

MODSIM WORLD

BREAKING BEYOND: TAKING THE NEXT STEP



#MODSIMWORLD



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Event Information

Up to Date Agenda	Please scan the QR for the most up to date agenda
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
Social Media	Follow us on social media and be sure to post throughout the conference!

Dear MODSIM World 2024 Guests,

On behalf of the conference committee, it is with immense pleasure that I welcome you to the 16th Annual International MODSIM World Conference. It is an honor to serve as conference chair to this premier gathering of modeling and simulation (M&S) professionals. The MODSIM World Conference provides an opportunity to come together and share ideas, learn how M&S impacts all industries, and form new partnerships that will further grow the community. The program's focus this year is a call to action that challenges us to surpass our current boundaries and venture into new realms of possibility across all domains. The dedication of our committee has culminated in an excitingly rich program, and we are thrilled you are joining us for MODSIM World 2024.

This year's conference theme, "Breaking Beyond: Taking the Next Step," encapsulates the spirit of innovation, collaboration, and forward-thinking that defines our community. The theme is more than a mere slogan, it is a reflection of our collective ambition to not only envision the future, but to actively shape it. The inspiration behind this year's theme lies in our desire to push boundaries, explore uncharted territories, and transcend limitations. As M&S practitioners, we recognize that our work extends far beyond mere simulations, it informs decisionmaking and empowers progress. The call to "Break Beyond" beckons us to challenge conventions, question assumptions, and forge new paths. It invites us to envision a world where our models simulate reality to catalyze positive change.

At MODSIM World 2024, you'll find a wealth of opportunities to engage, learn, and collaborate. We are honored to host a distinguished array of keynote speakers and panelists, each a beacon of progress in their respective fields. Their commitment to sharing their insights and experiences is a testament to the vibrant spirit of collaboration that defines our community. I am deeply grateful for the effort they have invested to enrich our conference with their knowledge, wisdom, and vision. This year's diversified technical program is filled with esteemed government, defense, industry, and academia contributors. They will delve into a spectrum of topics covering the traditional aspects of defense, education, and training and exploring how M&S intersects with cutting-edge technologies. In alignment with our theme, we have spotlighted the pioneering advancements within our field, highlighting the innovative use of established tools and the integration of emerging technologies.

As we embark on this journey together, let us embrace the spirit of "Breaking Beyond." Let us challenge ourselves, proactively collaborate, and envision a future where our work produces tangible impact. Whether you're a seasoned practitioner or a curious newcomer, MODSIM World 2024 promises to be a catalyst for growth, learning, and transformation.

As we draw this welcome to a close, I express my deepest gratitude to our sponsors, exhibitors, presenters, and speakers whose contributions drive this event's success and are the foundation 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. A special acknowledgment goes to NTSA for their continued support and dedication to fostering the growth of M&S in education and training. Thank you for joining us on this journey of exploration and advancement. Welcome to MODSIM World 2024, where together, we will break beyond and take the next step into the future we create.



Sincerely, Julian Abich IV, Ph.D. Quantum Improvements Consulting Conference Chair, MODSIM World 2024

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Schedule at a Glance

Schedule at a Glance

Monday, 20 May

Registration Open Granby Ballroom Foyer 0800 - 1600

Exhibits Open Granby Ballroom Foyer 1200 – 1600

General Session & Special Events Granby Ballrooms ABCD 1230 - 1415

Networking Break & Exhibits Granby Ballroom Foyer 1415 – 1445

General Session & Special Events Granby Ballrooms ABCD 1445 - 1615

No Host Social The Grain Restaurant 1615

Tuesday, 21 May

Registration Open Granby Ballroom Foyer **0700 – 1730**

Continental Breakfast Granby Ballroom Foyer 0730 – 0830

Exhibits Open Granby Ballroom Foyer 0830 - 1830

General Session Granby Ballrooms ABCD 0830 – 0945

Networking Break & Exhibits Granby Ballroom Foyer 0945 – 1000

Special Event Granby Ballrooms ABCD 1000 – 1130

Lunch & Exhibits Granby Ballroom E & Foyer 1130 - 1245

Paper Session I See Agenda for Rooms 1245 – 1400

Networking Break & Exhibits Granby Ballroom Foyer 1400 – 1415

Paper Session II See Agenda for Rooms 1415 - 1530

Networking Break & Exhibits Granby Ballroom Foyer 1530 – 1545

Special Event Granby Ballrooms ABCD 1545 – 1700

Opening Reception Granby Ballrooms Foyer **1700 – 1830**

Wednesday, 22 May

Registration Open Granby Ballroom Foyer **0700 – 1500**

Continental Breakfast Granby Ballroom Foyer 0730 – 0830

Exhibits Open Granby Ballroom Foyer 0830 - 1500

General Session & Special Event Granby Ballrooms ABCD 0830 - 1015

Networking Break & Exhibits Granby Ballroom Foyer 1015 – 1030

Paper Session III See Agenda for Rooms 1030 - 1145

STEM Event Granby Ballroom Foyer 1030 – 1145

Lunch & Exhibits Granby Ballroom E & Foyer 1145 - 1300

Paper Session IV See Agenda for Rooms 1300 – 1415

Networking Break & Exhibits Granby Ballroom Foyer 1415 – 1430

Special Event Granby Ballrooms ABCD 1430 – 1600

Closing Remarks & Adjourn Granby Ballrooms ABCD 1600



Congressional Keynote

Monday, 20 May | 1330 - 1345 | Granby Ballrooms ABCD



The Hon. 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

Tuesday, 21 May | 0845-0915 | Granby Ballrooms ABCD



Jennifer Solberg, Ph.D.

CEO, Quantum Improvements Consulting

Jennifer Solberg, Ph.D., is the founder and CEO of Quantum Improvements

Consulting (QIC). Her company specializes in designing, developing,

implementing, and evaluating emerging technology for training and performance. She received her Ph.D. in Cognitive and Experimental Psychology from the University of Georgia in 2004. As a Research Psychologist with the U.S. Army Research Institute, her work focused on mobile, game-based, and simulation-based training. At QIC, she leads a growing team of learning science professionals.

Government Keynote

Tuesday, 21 May | 0915 - 0945 | Granby Ballrooms ABCD



Major General Dominique Luzeaux

Digital Transformation Champion and Special Advisor to Supreme Allied Commander Transformation

Dominique Luzeaux entered the Ministry of Defense in 1984, as a cadet within

the Military Academy of Saint-Cyr from September of 1984 to January of 1985, and platoon leader, 43rd Infantry Regiment, from February of 1985 to August of 1985. He graduated from École Polytechnique (1987) and École Nationale Supérieure des Techniques Avancées (1989) as an armament engineer. His first position was as a research engineer in artificial intelligence and robotics. He defended his Ph.D. thesis at the University of Paris XI (1991), and was a visiting research scientist at the University of California at Berkeley (1991-1992). Within the DGA (French Armament Procurement Agency), he occupied various positions successively

as expert, project manager and director. As Director of the Complex System Engineering Department (2002-2004), he was in charge of the R&T programs in system engineering methods and tools, as well as in modeling and simulation. He was the French representative within NATO/RTO and WEAG technical panels. As Director of the Technical Center for Information Systems (2004-2007) he was in charge of the reorganization of the technical and human resources dedicated to the information system infrastructure of the DGA. 2008-2009, he was appointed Deputy Director for C4ISR systems. From 2009 to 2013, as Director for Land Systems acquisition, he was responsible for the technical and financial execution (yearly payment over 1 billion euros) of the military programs for land systems, and

was the French representative for several bilateral and multilateral agreements. He was named Honorary Private First Class of the Army for his personal implication in various armament programs, among them the Unitary Rocket Launcher. At the end of 2013 he joined the Joint Staff as Deputy Director within the Directorate for Infrastructure Networks and Information Systems at the Ministry of Defense level, where he acted as the Chief Purchasing Officer (yearly budgetary envelope of almost 1 billion euros) and head of the Acquisition and Supply-Chain Division. From 2021 to September of 2023, he was Director of the newly created Digital Defense Agency within the French Ministry of Defense, in charge of all defense complex digital projects.

NTSA Leadership



Debbie Langelier, CEM

Senior Vice President, National Training & Simulation Association (NTSA)

Debbie Langelier is Senior Vice President of the National Training and Simulation

Association (NTSA), a nonprofit organization in Arlington, VA. Langelier oversees management of all NTSA staff and operations including membership, marketing, and events. She initiated and is responsible for maintaining a high-level security program both for NTSA and Interservice/Industry Training, Simulation and Education Conference (I/ITSEC)

Langelier joined NTSA in 2004 and was previously Assistant Vice President. She previously held the title of Director of Exhibits & Sponsorships, a role in which she is credited for a growth rate of more than 30 percent. In this role, she was responsible for exhibits, sponsorships, and marketing for six events, including I/ ITSEC, the largest training and simulation event of its kind in the world. Her expertise in marketing has let her push toward the future with a year-round digital presence.

Langelier is a Certified Exhibit Manager and has worked in the field for over 30 years. With her background of more than a decade in customer service, creative service, and association sales management, Langelier knows what truly drives the non-profit sector and trade show industry. She knows that her talent in connecting people to people is one of the most important achievements in all organizations of which she has been a part of. 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 is an affiliate of the National Defense Industrial Association, a nonprofit organization in Arlington, VA that represents and advocates for the defense industrial base. It has more than 80,000 members and about 1,600 corporate members.

Agenda

Monday, 20 May

- 0800 1600 **Registration Open** GRANBY BALLROOM FOYER
- 1200 1600 Exhibit Hall Open GRANBY BALLROOM FOYER
- 1230 1245 MODSIM World 2024 Welcome & Opening Remarks GRANBY BALLROOMS ABCD

Welcome & Opening Remarks

Julian Abich IV, Ph.D. 2024 Conference Chair, Quantum Improvements Consulting

Scholarship Awards Presentation

Linda Brent, Ed.D.

Strategic Planning, National Training & Simulation Association (NTSA), Chief Executive Officer, The ASTA Group, LLC



Monday, 20 May | Agenda

1245 - 1330 Special Event: Women in Defense Fireside Chat

GRANBY BALLROOMS ABCD

In this panel, defense leaders in modeling and simulation will share experiences from their perspective as women. Topics will include mentoring, challenges, and opportunities, discussed in the context of their personal career journeys. In addition, we will discuss the future of modeling and simulation and how emerging technology might change the career landscape for women.

Jennifer Solberg, Ph.D.

CEO, Quantum Improvements Consulting *Moderator*

Lt Col Alexandra Carico, USSF

USSPACECOM Desk Officer, Joint Exercise Division

Amy Grom

Technical Teams Branch Chief, Environment Operations Division (EOD), Joint Staff J7

Elizabeth Owens Lape, Ph.D.

Sr. Education Specialist for Joint Staff J7 Joint Training, Plans and Operations Division

1330 - 1345 Congressional Keynote Address

GRANBY BALLROOMS ABCD

The Hon. Bobby Scott

U.S. Congress, 3rd District, VA

1345 - 1415 Special Event: Intro to Next Big Thing 2024 - Al at Work GRANBY BALLROOMS ABCD

One of the NTSA "Next Big Thing" topics for 2023 was artificial intelligence – and at I/ITSEC, more than 600 attendees joined a curated list of thought leaders and experts to explore the ethics, policies, opportunities, and challenges associated with Al. In 2024, AI continues to dominate the conversation. So, while I/ITSEC 2024 The Next Big Thing will again focus on AI, this year we will move beyond high level discussions and focus on how AI can create value NOW – in government and Industry. Leading up to The Next Big Thing at I/ITSEC 2024, NTSA will host a series of events exploring this year's topic, starting with this year's inaugural event at MODSIM World.

Bob Kleinhample, CMSP

President, RCK Simulations

1415 - 1445 Networking Break & Dedicated Exhibit Time

GRANBY BALLROOM FOYER

1445 - 1530 Special Event: Doing Business with the Government

GRANBY BALLROOMS ABCD

Doing business with the Government is simple, it's just sales. But it's far from easy, with the mountain of jargon, opaque processes, and myriad regulations, it's a wonder anyone survives. Join us for a few quick pointers.

John Ferry

President, Trenchant Analytics; CEO, UseRogue.com

1530 - 1615 Special Event: One-Minute Spotlight

GRANBY BALLROOMS ABCD

In this dynamic session, presenters distill their professional essence into a single slide and 60 seconds. Presenters will introduce themselves, outline their services or capabilities, and share their conference goals. Whether you're a researcher, entrepreneur, or industry professional, this rapid-fire spotlight ensures maximum impact in minimal time.

Julian Abich IV, Ph.D.

2024 Conference Chair, Quantum Improvements Consulting Host

1615 No Host Social

THE GRAIN RESTAURANT

Tuesday, 21 May

- 0700 1730 **Registration Open** GRANBY BALLROOM FOYER
- 0730 0830 Continental Breakfast GRANBY BALLROOM FOYER
- 0830 1830 Exhibit Hall Open GRANBY BALLROOM FOYER
- 0830 0845 Day Two Welcome & Opening Remarks GRANBY BALLROOMS ABCD

Opening Remarks & Introduction of Industry Keynote Speaker Julian Abich IV, Ph.D. 2024 Conference Chair, Quantum Improvements Consulting

Tuesday, 21 May | Agenda

Industry Keynote Address 0845 - 0915

GRANBY BALLROOMS ABCD

Jennifer Solberg, Ph.D.

CEO, Quantum Improvements Consulting

Government Keynote Address 0915 - 0945**GRANBY BALLROOMS ABCD** Major General Dominique Luzeaux

Digital Transformation Champion and Special Advisor to Supreme Allied Commander Transformation

Networking Break & Dedicated Exhibit Time 0945 - 1000 **GRANBY BALLROOM FOYER**

Special Event: The Simulation Century – What Does Education 1000 - 1130Need from AI in the Simulation Century? **GRANBY BALLROOMS ABCD**

This is our twelfth 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 the challenges and opportunities of implementing AI and simulation in education environments.

What Does AI Want?

Richard Boyd CEO, Ultisim, Inc. Moderator

Unlocking the Metaverse: Using AI and Simulation to Define a Preferred Future

Paul Doherty AIA, IFMA Fellow, DFC Senior Fellow

Streaming XR

Helmut Gulde President & CEO, HoloLight

Al and Designing the Future

Tish Shute Founder, Augmented World Expo

Lunch & Dedicated Exhibit Time 1130 - 1245 **GRANBY BALLROOM E & GRANBY BALLROOM FOYER**



Paper Session I – Industry Track: Simulating the Future: Innovations in Vehicle Dynamics and Power Systems

1245 - 1310 **Re-spatializing Gangs: An Exponential Random Graph Model of Twitter** Data to Analyze the Geospatial Distribution of Gang Member Connections

Ryan J. Roberts. Ph.D. Gardner-Webb University

1310 – 1335 Application of Immersive Technologies in the Visualization of Partial Discharges in Power Transformers: A Significant Advance in Supporting Maintenance Practices

Gerson Lima, Ph.D. CGWorks Virtual Reality

Alexandre Cardoso, Ph.D. Federal University of Uberlandia

Joao Feitosa Federal University of Uberlandia Mateus Flausino CGWorks Virtual Reality

Lucas Freitas CGWorks Virtual Reality

Helder Paula, Ph.D. Federal University of Uberlandia

1335 – 1400 BEST PAPER NOMINEE

Creating Virtual World Environments for Ocean Vehicles

Ryan Capozzi Unmanned Systems lan Friedrichs Unmanned Systems

Amanda Costa Unmanned Systems

Paper Session I – Defense Track: Advanced Simulation Technologies and Frameworks ENERGY

1245 - 1310

OptDef: Optimization & Analysis for Defense Simulation Models

Jose Ramirez, Ph.D. OptTek Systems, Inc.

BEST PAPER NOMINEE

Benjamin Thengvall, Ph.D. OptTek Systems, Inc.

1310 – 1335 Modeling Human Behavioral Responses to Targeted Violence

Rainer Hilscher, Ph.D. RTI International William Parkin RTI International

Matthew DeMichele RTI International

1335 – 1400 Harnessing Deep Learning for Enhanced Military Simulations: A Comprehensive Approach

Luis Velazquez

U.S. Marine Corps Systems Command

Paper Session I – Training & Education Track: Development and Evaluation of Training Simulations MOMENTUM

1245 – 1310 CyberSim RL: A Simulation Environment to Train, Test, and Evaluate Automated Cybersecurity Offensive Agents and Digital Twins

Sean Mondesire, Ph.D. University of Central Florida Daniel Muller University of Central Florida

1310 – 1335 Immersive Virtual Reality-Based Module for Cleanroom Fabrication Training: Enhanced Interactions by Using Controllers, Navigation, and Dynamic Simulations

Jordan Junior Atta Nuako Norfolk State University Michael Kozhevnikov Norfolk State University

1335 – 1400 Visualizing Communication Data to Augment Squad Performance Evaluations

Michael King, Ph.D. Quantum Improvements Consulting

Gregory Goodwin, Ph.D. U.S. Army Combat Capabilities Development Command – Soldier Center (DEVCOM SC)

Julian Abich IV, Ph.D. Quantum Improvements Consulting **Eric Sikorski, Ph.D.** Quantum Improvements Consulting

Clifford Hancock U.S. Army Combat Capabilities Development Command – Soldier Center (DEVCOM SC)

Meghan O'Donovan U.S. Army Combat Capabilities Development Command – Soldier Center (DEVCOM SC)

1400 - 1415 Networking Break & Dedicated Exhibit Time GRANBY BALLROOM FOYER



Paper Session II – Industry Track: Leveraging AI and Simulation Data for Immersive Training and Analytics FUSION

1415 – 1440 Synthetic Computer Vision Data Helps Overcome AI Training Challenges

Mark Hogsett Rendered.ai Christopher Andrews Rendered.ai

1440 – 1505 Digital Twins of the Battlespace – Data and Formats for Enhanced Modeling and Simulation

Randall Toth Maxar/MST

QUANTUM IMPROVEMENTS

CONSULTING

Ronald Moore Maxar/OWT

1505 – 1530 Interactive Coaching of Highly Independent Participants in AR

Richard St. Augustine Paratus Associates **Richard Goad** Paratus Associates

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- Human Factors Analysis
- Training Design and
 Development

Let's Talk

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Tuesday, 21 May | Agenda

Paper Session II – Defense Track: Strategic Military and Operational Insights ENERGY

1415 – 1440 Preliminary Assessment of Single Amphibious Integrated Precision Augmented Reality Navigation System

> Victoria Jolliff Old Dominion University

> Stacie Ringleb, Ph.D. Old Dominion University

Kevin Hernandez VR Rehab, Inc.

Peter Crane, Ph.D. VR Rehab, Inc.

1440 – 1505 Simulation Experimentation of Swarms

Melissa Jablonski U.S. Army DEVCOM Armaments Center

Elizabeth Mezzacappa, Ph.D. U.S. Army DEVCOM Armaments Center Michael McBride U.S. Army DEVCOM Armaments Center

Ross Arnold, Ph.D. U.S. Army DEVCOM Armaments Center

1505 – 1530 Building a Domain Agnostic Framework for Efficient and Effective Risk Communication Messages

Ross Gore, Ph.D. Old Dominion University

Ann Marie Reinhold, Ph.D. Montana State University

Barry Ezell, Ph.D. Old Dominion University

Elizabeth Shanahan, Ph.D. Montana State University

Erik Jensen Old Dominion University **Christopher Lynch, Ph.D.** Old Dominion University

Clemente Izurieta, Ph.D. Montana State University

Jessica Cordner Old Dominion University

Virginia Zamponi Old Dominion University

Madison Munro Montana State University



Paper Session II – Training & Education Track: Simulation Techniques in Education

1415 – 1440 Developing an Executive Education Simulation Using Game Design Methodologies

Gul Ayaz ODU Enterprise Research & Innovation

Katherine Smith, Ph.D. ODU Enterprise Research & Innovation **Rafael Diaz** ODU Enterprise Research & Innovation

Joshua Behr ODU Enterprise Research & Innovation

1440 – 1505 **Converting Traditional Training to Serious Gameplay**

Matthew Becchio

Engineering & Computer Simulations, Inc.

Madison Quinn Engineering & Computer Simulations, Inc.

Samantha Beigel Engineering & Computer Simulations, Inc. Alexis Damron Engineering & Computer Simulations, Inc.

Shane Taber Engineering & Computer Simulations, Inc.

1505 - 1530

Balancing Immersion and Comfort in Immersive Virtual Reality Training: The Role of Instructor's Movement and Trainee's Spatial Perspective

Steve Adjetey Adjei Norfolk State University Michael Kozhevnikov, Ph.D. Norfolk State University

RADM James Robb Scholarship Award @ MODSIM

The NTSA RADM James Robb scholarships are being offered to prepare individuals for leadership in the Modeling & Simulation, Training, and Education communities. RADM James Robb served as the NTSA President from 2012 – 2023, a keystone achievement during his presidency has been the continued expansion of the NTSA Scholarship program. RADM Robb's continued commitment to growing the modeling and simulation technology workforce was evident through his unwavering support of these scholarships. These core programs continue to identify and credential a professional workforce and established educational programs to stimulate interest in M&S careers at all grade levels. RADM Robb believed that by investing in our future workforce, these scholarships will encourage expansion of the I/ITSEC community and promote innovation through direct investment in our community's future leaders.



Ryan Long

Computational Modeling and Simulation Engineering, Old Dominion University



Nick Pickering

Computational Modeling and Simulation Engineering, Old Dominion University

1530 - 1545 Networking Break & Dedicated Exhibit Time

GRANBY BALLROOM FOYER

1545 – 1700

Special Event: AI at Work – Applications of AI in Government and Industry

GRANBY BALLROOMS ABCD

This year's Next Big Thing will go beyond policy and theory to dive into specific applications of AI being used today to create tangible value. Join this panel of leaders in government and industry to explore how AI is being used right now to improve efficiencies, automate processes, and create new monetization strategies across the world of modeling and simulation.

Luke DeVore

Managing Partner, The Voltron Group Moderator

Greg Corder

Shore Based Training Program Director, NSWCDD Dam Neck Activity

John Ferry

President, Trenchant Analytics; CEO, UseRogue.com

Jenna Tuck

Senior Director of Partnership, Bohemia Interactive Simulations

Shawn Weil, Ph.D.

Chief Growth Officer, Aptima

1700 – 1830 Opening Reception

GRANBY BALLROOM FOYER

Welcome Remarks

Julian Abich IV, Ph.D. 2024 Conference Chair, Quantum Improvements Consulting

Networking Reception Sponsor VMASC

Wednesday, 22 May

- 0700 1500 **Registration Open** GRANBY BALLROOM FOYER
- 0730 0830 Continental Breakfast GRANBY BALLROOM FOYER

Agenda | Wednesday, 22 May

0830 – 1500 Exhibit Hall Open GRANBY BALLROOM FOYER

0830 - 0845 Day Three Welcome & Opening Remarks GRANBY BALLROOMS ABCD

Opening Remarks

Julian Abich IV, Ph.D.

2024 Conference Chair, Quantum Improvements Consulting

0845 - 1015 Special Event: Future Needs of Adaptive Training GRANBY BALLROOMS ABCD

Adaptive training and intelligent tutoring capabilities are continually emphasized in future-defined visions of military training and education. However, we've only seen incremental progress over the years without well-established scalable solutions. With recent advancements in Artificial Intelligence (AI) and supporting Open System Architectures, these forward-leaning concepts have the potential to be realized through focused research and strategic implementation. In this expert panel, we center on next-generation training management tools and ongoing research efforts across the services dedicated to modernizing adaptive, data-driven solutions. Topics include data-driven infrastructure and interoperability, multi-modal methods to drive objective assessment, personalized feedback and coaching, immersive content generation, training decision support tools, and self-optimizing systems. Research agendas will be discussed, along with strategies and challenges associated with transition and implementation at scale.

Benjamin Goldberg, Ph.D.

Senior Scientist, Adaptive and Intelligent Training Systems (AITS) Team, U.S. Army DEVCOM Moderator

Glenn Gunzelmann, Ph.D.

711 Human Performance Wing, USAF/AFRL

Joseph Lomangino

Project Tripoli Team Leader, Marine Corp's LVC-TE

LtCol Matt Morse, Ph.D., USMC

Senior Modeling & Simulation Advisor, Project Tripoli, RTPD, TECOM; Operations Analysis Directorate, CD&I

James Pharmer, Ph.D.

Chief Scientist, NAWCTSD

CDR Liza Stone, USN

Nursing Director, Healthcare Simulation and Bioskills Training Center, Naval Medical Center Portsmouth

1015 - 1030 Networking Break & Dedicated Exhibit Time

GRANBY BALLROOM FOYER

Wednesday, 22 May | Agenda

Paper Session III – Industry Track: Advances in Modeling and Simulation for Traffic Management and Control Systems

1030 - 1055

A Modeling & Simulation (M&S) Framework to Assess Navigational Benefit and Distraction Potential for Specific Service Signs using Simulated Driving Performance and Self-reported Cognition

Kevin Hulme, Ph.D., CMSP The Stephen Still Institute for Sustainable Transportation and Logistics (SSISTL)

Rachel Su Ann Lim SickKids | The Hospital for Sick Children

Roman Dmowski Robert Bosch

Mahdi Ebnali, Ph.D. STRATUS Center for Medical Simulation at Harvard Medical School

Meredith Finn McGard, LLC **Jiajun Pang** Department of Civil, Structural, Environmental Engineering, University at Buffalo

Gongda Yu Department of Civil, Structural, Environmental Engineering, University at Buffalo

Huei-Yen Chen, Ph.D. Department of Industrial and Systems Engineering, University at Buffalo

Kuan-Ting Chen, Ph.D. Virginia Tech Transportation Institute (VTTI)

1055 – 1120 Analysis of a Model Predictive Control Mixed Integer Linear Program Model for Air Traffic Management

Rex Kincaid, Ph.D. William & Mary Logan Wolf William & Mary

1120 – 1145 Fuelish Erros: Taking the Risk out of Hazardous Petroleum Specialist Training with Interactive Simulations

Gayla Thompson Potawatomi Training Phil DeAlmedia Potawatomi Training

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Paper Session III – Defense Track: Human Factors and Training Innovations ENERGY

1030 – 1055 Beyond Assessment: Accelerating Simulation's Readiness Benefits with Competency Profiles

> Benjamin Bell, Ph.D. Eduworks Corporation

Matthew Ross Eduworks Corporation **Debbie Brown** Eduworks Corporation

Ronald Ray Eduworks Corporation

1055 – 1120 What Can, What Could, What Should... Simulation Supporting Delivery of Enhanced Effectiveness of JFS Training in a Live Environment?

Maximilian Jakob Industrieanlagenbetriebsgesellschaft mbh Florian Göttinger Industrieanlagenbetriebsgesellschaft mbh

1120 – 1145 The Complete C5ISR Architecture Tool (TC2AT)

John Lock Paratus Associates, LLC **Richard Goad** Paratus Associates, LLC



Why TSIS? 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.

Wednesday, 22 May | Agenda

Paper Session III – Training & Education Track: Integration of Technology in Training Programs MOMENTUM

1030 – 1055 Integration of Simulation Techniques for the Development and Validation of Artificial Neural Networks in Modeling Complex Dynamic Systems

> Kate Cloutier Old Dominion University

Mileta Tomovic, Ph.D. Old Dominion University Drew Landman, Ph.D. Old Dominion University

1055 – 1120 BEST PAPER NOMINEE

Employing Manned and Autonomous Machines: Implications for Live, Virtual, and Constructive (LVC) Training Simulations

Tim Cooley, Ph.D. DynamX Consulting Ivar Oswalt, Ph.D., CMSP The MIL Corporation

1120 – 1145 **Reality Capture for Electrical Substations with Integrated Spherical Images and GeoBase Data in a GIS Platform**

Gerson de Lima Computer Graphics Works

Claudemir Alves UFU - Universidade Federal de Uberlandia

Gabriel Cyrino UFU - Universidade Federal de Uberlandia

Alexandre Cardoso

UFU - Universidade Federal de Uberlandia

Edgard Lamounier UFU - Universidade Federal de Uberlandia

Davidson Campos Eletronorte, Eletrobras

Jader de Oliveira Eletronorte, Eletrobras

Luis dos Santos Eletronorte, Eletrobras

1030 - 1145 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 30 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.

1145 – 1300 Lunch & Dedicated Exhibit Time GRANBY BALLROOM E & GRANBY BALLROOM FOYER Paper Session IV – Industry Track: Shaping the Future: Digital Twins and Simulation in Manufacturing FUSION

1300 – 1325 A Micro-Discrete Event Simulation Environment for Production Scheduling in Manufacturing Digital Twins

Sean Mondesire. Ph.D. University of Central Florida

Tori Wright University of Central Florida Brian Tse University of Central Florida

Emmanuel Nsiye University of Central Florida

1325 – 1350 Enhancing Digital Transformation Through Maturity Modeling

Claire Hughes Design Interactive Kay Stanney, Ph.D. Design Interactive

Paper Session IV – Defense Track: Data Analytics and Performance in Modeling

1300 – 1325 Phase One of a Context-Aware Data Mesh

Erica Dretzka U.S. Department of Defense

1325 - 1350 Localized Observation Abstraction Using Piecewise Linear Spatial Decay for Reinforcement Learning in Combat Simulations

Scotty Black, Ph.D. Candidate Naval Postgraduate School **Christian Darken** Naval Postgraduate School

1350-1415Smart Munitions Effectiveness Model

Evelyn Welling DEVCOM, Armaments Center Antonio Aguirre DEVCOM, Armaments Center

Wednesday, 22 May | Agenda

Paper Session IV – Training & Education Track: Training through Simulation

MOMENTUM

1300 – 1325 Human Testing Using Large-Language Models: Experimental Research Through the Development of a Security Awareness Controls Framework

Sarah Assaf University of New South Wales Canberra **Timothy Lynar** University of New South Wales Canberra

1325 – 1350 Cybersickness Between a Virtual and Mixed Reality Flight Simulator – A Comparative Study

Christian Lindberg Swedish Defence Research Agency (FOI)

Jouni Lindqvist Swedish Defence Research Agency (FOI)

Robin Dahlkvist Swedish Defence Research Agency (FOI) **Guilherme Elçadi, Ph.D.** Swedish Defence Research Agency (FOI)

Robert Ramberg, Ph.D. Swedish Defence Research Agency (FOI)

Automating Analysis for Efficient and Effective Learning Solutions

Claudia Escribano C² Technologies, Inc

Cody Caddell C² Technologies, Inc **Stephen Godwin** C² Technologies, Inc

Beth Myers C² Technologies, Inc

1415 - 1430 Networking Break & Dedicated Exhibit Time GRANBY BALLROOM FOYER



MISSION ENGINEERING / MISSION FUSION ANALYSIS FOR TODAY'S WARFIGHTER

WWW.CFT-LLC.COM Herb Honaker Technical Director Herbert.Honaker@CFT-LLC.com (757) 752-4339

Enabling Solutions For Mission Support Scan to Learn More



1430 - 1600 Special Event: NATO Industry Advisory Group

GRANBY BALLROOMS ABCD

This briefing and panel discussion is a about a year-long NATO Industry Advisory Group study. The NIAG Study Group is comprised of industry partners from 55 different companies from 15 different companies across the alliance. The primary focus of the study is to harness industry's insight on current technical gaps and potential opportunities presented by modelling and simulation (M&S) application areas across the Alliance. The study will inform NATO's efforts to develop a persistent, Modelling & Simulation as a Service (MSaaS), data-centric, web-enabled, modular, single synthetic environment to supply cross-functional, cross-domain benefits for planners, decision makers and warfighters across NATO.

LTC Jason Frisco, USA

Programme Director, NATO NexGen M&S, Headquarters Supreme Allied Commander Transformation (HQ SACT) Moderator

COL Stephen Banks, USA Branch Head for Modeling and Simulation Learning Technologies, NATO HQSACT

Andrew Bonica Senior Client Executive, Dassault Systemes Government Solutions

Matt Martin Strategic Developement, CAE USA

Agatino Mursia Modeling and Simulation, Leonardo Spa

Robbie Phillips Advanced Concepts, Lockheed Martin

Robert Seigfried Managing Director, Aditerna GmbH

1600 Closing Remarks & Adjourn

GRANBY BALLROOMS ABCD

About MODSIM World







Scan the QR code to follow us on our social media accounts. Stay up to date on the latest and greatest from NTSA and all of our events!











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 2024 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.



Monday, 20 May | 1300 - 1345 | Granby Ballrooms ABCD



Jennifer Solberg, Ph.D.

CEO, Quantum Improvements Consulting

Jennifer Solberg, Ph.D., is the founder and CEO of Quantum Improvements

Consulting (QIC). Her company



Lt Col Alexandra Carico, USSF

USSPACECOM Desk Officer, Joint Exercise Divison

Lieutenant Colonel Alexandra Carico is the USSPACECOM Desk Officer and the Space and Missile

Branch Chief, Joint Force Development Directorate, Joint Staff J7, Suffolk, VA. Lt Col Carico is responsible to the Chairman of the Joint Chiefs of Staff (CJCS) for direct readiness support to the newly established United States Space Command (USSPACECOM). She is also responsible fo functional Space and Missile planning support to all combatant commands. Lt Col Carico entered active duty through Air Force ROTC at James

specializes in designing, developing,

She received her Ph.D. in Cognitive

and Experimental Psychology from

the University of Georgia in 2004. As

implementing, and evaluating emerging

technology for training and performance.

Madison University in 2006, and received a Masters of Health Science from Trident University International, CA in 2010. She transferred to the United States Space Force in October 2020. During her career she has held positions in both her core career field of Space Operations and Joint Service Operations.

a Research Psychologist with the U.S.

focused on mobile, game-based, and

simulation-based training. At QIC, she

leads a growing team of learning science

Army Research Institute, her work

professionals.



CDR Christina Carino, USN

Naval Surface Warfare Center Dahlgreen Division (NSWCDD), Dam Neck Activity

Commander Christina D. Carino is the commanding officer of Naval Surface Warfare

Center Dahlgren Division (NSWCDD) Dam Neck Activity (DNA) in Virginia Beach, VA, where she assumed command on June 29, 2022.

Carino is a native of Ringtown, Pennsylvania. She graduated from the United States Naval Academy (USNA) in 2008 with a Bachelor of Science in Naval Architecture. While at USNA, she was selected for the Engineering Duty Officer (EDO) Option Program. Upon commissioning, Carino reported to USS GERMANTOWN (LSD 42) where she served as the Weapons and Operations Intelligence Division Officer. She completed a temporary duty assignment on USS Lake Champlain (CG 57) to earn her surface warfare qualification while LSD 42 was in an extended maintenance availability. Carino graduated from the Naval Postgraduate School in 2012 with a Master of Science in Total Ship Systems Engineering.

After completing EDO Basic School, she reported to her EDO qualification tour at Supervisor of Shipbuilding in Newport News, Virginia, and served as the Assistant Project Officer for USS GERALD R. FORD (CVN 78). She then reported to Commander, Naval Surface Forces Atlantic where she served as the C5I Modernization Officer until May 2017. In June 2017, she reported to Program Executive Office Integrated Warfare Systems 2.0 where she served as the High Energy Laser and Integrated Optical Dazzling and Surveillance (HELIOS) Assistant Program Manager. Prior to assuming command of DNA, Carino

served in the office of the Assistant Secretary of the Navy for Research, Development and Acquisition, Deputy Assistant Secretary of the Navy Ships as Director of Electronic Warfare, Above Water Sensors and Combat Systems portfolios.

Carino's personal decorations include the Navy and Marine Corps Achievement Medal, Navy and Marine Corps Commendation Medal (three awards), and the Meritorious Service Medal

Additionally, Carino has been an active member of the American Society of Naval Engineers (ASNE) and has served as Fleet Liaison, Deputy Chairman, and Chairman of the Tidewater Section of ASNE. She was also a member of Cohort 3 of the Engineering Duty Guiding Coalition (EDGC). Carino was selected for the Assistant Secretary of the Navy RDA SIGMA program in 2019.



Amy Grom

Technical Teams Branch Chief, Enviroment Operations Division (EOD), Joint Staff J7

Amy Grom is a Government Civilian (GS14) currently serving as the Joint Staff

J7 Environment Operations Division Technical Teams Branch Chief, supervising a team of M&S and C4I planners responsible for planning and operating the technical enablers for Combatant Command exercises. She graduated from Western Connecticut State University with a degree in Computer Science, received her Master's in Defense and Strategic Studies from the Naval War College, and a Master's in National Security Studies from Regent University. Grom is a U.S. Army veteran who started her M&S career supporting Army exercises before joining the Joint Staff J7.



Elizabeth Owens Lape, Ph.D.

Sr. Education Specialist for Joint Staff J7 Joint Training, Plans and Operations Division

Elizabeth Owens Lape, Ph.D. (CDR, USN (ret) completed a 23 year career in the U.S. Navy

after serving in a wide variety of shore management, training, and joint billets retiring as an Education & Training Subspecialist and as a Joint Specialty Officer. She graduated from the Purdue University NROTC program, received her Master's in Education from Old Dominion University, and her Doctorate in Higher Education Administration at Old Dominion University. As a Government Civilian, Dr. Lape (GS14) is currently serving as the Deputy of the Plans & Operations Division for the Joint Staff J7/Joint Training Directorate where she is also responsible for Joint Course Certification and Women, Peace and Security Training/Education.

Intro to Next Big Thing 2024 Biography

Monday, 20 May | 1345 - 1415 | Granby Ballrooms ABCD



Bob Kleinhample, CMSP

President, RCK Solutions

Bob Kleinhample is the President of RCK Simulations, a consulting company providing strategic

growth services for companies desiring to succeed in the modeling, simulation and training (MS&T) market. Bob is also the National Training and Simulation Association (NTSA) Chair of the Next Big Thing Committee which seeks to accelerate the adoption of nascent technologies resulting in high value for the MS&T community. Previous work assignments include Strategic Growth Executive for Improbable Defense and National Security, and Vice President of Immersive Technologies for SAIC. Bob retired from the U.S. Army in 2006 as a Lieutenant Colonel in the Field Artillery. He possesses a Master of Engineering in Operations Research from Old Dominion University, and a Bachelor of Science in Engineering Management from the United States Military Academy. He is also a Certified Modeling and Simulation Professional (CMSP).



Monday, 20 May | 1445 – 1515 | Granby Ballrooms ABCD



John Ferry

built POMs in

President, Trenchant Analytics; CEO, UseRogue.com

from DARPA to U.S. Special Operations John Ferry is an Army Special Command. Forces veteran who previously

John is the president of TAC, the builders of AcqBot (ack-bot), the platform that is automating and applying generative AI to the government acquisition process, he

is also the cofounder of UseRogue.com, the leading platform for automating and applying genAI to the industry proposal process. He has a front row seat to AI upending the government contracting process.

years supporting technology transition

The Simulation Century Panel Biographies

Tuesday, 21 May | 1000 – 1130 | Granby Ballrooms ABCD



Richard Boyd

CEO, UltiSim, Inc. Richard is the CEO of UltiSim Inc. He has worked with machine learning since 2009 and was

founder and CEO of a machine learning company called Tanjo Inc from 2014 until 2023, when it was acquired by UltiSim. Over the last thirty 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.



Paul Doherty

AIA, IFMA Fellow, DFC Senior Fellow

Paul is Chairman and CEO of TDG (the digit group www. thedigitgroupinc. com), a globally

renowned and award-winning architect who is one of the world's most sought after thought leaders, strategists and integrators of process, technology, and business. As seen on The Wall Street Journal, Bloomberg TV, acknowledged by CNBC as one of America's Business Titans and reported by Forbes as "Changing the World", Paul is a Senior Fellow of the Design Futures Council and a Fellow of the International Facility Management Association (IFMA). Paul's current work is as Chairman of TDG Global Ventures, a Smart City real estate development company that provides financing, design-build and innovative technology solutions around the world. Concurrently, Paul is also the co-founder and producer of the critically acclaimed

AEC Hackathon (www.aechackathon.com) that launched at Facebook Headquarters. His past successful ventures include Revit Technologies (Sold to Autodesk 2002), Buzzsaw (Autodesk 2001) and TRIRIGA (IBM 2011). His 2 latest books are "Smart Cities: Reimagining the Urban Experience" published by Quality Press and "Unlocking the Metaverse: A Strategic Guide for the Future of the Built Environment", published by John Wiley & Sons, which rated #1 New Release on Amazon.com.



David Rubright

Account Executive, HoloLight

Executive at HOLO-LIGHT, a leading provider of augmented reality solutions for industrial applications. His mission is to help customers transform their workflows, enhance their productivity, and unleash their creativity with HOLO-LIGHT's innovative and userfriendly AR/VR streaming products.



Tish Shute

Founder, Augmented World Expo

As Director of AI/ AR/VR, Strategy & Technology Planning, at Futurewei, Tish was responsible for

strategy, planning & development of a full stack of emerging technologies (software & hardware). Previously, she worked with Will Wright (Sims, Sim City) at Stupid Fun Club & as Co-Founder at Syntertainment (THRED) developing next generation entertainment & player directed AI agents for reality based simulation games. She has taken a leading role in the emergence of AR/VR & XR into the consumer market. She was Co-Founder of Augmented World Expo (AWE) awexr.com & cofounded AugmentedReality.ORG, a global not-for-profit organization dedicated to advancing AR/VR/XR. Her career in design & technology began with creating visual effects for film/TV & theme park experiences using robotics. For videos & slides of recent talks see linkedin. com/in/tishshute including: The Future of AI Storytelling.. 2023, Augmented Ecosystems, AWE 2023, EclipseCon 2020, Photonics West 2019, Frontiers in Optics & LS, 2018, CAPE (Center for Advanced Photonics, Cambridge U).

Al at Work Panel Biographies

Tuesday, 21 May | 1545 - 1700 | Granby Ballrooms ABCD



Luke DeVore

Managing Partner, The Voltron Group

Luke DeVore is the Managing Partner at The Voltron Group, a technology and business

development consultancy focused on the Federal and DoD emerging technology

markets. Devore was introduced to modeling and simulation as a Marine Corps officer using the Deployable Virtual Training Environment (DVTE) aboard the USS Bataan while deployed with the 26th Marine Expeditionary Unity. DeVore has been in the technology and business development industry for nearly 15 years, and previously worked at Design Interactive and Unity Technologies. DeVore earned his MA from Webster University and his MBA from Quantic School of Business and Technology.





Greg Corder

Program Director, NSWCDD DNA Shore-Based Training Systems

Greg Corder is the Shore-Based Training Systems Program Director at Naval Surface

Warfare Center Dahlgren (NSWCDD) Dam Neck Activity (DNA). He establishes and directs the contractual, financial, and technical vision and execution of projects across the advanced research and development, Augmented Reality/ Virtual Reality (AR/VR), model-based systems engineering (MBSE), live virtual constructive (LVC) environments. Corder also co-chairs the Surface Training Advanced Virtual Environment-Combat Systems (STAVE-CS) Technical Integrated Product Team leading the execution of the next generation of naval training systems. From 2019-2022, Corder served as the Waterfront Operations Deputy Director and Program Manager for the Navy's Southwest Regional Maintenance Center in San Diego. He ensured the successful overhaul and upgrade of surface ships and submarines in Chief of Naval Operations (CNO) and non-CNO availability. He also led the establishment of the Navy's first Regional Maintenance Center Program Management Office focusing on improving the expertise of the workforce and the relationships with industry partners.

From 2014-2019, Corder served as an Industrial Engineering Installation Manager in the Littoral and Strike Warfare Department at Naval Surface Warfare Center Port Hueneme Division

John is the president of TAC, the builders

automating and applying generative AI to

of AcqBot (ack-bot), the platform that is

the government acquisition process, he

is also the cofounder of UseRogue.com,

in Port Hueneme, CA, and an In-Service Engineering Agent in the Air Dominance Department. He was responsible for the advanced planning, industrial overhaul, and testing of the Tomahawk Weapon System, Gun Weapon System, USCG Sea Commander weapon system, and the combat systems and business network for Littoral Combat Ships.

Corder began his naval career as an active-duty Aegis Computer Network Technician Fire Controlman where he served on the pre-commission crew of the USS GRAVELY (DDG-107) for six years. He conducted all of GRAVELY's acceptance testing and completed her maiden deployment in support of the Global War on Terror.

the leading platform for automating and applying genAI to the industry proposal

process. He has a front row seat to AI

upending the government contracting

process.



John Ferry

John Ferry is an

President, Trenchant Analytics; CEO, UseRogue.com

Special Operations Command.

Army Special Forces veteran who previously built POMs in support of the

Army Staff and spent 8 years supporting technology transition from DARPA to U.S.



Jenna Tuck

Senior Director of Partnerships, Bohemia Interactive Simulations (BISim)

Jenna Tuck, currently serving as the Senior Director of Partnerships for Bohemia

Interactive Simulations, brings a deep understanding of AI/ML, enterprise architecture, and Industry 4.0 to the forefront in the realm of defense and strategic development.

Based in Orlando, Tuck has devoted over a decade to exploring the nuances of emerging technologies, working collaboratively to identify and foster strategies aligned with emergent trends and advancements that enhance military training and simulation capabilities. She has consistently focused on understanding and analyzing the current and prospective landscape of technological developments. A respected voice in her field, Jenna has actively participated in high-level industry events, where she shares insights and engages in discussions on contemporary and future trends in the industry. Through these platforms, she has worked to bridge the gap between the theoretical potentials of technology and its realworld applications, offering a grounded yet forward-thinking perspective.

As a panelist, Jenna brings to the table not only a distinguished career but also a nuanced understanding of the AI landscape. Her insights, which are deeply rooted in firsthand experience with the industry's cutting-edge developments, promise a perspective that is richly informed and anchored in the realities of today's rapidly evolving technological ecosystem.



Shawn Weil, Ph.D.

Aptima, Inc.

As Chief Growth Officer (CGO), Shawn Weil has the responsibility to lead Aptima's

corporate strategic planning activities, oversee market expansion, and align Aptima's technical offerings with critical real-world needs. He continues to provide senior-level mentorship about customer engagement, technical management, and business process development. As a technical leader, Weil has served as principal investigator on a variety of Department of Defense research and development programs for DARPA, the Office of Naval Research, the Air Force Research Laboratory, and other organizations. His technical areas of expertise include human-AI teaming, command and control, and collective performance assessment. He also works as a senior mentor for Aptima's principal investigators and project managers. Weil received a Ph.D. in Cognitive/ Experimental Psychology from The Ohio State University with specializations in cognitive systems engineering, quantitative psychology, and psycholinguistics, and a BA in Psychology and Music from Binghamton University (SUNY). He is a member of the Human Factors and Ergonomics Society, the American Psychological Association, the National Defense Industrial Association, and the Cognitive Science Society.

Future Needs of Adaptive Training Panel Biographies

Wednesday, 22 May | 0845 - 1015 | Granby Ballrooms ABCD



Benjamin Goldberg, Ph.D.

Senior Scientist, Adaptive and Intelligent Training Systems (AITS) Team, U.S. Army DEVCOM

Dr. Benjamin Goldberg is a Senior Research Scientist at the U.S. Army Combat Capability

Development Command – Soldier Center where he serves as technical lead for a research program focused on the development and evaluation of adaptive Training Management Tools for future Army training systems. His research focuses on adaptive experiential learning with an emphasis on simulation-based environments and leveraging Artificial Intelligence to create personalized experiences. His research aims to impact how technology can be applied to support the development and sustainment of expertise in challenging domains that require proficiency across

cognitive, psychomotor, and affective knowledge and skill sets. Dr. Goldberg holds a Ph.D. in Modeling and simulation from the University of Central Florida and is well-published across several high-impact journals and proceedings, including IEEE Transactions of Learning Technologies, the Journal of Artificial Intelligence in Education (AIED), and Computers in Human Behavior.



Glenn Gunzelmann, Ph.D.

711 Human Performance Wing, USAF/AFRL

Dr. Glenn Gunzelmann is a Principal Research Psychologist in the Air Force Research

Laboratory's Airman Systems Directorate. He earned his Ph.D. from Carnegie Mellon University in 2003 and joined AFRL as a civilian government employee in 2004. Dr. Gunzelmann's scientific background is in computational cognitive modeling and cognitive science. He has led research portfolios associated with training, and with human learning and cognition more broadly. His own research has emphasized understanding how fatigue impacts cognition, including sleep loss and the vigilance decrement. He has more than 45 peer-reviewed journal articles, and over 150 peer-reviewed contributions to conferences and workshops. He is a Fellow of both the Psychonomic Society (2014) and the Association for Psychological Science (2020).





Joseph Lomangino

Project Tripoli Team Leader, Marine Corp's LVC-TE

Mr. Joseph Lomangino is the Project Tripoli team leader for the Marine Corp's

LVC-TE enterprise capability. Project Tripoli is a comprehensive initiative to modernize the Marine Corps' training environment. Its goal is to eliminate gaps between experimentation efforts, the training continuum, and real-world mission rehearsals and operations. This project will provide the Fleet Marine Force with an on-demand, all-domain LVC training environment that aligns with the future operating concepts outlined in Force Design. Consisting of 16 essential components that span multiple domains, Project Tripoli is vital for creating a complete and modern battlefield training environment.



James Pharmer, Ph.D.

Chief Scientist, NAWCTSD

Dr. Jim Pharmer is the Chief Scientist for the Training Systems Research, Development Test

and Evaluation Department (GT5E) and the Head of the Experimental and Applied Human Performance and Training Research and Development Division (GT55) at the NAWCTSD in Orlando, Florida. Over his 20+ years at NAWCTSD, his work has focused on delivering effective training products and human performance solutions to the fleet. He has held roles as a supervisor, a laboratory lead, and as principal investigator for multiple large training and human performance science and technology programs. Dr. Pharmer's research interests have centered on developing human systems integration (HSI) processes and tools for factoring capabilities and limitations of human operators, maintainers, and support personnel into the systems engineering process. During his career, he has supported surface ship and aviation acquisition programs as a key member on HSI Integrated Product Teams and leads a number of HSI working groups for developing consistent Navy and Joint HSI policy and guidance. Jim holds a MS in Engineering Psychology from Florida Institute of Technology and a PhD in Applied Experimental Human Factors from University of Central Florida.



CDR Liza Stone, USN

Nursing Director, Healthcare Simulation and Bioskills Training Center, Naval Medical Center Portsmith

CDR Liza Stone is currently assigned to 2nd Medical Battalion, BRAVO Surgical Company

as medical surgical nurse and assumed duties as Operational Nursing Educator, and Nursing Director for the Healthcare Simulation and BioSkills Training Center (HSBTC) at Portsmouth, VA. CDR Stone is an ANCC board certified nurse in psychiatric mental health nursing (PMH-BC), medical surgical nursing (MEDSURG-BC), ambulatory care (AMB CARE-BC), certified care coordination and transition management (CCCTM), and certified lactation education counselor (UC San Diego CLEC). She participated in three deployments in support of Operation Enduring Freedom/Operation Iraqi Freedom and NATO Operations in Kosovo. She also participated in a deployment to Central America in support of Drug Interdiction Operations under CTF-47 with the US Coast Guard. US Air National Guard, and US Air Force.

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



LTC Jason Frisco, USA

Programme Director, NATO NexGen M&S, Headquarters Supreme Allied Commander Transformation (HQ SACT)

Lieutenant Colonel Jason Frisco is the programme director for NATO Next

Generation Modelling and Simulation stationed at NATO Headquarters Supreme Allied Commander Transformation (HQ SACT).

Prior to this position Lieutenant Colonel Frisco was the Modelling and Simulation Section Head at Joint Forces Training Centre in Bydgoszcz Poland for four years.

Lieutenant Colonel Frisco enlisted in the U.S. Marine Corps Reserve as a Combat Engineer in 1997 where he served until 2004. He was also a former civilian Police Officer in Northern Virginia from 2000-2005. LTC Frisco was commissioned in the U.S. Army in 2006 and in 2011 transitioned from Field Artillery branch to Simulations Operations. He has deployed to Iraq, twice, and Qatar, in support of missions in Iraq and Afghanistan.

Lieutenant Colonel Frisco holds an undergraduate degree in Mathematics from The Citadel, and a Master's of Science in Modeling, Virtual Environments and Simulation (MOVES) Naval Postgraduate School.



COL Stephen Banks, USA

Brand Head, Modeling, Simulation and Learning Technologies, NATO HQSACT

Colonel Steve Banks is the branch head for Modelling and Simulation Learning Technologies at

NATO Headquarters Supreme Allied Commander Transformation (HQ SACT). He also serves as capability monitor for three programmes: NATO Next Generation Modelling and Simulation, Political Military Assisted Decision Making, and Education Training Exercise and Evaluation Functional Services.

ng, Simulation and Learning Technologies Prior to this position, Colonel Banks was the Chief of the Environment Operations Division, U.S. Joint Staff J7 in Suffolk,

Colonel Banks was commissioned in the U.S. Army in 1998 and in 2006 transitioned from armour branch to simulations operations. He has deployed to Kuwait, Iraq, and Afghanistan. In Afghanistan he was assigned as a planner to the NATO International Security Assistance Force - Joint Command (IJC) in 2014.

Colonel Banks holds the following degrees: Bachelor of Electrical Engineering from Purdue University, Master of Business Administration from Purdue University, Master of Military Operations from the U.S. Army School for Advanced Military Studies, and a Master of Strategic Studies from the U.S. Army War College.



Andrew Bonica

Senior Client Executive, Dassult Systems Government Solutions

Virginia.

Andrew Bonica is a is a multidisciplinary engineer and Marine Corps Veteran with over

20 years in the Defense, Aerospace,

and Music industries. As a Senior Client Executive at Dassault Systèmes Government Solutions. He is passionate about model-based methodologies across the enterprise, and moving the Defense industry forward to best support the warfighter. He previously presented at ModSim World 2023 and is active in NATO working groups focused on modeling, simulation, and interoperability.



Matt Martin

Strategic Development, CAE USA

Matt "Killjoy" Martin is the Director for Advanced Solutions Strategy, CAE USA Defense & Security,

Arlington, TX which includes the Link Training & Simulation division, with capabilities for fixed-wing, unmanned and rotorcraft flight simulators, training services, modeling & simulation and maintenance training solutions.

Mr. Martin joined Link in 2016 and reports to the Vice President for Business Development, CAE USA. He is responsible for defining the strategic technology priorities to develop solutions, and ensuring alignment of those solutions, for strategic campaigns to meet CAE USA's growing portfolio in Command and Control, Intelligence / Surveillance / Reconnaissance, Wargaming, Artificial Intelligence, and Modeling & Simulation.

Mr. Martin spent over 22 years on active duty in the United States Air Force, retiring in 2016. His significant assignments include Commander of the 46th Expeditionary Reconnaissance Squadron, Balad Air Base, Iraq; Director of Operations,16th Training Squadron, Holloman Air Force Base, NM; Operations Manager for the MQ-1/9 Enterprise, Headquarters Air Combat Command, Langley Air Force Base, VA; Commander of NATO Joint Task Force Unified Vision 2014, Ørland Air Base, Norway; Deputy Commander, 409th Air Expeditionary Group, Niamey, Niger; and Chief of Aerial Reconnaissance and Electronic Warfare for NATO's Southern Region, NATO Air Command Headquarter, Izmir, Turkey. He is also currently the Chief of Pilot Training for the Texas Wing of the Civil Air Patrol.

Mr. Martin has a BA in Political Science from Purdue University and an MA in International Studies from the University of Denver. He is a graduate of Air Force Squadron Officer School, Air Command and Staff College, the Air Force Air War College, and the Joint and Coalition Advanced Warfighters' School in Norfolk, VA. His flight experience includes over 5,000 hours in the T-34, the RC-135U/ V/W, the MQ-1, the MQ-9, and various general aviation aircraft.



Agatino Mursia

Modeling and Simualtion, Leonard Spa

Agatino MURSIA, currently with Leonardo S.p.a. as responsible for Simulation &

Training in the Digital Solutions & R&D Coordination Unit of the Chief Innovation Officer, has been working since 1989 in the industry, in different positions from Engineering, Research and Development, Business Development and CTIO, in Italy and in the USA.

Since 2003 he has been responsible for the definition and validation of complex net-centric architectures and C4ISTAR systems by using M&S techniques such as distributed simulation in support of CD&E (Concept Development & Experimentation) and Training in the military domain. From March 2013 he is the Industrial Member of the NATO STO NMSG (NATO M&S Group) representing, until now, Italy in that context. He is also former Chairman of the NMSG (position hold from 2018 to 2020 - first time for an Italian to assume that position) and recently he was also elected as NIAG Liaison Officer (NLO) for NSMG.

He has been promoting the use of M&S and related international simulation standards also through numerous presentations of M&S related papers to National and International conferences like IEEE, IT²EC, I/ITSEC, CA2X2 Forum.

He has been awarded twice with the NATO STO Achievement Award: in 2014 for "C2 Capability Maturity Model" and in 2015 for MSG-131 Specialist Team on "Modelling and Simulation as a Service: New Concepts and Service Oriented Architectures".

In the context of NexGen M&S NATO ACT Program he has been actively participating since the initial phase as M&S SME representing NMSG Community. Later in 2023 he was elected Chair of the new SG-296 NIAG Study on NexGen M&S sponsored by ACT that is currently ongoing.

In the European scenario he is Industrial Rapporteur of the EDA CapTech Simulation and is coordinating the Leonardo and Italian participation to the EDF project FEDERATES aiming at realizing the first European MSaaS Ecosystem.



Robbie Phillips

Advanced Concepts, Lockheed Martin

Robbie Phillips is the Advanced Concepts lead for Training and Logistics, within the Rotary and Mission

Systems business area of Lockheed Martin. Rob is the business champion for AI/ML applications across joint mission readiness and joint contested logistics. In his current role he is responsible for addressing specific problems or gaps faced by the warfighters of today and tomorrow, and focusing Lockheed Martin's resources to address these challenges. He supports the development of the TLS Technology Roadmap and investment decisions for research and development of new enabling technologies and warfighting capabilities. Rob holds an MBA in Strategy and Entrepreneurship, and undergraduate studies in computer science, scientific instrumentation, and analytics. He has more than 30 years of work experience in engineering and business development across C4ISR, Simulation, Training, and Sustainment domains. Rob has been a recipient of NATO S&T awards for his contribution to M&S working groups and is the Task Group 2 AI/ML Lead for NIAG SG296.



Robert Seigfried

Managing Director, Aditerna GmbH

Dr. Robert Siegfried is Senior Consultant for IT/M&S projects and Managing Director of Aditerna

GmbH, a Munich-based company providing specialized services and consulting in this area. He is also the President of Aditerna Inc, headquartered in Virginia Beach, VA, USA. He earned his doctorate in modeling and simulation at the Universität der Bundeswehr München.

In his 15+ year professional career, he has worked on a wide range of topics for the German Armed Forces, to include secure data sharing, M&S as a Service, process models, documentation guidelines, model management systems, and distributed simulation test beds. For civilian customers, such as German Rail (Deutsche Bahn), he served as project manager for a complex, high-visibility IT modernization project for vehicle-based onboard IT systems, involving 400 trains across Germany.

From 2018 to 2023 Robert was serving on behalf of the German Armed Forces as Vice-Chair and Chairman of the NATO Modelling and Simulation Group (NMSG). In addition, he is actively leading various NMSG technical activities, like "Distributed Synthetic Training" (DST) and "Modelling and Simulation as a Service" (MSaaS). The exceptional team effort of the MSaaS working groups resulted in outstanding and very original contributions to Defence Science and Technology for the benefit of the NATO technical community and the military, and were twice recognized with the prestigious Science and Technology Organization (STO) Scientific Achievement Award.

From 2014 to 2022 Robert was a member of the Executive Committee (EXCOM) of the Simulation Interoperability Standards Organization (SISO) and is still today actively engaged in multiple SISO working groups. He is author of more than 30 scientific papers and serves as track chair or program committee member for highly recognized conferences like the Winter Simulation Conference and the annual NMSG Symposium. He is Guest Editor of the Journal for Defense Modeling and Simulation.





Julian Abich IV, Ph.D. | 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-byside 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,

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

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.

reality and its effects on the human

sensory system. She is also actively

involved in the design and delivery of

Department of Defense, with a focus on

driving user-centered design for scalable

XR training technologies across the

adoption of AR/VR/XR solutions.



Claire Hughes | Deputy Conference 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



Vance Souders | Program Chair

Founder, Plas.md; Thermo Fisher Scientific

Vance Souders has over 23 years of software engineering, design, and leadership 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.

experience focused on creating cutting-



Angelica Jasper, Ph.D. | Deputy Program 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 falls at the intersection of intuitive usability and innovative product development that optimizes human performance, with an emphasis on virtual and augmented reality solutions. Dr. Jasper is the lead researcher across all Guidance Automation products in John Deere's Precision Ag space, providing evidence-based leadership on product development and enhancement efforts. She also supports the Advanced Digital Technologies area to marshal XR and simulated research efforts on advanced proof-of-concept products for next generation technology releases. She previously served as the Human Engineering Technical Lead Engineer for Virtual and Augmented Reality at Boeing Defense, Space, and Security, with her past work including the development of XR tools for the Air Force, Space Force, and Navy. Dr. Jasper continues to review, write, 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.

Defense



Col Cheryl Lockhart, USAF (Ret.) | Chair

SimX, Inc.

Colonel Cheryl C. Lockhart (ret) is a retired officer with over 30 years of military

experience in the Air Force and Army National Guard. She is a former Chief Nurse, Surgeon General Military Nursing Consultant and Signal Corp officer. Col Lockhart's areas of expertise are medical simulation education and critical care nursing. She has served as an ICU nurse, Aeromedical Evacuation Flight Nurse, and Critical Care Aeromedical Transport Team (CCATT) nurse and has overseen several simulation departments. She is

synthetic training and simulation-based

training for infantry skills. Previously, he

Laboratory in the areas of scaled

conducted research at the Army Research

simulation-based training, gauging effects

of simulation-based training on decision

an experienced researcher and remains involved in virtual reality simulation research. Col Lockhart has a Doctorate from the SUNY Buffalo as well as an MPH with a focus on Homeland Security. She is a 2018 graduate of the Air War College. She is currently employed by SimX Inc. as a Senior Military Advisor.



Douglas Maxwell, Ph.D. | Deputy Chair

Chief Engineer, JANUS Research Group

Doug Maxwell is the chief engineer of JANUS Research Group specializing in practical

applications of research related to



Connor Parsey | Deputy Chair

U.S. Army DEVCOM SC 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 College of Engineering at the University of Central Florida.

making skills of infantry soldiers, and data

training assessment. Doug earned a Ph.D.

modeling requirements for automated

in Modeling and Simulation from the

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.

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, 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, Benson was a Business Analyst assisting with the implementation and support of business information systems in order to help achieve the business' goals. Benson possesses a BS degree from Old Dominion University in Business Management and Business Analytics as well as a MS in Business Analytics from the College of William and Mary.





Andrew Hollis | Deputy Chair

Emerging Technology Support, LLC

Andrew Hollis has been involved in the evolution of training over the last almost two decades from

the ground up. Starting as a graphic artist on an award-winning training supplement for the aging boats in the United States Coast Guard, Andrew is currently the lead developer of an immersive VR sim. During his career, he has worn nearly every hat that can be worn when it comes to training development, as well as being a role player for live training and as an instructor on the podium. He holds an MFA in Game Development and has earned the call sign of 'Wizard' from his US Marine colleagues as the man behind the curtain crafting and operating their immersive sim. He mostly chooses to use Military Grade Dungeon Master as his title after being introduced by a Colonel to a General with said title. He is passionate about harnessing the learning experiences that can be crafted by gamification, and he works to ensure that the fun factor goes where needed. This is Andrew's first time as a committee member for a conference, and he is looking forward to taking the next big step with everyone.



Matthew "Matt" Pittard | Deputy Chair

Program Manager, Analysis Branch Lead, Aerospace Vehicle Equipment (AVE) Division | Strategic Systems | Air & Space Force Solutions | Intelligence & Security | BAE Systems Inc.

Mr. Matt Pittard joined BAE Systems, Inc. in December 2016 and leads

the AVE Analysis Branch in developing leading-edge flight simulation and integrated threat assessment simulation environment analysis for the Sentinel weapon system. Previous to BAE Systems, Inc., he served for 2 years as a senior member of the Draper Laboratory technical staff, where he developed the Enhanced Ground Test guidance system test and evaluation program for Sentinel. He began his career with Raytheon Missile Systems in 2003, developing the Standard Missile-3 kill vehicle design. A notable accomplishment from his career was serving as a key member of the engineering team behind the historic intercept of disabled satellite USA-193/ NROL-21 February 20, 2008 as a kill vehicle telemetry onboard the USS Lake Erie. The mission was recognized by U.S. House of Representatives Resolution 1004 110th Congress, Second Session.

Pittard has authored 20 technical journals and conference proceedings ranging from wavelength pyrometry, large eddy simulation in computational fluid dynamics, kill vehicle design, divert and attitude Control motors (solid and throttling), microelectromechanical or MEMS-based gyroscopes, flight testing, statistical analysis of algorithms, ICBM simulations, and augmented reality.

His academic achievements include a Bachelors and Masters of Science degree in Mechanical Engineering from Brigham Young University, Provo, UT. A native of Caldwell, Idaho, he resides in Layton, UT, and is the father of six amazing sons. In his free time, he enjoys singing tenor with the Salt Lake Singers, Westminster Choral, and volunteering as a District Director for Tau Beta Pi, the Engineering Honor Society.

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.



Kevin F. Hulme, Ph.D., CMSP | Deputy Chair

Program Manager, The Stephen Still Institute for Sustainable Transportation and Logistics (SSISTL)

Kevin F. Hulme received his Ph.D. from the University at Buffalo, specializing

in multidisciplinary analysis and optimization of complex systems.

Currently, he serves as the Program Manager for The Stephen Still Institute for Sustainable Transportation and Logistics, and provides oversight for its Motion Simulation Laboratory. Dr. Hulme's current areas of focus include applied modeling and simulation (M&S), simulation science, transportation and vehicle M&S, game-based approaches in engineering education, human factors, and advanced air mobility. Dr. Hulme is a Certified Modeling and Simulation Professional (CMSP).



Michael "Mike" King, Ph.D. | Deputy Chair

Research Psychologist II, Quantum Improvements Consulting (QIC)

Dr. Michael King is a Research Psychologist II at Quantum Improvements

Consulting (QIC). While at QIC, Michael has led various training and human performance improvement projects, including a major initiative studying team communication and performance for the U.S. Army. He has experience evaluating virtual reality technologies for Air Force pilot training, incorporating gamification elements to increase customer motivation for personal finance management, and conducting usability testing on a mobile application that promotes self-directed learning. Michael earned his Ph.D. in Experimental Psychology at Case Western Reserve University, where he researched the cognitive and perceptual factors that influence human performance, such as memory, attention, and learning. Michael's research interests center on human performance, training, and the predictors of success in team-based performance contexts.



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Luke DeVore | Chair

Managing Partner, The Voltron Group

Luke DeVore is the Managing Partner at The Voltron Group, a technology and business

development consultancy focused on the Federal and DoD emerging technology markets. Devore was introduced to modeling and simulation as a Marine Corps officer using the Deployable Virtual Training Environment (DVTE) aboard the USS Bataan while deployed with the 26th Marine Expeditionary Unity. DeVore has been in the technology and business development industry for nearly 15 years, and previously worked at Design Interactive and Unity Technologies. DeVore earned his MA from Webster University and his MBA from Quantic School of Business and Technology.



Frank Karluk | Deputy Chair

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. 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.

NDIA

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.

SIGNS

VITAL

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LTC Jason Frisco, USA

Programme Director, NATO NexGen M&S, Headquarters Supreme Allied Commander Transformation (HQ SACT)

Lieutenant Colonel Jason Frisco is the programme director for NATO

Next Generation Modeling and Simulation stationed at NATO Headquarters Supreme Allied Commander Transformation (HQ SACT).

Prior to this position Lieutenant Colonel Frisco was the Modeling and Simulation Section Head at Joint Forces Training Centre in Bydgoszcz Poland for four years.

Lieutenant Colonel Frisco enlisted in the U.S. Marine Corps Reserve as a Combat Engineer in 1997 where he served until 2004. He was also a former civilian Police Officer in Northern Virginia from 2000-2005. LTC Frisco was commissioned in the U.S. Army in 2006 and in 2011 transitioned from Field Artillery branch to Simulations Operations. He has deployed to Iraq, twice, and Qatar, in support of missions in Iraq and Afghanistan.

Lieutenant Colonel Frisco holds an undergraduate degree in Mathematics from The Citadel, and a Master's of Science in Modeling, Virtual Environments and Simulation (MOVES) Naval Postgraduate School.



Brian Vogt

Programme Coordinator, NATO NexGen M&S, Applied Training Solutions

Brian Vogt is the NATO Next Generation Modeling & Simulation Programme

Coordinator at Applied Training

Solutions. Previously, he was the M&S Technical Solutions Lead for the AFMS3 program for SAIC. Vogt is a retired Army Simulation Operations officer where he led the Army's Early Synthetic Prototyping project and was the project lead for Synthetic Environment Core program. He holds a master's degree from the Naval Postgraduate School in Modeling, Virtual Environments, and Simulations.

STEM Chair Biography



Jessica Johnson, 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

Learning Engineer for the Virginia Digital Maritime Center and Director for STEM and Educational Partnerships at the Office of Enterprise Research and Innovation (OERI) a research enterprise of Old Dominion University. She has expertise in both cognitive and learning sciences, coupled with a background in human-factors psychology for use in field applications of multi-modal learning and training systems. Her applied research encompasses the intersection of cognitive and knowledge engineering, aiming to inform the design and evaluation of immersive learning environments that optimize cognitive, performance and training outcomes. She also advocates and leads Science, Technology, Engineering, Arts, and Mathematics (STEAM) outreach efforts in multiple capacities across K-12 pipelines.

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 EcosSystem of Learning Pavilion and 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

In 2020, 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 and has been active since that time 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. Legislation was passed in the last Congress, and the group continues to advance the initiative in the current Congressional budget cycles.

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.

Debbie Langelier, CEM Senior Vice President

Carol Dwyer, CMP Associate Director, Membership Services Shannon Burch, CEM Senior Director, Exhibits and Sponsorships

Holly Gallier Operations Coordinatior Reneé Despot Director, Meetings & Operations

Caitlyn Langelier Meetings Support



Training & Simulation Industry Symposium (TSIS) June 12 – 13, 2024 | Orlando, FL

Register at NTSA.org/TSIS



Capitol Hill Modelling & Simulation Expo

July 11, 2024 | Washington, DC RSVP is appreciated but not required

Learn More at NTSA.org/CapitolExpo



Interservice/Industry Training, Simulation & Education Conference (I/ITSEC 2024)

December 2 - 6, 2024 | Orlando, FL

Learn More at IITSEC.org



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BAE Systems

NTSA Corporate Member

Sponsor

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

Battle Road Digitial, Inc

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NTSA Corporate Member

Building the future of wargaming at planet-scale at Battle Road, we're applying cutting edge innovations from the game industry to build the future of planet-scale simulations, modeling, and operations. Our Atom Engine technology is designed from the ground up for a new generation of wargaming that's fast, intuitive, and highly accurate – at the operational and tactical scale.

Bluemont Technology & Research, Inc

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NTSA Corporate Member

Bluemont (www.BluemontTechnology.com) is focused on providing solutions based on data intensive applications, emerging technologies, and modeling/simulations/gaming. Our expertise supports Information Technology, Data Management, Chemical, Mechanical, Electrical, Nuclear Engineering, and Biological Life Sciences. We are combining our skills to produce "real world" simulations (e.g., digital twins) in the production of Virtual and Augmented Reality (VR/AR) program in support of training and operations activities.

Bohemia Interactive Simulations 12

NTSA Corporate Member

Founded in 2001, Bohemia Interactive Simulations (BISim) is a global software company at the forefront of simulation and training solutions for defense and civilian organizations. Our mission is to harness the explosive potential of technology to revolutionize training and simulation. BISim leverages the latest commercial technology and a large, experienced in-house team of engineers to develop high-fidelity, cost-effective training and simulation software products and components for defense applications. BISim supplies its software to customers around the world and endeavors to bring innovative technology and disruptive business models to all areas of the defense industry. Learn more online at bisimulations.com.

Cole Engineering Services Inc (CESI) 5

NTSA Corporate Member

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



Compendium Federal Technology

Sponsor

Compendium Federal Technology, LLC (CFT) is a Small Business founded in 2010 and headquartered in Lexington Park, MD. Our office is located within one mile of NAS Patuxent River, MD, and we have a second office opening in Hampton, VA. We provide Integrated Logistics Support (ILS), technical data creation and sustainment, engineering, and training services, and Model-Based Systems Engineering services to the Naval Air Systems Command (NAVAIR), Naval Information Warfare Systems Command (NAVWAR), and other Department of Defense (DoD) clients. We have a TOP SECRET (TS) facility clearance with SECRET Holding and a DCAA-certified Cost accounting System (CAS). CFT primarily supports the Maritime Patrol & Reconnaissance Program Office (PMA-290), the H-53 Helicopters Program Office (PMA-261), and the USAF Air Combat Command (ACC) A5/A9. The Company's staff consists of veterans with deep Domain experience from the US Navy, US Air Force, and US Army on the platforms and in the systems we support.

Design Interactive

NTSA Corporate Member

Advanced technology can improve success on and off the battlefield, but if it isn't properly implemented it can cause adverse effects – high workload, errors, misuse, technology rejection – or compromise safety.

For over 25 years, Design Interactive's team of Human Factors experts have helped both Government and Commercial organizations "Accelerate Digital Transformation" by evaluating, developing, and safely integrating advanced computing and software solutions that optimize both the human and the system.

- DI's spatial computing solutions, driven by generative AI, are rooted in the principle of working smarter, not harder to elevate your team and guarantee readiness for the burgeoning industrial metaverse.
- Our highly creative, high energy, multi-disciplinary teams specialize in coupling emerging tech such as XR and Aldriven human performance analytics and engaging human machine interfaces to achieve desired outcomes through personalized training and operational support.

HII

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NTSA Corporate Member

Sponsor

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

INHANCE

NTSA Corporate Member Sponsor

Inhance is a leading software development company for the aerospace and defense industry. With trailblazing immersive applications and interactive tools, we're redefining modeling, simulation, and training. We're blending Hollywood's stunning visual storytelling with cutting-edge video game technology to demystify intricate science, technology, and operational concepts. Our elite team excels in AR/VR/XR, AI/ML, and comprehensive software solutions.

Inhance is at the forefront of innovation, collaborating with the USAF and NASA on pioneering SBIR and STTR projects, setting new benchmarks for excellence and expertise in the field.

Interactive Aptitude LLC

Interactive Aptitude LLC is a trusted partner for advanced AI solutions, delivering cutting-edge capabilities to the Air Force, Space Force, DARPA, and industry. We excel in wargaming simulations, platform-level autonomy, decentralized BMC3, multi-sensor data fusion, business automation, and custom AI/ML/LLM software. As a highly client-centric firm, we focus on creating measurable enhancements that drive long-term operational success. If interested in leveraging the latest software and hardware frameworks for your mission-critical needs, feel free to contact us at contact@intaptai.com for a free consultation.

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Exhibitor & Sponsor Descriptions

Jacob Barhak Analytics

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

ML Horizons

NTSA Corporate Member Sponsor

Magic Leap is the US-based manufacturer of the award-winning, TAA compliant, Magic Leap 2 augmented reality headset built for the enterprise. We seamlessly integrate digital and physical worlds to build a reality where technologies like AR and AI aren't edge cases, but fundamental tools to achieve new levels of productivity." Additional information can be found here: https://www.magicleap.com/about-us

Quantum Improvements Consulting

Sponsor

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QIC is an EDWOSB headquartered in Orlando, FL. We specialize in designing, developing, implementing, and evaluating demonstrably effective learning and performance support solutions. Our staff have advanced degrees in cognitive science, human factors, and instructional design. Our team takes a unique approach to discovery by combining cutting-edge research with established needs analysis techniques to identify user needs. Unlike providers tied to a proprietary product, we have expertise with a wide variety of technology platforms and leverage our network of providers to design and develop a customized solution. We ensure your solution achieves your organization's goals by developing a data strategy focused on outcomes and conducting research to demonstrate effectiveness.

RADICL

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RADICL provides SMBs serving America's Defense Industrial Base (DIB) and critical infrastructure Xtended Threat Protection (XTP). RADICL's purpose-built and proprietary XTP[™] Platform delivers deep-spectrum[™] threat protection and compliance management that is quick, easy, and affordable. RADICL enables SMBs in the DIB to focus on running a profitable business and not worrying about security and compliance.

SimIS, Inc

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



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Tech Wizards, Inc.

NTSA Corporate Member

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-tolife immersive high-fidelity 3D gaming experiences that educate sailors on procedural compliance.

www.tech-wizards.com

The Weather Company

NTSA Corporate Member Sponsor

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As global weather events become increasingly intense, effective planning for the impact of weather on operations and missions is more important than ever. Even minor changes in weather conditions can exert profound effects, affecting aircraft performance, ground operation speeds, and the resilience of crucial infrastructure. The Weather Company, the world's most accurate forecaster, offers a planning tool with customized map visualizations and a simulation tool with immersive 3D weather visualizations for decision-makers to see the impact of current and future weather on their objectives and perform what-if scenarios leading to more successful outcomes.

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Virginia Modeling Analysis & Simulation Center (VMASC)

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Notes



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INTERSERVICE/INDUSTRY TRAINING, SIMULATION & EDUCATION CONFERENCE ASSURING DETERRENCE THROUGH INTEGRATED TRAINING AND READINESS – THE NEED IS NOW!



18,000 attendees 517 exhibitors 200,000 sq ft exhibit hall Over 2,040 international attendees, from 60 countries

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