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 & Introduction of Congressional Keynote Speaker

Linda Brent, Ed.D.

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



Monday, 20 May | Agenda

1245 - 1300 Congressional Keynote Address

GRANBY BALLROOMS ABCD

The Hon. Bobby Scott

U.S. Congress, 3rd District, VA

1300 - 1345 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 and more broadly.

Jennifer Solberg, Ph.D.

CEO, Quantum Improvements Consulting Moderator

LtCol Alexandra Carico, USSF

USSPACECOM Desk Officer, Joint Exercise Division

CDR Christina Carino, USN

Naval SurfaceWarefare Center Dahlgreen Division (NSWCDD), Dam Neck Activity

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

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 AI. 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 Moderator

Networking Break & Dedicated Exhibit Time

Agenda

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

1515 - 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

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

0845 - 0915 Industry Keynote Address

GRANBY BALLROOMS ABCD

Jennifer Solberg, Ph.D.

CEO, Quantum Improvements Consulting

0915 - 0945 Government Keynote Address

GRANBY BALLROOMS ABCD

Major General Dominique Luzeaux

Digital Transformation Champion and Special Advisor to Supreme Allied Commander Transformation

0945 - 1000 Networking Break & Dedicated Exhibit Time

GRANBY BALLROOM FOYER

Special Event: The Simulation Century – What Does Education Need 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 Al 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

David Rubright

Account Executive, HoloLight

Al and Designing the Future

Tish Shute

Founder, Augmented World Expo

1130 - 1245 Lunch & Dedicated Exhibit Time

GRANBY BALLROOM E & GRANBY BALLROOM FOYER

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

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

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

Mateus Flausino
CGWorks Virtual Reality

Alexandre Cardoso, Ph.D.

Federal University of Uberlandia

Lucas Freitas

CGWorks Virtual Reality

Joao FeitosaHelder Paula, Ph.D.Federal University of UberlandiaFederal University of Uberlandia

1335 – 1400 Creating Virtual World Environments for Ocean Vehicles

Ryan CapozziUnmanned Systems

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

Tuesday, 21 May | Agenda

1310 – 1335 Modeling Human Behavioral Responses to Targeted Violence

Rainer Hilscher, Ph.D.

William Parkin

RTI International

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.

Daniel Muller

University of Central Florida

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

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

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

Mark Hogsett Christopher Andrews

Rendered.ai Rendered.ai

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

Randall Toth Ronald Moore

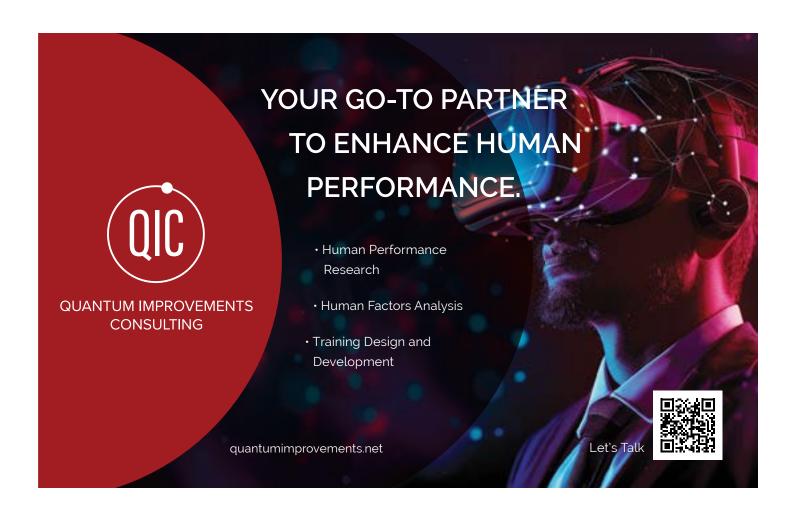
Maxar/MST Maxar/OWT

1505 – 1530 Interactive Coaching of Highly Independent Participants in AR

Richard St. AugustineParatus Associates

Richard Goad
Paratus Associates

Paratus Associates



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

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

MOMENTUM

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

Tuesday, 21 May | Agenda

1530 - 1545 Networking Break & Dedicated Exhibit Time

GRANBY BALLROOM FOYER

Special Event: Al at Work – Applications of Al 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 Al being used today to create tangible value. Join this panel of leaders in government and industry to explore how Al 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

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

0830 - 1500 Exhibit Hall Open

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

James Pharmer, Ph.D.

Chief Scientist, NAWCTSD

CDR Liza Stone, USN

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



Wednesday, 22 May | Agenda

1015 - 1030 Networking Break & Dedicated Exhibit Time

GRANBY BALLROOM FOYER

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

FUSION

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

Agenda | Wednesday, 22 May

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

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

Benjamin Bell, Ph.D. Eduworks Corporation

Matthew Ross

Eduworks Corporation

Debbie BrownEduworks 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

TRAINING & SIMULATION INDUSTRY SYMPOSIUM



Register Today!

12 - 13 June 2024 | Orlando, FL | NTSA.org/TSIS

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

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

Drew Landman, Ph.D.Old Dominion University

Mileta Tomovic, Ph.D.
Old Dominion University

1055 – 1120 Employing Manned and Autonomous Machines: Implications for Live, Virtual, and Constructive (LVC) Training Simulations

Tim Cooley, Ph.D.

Ivar Oswalt, Ph.D., CMSP

DynamX Consulting 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

Agenda | Wednesday, 22 May

Paper Session IV – Industry Track: Shaping the Future: Digital Twins and Simulation in Manufacturing

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

ENERGY

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- 1415 Smart 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



Special Event: NATO Industry Advisory Group 1430 - 1600

GRANBY BALLROOMS ABCD

LTC Jason Frisco, USA

Programme Director, NATO NexGen M&S 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

Closing Remarks & Adjourn GRANBY BALLROOMS ABCD 1600