk to Critical Infrastructure from cyberattacks as well as other significant man-made and natural-hazard risks.

Prior to this assignment, Dr. Duhon was dual hatted as the Chief Technology Officer (CTO) to the Department of the Air Force's Chief Modeling and Simulation Officer (CMSO) and Technical Director of the Air Force Agency for Modeling and Simulation (AFAMS). As the CTO, she served as the Department of the Air Force key scientific authority in the Modeling and Simulation (M&S) field of endeavor. As the AFAMS TD, she was responsible for the planning, direction, management, coordination, reporting, and evaluation of all technical aspects of AFAMS' mission and programs.

Preceding that assignment, Dr. Duhon was the Senior Technical Advisor in the Office of the Under Secretary of Defense (OUSD) Policy, Defense Technology Security Administration (DTSA). In this role, she provided technical insight, advice and analysis on international transfers of defense-related items and other matters of national security interest. Previously, she served as an Acquisition Program Manager at the Assistant Secretary of the Air Force (Acquisition), Space Programs, Budget, Congressional and Program Integration Division. She also served as the Chief, Intelligence, Surveillance, and Reconnaissance (ISR) and Special Operations Forces (SOF) Programs, and Air Force Scientific Test and Analysis Techniques (STAT) Lead for the Headquarters United States Air Force, Directorate of Test and Evaluation and was instrumental in establishing the STAT Center of Excellence. She has held previous flight test and flight dynamics positions at Air Force Test Center, Edwards AFB, CA, Northrop Grumman Corporation, Palmdale, CA and Parker Hannifin (Aerospace), Irvine, CA.

Dr. Duhon received her B.S. and M.S. degrees in Aeronautical & Astronautical Engineering from Purdue University. She received her Ph.D. in Systems Engineering from The George Washington University and was a Massachusetts Institute of Technology (MIT) Seminar XXI Fellow.

NATO JOINT FORCE DEVELOPMENT PANEL BIOGRAPHIES

SÉBASTIEN LOZÉ

Unreal Engine Business Director, Simulation, Epic Games

Starting his career in the modeling and simulation community close to 20 years ago, Sébastien was working for Engenuity as a software engineer for the implementation of the lesson planner scenario generator (LPSG) of the Eurofighter Typhoon training solution as well as several other European projects. After moving to Montreal, Canada in 2006, he has been working on the COTS integration at CAE and the Presagis focusing on Simulation and Visualization products. Lately he put together simulation and training teams and strategies for innovative simulation companies like CM Labs and D-BOX. After a short incursion in the "real reality" World, managing Rheinmetall Defense Canada European channels, Seb came back into the virtual World. He is now the Unreal Engine Business Director for Simulations at Epic Games. During his career, Seb focused on learning about the latest simulation innovations as well as sharing his experiences about how experts have solved their challenges. If you are building virtual reality applications in order to train machines or train humans he wants to hear from you.

THE SIMULATION CENTURY PANEL BIOGRAPHIES

Monday, 22 May | 1430 – 1600 | Granby Ballrooms ABCD

RICHARD BOYD

CEO, Tanjo, Inc.

Richard Boyd is the CEO of Tanjo, a human-based neural net company designed to help businesses achieve the right balance between humans and machines. Over the last twenty-five years Richard has led or helped create some of the most innovative game technology companies in the industry. He has served as a game technology consultant for a wide variety of industries including energy, healthcare, education and motion pictures. At Aerospace giant Lockheed Martin he created and led a group of innovative engineers and designers across all mission areas called Virtual World Labs. Richard joined Lockheed Martin in 2007 with the acquisition of 3Dsolve, a North Carolina based computer game technology firm where he was founder and CEO.

Richard served for a decade on the executive management team of Virtus Corporation where he helped create several pioneering computer gaming companies including Red Storm Entertainment, with author Tom Clancy; iRock Entertainment with Ozzy Osbourne; and Timeline Computer Entertainment, with author Michael Crichton.

JOE ABLEIDINGER

Executive Director, SparkNC

Joe Ableidinger is a nationally-recognized leader in education innovation, with expertise in personalized learning, emerging technologies, and advanced teaching roles. Prior to founding SparkNC, Joe served as Acting CEO of The Innovation Project (TIP) and as TIP's Vice President for Innovation and Strategy. He led the organization's strategic initiatives and helped TIP's member superintendents "see around corners," anticipating major challenges in education and designing programs and policies to proactively address them.

Before joining TIP, Joe was the Senior Director of Policy & Programs at the Public School Forum of North Carolina, where he created the North Carolina Resilience & Learning Project and coordinated the North Carolina Education Policy Fellowship Program. Prior to that, Joe worked at Public Impact, a leading national education policy and management organization based in Chapel Hill, NC. Earlier in his career, Joe taught high-school English with the Fulbright Program in Korea and started a family resource center at an underperforming elementary school as an AmeriCorps VISTA member with Communities In Schools of Durham.

Joe has served as a strategic advisor to schools, philanthropic foundations, government agencies, and education-focused nonprofit organizations. He has authored or co-authored numerous publications at the intersection of law, policy, and practice. Joe holds a bachelor's degree with highest honors from Duke University, a master's degree in public administration from the John F. Kennedy School of Government at Harvard University, and a law degree with honors from Harvard Law School.

JAMES O'SHEA

Chairman of the Board, Middle East Broadcast Network

Jim O'Shea is chairman of the board of the Middle East Broadcast network, served as Managing Editor of the Chicago Tribune and Editor of the Los Angeles Times. He has written several books including The Deal From Hell, a book about the collapse of the newspaper industry as seen through the failure of the merger of Tribune Company and Times Mirror Company, publishers of the Chicago Tribune and the Los Angeles Times. The book was named a Fortune magazine best book of the year and one of Library Journal's best nonfiction books of the year. It came out in paperback in August, 2012 and is available on Amazon. He also co-authored Dangerous Company, The Consulting Powerhouses and the Companies They Save and Ruin, an Amazon best seller. He wrote the Daisy Chain, How Borrowed Billions Sank a Texas Savings and Loan, which exposed the financial and political corruption behind the savings and loan crisis in the 1980s.

KYLE SHANNON

Founder, Agency.com; Creator, The AI Artists Salon

Kyle Shannon is a visionary leader with more than 30 years of experience innovating in storytelling and digital marketing. As the Co-Founder and CEO of Storyvine, he has revolutionized video storytelling with a Guided Video platform that automates production and empowers clients to create authentic, professional content at scale.

Kyle's experience co-founding AGENCY.COM in the mid-1990s played a significant role in shaping the modern digital marketing landscape. As Chief Creative Officer, he helped grow the company to over 2,200 employees, $200 million in revenue, and a successful IPO on NASDAQ.

Today, Kyle is deeply invested in exploring generative AI and is the founder of the AI Salon, (TheSalon.ai) a community of curious AI adventurers exploring the potential of what AI makes possible for as many people as possible. He's dedicated to making AI accessible and understandable through the Everyday AI newsletter and AI Learning Lab TikTok channel.

Along with keynote presentations, Kyle also offers workshops to help organizations navigate the implications of emerging technologies on business models. Kyle's wealth of experience in digital marketing and passion for empowering others through technology clearly mark him as a tech optimist. Given all that is happening with AI recently, his friends & family lament, "he's been a bit manic lately."

Tuesday, 22 May | 0900 – 1030 | Granby Ballrooms ABCD

LUKE DEVORE

Senior Manager, Strategy & Partnerships, Government and Aerospace, Unity Technologies

Luke is the Senior Manager for Strategy & Partnerships for Unity Technologies' Government and Aerospace division where he works with government and industry partners to expand Unity-based use cases into new domains. Luke is particularly focused on developing new digital twin initiatives and is currently working on new initiatives with DARPA, Defense Innovation Unity, the Department of Energy, and the US Department of Veteran's Affairs. Prior to joining Unity, Luke was the Senior Vice President at Design Interactive, Inc. where he led business development and strategy. His time at Design Interactive gave him an appreciation for human systems integration and user experience that continues to inform his understanding of how best to apply emerging technologies. Luke is a Marine Corps combat veteran who served in the Global War on Terror and Operation Iraqi Freedom. Luke attended University of Pittsburgh and has earned his MA in Management and Leadership from Webster University and his eMBA from the Quantic School of Business and Technology.

PAUL CUMMINGS, PH.D.

Chief Architect, Unity Government and Aerospace

Dr. Paul Cummings, Chief Architect for Unity Government and Aerospace, has spent his 25-year career developing transformational technology solutions with an emphasis on simulation and training, metaverse, digital twins, Live, Virtual and Constructive (LVC) simulators, and distributed simulations. Dr. Cummings is a seasoned technical leader helping to support digital transformation internal to the organization as well as across multiple teams. Dr. Cummings has built and led teams of program managers, designers, engineers, subject matter experts, and educational content professionals toward the success of large and small businesses. He is a member of the Interservice/ Industry Training, Simulation, and Education Conference (IITSEC) emerging concepts committee and is a published author on topics including LVC, explainable AI, intelligent tutoring, computational data science, and training transformation. Dr. Cummings is also on the Presidential Advisory Board for the George Mason University Fuse Center, supporting high technology innovation through federal, commercial, and university collaboration.

CHRIS HAMPLE

Director, Booz Allen Hamilton

Chris Hample holds leadership roles across several emerging technologies across Booz Allen's Chief Technology Office, including Spatial Computing, Human Performance, IoT, and Digital Twins. Mr. Hample also leads Booz Allen's Spatial Integration Lab in Austin, TX, focused on creating hands-on demonstrations of the intersection of the physical and digital worlds, collaborating with startup hubs such as Capital Factory and local DoD innovation outposts such as Army Applications Lab (AAL), DIU, and AFWERX. His current efforts revolve around the enterprise metaverse, human digital twins, and novel human-computer interfaces. Mr. Hample has over 30 years of experience in software engineering, data analytics, and hybrid cloud infrastructure with degrees in Mathematics and Computer Science from the University of Utah.

DIGITAL TWINS PANEL BIOGRAPHIES

ROBERT HERMAN

Co-founder & CEO, REscan

Robert Herman is the Co-founder & CEO of REscan, a 3D mapping technology company that captures and digitizes the physical world from a human point of view.

Robert brings a deep understanding of the CRE asset owners and managers' need to REscan from spending over a decade acquiring and managing over 100 assets on behalf of Washington State Pension Fund.

In 2019, Robert was appointed to serve on the Americas World Regional Board of RICS (which is the largest real estate organization in the world) and responsible for the work of the Data & Technology Working Group. He's also an active member of the Digital Twin Consortium.

Robert holds a JD and two Masters in Real Estate from NTU in Nottingham (UK), and International Economics from Corvinus University, Budapest (Hungary).

MATT ZIMMERMAN

CEO, Beast Code

Matt is the CEO of Beast Code and a huge nerd with a background in software engineering.

His focus is on digitally transforming the Department of Defense to better the Warfighter through cloud-based technology. Matt is well versed in agile principles, human centered design, and modern software practices. As CEO of Beast Code, he has grown the team from seven dudes to over one-hundred talented employees, scaled from supporting one ship to the entire Fleet, and is just getting started.

SBIR PANEL BIOGRAPHIES

Wednesday, 22 May | 1430 – 1600 | Granby Ballrooms ABCD

LUKE DEVORE

Senior Manager, Strategy & Partnerships, Government and Aerospace, Unity Technologies

Luke is the Senior Manager for Strategy & Partnerships for Unity Technologies' Government and Aerospace division where he works with government and industry partners to expand Unity-based use cases into new domains. Luke regularly partners with small businesses to propose novel Unity-based solutions for RDT&E contracts including OTAs, BAAs, and SBIRs. Prior to joining Unity, Luke was the Senior Vice President at Design Interactive, Inc., a woman-owned small business, where he led business development and strategy. During his time at Design Interactive, Luke became expert at understanding the SBIR program, and the integration of SBIR contracts into a tech roadmap and business strategy. Luke is a Marine Corps combat veteran who served in the Global War on Terror and Operation Iraqi Freedom. Luke attended University of Pittsburgh and has earned his MA in Management and Leadership from Webster University and his eMBA from the Quantic School of Business and Technology.

PAUL REID

Army SBIR Portfolio Manager, U.S. Army, DEVCOM – ARL, Strategic Partnerships Office

Mr. Paul Reid currently serves as a Portfolio Manager for the Army Applied Small Business Innovative Research (SBIR) Program at the Army Research Laboratory. In this position, he is the lead for both the SMART Sensors and the Immersive and Wearables Transition Broker Teams executing and managing a diverse research portfolio identifying gaps and developing new technologies and capabilities for transition to the Army. Mr. Reid has 10 years of experience supporting both basic research and SBIR/STTR efforts at the Army Research Office developing technologies for the Army, Army Special Operations Command, Defense Health Agency, IARPA, and Department of Homeland Security.

BRIAN SHIPLEY

SBIR/STTR Commercialization Program Manager, Department of the Navy

Brian Shipley, DON SBIR/STTR Commercialization Manager. Brian Shipley is the Commercialization Program Manager for the Department of the Navy (NAVY) Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) Programs. In this role he ensures policy and programs are in place to facilitate, encourage, and increase the commercialization of SBIR/STTR-developed technology.

Mr. Shipley has over 30 years of experience working with Navy and DoD programs. He began his career in financial management providing programming and planning for Navy shipbuilding and research and development programs. In 2007 he joined the DoD Office of Small Business Programs to provide over-arching program management support to the DoD SBIR/STTR Programs. In 2013 Mr. Shipley transitioned to the NAVY SBIR/STTR Programs Office to support policy development, program management and outreach. Mr. Shipley has been in his current role as the NAVY SBIR/STTR Commercialization Program Manager since joining the civilian workforce in July 2020.

Mr. Shipley earned a Bachelor's in Marketing and Management from the University of Maryland and an MBA from Johns Hopkins University.

RICK STONE

Founder, Stone Solutions + Research Collective LLC

Rick Stone is the founder of Stone Solutions + Research Collective LLC (S2RC), an 8(a) certified Service-Disabled Veteran-Owned Small Business (SDVOSB). With over two decades of diverse experience in government, military, and aerospace sectors, Rick is a seasoned executive and human systems engineer. As an Air Force Special Warfare (AFSPECWAR) Tactical Air Control Party (TACP) Joint Terminal Attack Controller (JTAC), he has refined his expertise through a decade of active-duty service, followed by over ten years in the Air National Guard. In his ongoing role as a JTAC Instructor and Innovation Officer, Rick continues to make significant contributions to the Air National Guard and serves as a Technical Point of Contact (TPOC) for Small Business Innovation Research (SBIR) efforts.

Rick is well-versed in the intricacies of the SBIR process, having authored numerous SBIR Phase I, II, III, TACFI, and STRATFI proposals for various U.S. government entities as both a prime contractor, subcontractor, consultant, and a Principal Investigator. Rick has a great understanding and operational.

JOSH SUTLIFF

Senior Director, Capture – Innovation, Slingshot Aerospace, Inc.

Josh leads capture at Slingshot Aerospace Inc., a company that is bringing the space domain into the digital environment with its world-class space simulation and analytics solutions. Mr. Sutliff has more than 16 years experience in program & proposal management, systems acquisition, business operations and systems engineering on cutting edge, technically complex engineering projects. Josh has significant leadership experience managing and teaming with defense contractors, government civilians, government technical advisors and all branches of the military. He has also held key leadership positions in competitive bid source selections and contract negotiations. Mr. Sutliff served over 12 years on active duty in the United States Air Force as an Acquisitions Officer. Prior to separating from active duty, Josh served at Space Systems Center (formerly Space and Missile Systems Center) where he was the Geosynchronous Space Situational Awareness Program (GSSAP) Chief Engineer osh received his Bachelor of Science Degree in Mechanical Engineering from Purdue University and received his master's degree in Astronautical Engineering from the Air Force Institute of Technology.

CONFERENCE LEADERSHIP BIOGRAPHIES

STEFANI BRIGHAM | CONFERENCE CHAIR

Software Engineer, Newport News Shipbuilding (NNS)

Stefani Brigham is a Software Engineer in Newport News Shipbuilding's (NNS) Dogfish Labs (DFL). Ms. Brigham serves as technical lead and senior software developer for a software delivery team responsible for creating microservices and cross-platform applications that utilize IIoT, cloud, and other emerging technologies to solve complex NNS problems. Prior to joining DFL Ms. Brigham developed and implemented change management initiatives in support of the Integrated Digital Shipbuilding Program. Previously she worked as a Modeling and Simulation Engineer, developing several simulations for modeling logistics and nuclear operations for the Department of Defense. She has also served as technical lead and senior software developer on multiple nuclear modeling and simulation projects in support of the Department of Energy. Ms. Brigham received degrees from the College of William and Mary including a Bachelor of Science in Mathematics and Computer Science and a Master of Science in Computational Operations Research.

JULIAN ABICH IV, PH.D. | DEPUTY CONFERENCE CHAIR

Senior Human Factors Engineer, Quantum Improvements Consulting

Dr. Julian Abich IV is a Senior Human Factors Engineer at Quantum Improvements Consulting. His work focuses on implementing a user-centered approach to design, develop, and assess innovative training and learning solutions. He has extensive experience working side-by-side with stakeholders to improve the experience, effectiveness, and efficiency of tasks, processes, and technologies used in real-world applications. These technologies span from mobile to immersive platforms, such as augmented, virtual, and mixed reality. He continues to serve the research community through his national and international publications and presentations, top-tiered journal reviews, and participation in conference program committees. He served on the UCF faculty and continues to support their Modeling and Simulation graduate program as a Graduate Faculty Scholar. He also advocates for Science, Technology, Engineering, Arts, and Mathematics (STEAM) outreach efforts by encouraging public support and fostering posterity's interest within these domains.

CLAIRE HUGHES | PROGRAM CHAIR

Portfolio Manager, Design Interactive, Inc.

Claire Hughes is a Senior Research Associate and the Human-Systems Integration Portfolio Manager at Design Interactive, Inc. Claire has 10+ years of Human Factors Engineering experience focusing on project management, end-user evaluations, and research analysis. Claire leads her cross functional teams through the research, development, test, and evaluation cycles leading to products that truly empower the end-user. She is currently managing three simultaneous research studies focused on augmented reality and its effects on the human sensory system. She is also actively involved in the design and delivery of XR training technologies across the Department of Defense, with a focus on driving user-centered design for scalable adoption of AR/VR/XR solutions.

VANCE SOUDERS | DEPUTY PROGRAM CHAIR

Founder, Plas.md; Technical Lead, Cubic

Vance Souders has over 23 years of software engineering, design, and leadership experience focused on creating cutting-edge immersive experiences. He has played a critical role or spearheaded the development of over 40 innovative projects, driving value across various verticals, including health care, defense, and education. He has led diverse teams composed of on-site and remote engineers, artists, designers, clinicians, and scientists across multiple time zones. At Cubic, he is a technical lead focused on the development of immersive experiences for Sailor 2025.

DEFENSE

COL CHERYL LOCKHART, USAF | CHAIR

Chief Nurse, 6th Medical Group, MacDill AFB, FL

Colonel Cheryl C. Lockhart is the Chief Nurse at the 6th Medical Group at MacDill AFB, FL. She is responsible for ensuring standards of nursing care and practice provided by 103 nursing personnel serving over 241,000 beneficiaries.

Colonel Lockhart directly supervises Group Education and Training and is responsible for training over 650 medics in TCCC, EMT and medical readiness within a $400,000 Tier 1 Simulation Center. She is piloting the first Air Force outpatient virtual reality training platform and actively promotes immersive training methodologies throughout the DOD. She is a trained AFWERX SBIR evaluator and Tri-Service Nursing Research presenter and grant administrator. She has served as the Deputy Plans and Programs Officer at Bagram AB as well deploying multiple times as a Critical Care Air Transport Team (CCATT) nurse and an aeromedical evacuation nurse.

Col Lockhart enlisted in 1980 and will retire from the USAF in 2023. She has a Doctorate from SUNY Buffalo as well as an MPH with a focus on Homeland Security. She is a 2018 graduate of the Air War College. She plans to work in the Virtual and Augmented Reality field post-retirement.

FRANK KARLUK | DEPUTY CHAIR

Medical Simulation Account Executive, DLH Corporation

Frank J. Karluk, MA, PMP, NRP has over 30 years' experience in the medical field in multiple areas to include advancing patient care on the battlefield, direct patient care in the hospital setting, instruction, and curriculum development. Twenty-one of these years were in service to the United States Army with various assignments that included combat operations in the Helmand Province of Afghanistan. During this deployment he served as the Non-Commissioned Officer in Charge of an Army MEDEVAC detachment that was tasked to directly support the Special Operations Command during high-risk kinetic operations involving active warfare, including lethal force. He and his unit were the first Army MEDEVAC unit to conduct in flight blood resuscitation and he is credited with being the first flight paramedic to perform an emergency escharotomy in flight under the remote direction of a trauma surgeon. He maintains active licensure and certifications and is currently a faculty member at The George Washington University. Mr. Karluk has been invited to speak at international conferences and has been a spokesperson within the Medical/ Chemical, Biological, Radiological, Nuclear, and high yield Explosives (CBRNE) community before the Joint Chiefs, and other high level governmental leadership post 9/11.

Mr. Karluk holds a master's degree in Emergency and Disaster Management and graduated with high honors. He continues to share is experiences in the development of future medical simulation and training efforts and has been cited in multiple efforts that have expanded the abilities of a multidisciplinary practitioner community that includes medical providers both inside and outside the military. Most recently he managed the over $90M efforts within the Defense Health Agency, Medical Simulation portfolio, and designed and implemented curriculum within the U.S. Department of State, Special Agent training that was based on recent lessons learned during worldwide deployments into austere locations of conflict.

INDUSTRY

HALEIGH BENSON | CHAIR

Systems Engineer, Newport News Shipbuilding (NNS)

Haleigh Benson is a Systems Engineer in Newport News Shipbuilding's (NNS) Data Science & Advanced Data Solutions group. In this role, Ms. Benson is responsible for supporting the Data Science team as well as the Robotic Process Automation (RPA) group developing "bots" used to automate workflows. In addition to RPA, Ms. Benson assists the data scientists within the group to create solutions to empower better decision making. Prior to this role, Ms. Benson was a Business Analyst assisting with the implementation and support of business information systems in order to help achieve the business' goals. Ms. Benson possesses a Bachelor's of Science degree from Old Dominion University in Business Management and Business Analytics as well as a Master's of Science in Business Analytics from the College of William and Mary.

TRACK CHAIR BIOGRAPHIES

CONNER PARSEY | DEPUTY CHAIR

Science and Technology Manager, U.S. Army DEVCOM Simulation and Training Technology Center (STTC)

Conner Parsey is a Science and Technology Manager for the U.S. Army DEVCOM at the Simulation and Training Technology Center (STTC) in Orlando. Mr. Parsey manages medical simulation research and development projects aimed to advance simulation technology, increase training effectiveness, improve haptic fidelity, and ultimately impact the warfighter. His research interests include dynamic wounds, human tissue characterization, synthetic tissue surrogates, virtual and augmented reality simulations, 3D printing, bioprinting, and medical haptics. He has a BS in Mechanical Engineering and a MS in Mechanical Engineering from the University of Central Florida.

RYAN FOSTER | DEPUTY CHAIR

Software Engineer, Newport News Shipbuilding (NNS)

Ryan Foster is a Software Engineer at Newport News Shipbuilding's (NNS) Dogfish Labs (DFL). Ryan serves as a software developer and technical coach for a software delivery team working on Mixed Reality (XR) products for the enterprise. Ryan led development on several products for Navy and Shipyard customers that leveraged tablet and phone-based Augmented Reality (AR), and soon moved on to prototyping Virtual Reality (VR) training applications for shipbuilders on the waterfront. Following the success of these prototypes, Ryan, along with a team of skilled engineers, artists, and designers, now work on a large-scale VR learning platform that allows for creation of customized virtual training scenarios. Ryan has also developed games in his spare time, with a focus on arcade-style mobile games. Mr. Foster received his Bachelor of Science in Electrical Engineering from Virginia Tech.

TRAINING & EDUCATION

RADHAKISHAN "KISHAN" SHETTY | CHAIR

Principal Software Developer, JANUS Research Group

Principal Software Developer with 20 years of software engineering experience and interests in Augmented Reality, Machine Learning and Educational systems. Currently the Principal Investigator for the NIST PSIAP-2022 Wildland Urban Interface Mitigation Framework grant. Technical Lead on the Strikewerx Advanced Training Concepts Challenge B-52 Communications Trainer.

ANGELICA JASPER, PH.D. | DEPUTY CHAIR

Senior User Experience Researcher, John Deere

Dr. Angelica Jasper is a Senior User Experience Researcher at John Deere within the Intelligent Solutions Group. Her work is at the intersection of intuitive usability and innovative product development that optimizes human performance, with an emphasis on virtual and augmented reality solutions. She previously served as the Human Engineering Technical Lead Engineer for Virtual and Augmented Reality at Boeing Defense, Space, and Security, and her past work includes developing XR tools for the Air Force, Space Force, and Navy, as well as next generation solutions for flight simulation training. Dr. Jasper continues to write, review, and publish within the XR domain and specializes in issues related to cybersickness within simulated environments. She received her Ph.D. in Human Computer Interaction based within Industrial and Manufacturing Systems Engineering at Iowa State University.

LUKE DEVORE

Senior Manager, Strategy & Partnerships, Government and Aerospace, Unity Technologies

Luke is a Senior Manager of Strategy & Partnerships at Unity Technologies, specifically focused on the widescale adoption of real-time 3D technologies across the Federal and Defense markets. Prior to joining Unity, Luke worked for large systems integrators and as a leader in small business with a focus on growth and business development in the R&D markets, including OTAs, BAAs, and SBIRs. Prior to joining industry, Luke was a Marine Corps officer that deployed in support of Operation Iraqi Freedom and the Global War on Terrorism. Luke has a BA from University of Pittsburgh, an MA from Webster University, and an eMBA from the Quantic School of Business.

STEM CHAIR BIOGRAPHY

JESSICA JOHNSON, ED.S, PH.D.

Research Assistant Professor, Director for STEM and Educational Partnerships, Virginia Modeling Analysis & Simulation Center, Old Dominion University

Dr. Jessica Johnson is a Research Assistant Professor and the Director for STEM and Educational Partnerships at the Virginia Modeling Analysis & Simulation Center for Old Dominion University. She has over 15 years of experience applying cognitive and educational psychology principles, learning systems, and M&S approaches for utilization in education and training. Her work encompasses the applied development and design of learner autonomy constructs employing instructional design methodologies in emergent and immersive technologies. She leads various STEM outreach and programming for audiences spanning K-higher educational partnerships.

NATIONAL MODELING & SIMULATION COALITION

The National Modeling & Simulation Coalition (NMSC) is an unincorporated, voluntary, nonprofit coalition sponsored by and composed of government, industrial and educational organizations and professional societies having a common interest in promoting and leveraging M&S to better the human condition and to strengthen the National well-being. The mission of the NMSC is to create a unified national community of individuals and organizations around the M&S discipline and professional practice and to be the principal advocate for M&S.

ECOSYSTEM OF LEARNING

NTSA's EcosySTEM of Learning spans the lifecycle of learning. Opportunities abound for elementary and secondary students, college students, and the workforce to experience modeling and simulation through science, technology, engineering, and mathematics experiences. The four cornerstones of the program provide varying ways to engage with others in the modeling and simulation industry, through focused workshops, industry visits, and outreach encounters, the Discovery Den at I/ISTEC and career investment opportunities to include scholarship and career fairs. These events, occurring throughout the year, support learning at all levels, as well as professional development and workforce engagement.

PATIENT SAFETY INITIATIVE

Several years ago, NTSA launched an initiative to address the alarming statistics related to active and latent errors in healthcare which affect patient safety. Training through simulation has been shown to minimize errors and improve performance for healthcare workers in high stress environments. A working group was established to delve deeper into ways that simulation can improve patient safety and thus lessen the number of errors in the patient care arena. This working group holds regular meetings and has established a campaign through the Modeling and Simulation Congressional Caucus to raise awareness of this issue, and establish legislation to support the application of modeling and simulation to this critical need.

NTSA | NATIONAL TRAINING & SIMULATION ASSOCIATION

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Whether you are a large or small company, there is an NTSA membership option for you.

Corporate Membership Options

Sustaining	Regular	Associate
• $5,000 in dues	• $1,250 to $3,750 in dues (depending on # of employees involved in training and/or M&S)	• $500 in dues; designed for smaller companies
• First choice of booth space (during I/ITSEC)	• Second round of booth space selection (in early to mid-February)	• Third round of booth space selection (in late February)
• 10% discount on booth space for I/ITSEC (Maximum discount = $5,000)	• 5% discount on booth space for I/ITSEC (Maximum discount = dues amount paid)	• No discount on booth space for I/ITSEC
• Seat on Executive Committee and Invitation to M&S Awards Dinner		
• Additional exposure at I/ITSEC		

All corporate members of NTSA receive these core benefits:
- Reduced registration fees for all employees for all NTSA & NDIA events
- Member listing with hyperlink on the NTSA website
- NTSA's monthly e-newsletters
- National Defense, NDIA's award-winning magazine
- Opportunity to participate in various NTSA and I/ITSEC initiatives

VISIT NTSA.ORG/MEMBERSHIP, CONTACT CAROL DWYER AT CDWYER@NTSA.ORG

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M&S LEADERSHIP SUMMIT & CAPITOL HILL MODELING AND SIMULATION EXPO

Postponed to Early 2024
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IT²EC

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SIMULATION AND TRAINING COMMUNITY FORUM (STCF)

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WHY TSIS?

Held annually, TSIS provides industry an opportunity to network and interact with procurement officials for training and simulation products and services from the Army, Marine Corps, Navy, and Air Force. Industry looks for insight on near-term and long-term opportunities, to include Q&A sessions and panel discussions. Acquisition strategies, timing and funding levels are also provided during the briefs.

NTSA | NATIONAL TRAINING & SIMULATION ASSOCIATION

EXHIBITORS BY COMPANY

COLE ENGINEERING SERVICES INC (CESI) 5

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SPONSOR

Cole Engineering Services, Inc. (CESI), a wholly owned, independent subsidiary of By Light Professional IT Services, Inc., provides technical expertise in systems architecture, systems engineering, software development, systems modeling, and Live, Virtual & Constructive (LVC) architectural, engineering, post deployment operations and maintenance (O&M) and training services.

CESI operations are based in Orlando, FL with our corporate offices; a collaboration center; six laboratories; two high bays; and an accredited controlled space. CESI pride itself in listening to our customers, providing Government Purpose Rights (GPR) open source and open architecture solutions, and delivering training systems that are easy for our nation's warfighters to use. As the prime contractor on several key DoD programs. CESI has achieved sustained performance in three critical domains: simulation architectures, serious gaming and virtual and constructive simulations.

www.coleengineering.com

BAE SYSTEMS

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BAE Systems, Inc. and its 34,000 people are part of a global defense, aerospace and security company. We deliver products and services for air, land, sea and space, as well as advanced electronics, intelligence, security, and IT solutions and support services. Our dedication shows in everything we design, produce and deliver— to protect those who protect us in a high-performance, innovative culture. We push the limits of possibility to provide a critical advantage to our customers where it counts.

www.baesystems.com

DESIGN INTERACTIVE 3

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A Human Factors Research company that develops & evaluates innovative technology to accelerate human performance. We specialize in user-centered design and development of highly effective, learning science-based, performance-enhancing solutions for training and operational support. Our core capability is coupling XR technology, AI/ML driven human performance analytics to empower people with innovative technology.

www.designinteractive.net

HAVELSAN 17

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HAVELSAN is one of the leading technology companies of Türkiye, established in 1982 as a corporation affiliated with the Turkish Armed Forces Foundation. Thanks to its decades-long experience and highly qualified human resources, HAVELSAN provides high technology-based software-intensive solutions and products for armed forces, public and private sectors.

HAVELSAN has undersigned many reference projects at home and abroad in the fields of; C4ISR Technologies Simulation, Autonomous and Platform Management Technologies Information and Communication Technologies.
HAVELSAN, not only designs innovative technologies but also develops holistic defense systems for a trusted future. HAVELSAN as a reliable, sustainable, and strategic solution partner also leads the way for digital transformation both at home and abroad.

www.havelsan.com.tr/en

HII 8

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HII is a global, all-domain defense provider. HII's mission is to deliver the world's most powerful ships and all-domain solutions in service of the nation, creating the advantage for our customers to protect peace and freedom around the world. As the nation's largest military shipbuilder, and with a more than 135-year history of advancing U.S. national security, HII delivers critical capabilities extending from ships to unmanned systems, cyber, ISR, AI/ML and synthetic training. Headquartered in Virginia, HII's workforce is 43,000 strong.

www.hii.com

JACOB BARHAK ANALYTICS 1

Jacob Barhak is a Sole Proprietor registered in Texas as Jacob Barhak Analytics. Jacob is a Software Developer, and Computational Disease Modeler focusing on machine comprehension of clinical data.

He offers are support and consultation services for machine learning, the python programming language, high performance computing, disease modeling, and data standardization.

Jacob Barhak owns two U.S. patents to protect his main products:

1) The Reference model for disease progression is the most validated Diabetes model known worldwide and also the first COVID-19 multi-scale ensemble model.

2) ClinicalUnitMapping.com is a web portal with technology for standardizing clinical unit mapping.

Dr. Barhak has a diverse international background in engineering and computing science with more than 2 decades of experience. Jacob is active within the python community and an organizer with the Austin python meetup and DC python meetup. He is organizing the evening of python coding since 2014.

https://sites.google.com/view/jacob-barhak/home

MAXAR 6

Maxar Technologies is a provider of comprehensive space solutions and secure, precise, geospatial intelligence, delivering disruptive value to government and commercial customers around the world. Maxar's 4,600 team members are inspired to harness the potential of space to help our customers create a better world. For more information, visit www.maxar.com.

PITCH TECHNOLOGIES 7

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Pitch Technologies is a leading provider of Open Standards compliant products and services for interoperable distributed simulation systems. Pitch's products are used in system development, integration and test, and exercise & training delivery programs across a global range of sectors including Defense, Aerospace, Air Traffic Control, Transport, Energy and Medicine.
www.pitchtechnologies.com

QT GROUP 15

Qt Group offers cross-platform solutions for the entire software development lifecycle.

Qt Group is a global software company trusted by industry leaders and developers worldwide to create applications and smart devices that users love. We help our customers to increase productivity through the entire product development lifecycle - from UI design and software development to quality management and deployment.

Our customers are in more than 70 different industries in over 180 countries. Qt Group is headquartered in Espoo, Finland, and employs over 700 people globally.
www.qt.io

SIMIS, INC. 12

SimIS, Inc., founded in 2007, is an innovative information technology Veteran Owned Small Business (VOSB). SimIS is led and managed by industry professionals with career experience, determination, and balanced business insight. We are a values-driven company specializing in Modeling and Simulation Training, Test and Evaluation, Autonomous Solutions, Information Assurance, and Cyber Security.

SimIS will provide our clients with quality and innovative information technology solutions that will model the future and secure the enterprise, in order to sustain corporate growth and provide a challenging and rewarding environment for employee success.

Our performance standard is "excellence," with an outcome-based quality focus in our services and products, guided by our core values of honesty, relationships, teamwork, loyalty, and importance of others.
www.simisinc.com

SIMX VR 10

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SimX is the world's most comprehensive virtual reality medical simulation training platform and home to the most extensive library of VR-simulated patient encounters. Developed by physicians for physicians, SimX is currently used to train doctors, nurses, EMS, healthcare providers, and military personnel to prepare through more accessible, immersive, and affordable simulated patient encounters. This patented software enables students, instructors, and observers to work together in the same room or from across the world.
www.simxvr.com

TECH WIZARDS, INC. 2

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Tech Wizards, Inc. (TWI) is a small business founded in 2005, based in Dahlgren, Va. TWI supports government and commercial arenas with systems, software, and cyber security services. TWI administers full-system and software life cycle support and utilizes state-of-the-art processes and methodologies to implement scalable, extensible, and maintainable solutions.

TWI is a U.S. Navy Surface Training Advanced Virtual Environment (STAVE) solutions provider. Virtual Maintenance Trainers (VMTs) developed by TWI aid the United States Navy's Ready Relevant Learning (RRL) initiative by lowering costs and increasing the quality and proficiency of training. TWIs VMTs are digital twins of tactical training equipment, creating true-to-life immersive high-fidelity 3D gaming experiences that educate sailors on procedural compliance.
www.tech-wizards.com

THREAT TEC 13

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Threat Tec is a private company committed to providing unparalleled value to the US Department of Defense, including the Departments of the Army, Navy, and Special Operations Command. Their multifaceted service offerings equip modern warfighters for the complexities of an ever-changing Operational Environment (OE) by accounting and preparing for rapidly-evolving threats and emerging technologies. Through advanced threat emulation, red teaming, modeling, and simulation, Threat Tec provides customized solutions that effectively train and prepare soldiers for the most challenging missions. With a steadfast commitment to innovation, Threat Tec remains at the forefront of the ever-evolving threat landscape, providing clients with cutting-edge solutions that keep them ahead of the curve.
www.threattec.com

UNITY TECHNOLOGIES

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Unity believes the world is better with more creators. To that end, Unity develops the world's most versatile Real-time 3D technology, includingsolutions for gaming, film/entertainment, and industrial applications.

From mobile games to VR experiences, from Oscar winning films to the digital twins powering technological advances at the world's most innovative companies, Unity is at the center of the Real-time 3D movement.

The Unity Government & Aerospace team is proud to sponsor and contribute to ModSim 2023. The team is dedicated to helping our #madewithunity community to deliver the most innovative and effective Real-time 3D solutions across the defense and aerospace markets.
www.unity.com

UNREAL ENGINE   4

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Unreal Engine is the world's most open and advanced real-time 3D creation tool that enables creators across industries to realize next-generation real-time 3D content and experiences with greater freedom, fidelity, and flexibility than ever before. Prepare for the unexpected. Prevent life-threatening situations. And do it in the most realistic way possible.
www.unrealengine.com/en-US/solutions/simulation

VALKYRIE ENTERPRISES   16

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Valkyrie Enterprises is a preeminent provider of advanced engineering services and technology solutions supporting the United States' warriors and allies. We deliver an extensive array of C5I systems, missile defense, digital and systems engineering, advanced modeling and simulation, and information technology systems capabilities. We are developing new Joint Theater Level Simulation – Global Operations (JTLS-GO) RDT&E and IRAD efforts for 2023 in Space, Hypersonic Weapons, Joint Tactical Data Service (JTDS) integration, and new 3-D mapping capability. Additionally, we have begun collaborating with several domestic and international industry partners to evaluate the potential of combining our respective Modeling and simulation capabilities to create more comprehensive technical solutions and products. We look forward to sharing these developments and the latest version of JTLS-GO, which will be available for demonstrations at our table 16, during MODSIM 2023.
www.valkyrie.com

VIRGINIA MODELING ANALYSIS & SIMULATION CENTER   9

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VMASC is a multidisciplinary applied research center and enterprise of Old Dominion University. Staffed by experts in their fields, VMASC provides modeling and simulation, analytical research, and technological support for partners across various industry, government, and community sectors. These include healthcare, cybersecurity, strategic defense, transportation, infrastructure, usability, instructional systems design, and human performance. VMASC is pioneering research and applied development which conceptualizes systems and provides actionable insights through integrative digital technologies.
https://vmasc.org

NTSA

NATIONAL TRAINING AND SIMULATION ASSOCIATION

The National Training and Simulation Association (NTSA) is America's premier organization representing the interests of the modeling and simulation community worldwide. As such, it serves as a constant point of contact for government, academia, industry, research organizations and the military to exchange information, share knowledge, align business interests and in general stimulate growth and overall advancement of the industry. NTSA pursues these goals through a series of conference, meetings and exhibitions throughout the year. NTSA produces The Interservice/Industry Training, Simulation and Education Conference (I/ITSEC), which is the world's largest conference and exhibition dedicated to modeling and simulation. While NTSA primarily serves the North American community of practice, many of its members and participants are non-US. NTSA is a key member of the International Training and Simulation Alliance (ITSA), a worldwide group of simulation associations that promotes knowledge and information about training and simulation worldwide.

RADM James Robb, USN (Ret.)
President

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Shannon Burch, CEM
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Holly Gallier
Operations Coordinatior

ABOUT MODSIM WORLD

MODSIM WORLD is a unique multi-disciplinary conference for the exchange of modeling and simulation knowledge, research, and technology. This event joins theory and practice across industry, government and academia; providing for an open interchange of information, knowledge and technology.

MODSIM WORLD began in 2007 with the creation of the Center for Public and Private Partnership (CP3), a non-profit corporation that drew membership from the M&S industry and community leaders in Hampton Roads, Virginia. In November 2014 the CP3 changed its name to Virginia Modeling and Simulation Partnership (VMSP), by vote of the Board of Directors. VMSP saw the interest and need to share information about the vast amount of M&S based development occurring in the Hampton Roads area, including work based at Joint Forces Hampton Roads, Virginia Modeling, Analysis and Simulation Center (VMASC), Eastern Virginia Medical School (EVMS), NASA Langley Research Center, and many other regional government, academic, and industry organizations. Now sponsored and managed by the National Training and Simulation Association (NTSA), MODSIM has been held annually since.

Specific focus areas of the conference vary from year to year, based upon current events and interest level. The 2023 conference tracks are Industry, Defense, and Training & Education.

MODSIM VISION

MODSIM World will become the premier international conference and exposition for collaboration and transfer of M&S knowledge, new research, development, and applied technology across all public and private sectors.

MODSIM MISSION

- To promote the initiation, development, and research of M&S among all organizations internationally.

- To share the latest technical expertise, knowledge, applications, and capabilities of simulation technology by academia, industry, and government.

- To promote cooperation among academia, industry, and government, applying M&S technologies to help organizations anticipate and prepare for the future.

- To improve M&S technology to reduce its implementation cost by academia, industry, and government.

- To support planning, decision-making, and real time operations management with state-of-the-art computer software and development expertise utilizing modeling and simulation.

- To foster the transfer of leading edge simulation technology and knowledge from the military community to the medical, transportation, homeland security, and other applicable communities.

PLATINUM

OPENING RECEPTION

GOLD

GOLD

GOLD

TRACK

SILVER

SILVER

NOTES

NTSA

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Exercise Management
Flight Simulation & Training
Gaming
Homeland Security
Instructional Systems Design
LVC (Live, Virtual, Constructive)
Manufacturing
Medical Simulation & Training
Metaverse
Mission Planning/Mission Rehearsal
Modeling Services
Oil, Gas, Energy
Operational & Maintenance Services
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