Federal E-learning Science & Technology

# i³FEST

*innovation • instruction • implementation*



# 2019 iFEST

August 26 – 28 **|** Hilton Mark Center **|** Alexandria, VA **|** Training Systems.org/Events

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**NTSA** **NDIA** A Proud Affiliate of

## WHO WE ARE

The National Training & Simulation Association (NTSA) provides the training, simulation, related support systems and training services industries a focused, formal organization to represent and promote their business interests in the market place. NTSA provides a forum to communicate the full capability and broad characteristics of all the elements of training systems and services to include associated support services. NTSA is an affiliate of National Defense Industrial Association (NDIA). NDIA is America's trusted leader in defense and national security associations.

# SCHEDULE AT-A-GLANCE

## MONDAY, 26 AUGUST

**Registration Open**
Lower Foyer
1200

**Exhibits Open**
Lower Foyer
1300 - 1900

**General Session**
Plaza Ballroom BC
1400 - 1730

**Professional Networking Reception**
Lower Foyer
1730 - 1900

## TUESDAY, 27 AUGUST

**Continental Breakfast**
Lower Foyer
0730 - 0830

**General Session**
Plaza Ballroom BC
0830 - 1000

**Exhibits Open**
Lower Foyer
1000 - 1900

**Concurrent Sessions**
Plaza Ballroom I-III & Beech AB
1030 - 1615

**Lunch and Exhibit Time**
Terrace Room and Lower Foyer
1130 - 1300

**Ignite! Presentations**
Plaza Ballroom BC
1630 - 1730

**Professional Networking Reception/Poster Session**
Lower Foyer
1730 - 1900

## WEDNESDAY, 28 AUGUST

**Continental Breakfast**
Lower Foyer
0730 - 0830

**Concurrent Sessions**
Plaza Ballroom I-III & Beech AB
0830 - 0930

**Exhibits Open**
Lower Foyer
0930 - 1330

**General Session & Ignite! Presentations**
Plaza Ballroom BC
0945 - 1215

**Closing Luncheon**
Terrace Room
1215 - 1330

# EVENT INFORMATION

**LOCATION**

Hilton Alexandria Mark Center
5000 Seminary Road
Alexandria, VA 22311

**WIFI**

Network: HILTON_MEETING
Password: ADLiFEST

*The WiFi is provided by The Hilton Alexandria Mark Center and should be treated as an unsecure network; it is in no way affiliated with NTSA or the ADL Initiative. Please treat it as you would a public connection with regard to security.*

**ATTIRE**

Civilian: Business
Military: Uniform of the day

**SURVEY AND PARTICIPANT LIST**

You'll receive via email a survey and list of attendees (name and organization) after the conference. Please complete the survey, which helps make our event even more successful in the future.

# SAVE THE DATES

**INTERSERVICE/INDUSTRY TRAINING, SIMULATION & EDUCATION CONFERENCE (I/ITSEC) 2019**

**December 2 – 6, 2019**
Orlando, FL

**2020 SIMULATION INNOVATION WORKSHOP (SIW)**

**February 10 – 14, 2020**
Orlando, FL
(Sponsored by SISO / Supported by NTSA)

**M&S LEADERSHIP SUMMIT**

**Date TBD**
Location TBD

**ITEC 2020**

**April 28 – 30, 2020**
ExCeL, London, UK

**MODSIM WORLD 2020**

**May 5 – 7, 2020**
Norfolk, VA

**2020 SIMULATION & TRAINING COMMUNITY FORUM**

**May 12, 2020**
Dayton, OH

**TRAINING & SIMULATION INDUSTRY SYMPOSIUM (TSIS) 2020**

**June 17 – 18, 2020**
Orlando, FL

**CAPITOL HILL M&S EXPO**

**July 2020**
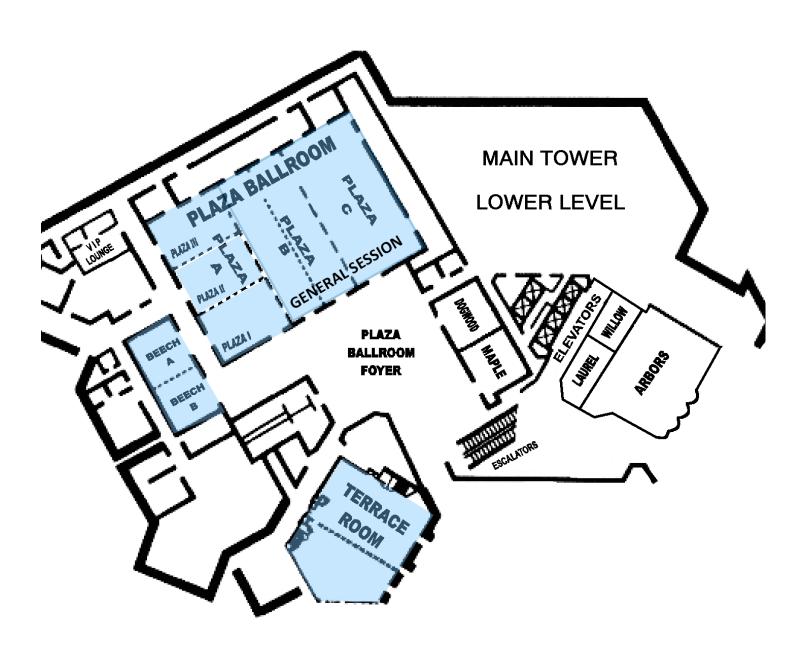Washington, DC

**IFEST 2020**

**August 2020**
Alexandria, VA

TrainingSystems.org/events

# HOTEL MAP

# ADL LEADERSHIP

### CHARLES (FRED) DRUMMOND, SES

*Deputy Assistant Secretary of Defense, Force Education and Training*

Office of the Assistant Secretary of Defense for Readiness

Mr. Drummond serves as the Deputy Assistant Secretary of Defense for Force Education and Training in the Office of the Assistant Secretary of Defense for Readiness. He oversees the development of policies and plans for military training and education. His responsibilities include Service and joint training policy, cyber training policy, joint professional military education, training capability modernization, and enabling access to the land, air, and sea live training domains.

Prior to joining OSD, Mr. Drummond was responsible for Navy's strategy, policy, resource allocation, and execution oversight for all officer, graduate, and voluntary education programs on behalf of the Deputy Chief of Naval Operations. A career Naval Officer, Mr. Drummond served in a variety of operational and staff billets. As a Naval Flight Officer flying in the EA-6B and in the USAF EF-111A, Mr. Drummond deployed across the globe conducting combat and peacetime operations. Non-operational tours included assignments in education, training, and manpower.

Mr. Drummond's military awards include the Defense Superior Service Medal, the Legion of Merit, the Distinguished Flying Cross, and the Air Medal. He is a graduate of Virginia Tech and received a Master's of Political Science from Auburn University of Montgomery.

### SAE SCHATZ, PH.D.

*Director*

ADL Initiative

Dr. Sae Schatz serves as the Director of the Advanced Distributed Learning (ADL) Initiative, a research and development program under the Deputy Assistant Secretary of Defense for Force Education and Training. Before joining the Government in 2015, Sae worked as an applied human–systems scientist, with an emphasis on human cognition and learning, instructional technologies, adaptive systems, human performance assessment, and modeling and simulation. During that time, she led the authorship and execution of the Marine Corps' Making Good Instructors Great course and accompanying instructor tool kit. She was also the chief scientist for the award-winning Border Hunter research effort and the Joint Staff J7's Blended Learning–Training project.

Sae has worked with the Defense training and education community for over 10 years. During that time her efforts frequently focused on ways to enhance individuals' higher-order cognitive skills (i.e., the mental, emotional, and relational skills associated with "cognitive readiness"). She has authored more than 50 peer-reviewed scholarly publications, led development of 3 military textbooks, and received professional recognition for her publications and research, including best paper awards from the I/ITSEC and MODSIM conferences.

Sae also maintains close ties with her alma mater, the University of Central Florida. She formerly held an assistant professor position with the university, and she previously taught courses in visual design, web design and development, modeling and simulation, and human–systems interaction. Today, she continues to mentor UCF graduate students from the Institute for Simulation and Training, and she serves on the Digital Media Advisory Board.

# AGENDA

**1200**

## REGISTRATION OPEN
LOWER FOYER

**1300**

## EXHIBITS OPEN
LOWER FOYER

**1400–1410**

## CONFERENCE WELCOME
PLAZA BALLROOM BC

RADM James A. Robb, USN (Ret)
President, National Training & Simulation Association

**1410-1430**

## OPENING REMARKS AND KEYNOTE INTRODUCTION
PLAZA BALLROOM BC

Charles (Fred) Drummond, SES
Deputy Assistant Secretary of Defense, Force Education and Training, Office of the Assistant Secretary of Defense for Readiness

**1430–1530**

## KEYNOTE PRESENTATIONS
PLAZA BALLROOM BC

James P. Woolsey, SES
President, Defense Acquisition University
*Government Keynote*

John Schwartz
Head of Enterprise Business Development, edX
*Industry Keynote*

**1530–1600**

## BREAK AND EXHIBIT TIME
LOWER FOYER

**1600–1730**

## WHO CARES? A STRATEGIC LOOK AT MODERNIZING LEARNING
PLAZA BALLROOM BC

Sharon Ridings, SES
Chief Learning Officer, U. S. Environmental Protection Agency

Yoram (Jerry) Wind, Ph.D.
Emeritus Professor of Marketing, The Wharton School of the University of Pennsylvania

Heidi Schweingruber, Ph.D.
Director, Board on Science Education, The National Academies of Sciences, Engineering and Medicine

Phill Miller
Chief Learning and Innovation Officer, Blackboard, Inc.

Sae Schatz, Ph.D.
Director, ADL Initiative
*Moderator*

**1730–1900**

## PROFESSIONAL NETWORKING RECEPTION
LOWER FOYER

# TUESDAY, AUGUST 27

**0730–0830**    ## CONTINENTAL BREAKFAST
LOWER FOYER

**0830–0845**    ## DAY 2 WELCOME
PLAZA BALLROOM BC

**Ellen Purdy**
Director, Emerging Capabilities & Prototyping Initiatives & Analysis, Office of the Assistant Secretary of Defense (Research & Engineering)

*Introduction:*
**Angie M. Gamble, Ph.D.**
U.S. Army

**0845–1000**    ## GOOD PRACTICES IN DISTRIBUTED AND ONLINE LEARNING
PLAZA BALLROOM BC

**David LeFevre, Ph.D.**
Director of the EdTech Lab, Imperial College

**Sarah Toms**
Executive Director, Wharton Interactive

**Robert Peach, Ph.D.**
Professor of Mathematics (Online Program Analytics), Imperial College

**Patricia Gabaldon, Ph.D.**
Associate Professor of Economic Environment, IE University

**Kristine Rabberman, Ph.D.**
Assistant Vice Dean, Director of Academic Affairs at Professional and Liberal Education, University of Pennsylvania

**Nunzio Quacquarelli**
CEO, QS Quacquarelli Symonds
*Moderator*

**1000–1030**    ## BREAK AND EXHIBIT TIME
LOWER FOYER

## CONCURRENT PRESENTATION SESSIONS

### THE SKILLFUL USE OF xAPI, IN PRACTICE
PLAZA I

Session Chair:
Martin Bogan
CAE USA

**DATASIM: Data and Training Analytics Simulated Input Modeler for xAPI and xAPI Profiles**
Shelly Blake-Plock
Yet Analytics

**Challenges in Providing a Semi-Connected Learner Experience with xAPI**
Daniel Pfeiffer
Float, LLC

**No Device Left Behind: Solving the Offline Learning Challenges of xAPI and cmi5**
George Vilches
JCA Solutions

### NEW, CREATIVE WAYS TO LEARN
PLAZA II

Session Chair:
Nunzio Quacquarelli
QS Quacquarelli Symonds

**It's Not About the Technology**
Ken Crim
U.S. Navy

**Alternate Reality Courses: A Paradigm Shift in Using Games to Activate Learning**
Sarah Toms
Wharton Interactive

**Collaborative Augmented Reality with Virtual Humans to Support Social Learning**
Marjorie Zielke, Ph.D.
University of Texas, Dallas

Additional Author(s):
Scotty D. Craig, Ph.D.

### LEARNING ENGINEERING
PLAZA III

Session Chair:
Andy Johnson
ADL Initiative (Contractor)

**Instructional Designers and Learning Engineers of the Future**
Dina Kurzweil, Ph.D.
Uniformed Services University of the Health Science

**Engineering Better Learning: Practical On-Ramps to the Emerging Practice of Learning Engineering**
Jim Goodell
Quality Information Partners & IEEE ICICLE

Additional Author(s):
Michelle Barrett, Ph.D., Shelly Blake-Plock, & Ellen Wagner, Ph.D.

**Linking up the Talent Pipeline**
Scott L. Cheney
Credential Engine

Additional Author(s):
Fritz Ray, Kristin Wood, Joshua Westfall & Emilie Rafal

### AR/VR PLATFORMS
BEECH AB

Session Chair:
Van Brewer, Ph.D.
ADL Initiative (Contractor)

**Close Combat Training via Integrated Visual Augmentation System**
LtCol Rory Quinn, USMC
Close Combat Lethality Task Force, Office of the Secretary of Defense

**Global Collaborative Learning Through AR/VR and Immersive Technology**
Julia Pelton
Modest Tree Media, Inc.

**AR/VR Platforms**
Lee Zerfass
Imagine-Invest-Create

## LUNCH AND EXHIBIT TIME
TERRACE ROOM AND LOWER FOYER

| 1300–1345 | **CONCURRENT TUTORIAL SESSIONS (X2 ITERATIONS)** |

**Total Learning Architecture: An Abolitionist View of Data Stovepipes and Ongoing Modernization**
PLAZA I

Brent Smith
ADL Initiative (Contractor)

**Industry Roundtable: Upcoming Government Requirements for Vendors**
PLAZA II

Sae Schatz, Ph.D.
ADL Initiative
   Mike Kline, WHS
   Jasmine Bramlett, WHS

LtCol Rory Quinn, USMC
Close Combat Lethality Task Force, Office of the Secretary of Defense

Shawn Miller
Defense Acquisition University
   DAU Team Members:
   Julie Bailey, Shelton Jewette, Kim Kendall, Mike McGhee, Carolyn Tebault, James Wilkerson, Nantana Wongtanasirikul

Ben Goldberg, Ph.D.
U.S. Army Combat Capabilities Development Command - Soldier Center STTC

**Learning Analytics Experts Discussion**
PLAZA III

Ryan Baker, Ph.D.
University of Pennsylvania

George Siemens, Ph.D.
University of Texas, Arlington

Jeanine DeFalco, Ph.D.
Army Futures Command

Erica Snow, Ph.D.
Imbellus

Aaron Presnall, Ph.D.
Jefferson Institute
*Moderator*

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| 1345–1400 | **BREAK AND EXHIBIT TIME** |
| | LOWER FOYER |

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| 1400–1445 | |

**Total Learning Architecture: An Abolitionist View of Data Stovepipes and Ongoing Modernization**
PLAZA I

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**Industry Roundtable: Upcoming Government Requirements for Vendors**
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Sae Schatz, Ph.D.
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Imbellus

Aaron Presnall, Ph.D.
Jefferson Institute
*Moderator*

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| 1445–1515 | **BREAK AND EXHIBIT TIME** |
| | LOWER FOYER |

## CONCURRENT PRESENTATION SESSIONS

### xAPI PROFILES, IN PRACTICE
PLAZA I

**Session Chair: Mike Hernandez**
ADL Initiative (Contractor)

#### Taking xAPI Profiles Further: A Strategic Approach to Utilize xAPI Profiles to Address Specific Requirements within the DoD and Guidance for Putting the Process into Practice

**TJ Seabrooks**
Rustici Software

#### Implementing xAPI Profiles in the Navy: Case Studies and Recommendations

**Tim Welch**
Naval Air Warfare Center Training Systems Division

**Additional Author(s):**
Rob Chadwick, Jason Haag & Jonathan Poltrack

#### Mapping the DoD ISD Verb Profile for Adaptive Learning Using Extended Reality (XR) Technology for Pilot Training

**Martin K. Bogan**
CAE USA

### LEARNING ANALYTICS FROM DIVERSE DATA
PLAZA II

**Session Chair: Yihua Liu**
ADL Initiative (Contractor)

#### TLA Collaborative Mission Control and Self-Regulating Ecology

**Prasad Ram, Ph.D.**
Gooru

**Additional Author(s):**
Michelle Newstadt, Ph.D. & Mukul Markande

#### A Persona-based Analytics Framework for Learner Experience Mapping

**Mike A. Smith**
ICF

**Additional Author(s):**
Skilan Ortiz & Sue Dass

#### Learning from Sensor-based Analytics for First Responder Training

**Brenda Bannan, Ph.D.**
George Mason University

### LEARNING SCIENCE FOR OUTCOMES
PLAZA III

**Session Chair: Naomi Malone, Ph.D.**
ADL Initiative (Contractor)

#### The Future of Work: Technology, Predictions, and Preparing the Workforce

**Maria Ho**
Association for Talent Development

#### Bottom-up Views of Distributed Learning: The Role of Distributed Cognition

**Garett Howardson, Ph.D.**
U.S. Army Research Institute

#### Driving Retention: Using Technology to Support Learning Science

**Duncan Welder IV**
RISC Inc.

**Additional Author(s):**
Art Werkenthin

### AR/VR DISTRIBUTED LEARNING DESIGN
BEECH AB

**Session Chair: Mickey Neeley**
ADL Initiative (Contractor)

#### The Emerging ID World of AR/VR

**Barbara M. Greenstein**
Epsilon Systems Solutions, Inc.

**Additional Author(s):**
Richard Benedetto

#### Augmented Reality Based Extensible-Experiential-Expertise (X) Learning-Model Objectives

**Kevin Owens**
Applied Research Laboratories: The University of Texas at Austin Signal Information Science Lab

#### Designing Automated Evaluation and Feedback with AR and Use Cases

**Brenda Braitling**
Brenda Braitling, MISM

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## BREAK AND EXHIBIT TIME
LOWER FOYER

**1630–1730**  **IGNITE! PRESENTATIONS: ADL—IT'S MORE THAN THE TECHNOLOGY**
PLAZA BALLROOM BC

1.  **Innovative Approaches to Learning, Teaching, and Nurturing Employability – Lessons from Wharton-QS Reimagine Education Global Awards**
    **Nunzio Quacquarelli**
    QS Quacquarelli Symonds

    Additional Author(s): Yoram (Jerry) Wind, Ph.D.

2.  **DoD Career Ready Portal, Open for Business!**
    **Jonathan Woods**
    DoD Voluntary Education

3.  **Delivering Online Training to International Audiences**
    **Paul Thurkettle**
    NATO Allied Command Transformation

4.  **Building ADL Capacity Through Security Sector Reform Projects**
    **Commander Geir Isaksen**
    Norwegian Defense University College

5.  **Operational Integration of Advanced Distributed Learning into Exercises**
    **Major Niclas Ljung**
    Swedish Armed Forces

    Additional Author(s): Major Tohmas Ax & Biljana Presnall

6.  **Specifications and Standards Utility within NATO DEEP ADL: Experiences and Lessons Learned from Alliance Partner Countries ADL Capacity Building**
    **Piotr Gawliczek, Ph.D.**
    University of Warmia and Mazury

    Additional Author(s): MA Marcin Jozwiak

7.  **Modernizing Learning**
    **Sae Schatz, Ph.D.**
    ADL Initiative

    **Angie M. Gamble, Ph.D., U.S. Army**
    *Moderator*


**1730–1900**  **PROFESSIONAL NETWORKING RECEPTION – EXHIBITOR/POSTER SESSION**
LOWER FOYER

**0730–0830**  **CONTINENTAL BREAKFAST**
LOWER FOYER

**0830–0930**  **CONCURRENT PRESENTATION SESSIONS**

### SPECIAL EVENT: IEEE LTSC PRESENTATIONS
PLAZA I

Session Chair: Andy Johnson
ADL Initiative (Contractor)

**The IEEE Learning Technology Standards Committee (IEEE LTSC) Standards Program**

Robby Robson, Ph.D.
Eduworks

Additional Author(s):
Robert Sottilare, Ph.D.,
Jonathan Poltrack,
Jim Goodell & Avron Barr

### BRIDGING ADL AND SIMULATION
PLAZA II

Session Chair: Jerry Gordon
ADL Initiative (Contractor)

**The Danish Army NCO Academy's Use of Lightweight Simulation Before Field Training, Supported by xAPI**

WO II Bob Ludvigsen
Royal Danish Defense College

**Training Management and STE: Mapping Squad Level Competencies in Simulation Data Through a GIFT/TLA Integration**

Benjamin Goldberg, Ph.D.
U.S. Army Combat Capabilities Development Command-Soldier Center STTC

Additional Author(s):
Gregory Goodwin, Ph.D. & Joan Johnston, Ph.D.

**Leveraging xAPI for AI-Based Performance Measurement and Adaptive Learning**

Janet Spruill
Aptima, Inc.

Additional Author(s):
Lloyd Kleinman & Evan Oster

### SELF–DIRECTED AND SELF–REGULATED LEARNING
PLAZA III

Session Chair: Mickey Neeley
ADL Initiative (Contractor)

**Measuring Success in Self-Guided Information Assurance Training**

David Tileston
Software Engineering Institute

Additional Author(s):
Kimo Bumanglag, Adam Welle & Brandon Wolfe

**A Heuristic Evaluative Framework for Mobile Self-Regulated Learning Design**

Stephanie McNicol
Arizona State University

Additional Author(s):
Scotty D. Craig, Ph.D.,
Russell J. Branaghan, Ph.D. &
Rod D. Roscoe, Ph.D.

**Detecting Self-Regulated Learning Strategies Using xAPI to Collect Trace Data**

Naomi Malone, Ph.D.
ADL Initiative (Contractor)

Additional Author(s):
Hong Jiang, Ph.D.

### DISTRIBUTING LEARNING WITH AR/VR—USE CASES
BEECH AB

Session Chair: Karen Cooper, Ph.D.
Naval Air Systems Command

**XR Emerging Technologies at Air U**

Col Tony Millican, Ph.D.
Air University

Additional Author(s):
Dennis Armstrong, Ph.D.

**Protection of Civilians/ Children in Armed Conflict VR**

Paul Thurkettle
NATO ACT

Additional Author(s):
MSGT Marc Sallach

**VR Balkan Medical Task Force**

Biljana Presnall
Jefferson Institute

**0930–0945** **BREAK AND EXHIBIT TIME**
LOWER FOYER

**0945–1045** **STRENGTHENING ALLIANCES AND BUILDING PARTNERSHIPS THROUGH ADL**
PLAZA BALLROOM BC

**Commodore Lars Arne Aulie**
Chief of Staff, Norwegian Defense University College (NoDUC)

**Colonel Slaven Blavicki**
Chief, Training and Doctrine Command (TRADOC), Bosnia and Herzegovina

**Paul Thurkettle**
NATO Allied Command Transformation, NATO e-Learning Programme Manager

**Daniel Eagle**
Director of Executive Education, Defense Institute of Security Cooperation Studies

**Aaron Presnall, Ph.D., Jefferson Institute**
*Moderator*

**1045–1100** **BREAK AND EXHIBIT TIME**
LOWER FOYER

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**SIS☉**
**Simulation Interoperability Standards Organization**
*"Simulation Interoperability & Reuse through Standards"*

# 2020 SIMULATION INNOVATION WORKSHOP (SIW)

February 10 – 14 | The Florida Hotel and Conference Center | Orlando, FL | **Training Systems.org/Events**

**2020 SIW will feature:**
- Keynote Speakers & Panel Sessions
- Peer-reviewed papers covering three tracks:
  - System Life-Cycle and Technologies
  - Services, Processes, Tools, and Data
  - M&S Specialty Applications
- Tutorials on a wide range of subjects
- Numerous Working Group sessions on specific standards
  and technical topics

**Call for Papers & Presentations**
TrainingSystems.org/SIW/CFP

**Early Submission Deadline:**
2 September 2019

**All Submissions Deadline:**
15 October 2019

See full details at **TrainingSystems.org/events**

**1100–1200**  **IGNITE! PRESENTATIONS: TECHNICAL CONCEPTS**
PLAZA BALLROOM BC

**1.** **Best Practices for Nudge Learning to Drive Learner Adoption and Performance**

Shrikant Pattathil
Harbinger Systems

**2.** **Utilizing xAPI to Track Learning Objectives and Skill/Competencies to Drive Business Decisions and Dynamically Adapt Training Content**

Paul Schneider, Ph.D.
dominKnow

**3.** **Minute School's Recommendation System Based on xAPI LRS**

Tushar Singh
Minute School

**4.** **Experience Driven Learning**

Yasir Saleem
Adobe Federal Systems

Additional Author(s): Jeffrey Young

**5.** **From Paper Certificates to Digital Badges**

Gigi Roman
NATO School Oberammergau

Additional Author(s): Tanja Geiss

**6.** **xAPI Profiles and xAPI Adoption in DoD**

Andy Johnson
ADL Initiative (Contractor)

**7.** **Applying xAPI and Machine Learning in Career Planning**

Harri Ketamo, Ph.D.
Headai LTD

Paul Thurkettle, NATO ACT
*Moderator*

**1200–1215**  **CLOSING REMARKS AND ACKNOWLEDGEMENTS**
PLAZA BALLROOM BC

Aaron Presnall, Ph.D.
2019 iFEST Program Chair, Jefferson Institute

**1215–1330**  **LUNCH AND EXHIBIT TIME**
TERRACE ROOM

# POSTER INDEX BY TOPIC

## LEARNING DATA, ANALYTICS, AND VISUALIZATIONS

### MADLx: Maturing ADL in Exercises
Biljana Presnall
VP, Jefferson Institute

### DATASIM: the Data and Training Analytics Simulated Input Modeler
Shelly Blake-Plock
President and CEO, Yet Analytics, Inc.

### Virtual Recruit Tracker (VRT) the Practical Application of xAPI to a Mobile Application (eHelm) and Data Dashboard (Management Component) for the Navy's Delayed Entry Program (DEP)
Kimberly A. Crayton
Operation Research Analyst, Naval Air Warfare Center Training System Division

### Data Analytics and Visualization Environment for xAPI and the Total Learning Architecture
Shelly Blake-Plock
President and CEO, Yet Analytics, Inc.

### Sen$e: Designing for Data Using xAPI
Jennifer Murphy, Ph.D.
Chief Executive Officer, Quantum Improvements Consulting

### xAPI Profiles
Florian Tolk
Software Engineer, Advanced Distributed Learning Initiative (Contractor)

### xAPI and the Evolving Learning Ecosystem - A 5-Year Plan
Patrick Selby
xAPI Expert, Onlearningpoint

### Using xAPI and Population Models to Support Self-Improving Adaptive Instructional Systems - A Framework and Conceptual Design
Xiangen Hu, Ph.D.
Professor, The University of Memphis

## ADAPTIVE LEARNING AND AI APPLICATIONS

### Enabling Lifelong Learning Using a Novel, Adaptive Recommendation Engine
Tara A. Brown, Ph.D.
Lead, Instructional Strategy and Support Capability, Aptima, Inc.

### Envisioning PERLS 2.0: Moving Adaptive Learning from Research to Production
Chad Udell
Managing Partner, Float, LLC

### Navigated Learning and the Navigator as an Interoperable Learning Exchange
Prasad Ram, Ph.D.
Founder, Chief Executive Officer, Gooru

### Hands-on Active Learning Systems
Brenda Braitling
System Engineer-Data Governance, Pondering Press, Inc.

## SOFTWARE, SPECIFICATIONS, AND STANDARDS

### The TLA: A DODAF Perspective
Jerry Gordon
Internal Research and Development Manager, Advanced Distributed Learning Initiative (Contractor)

### Flash Deprecation
Trey Hayden
Lead Software Engineer, Advanced Distributed Learning Initiative (Contractor)

Yihua Liu
Data Scientist, Advanced Distributed Learning Initiative (Contractor)

### Guerrilla Photogrammetry
Lee Cox
Game Development Spec. Sr., SAIC

### Capability Maturity Model
Naomi Malone, Ph.D.
Learning Scientist, Advanced Distributed Learning Initiative (Contractor)

## LEARNING SCIENCE FOR ADL ENVIRONMENTS

### Science of Learning for Education and Readiness (SoLaR)
Scotty D. Craig, Ph.D.
Associate Professor of Human Systems Engineering, Arizona State University

### From Theory to Practice: Elevating mLearning Through Gamification
Ashley L. Reardon
Systems Engineer

### Knowledge Elicitation: A Foundation for Improved AR-Based Learning
Claire Hughes
Research Associate, Design Interactive

### PERvasive Learning System (PERLS) – Verification, Validation, and Experimental Testing Project for Supporting System Transition
Scotty D. Craig, Ph.D.
Associate Professor of Human Systems Engineering, Arizona State University

### Bridging Resident and Online Courses for a Sustainable Blended Learning Approach
Tanja Geiss
ADL Chair, NATO School Oberammergau

# KEYNOTE BIOGRAPHIES

### GOVERNMENT KEYNOTE – MONDAY, 26 AUGUST | 1430 – 1500 | PLAZA BALLROOM BC

### JAMES P. WOOLSEY, SES

*President*
Defense Acquisition University

Mr. Woolsey is President of the Defense Acquisition University (DAU), a position he has held since January 2014. In that role, he is responsible for delivery of learning products through the DAU regions, the Defense Systems Management College, and the College of Contract Management; curriculum development; online learning programs; learning technology; and library services for a major Department of Defense corporate university. DAU is strategically located within five geographical regions across the country and provides a global learning environment to develop qualified acquisition, requirements, and contingency professionals who deliver and sustain effective and affordable warfighting capabilities.

He previously served as the first Deputy Director for Performance Assessments (PA) in the office of Performance Assessments and Root Cause Analyses (PARCA). In standing up the PA organization, he created the processes and practices that allowed it to perform its statutory responsibility of assessing the progress of all Major Defense Acquisition Programs. The new office also made a substantial contribution to re-invigorating the Defense Acquisition Executive Summary process and provided the Under Secretary of Defense for Acquisition, Technology and Logistics with unique analyses to give him improved visibility into the status of the MDAP portfolio.

Mr. Woolsey was previously an Assistant Director in the Cost Analysis and Research Division of the Institute for Defense Analyses. His responsibilities included management of the division's cost analysis and research, and leadership of a wide range of cost and acquisition studies. His work included a congressionally-directed cost benefit analysis of the F-35 alternate engine, an evaluation of KC 767A lease prices, C-5 re-engineering costs and benefits, F-22 production readiness, Joint Air-to-Surface Standoff Missile costs, and space launch alternatives. Mr. Woolsey also served on a Defense Science Board Task Force on long-range strike.

Mr. Woolsey's other previous positions include service as a structures engineer for F/A-18 aircraft at Naval Air Systems Command, and work as an engineer for Lockheed Martin airlift programs in Marietta, GA.

Mr. Woolsey has a bachelor of science in aerospace engineering from Virginia Polytechnic Institute and State University, a master's in business administration from George Mason University and was a Fellow in the Massachusetts Institute of Technology Seminar XXI on International Relations.

### INDUSTRY KEYNOTE – MONDAY, 26 AUGUST | 1500 – 1530 | PLAZA BALLROOM BC

### JOHN SCHWARTZ

*Head of Enterprise Business Development*
edX

John Schwartz serves as edX Head of Global Business Development. He is part of the team that drives edX's engagements with prospects and partners including Foundations, NGO's, Corporations, and Governments both local and international. John has extensive experience in Asia and the Middle East. John's career has been focused on driving business development for companies in a variety of industries including education tech, automotive, pharmaceutical, publishing and finance. He also has experience in strategic marketing and branding with an emphasis on experiential design. Most recently, John was a Board Member and Chief Strategist at Hudson & Cutler, a technology driven marketing and communications company. John is a graduate of Hobart and William Smith Colleges.

# NTSA LEADERSHIP

## RADM JAMES A. ROBB, USN (Ret)

*President*
National Training & Simulation Association

Following graduation from Rensselaer Polytechnic Institute, designation as a Naval Aviator, and training in the F-14 Tomcat, Admiral Robb deployed nine times across the globe accumulating over 5,000 hours and 1,000 carrier landings. Following a tour flying Russian fighters in the Nevada desert, he commanded Fighter Squadron Fifty One, Carrier Air Wing Nine, the Navy Fighter Weapons School (TOPGUN), and Carrier Strike Group Seven. As a Flag Officer he managed all Naval Aviation Programs (N980) and was the Director of Navy Readiness (N43). Following 9/11, he joined USCENTCOM as the Director of Plans (J5) deploying to the Middle East in support of combat operations.

Retiring in 2006, he built a successful small consulting business before joining the National Training and Simulation Association as President in June 2012.

**NTSA | NATIONAL TRAINING & SIMULATION ASSOCIATION**

## Discover the many benefits of NTSA corporate membership

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### Sustaining

- $5,000 in dues
- First choice of booth space (during I/ITSEC)
- 10% discount on booth space for I/ITSEC (Maximum discount = $5,000)
- Seat on Executive Committee and Invitation to M&S Awards Dinner
- Additional exposure at I/ITSEC

### Regular

- $1,250 to $2,500 in dues (depending on # of employees involved in training and/or M&S)
- Second round of booth space selection (in early to mid-February)
- 5% discount on booth space for I/ITSEC (Maximum discount = dues amount paid)

### Associate

- $500 in dues; designed for smaller companies
- Third round of booth space selection (in late February)
- No discount on booth space for I/ITSEC

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- Member listing with hyperlink on the NTSA website
- NTSA's monthly e-newsletters
- National Defense, NDIA's award-winning magazine

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# PRESENTER BIOGRAPHIES

## COMMODORE LARS ARNE AULIE

*Chief of Staff*
Norwegian Defense University College (NoDUC)

Captain (N) Lars Arne Aulie was born in Athens, Greece, and grew up in Lillehammer, Norway. He has since 2000 lived in Drøbak, south of Oslo, with his wife Mette and two sons Endre (b1994) and Anders (b1997). He is particularly interested in alpine skiing, crosscountry skiing and mountain hiking.

**Presentation Title: Strengthening Alliances and Building Partnerships Through ADL**

## RYAN BAKER, PH.D.

*Associate Professor*
University of Pennsylvania

Ryan Baker is Associate Professor at the University of Pennsylvania, and Director of the Penn Center for Learning Analytics. Baker developed models that can automatically detect student engagement in over a dozen online learning environments, and led the development of an observational protocol and app for field observation of student engagement used by over 150 researchers in 4 countries. Predictive analytics models he helped develop have been used to benefit hundreds of thousands of students, over a hundred thousand people have taken MOOCs he ran, and he has coordinated longitudinal studies that spanned over a decade. He was founding president of the International Educational Data Mining Society, is currently serving as Editor of the journal Computer-Based Learning in Context, was first technical director of the Pittsburgh Science of Learning Center DataShop, and currently serves as Co-Director of the MOOC Replication Framework (MORF). Baker has published papers with over 300 co-authors.

**Presentation Title: Learning Analytics Experts Discussion**

## BRENDA BANNAN, PH.D.

*Associate Professor*
George Mason University

Brenda Bannan is an Associate Professor in the Instructional Design & Technology/Learning Technologies Design Research programs at George Mason University in Fairfax, Virginia, USA. Her research interests primarily involve the articulation of integrated design and research processes in learning technology design and development contexts. She is the author of numerous articles and book chapters on user experience (UX) design, instructional design and design research in education related to areas such as mobile learning, augmented reality and internet of things technologies (IoT). Funded by the National Science Foundation in their Smart Connected Communities program, Dr. Bannan leads a team conducting cycles of user experience design research developing a smart city solution prototype for emergency response simulation training integrating mobile, sensor-based technologies, activity stream data and learning analytics. Dr. Bannan has been invited to speak at the American Association for the Advancement of Science (AAAS) and the National League of Cities.

**Presentation Title: Learning from Sensor-based Analytics for First Responder Training**

## SHELLY BLAKE–PLOCK

*President and CEO*
Yet Analytics, Inc.

Shelly Blake-Plock is co-founder, President, and CEO of Yet Analytics; Chair of the IEEE Learning Technology Standards Committee Technical Advisory Group on xAPI (TAGxAPI); Chair and Managing Editor of the IEEE IC Industry Consortium on Learning Engineering (ICICLE); Chair of the Recommended Practices for AIS Evaluation Subgroup of the IEEE LTSC Adaptive Instructional Systems (C/LT/AIS) P2247.1 Working Group; and Treasurer of the IEEE Learning Technology Standards Committee.

**Presentation Title: DATASIM: Data and Training Analytics Simulated Input Modeler for xAPI and xAPI Profiles**

## COLONEL SLAVEN BLAVICKI

*Chief, Training and Doctrine Command (TRADOC)*
Bosnia and Herzegovina

I was born on August 30, 1971 in Bosnia and Herzegovina. At the beginning of the war in BiH 1992, I joined the Croatian Defense Council. During the war I was promoted from a soldier to an officer and by the end of the war I gained the rank of captain.

I completed my basic and advanced officer training in Croatia, graduated from the US Army CGSC in 2003, and received my Master's degree from the NPS in 2009. Finally, I graduated from the Croatian Army's War College in 2018.

I served on the UN mission in Democratic Republic of Congo during 2006 and in ISAF during 2012.

During my military career, I have held many duties starting from platoon commander to infantry brigade chief of staff. Since August 2018, I have been in the position of TRADOC Commander.

**Presentation Title: Strengthening Alliances and Building Partnerships Through ADL**

## MARTIN K. BOGAN

*Research and Development*
CAE USA

Martin Bogan is a training solutions expert for CAE USA's Instructional Systems Group. For over 11 years, Martin led a diverse team of designers, 3D artists, and programmers in interactive courseware design and production. He now focuses on research and development projects in the areas of extended reality, adaptive learning, data analytics, and use of xAPI in data collection. Martin contributed to the xAPI specification in 2018 with a new xAPI profile titled, Department of Defense Instructional Systems Design Verb Profile, which consists of over 400 verbs and metadata for use tracking competencies and proficiencies in any U.S. military training application.

**Presentation Title: Mapping the DoD ISD Verb Profile for Adaptive Learning using Extended Reality (XR) Technology for Pilot Training**

## BRENDA BRAITLING

*Consulting Information Systems Engineer*
Brenda Braitling, MISM

Brenda Braitling holds a Masters in Information Systems Management and brings her abilities as a polymath and her skills in Systems Thinking and Design Principles to her work as a Consulting Information Systems Engineer for more than 20 years. She served with distinction in the Army Reserve in a Medical Battalion for more than 15 years. She volunteers as a Planning and Zoning Commissioner for her city and mentors young professionals and job changers who struggle with assuming leadership, learning STEM and traversing the technology jungle. For the last two years, she has used the case of Vascular Access Device Maintenance and the Prevention of Blood Infection to consider how to: identify and observe requirements for job tasks, differentiate passive "exposure to experiences" from active "learning experiences," automatically sense and evaluate learning experiences using Augmented Reality and aggregate this experience data into meaningful and actionable information using xAPI.

**Presentation Title: Designing Automated Evaluation and Feedback with AR and Use Cases**

## SCOTT CHENEY

*Executive Director*
Credential Engine

Scott Cheney started as Credential Engine's first Executive Director in April, 2017. Prior to Credential Engine, he served as the Policy Director for Workforce, Postsecondary Education, Economic Development, and Labor for Senator Patty Murray and the Senate Health, Education, Labor and Pensions (HELP) Committee. He led the reauthorization of the Workforce Innovation and Opportunity Act. Scott also led the Senator's work to reauthorize the Perkins Career and Technical Education Act, expand registered apprenticeships, formalize research and evaluation standards at the Department of Labor, enhance services and resources for dislocated workers, modernize unemployment insurance, and better align workforce and economic development in distressed regions around the country. Before going to Capitol Hill, Scott managed his own consulting firm, working with a number of states, companies, foundations, and think tanks on a host of education, training and employment issues. He also held positions with the National Alliance of Business, the American Society for Training and Development, the U.S. Chamber of Commerce, and worked with foster-care, homeless youth, and adult literacy programs. His first paycheck in this field came from Dr. Seuss. Scott holds a Bachelor of Arts in philosophy from Carleton College, and a Master of Public Policy degree from Georgetown University.

**Presentation Title: Linking Up the Talent Pipeline**

## KEN CRIM

*Training Director*
Commander Naval Installations Command

Ken Crim is the Training Director for the Commander Naval Installations Command. He has been the Joint Individual Education and Training Chief for The Army Distributed Learning Program, Dean of Academics at Marine Corps University, and is an Adjunct Professor of History at Georgetown University. Mr. Crim is a retired Navy Captain and Naval Aviator and served in Operation Desert Storm and Operation Iraqi Freedom where he was Chief of Operations, Multi National Force-Iraq. At Joint Forces Command he developed the courses and Communities of Interest to train officers going to the Joint Staffs in Iraq, Afghanistan and Horn of Africa. Additionally he developed the first online information courses for the Departments of Defense, Department of State, and USAID. He is a graduate of Georgetown University (BSBA), The Naval War College (MA), Joint Forces Staff College, and Oglethorpe University (Masters Level Teacher Certification).

**Presentation Title: It's Not About the Technology**

## JEANINE DEFALCO, PH.D.

*Adaptive Training Research Scientist*
Army Futures Command/ORAU

Jeanine A. DeFalco is an Adaptive Training Research Scientist/ Post-Doctoral fellow with the Army Futures Command, CCDC SSTC, assigned to the United States Military Academy. Her current research includes investigating the relevance of the traits of honesty / humility and conscientiousness as it informs the design of adaptive instruction to support medical critical care expertise. In addition, her research is extending into the domain of supporting ethical decision making mediated by human virtual agents. She is an active member of the IEEE working group on developing standards for adaptive instructional systems.

**Presentation Title: Learning Analytics Experts Discussion**

## DANIEL EAGLE

*Director of Executive Education*
Defense Institute of Security Cooperation Studies

Mr. Daniel R. Eagle is the Director for Executive Education at the Defense Security Cooperation University (DSCU.) In this capacity, Dan supervises security cooperation instruction and course development for military and civilian executive and senior executive students.

Dan is a retired Brigadier General, with over 35 years of service in the United States Air Force. During his Air Force career, Dan served in a variety of international assignments to include senior service school at the National Institute of Defense Studies and Japan and several senior leadership positions in NATO. He served as the Senior Defense Officer/ Defense Attache to the Russian Federation and was inducted into the Defense Intelligence Agency Hall of Fame in 2012.

**Presentation Title: Strengthening Alliances and Building Partnerships Through ADL**

## PATRICIA GABALDÓN, PH.D.

*Associate Professor of Economic Environment*
IE University

Patricia Gabaldón is associate professor of economic environment at IE Business School in Spain, PhD in Economics, she has developed her research around the role of women in the economy and its effect in economic growth and sustainability. Patricia is a graduate in Economics of the University of Alcala (Spain), from where she received her PhD in Economics. Her research has been published in numerous book chapters and articles in academic journals such as Long Range Planning, Journal of Business Ethics,  Corporate Governance: An International Review and among many others. She has authorized several multimedia cases in the field of economics.

**Presentation Title: Good Practices in Distributed and Online Learning**

## PIOTR GAWLICZEK, PH.D.

*NATO DEEP Portal Coordinator*
University of Warmia and Mazury in Olsztyn

Piotr Gawliczek, PhD is the Associate Professor of the University of Warmia and Mazury in Olsztyn and NATO DEEP ADL Portal Coordinator. His research and educational activities are focused on innovative solutions within the education and training. He supports the efforts of the partner countries within NATO DEEP. He has written numerous publications on questions of ICT, e-learning, Bologna Process, asymmetric threats and leadership. He has implemented e-learning/ADL system solutions, based on LMS ILIAS platform, in many military and civilian educational entities. His hobby is Nordic Walking and foreign languages.

**Presentation Title: Specifications and Standards Utility within NATO DEEP ADL: Experiences and Lessons Learned from Alliance Partner Countries ADL Capacity Building**

## BENJAMIN GOLDBERG, PH.D.

*Senior Scientist*
U.S. Army Combat Capabilities Development Command-Soldier Center STTC

Dr. Benjamin Goldberg is a senior scientist in the Learning in Intelligent Tutoring Environments (LITE) Lab at the U.S. Army Combat Capabilities Development Command-Soldier Center (CCDC-SC), Simulation and Training Technology Center (STTC) in Orlando, FL. He has been conducting research on simulation-based training for the past eleven years, and is co-creator of the Generalized Intelligent Framework for Tutoring (GIFT). Dr. Goldberg's research focuses on adaptive learning and leveraging artificial intelligence tools and methods for the management of targeted and personalized training experiences. Currently, he is investigating capabilities to inform training management tools and intelligent tutoring functions in support of the Army's Synthetic Training Environment modernization program. His work has been published across several well-known conferences, with recent contributions to the Human Factors and Ergonomics Society (HFES), Artificial Intelligence (AI) in Education and Intelligent Tutoring Systems proceedings. He has also recently contributed to the IEEE Transactions of Learning Technologies, the International Journal of AI in Education, Computers in Human Behavior and the Journal of Cognitive Technology.

**Presentation Title: Training Management and STE (Synthetic Training Environment): Mapping Squad Level Competencies in Simulation Data through a GIFT/ TLA Integration and Industry Roundtable: Upcoming Government Requirements for Vendors**

## JIM GOODELL

*Senior Analyst*
Quality Information Partners & IEEE ICICLE

Jim Goodell co-chairs IEEE ICICLE's Competencies, Curriculum, and Credentials SIG, serves on the ICICLE Steering Committee; and chairs the IEEE LTSC Competencies WG. He leads development of CEDS.ed.gov data standards as Senior Analyst at Quality Information Partners. He was an executive at CELT, Sound Image, and Chief Technologist at PixelDance developing online training solutions for Fidelity, Adobe, others.

**Presentation Title: Engineering Better Learning: Practical On-Ramps to the Emerging Practice of Learning Engineering**

## BARBARA GREENSTEIN

*Sr. Instructional Designer*
Epsilon Systems Solutions, Inc.

Barbara Greenstein is a performance improvement specialist providing proven and creative ways to improve human performance in the workplace. By identifying issues and opportunities for improvement, she helps organizations large and small meet their planned goals. Barbara is highly regarded for her instructional design and facilitation skills. With more than 25 years of experience in the learning and development field, her mission is to help clients put the systems in place that help them more effectively manage in today's changing business environment while ensuring optimal performance and job satisfaction for all employees.

**Presentation Title: The Emerging ID World of AR/VR**

## MARIA HO

*Director of Research*
Association for Talent Development

Maria Ho leads the research team at the Association for Talent Development (ATD), the world's largest professional member organization serving those who develop the knowledge and skills of employees. ATD was previously known as the American Society for Training & Development and is headquartered in Alexandria, VA.  Maria has been with ATD for over 5 years, she received her bachelor's degree from Harvard University and her master's degree from The Johns Hopkins University. Maria and her team produce research reports and case studies on a wide variety of topics, ranging from benchmarking corporate training spending and hours to looking at how changes in technology will impact the skills workers need to develop.

**Presentation Title: The Future of Work: Technology, Predictions, and Preparing the Workforce**

## GARETT HOWARDSON, PH.D.

*Research Psychologist*
U.S. Army Research Institute for the Behavioral and Social Sciences

Dr. Howardson is a Research Psychologist at the U.S. Army Research Institute for the Behavioral and Social Sciences where he manages the Learning in Formal and Informal Environments portfolio. Dr. Howardson's work centers on integrating learning conceptualizations that span diverse temporal, social, and spatial scales. One such question, for example, might be, "What are the similarities between how a neuron learns and how an organization learns?" To pursue such questions, Dr. Howardson combines his background in industrial-organizational psychology, quantitative research methods, and computer science.

**Presentation Title: Bottom-Up Views of Distributed Learning: The Role of Distributed Cognition**

## CDR GEIR ISAKSEN

*Staff Officer Digitalization and Pedagogy*
Norwegian Defense University College

Commander (CDR) Geir Isaksen has more than fifteen years in the field of Advanced Distributed Learning (ADL) and is responsible for more than 30 defense projects in the field of digital learning methods and learning technology. He has published more than 20 papers covering different fields like mobile learning, student motivation, cognitive overload in e-learning and use of video lectures. He has a master's degree in Information Computer Technology (ICT) & Learning from the University of Aalborg (2014) and a bachelor's degree in Electrical Engineering from Vestfold University College (1998). CDR Isaksen holds the position as a Staff Officer for digitalization and pedagogy at the NoDUC/Faculty administration, where he is responsible for leading and coordinating procurement, development and implementation of digital learning projects and use of defense LMS. His military background is from the Navy, serving on submarines for six years as an electro officer and he is also responsible for international ADL cooperation at the NoDUC and MoD funded international ADL capacity building projects.

**Presentation Title: Building ADL Capacity Through Security Sector Reform Projects**

## ANDY JOHNSON

*Specifications and Standards Manager*
ADL Initiative (Contractor)

Andy Johnson has been working professionally in distributed learning technology for the last 15 years. He was a developer as the Sharable Content Object Reference Model (SCORM) emerged and was involved in every version of SCORM. He has been the Experience API (xAPI) lead at ADL since version .9 was established.  He has been working at the Advanced Distributed Learning (ADL) Initiative for a majority of his career, and is currently serving as the Specifications and Standards Manager. Andy received both his Bachelor's degree in Computer Science and Master's degree in Education, Communication and Technology from the University of Wisconsin-Madison.

**Presentation Title: xAPI Profiles and xAPI Adoption in DOD**

## HARRI KETAMO, PH.D.

*Founder & Chairman*
Headai LTD

Harri Ketamo, Ph.D., is an entrepreneur with 20 years of experience in cognitive sciences, computational intelligence, complex adaptive systems and game development. Currently he is founder & chairman of Headai, a company developing cognitive artificial intelligence for lifelong learning. He's also actively participating in academic research as a senior fellow at University of Turku. Previously Ketamo has been e.g. founder & CEO of gameMiner (game AI), xTask (adaptive learning) and SkillPixels (serious games). He has had more than 300 presentations, published more than 100 peer-reviewed research articles and developed products (games, MOOCs, adaptive systems, AIs) used in more than 120 countries all over the world.

**Presentation Title: Applying xAPI and Machine Learning in Career Planning**

## DINA KURZWEIL, PH.D.

*Director and Assistant Faculty*
Uniformed Services University of the Health Science

Dr. Kurzweil is the Director of the ETI and has worked at USU since 2006. In this capacity, she provides strategic direction for the ETI, instructional and educational technology support for faculty, supervision of ETI personnel, and management of the ETI office. Prior to that, she worked at the National Defense University providing direction and vision of the instructional team supporting the Center for Educational Technology.  She also is a faculty member in the Health Professions Education program at USU.

She has served on numerous committees and task forces examining a wide range of topics including educational technologies, inter-professional education, professional development for K12 and higher education faculty, learning management systems, program assessment and evaluation, instructional design, and teaching/faculty support paradigms. Dr. Kurzweil has presented at numerous international, national, and regional conferences.

**Presentation Title: Instructional Designers and Learning Engineers of the Future**

## DAVID LEFEVRE, PH.D.

*Director*
EdTech Lab, Imperial College

I have a long standing interest in the use of technology in education and started teaching my classes at Imperial College online in 2003. My role then evolved to encourage others to teach using technology and in 2005 I formed the Edtech Lab in the Imperial College Business School.

Our team has overseen a substantial increase in the use of educational technology at the School. We launched our Global Online MBA programme in 2015, an Online MSc in Analytics in 2018 and currently deliver around 180 online courses each year. We have received awards along the way including a Gold award at the IMS Learning Impact awards in 2010, an Effective Practice Award at the Sloan-C Blended Learning Conference in 2011 and a silver award at the 2018 QS Reimagine Education Conference.

I was co-founder and am now president of the Imperial College e-Learning spin-out firm Epigeum (now a successful part of the Oxford Univeristy Press) which publishes high quality online courseware used by 250 universities globally. In 2018 I helped launch Insendi, also spin-out firm from the Edtech Lab focused on online learning platforms.

**Presentation Title: Good Practices in Distributed and Online Learning**

## MAJOR NICLAS LJUNG

*Project Manager*
Swedish Armed Forces

Major Niclas Ljung serves as a Project Manager at the Swedish Armed Forces Development Unit for Leadership and Pedagogy and holds a degree in Concept Development and Experimentation. He has more than 20 years of experience as a project manager and has been responsible for a multitude of projects within the fields of Advanced Distributed Learning, individual training, education, collective training and leadership. As a member of the Advanced Distributed Learning Global Partnership Network, the NATO Training Group Task Group Individual Training and Education Developments and the NORDEFCO ADL Forum of experts he works closely with the international community in developing defense training and education.

**Presentation Title: Operational Integration of Advanced Distributed Learning into Exercises**

## WO II BOB LUDVIGSEN

*Project Manager*
Royal Danish Defence College

Bob Ludvigsen is a Warrant Officer II in the Danish Army, posted at the Royal Danish Defence College. He has 10+ years of experience in the area of Advanced Distributed Learning. Over the past 6 years he has specialized in developing games and simulations. He has successfully integrated xAPI into a simulation, making it possible to pull valuable learner data from the sim.

**Presentation Title: The Danish Army NCO Academys Use of Lightweight Simulation Before Fieldtraining, Supported by xAPI**

## NAOMI MALONE, PH.D.

*Learning Scientist*
ADL Initiative (Contractor)

Dr. Naomi Malone is a Learning Scientist for Lockwood Hills, LLC, currently working as part of Lockwood Hill's team for the Advanced Distributed Learning (ADL) Initiative in Orlando, FL. Naomi has worked as an instructional systems designer since 2013, with design experience spanning academic, business, and military domains. Her current research efforts support self-regulated learning skills for adult learners in online learning environments.

**Presentation Title: Detecting Self-Regulated Learning Strategies Using xAPI to Collect Trace Data**

## STEPHANIE MCNICOL

*Research Assistant in Human Systems Engineering*
Arizona State University

Stephanie McNicol is a graduate student in the Human Systems Engineering Master of Science program at Arizona State University and a Research Assistant on the ADL initiative funded PERvasive Learning System (PERLS) – Verification, Validation, and Experimental Testing project. She received her undergraduate degree in graphic design and has five years of experience working in higher education as an interaction designer where she collaborated with a multidisciplinary team to improve the online class experience for students and instructors. Her research focuses on exploring the intersection of human factors and visual design.

**Presentation Title: A Heuristic Evaluative Framework for Mobile Self-Regulated Learning Design**

## COL TONY MILLICAN

*USAF, Director, Future Leraning Initatives, Air University's eSchool of Graduate PME*
Air University

Col Tony L. Millican, Ph.D. USAF, is Course Director for AU's joint reserach class on XR emerging technologies in learning. His Auburn University doctoral dissertation focused on "Virtual Reality in Higher Education." Previous assignments include Deputy Commander for Support of the 2.9M-acre Nevada Test & Training Range and US National Support Commander for 1,200 personnel in Kabul Afghanistan, during a period of high insurgent activity.

**Presentation Title: XR Emerging Technologies at Air U**

## PHILL MILLER

*Chief Learning and Innovation Officer*
Blackboard, Inc.

With over 14 years experience in education technology, Phill Miller serves as Chief Learning and Innovation Officer at Blackboard. In his role, Phill leads new growth opportunities in the areas of teaching and learning as well as student success, exploring ways to re-envision the teaching and learning market.

Prior to his current role at Blackboard, Phill was Vice President of Teaching and Learning, during which he was responsible for leading the product strategy, roadmap, management and marketing for Blackboard's suite of world-class online teaching and learning solutions. He has also served as Vice President and Business Line Manager of Blackboard Open LMS, the open source division of Blackboard.

Phill joined the company in 2012 with the acquisition of Moodlerooms, where he was Vice President of Product Strategy. During his tenure at Moodlerooms, he helped to build an innovative Software-as-a-Service Learning Management System on a global, open source learning platform, and invented cross-platform content sharing software for delivering open educational resources.

Earlier, Phill served as Director of Business Development at Oxygen Education, LLC and as Product Manager/Senior Solutions Architect at ANGEL Learning, Inc.

He holds a Juris Doctorate from Indiana University School of Law, a Master of Business Administration from Indiana University, and a Bachelor of Science in Computer Science/Information Systems from Ball State University.

**Presentation Title: Who Cares? A Strategic Look at Modernizing Learning**

## SHAWN MILLER

*DART & Mobile Development Program Manager Integrated Learning Systems*
Defense Acquisition University

Because exponential change, digital disruption, and personal optimization are rapidly changing the way learners absorb and approach learning, the Defense Acquisition University (DAU) stood up a dedicated team to explore Artificial Intelligence-Powered Adaptive Learning technologies. DAU seeks to transform its traditional learning to an adaptive environment that responds, in real time, to learner needs. By harnessing AI-Powered analytics, DAU can better understand individual learner needs to further improve the development and effective delivery of content. Over the coming months, the DAU team will conduct market research, build partnerships and conduct prototypes to inform DAU's AI-Powered Adaptive Learning Strategy.

**Presentation Title: Industry Roundtable: Upcoming Government Requirements for Vendors**

## KEVIN OWENS

*Engineering Scientist*
Applied Research Laboratories:The University of Texas at Austin

Kevin Owens is an Data Scientist and Instructional Designer at the Applied Research Laboratories: The University of Texas at Austin (ARL:UT).  At ARL:UT, Kevin works in the Signal and Information Science Lab where he reconstructs and analyzes live warfighter data, and uses that data to design and research advanced warfighter training, assessment and learning models for the US Navy and US Army.

Kevin is a retired US Navy Chief Petty Officer with over 20-years of military operational training and assessment experience.  Kevin has a Bachelor's and Master's Degree in Instructional Design, Development and Evaluation, as well as numerous certificates and certifications in Computer Science.

Over the past 18-years, Kevin has accumulated broad experience researching, designing, developing and implementing training and assessment content and technologies to improve DoD related learning and human-performance areas, as well as conducting Human System Integration and Performance Synergy design work for both DoD and Industry.

Kevin, his wife and daughter has lived in Austin Texas for the last 12-years, after moving to and living in numerous states and countries, and is originally from the San Francisco Bay-Area.

**Presentation Title: Augmented Reality Based Extensible-Experiential-Expertise (X) Learning-Model Objectives**

## SHRIKANT PATTATHIL

*President*
Harbinger Systems

Shrikant's solutions have ranged from development frameworks, data architectures, schema designs to test strategies for applications for thin-client, rich-client and desktop.

In the course of his tenure, Shrikant has held key positions including Project Leader, On-Site Coordinator and Lead Manager R&D. He has worked out of Harbinger's offices in Redmond, WA for two years and has also completed several on-site customer consultations across the US.

Shrikant's contribution in e-learning specifications has been recognized by the Aviation Industry CBT Committee, where he is a frequent speaker. He has also architected the Offline Content Player, a unique product that enables e-learning for users that need to cope with limited connectivity. Organizations such as Northwest Airlines and Bristol Myers Squibb are using this solution to enable offline learning. He has an Executive Certificate in Strategy and Innovation from MIT- Sloan School of Management.

**Presentation Title: Best Practices for Nudge Learning to Drive Learner Adoption and Performance**

## ROBERT PEACH, PH.D.

*Professor of Mathematics (Online Program Analytics)*
Imperial College

Robert Peach obtained a PhD in Applied Mathematics and Physical Chemistry from the Imperial College London. Over the past 2 years he has conducted postdoctoral research at Imperial College as a joint member of the Department of Mathematics, Imperial College Business School and the Department of Medicine. He is currently working on developing mathematical models to analyse temporal data corresponding to students undertaking on-line courses with Imperial College. His current research looks to uncover engagement behaviours of students from their time-series 'click-stream' data and subsequently identify the relationship between behaviour and performance.

**Presentation Title: Good Practices in Distributed and Online Learning**

## JULIA PELTON

*Project Manager*
Modest Tree Media Inc.

Julia Pelton oversees Project Management at Modest Tree. She seeks out new opportunities, oversees stakeholder relations and develops strategic partnerships for the growth of the organization.She holds a bachelor's degree Environmental Science and International Development, a certificate in Project Management, and a master's degree in Business Administration. Julia has worked across varied industries throughout her career. She has over 10 years of experience overseeing all phases of multi-million dollar projects that span energy, defence, aerospace, and healthcare. Julia is well versed in project management methodologies, project planning, team building, and communication.

**Presentation Title: Global Collaborative Learning Through AR/VR and Immersive Technology**

## DANIEL PFEIFFER

*Lead Developer*
Float, LLC

Daniel is the Lead Developer for Float, directing the mobile, Web, and AR development teams. He is responsible for working with Float's clients' technical experts to identify, design, and implement the technical architectures that meet the requirements and goals of the client and the project. Daniel works with Float's development teams to make sure that the team members complete the work with quality and adherence to industry-accepted standards and client standards. He has led efforts for a number of ADL's mobile efforts as well as Fortune 500 clients, including Microsoft, AbbVie, and Home Depot. His expertise in data design has continued to enable him to build creative and robust solutions for clients. Daniel has proficiency with a number of open and proprietary industry standards, including the Experience API (xAPI). He has implemented xAPI reporting in multiple applications and built a reusable Objective-C framework to help others quickly implement xAPI reporting to their iOS apps. Daniel has presented at a number of development conferences on topics related to mobile, and is a contributing author to Mastering Mobile Learning: Tips and Techniques for Success.

**Presentation Title: Challenges in Providing a Semi-Connected Learner Experience with xAPI**

## BILJANA PRESNALL

*Vice President*
Jefferson Institute

Biljana Presnall is Vice President of the Jefferson Institute. In her role as lead software systems architect, she has over 15 years of experience in designing and developing distributed learning solutions, simulations, courseware, and learning technologies for government and academic stakeholders. She specializes in international development, deploying digital tools, and integrating them with research and education systems to transform societies by empowering engaged access to information.

**Presentation Title: VR Balkan Medical Task Force**

## NUNZIO QUACQUARELLI

*Chief Executive Officer*
QS Quacquarelli Symonds

Nunzio Quacquarelli is founder and CEO of QS Quacquarelli Symonds Ltd. Nunzio passionately believes in QS's mission to help young people to fulfill their potential through educational achievement, international mobility, and career development.

Since 1990, Nunzio has led QS to become a leading player in higher education student recruitment and solutions. Today, QS serves over 1500 HE institutions.  Best known for producing the world's most popular rankings – QS World University Rankings - QS is also a world leader in international postgraduate student recruitment, running 350 events in 57 countries, online platforms attracting over 70 million web visitors and offering student enrollment solutions. QS Professional Services offer; higher education data intelligence and technology solutions supporting strategy, partnerships, mobility and international enrollments.

In 1986 Nunzio graduated with a MA in Economics from University of Cambridge. In 1990 he earned an MBA from The Wharton School in the USA.

**Presentation Title: Innovative Approaches to Learning, Teaching, and Nurturing Employability – Lessons from Wharton-QS Reimagine Education Global Awards & Good Practices in Distributed and Online Learning (Moderator)**

## LT. COL RORY QUINN

*Close Combat Lethality Task Force*
Office of the Secretary of Defense

LtCol Rory Quinn is a career infantry officer in the U.S. Marine Corps who is currently serving as a member of the Secretary of Defense's Close Combat Lethality Task Force. The CCLTF provides focused recommendations on Department of Defense and Military Service efforts to achieve close combat overmatch to ensure infantry squads are never in a fair fight.

**Presentation Title: Close Combat Training via Integrated Visual Augmentation System and Industry Roundtable: Upcoming Government Requirements for Vendors**

## KRISTINE RABBERMAN, PH.D.

*Assistant Vice Dean*
University of Pennsylvania, LPS, SAS

Kristine Rabberman is Assistant Vice Dean and Director of Academic Affairs for the College of Liberal and Professional Studies, a division of the School of Arts and Sciences at the University of Pennsylvania. In this role, Kris has been serving as the project lead for the new online Bachelor of Applied Arts and Sciences program, working with a large cross-functional team of staff and faculty to bring the BAAS from brainstorming stages to proposal to approval, with the certificate launch completed in Fall 2018 and the degree launch coming in Fall 2019. Kris has a Ph.D. in Medieval History and teaches online graduate courses, including History of Sexuality and Academic Writing & Research Design. She is the recipient of the UPCEA Mid-Atlantic Award for Excellence in Teaching and LPS's Distinguished Teaching Award for Affiliated Faculty. She is also the chair elect for UPCEA's Mid Atlantic Region.

**Presentation Title: Good Practices in Distributed and Online Learning**

## PRASAD RAM, PH.D.

*Founder, Chief Executive Officer*
Gooru

Dr. Prasad Ram ("Pram") started Gooru as a "20% project" while at Google to develop a "GPS for Education and Skills" to bring the simplicity and assured success to learning. At Google, Pram led Google Books for Education in Mountain View and before that he was the head of Google R&D in India where he led projects on Google Maps, News, Language Technologies, Search, and Ads. Pram received the Founders' Award at Google in 2010 for his work on Google Ads. Prior to joining Google, Pram led engineering at Yahoo! and was a scientist at Xerox Research.

Pram is a Council Member and Chair of the Education Committee at the California Council of Science and Technology. Pram is also a board member at Leadership Public Schools. Pram has a Ph.D. in Computer Science from UCLA, and a B.Tech. in Computer Science from Indian Institute of Technology-Bombay, India.

**Presentation Title: TLA Collaborative Mission Control and Self-Regulating Ecology**

## SHARON RIDINGS, SES

*Chief Learning Officer*
U. S. Environmental Protection Agency

Sharon Ridings is currently EPA's Chief Learning Officer, located in the Office of Human Resources, Washington, DC. Sharon has been with the Federal Service for over eighteen years leading EPA in its multi-media approach for professional employee and leadership development programs. Prior to joining the EPA, Sharon was the Regional Training Manager for Harrah's Entertainment in Memphis TN, focusing on organizational and individual leadership development at all levels of the organization. She spent the first 21 years of her professional career in the banking industry learning the ins and outs of financial management and quality customer service. Sharon's focus and passion for personal and professional development is displayed in the work she does with current and future agency leaders. Working with colleagues across the Agency, Sharon has the platform to share valuable tools and techniques to help develop and improve individual leadership abilities. She strives to provide agency employees with safe learning environments in which to explore and experiment with various competency-based leadership activities. All this work moves EPA to a desired outcome of performing at a higher level, personal and professional excellence and meeting the goals of the Agency, protecting human health and the environment. Sharon is a certified executive coach and holds a bachelor's degree in Business Administration from Husson University and one in Liberal Arts from the University of Maine. Her philosophy is to keep an open mind to change and opportunities that will allow us to discover and embrace exciting possibilities for today and tomorrow! Each of us needs to find something that inspires us every day, keeps us focused and motivated, so we can have a positive impact on our work and those we serve.

**Presentation Title: Who Cares? A Strategic Look at Modernizing Learning**

## ROBBY ROBSON, PH.D.

*CEO / Member, Board of Governors*
Eduworks Corporation / IEEE Standards Association

Robby is a researcher, entrepreneur, and standards professional known for creative and disruptive innovation in industry and academia. He is co-founder and CEO of Eduworks Corporation, serves on the IEEE Standards Association Board of Governors, and chair of the IEEE Standards Education Committee for 2019, which is responsible for Standards University and for training and education concerning the IEEE standards process and the value of standards in general. He and the other presenters are long time contributors to ADL-related research and standards as Government employees or contractors and as volunteer contributors.

**Presentation Title: The IEEE Learning Technology Standards Committee (IEEE LTSC) Standards Program**

## GIGI ROMAN

*eLearning Coordinator*
NATO School Oberammergau

Gigi Roman is one of the Course Directors for the NATO eLearning Design Development and Deploy course and the Advanced Distributed Learning (eLearning) Coordinator responsible for NATO School's online education, training and online content management, including new product design and strategic relationships for the organization learning management system, authoring tools and collaboration solutions. In previous roles with NATO School and PfP community, he has overseen the development of web-based knowledge management systems and the re purposing of instructional materials for online delivery.

**Presentation Title: From Paper Certificates to Digital Badges**

## YASIR SALEEM

*Sr. Solutions Consultant*
Adobe Federal Systems

Yasir Saleem is a Senior Solutions Consultant at Adobe Systems Federal. He has over 10 years of experience working within Department of Defense, Civilian, and Intelligence Community. Yasir has worked to engineer and architect solutions from online collaboration to incident response applications. Having an extensive background in systems and infrastructure management, data center consolidation, and cloud computing, Yasir focuses on customer's journey to finding value while providing a long-term vision. Yasir has also been working in the eLearning space applying marketing principles and technologies to help elevate user experience, engagement with content and peers, and overall effectiveness of the platform. Saleem holds a Bachelor of Science in Integrated Science and Technology from James Madison University, and a Master's of Science in Information Systems Technology from George Washington University.

**Presentation Title: Experience Driven Learning**

## PAUL SCHNEIDER, PH.D.

*SVP Business Development*
dominKnow

Paul Schneider has worked in the area of distance communication technologies in academia and corporate for over 18 years, with his primary focus on distance learning. In this capacity he has provided services in the areas including instructional design, web design, classroom, product development, distance instruction, technical support, project management, network administration, and course development. Paul, who holds a PhD, oversees operations and business development at dominKnow, helping to guide the product development and organization to meet their mission to design easy-to-use products that can enable people to develop and deliver high quality training with maximum efficiency.

**Presentation Title: Utilizing xAPI to Track Learning Objectives and Skill/Competencies to Drive Business Decisions and Dynamically Adapt Training Content**

## HEIDI SCHWEINGRUBER, PH.D.

*Director, Board on Science Education*
The National Academies of Sciences, Engineering and Medicine

Heidi Schweingruber, directs the Board on Science Education at the National Academies of Sciences, Engineering and Medicine (NASEM). She oversees a portfolio of work that includes K-12 science education, informal science education and higher education. Dr. Schweingruber joined the board staff in 2004 as a senior program officer. In this role, she directed or co-directed several projects including the study that resulted in the report A Framework for K-12 Science Education (2011) which served as the blueprint for the Next Generation Science Standards. She is a nationally recognized leader in leveraging research findings to catalyze improvements in science and STEM education policy and practice. She co- authored two award-winning books for practitioners that translate findings of NASEM reports for a broader audience: Ready, Set, Science! (2008) and Surrounded by Science (2010). She holds a Ph.D. in psychology and anthropology, and a certificate in culture and cognition from the University of Michigan.

**Presentation Title: Who Cares? A Strategic Look at Modernizing Learning**

## TJ. SEABROOKS

*Chief Executive Officer*
Rustici Software

TJ Seabrooks is the CEO of Rustici Software, which helps eLearning companies work well together by compliance with specifications like SCORM or xAPI, and before that he served as the Director of Products. TJ is influential in the evolution of eLearning standards– he played an integral role in the contribution to two Broad Agency Announcements (BAAs) awarded to Rustici by Advanced Distributed Learning Initiative (ADL) and has been a key contributor to the xAPI specification since 2012. TJ has an M.S. in Computer Science from Vanderbilt University and a B.S. in Computer Science from Mount Vernon Nazarene University.

**Presentation Title: Taking xAPI Profiles Further: A Strategic Approach to Utilize xAPI Profiles to Address Specific Requirements within the DoD and Guidance for Putting the Process into Practice**

## GEORGE SIEMENS, PH.D.

*Executive Director of the Learning Innovation and Networked Knowledge Research Lab*
University of Texas at Arlington

George Siemens researches, technology, networks, analytics, and openness in education. Dr. Siemens is Professor and Executive Director of the Learning Innovation and Networked Knowledge Research Lab at University of Texas, Arlington. He co-leads the development of the Center for Change and Complexity in Learning (C3L) at University of South Australia. He has delivered keynote addresses in more than 35 countries on the influence of technology and media on education, organizations, and society. His work has been profiled in provincial, national, and international newspapers (including NY Times), radio, and television. He has served as PI or Co-PI on grants funded by NSF, SSHRC (Canada), Intel, Boeing, Bill & Melinda Gates Foundation, and the Soros Foundation. He has received numerous awards, including honorary doctorates from Universidad de San Martín de Porres and Fraser Valley University for his pioneering work in learning, technology, and networks. He holds an honorary professorship with University of Edinburgh.

**Presentation Title: Learning Analytics Experts Discussion**

## TUSHAR SINGH

*Chief Executive Officer*
Minute School

Tushar Singh has been creating leading-edge learning platforms for over 15 years. Starting in 2001 with the creation of a flipped learning platform for the University of Waterloo, he has constantly worked to provide students with a learning environment that suits their needs. Since then he has co-founded a video game company, corporate eLearning companies, and Internet marketing companies. His priority during this period has been determining how to improve student engagement and learning through mobile technologies enhanced by recommendation systems. This journey has led to his latest startup, Minute School, which delivers adaptive micro-courses using a vast variety of activity data.

**Presentation Title: Minute School's Recommendation System Based on xAPI LRS**

## BRENT SMITH

*R&D Principal*
ADL Initiative (Contractor)

Mr. Brent Smith is a Software Systems Architect with over 20 years of experience in designing and developing learning technologies for government stakeholders, defining R&D roadmaps to meet organizational objectives, and establishing chains of research that align with strategic goals. As the ADL Initiative R&D Principal, Mr. Smith helps ensure the ADL Initiative research agenda is aligned with its overall strategy.

**Presentation Title: Total Learning Architecture: An Abolitionist View of Data Stovepipes and Ongoing Modernization**

## MIKE A. SMITH

*Director, Data Analytics*
ICF

Michael Smith has more than 15 years of experience in analytics, strategy, innovation, and project/program management. Michael currently advises several U.S. Department of Defense clients on how to adapt emerging data science practices to improve performance. At the U.S. Army Research Laboratory, Michael successfully led a team of computational scientists and learning researchers to develop a novel approach to course effectiveness evaluation using simulation, pattern recognition, and factor analysis. The project resulted in a number of peer-reviewed publications and a book chapter. Michael's study at a U.S. Air Force Major Command led to a series of organizational changes and leadership initiatives to modernize learning practices and instill a culture of innovation.

Michael regularly publishes and presents on the topics of data science, analytics, and other emerging technologies. He helped develop the Institute for Operations Research and Management Science's (INFORMS) industry-leading credential for analytics, the Certified Analytics Professional (CAP), as part of the inaugural examination group. He was also a study guide author (2014). Michael holds a master's of public policy from Georgetown University and a Bachelor of Arts in international economics from Longwood University.

**Presentation Title: A Persona-Based Analytics Framework for Learner Experience Mapping**

## ERICA SNOW, PH.D.

*Sr. Mgr Learning Science & Data Science*
Imbellus

Dr. Snow is an interdisciplinary researcher with expertise in cognitive psychology, human-computer interactions, data mining, and learning analytics. Her research examines how patterns of behavior can be extracted from digital environments to better understand and ultimately support users' cognitive, metacognitive, and regulatory processes. Dr. Snow had over 8 years of experience analyzing and interpreting "big data" sets that include process, natural language and physiological data. Dr. Snow has over 60 peer-reviewed publications and currently works as the SR. Manager of Learning and Data Scinece at Imbellus.

**Presentation Title: Learning Analytics Experts Discussion**

## JANET SPRUILL

*Vice President, Programs*
Aptima, Inc.

Ms. Janet Spruill is a Vice President of Programs at Aptima, Inc. She has more than 25 years of experience serving as Principal Investigator (PI) for simulation and training, performance support, knowledge management, and organizational development programs across defense, intelligence, federal, and commercial sectors. She has deep expertise as a human performance technologist, learning solutions architect, and principal consultant developing and working with technology-based learning systems. Ms. Spruill currently leads Aptima's efforts in support of the US Navy's Center for Surface Combat Systems, where Aptima's A-Measure software suite is being used to capture, measure, assesses, and visualize learner performance data in real-time using observer, system, and self-report methods. Aptima is also leveraging adaptive instructional techniques and technologies to leverage this data and turn it into intelligent and actionable information for decision making and tailored learning. Over her career, she has supported or led more than 48 defense and federal learning and performance support programs.

**Presentation Title: Leveraging xAPI for AI-based Performance Measurement and Adaptive Learning**

## PAUL THURKETTLE

*NATO Training Technologies Section Head*
NATO Allied Command Transformation

Paul Thurkettle is a British NATO civilian working at one of the two NATO strategic commands, ACT based in Norfolk, Virginia.

His tenure with NATO since 1990, and 12 years of Royal Air Force service, have covered telecommunications, command and control systems, technology, and training.

Currently in his role as the lead for NATO in adopting technology for education and training, he is introducing e-learning and training technology into NATO, covering all aspects of this field from serious games to mobile learning (mlearning). Paul lives in Hampton, Virginia with as many boats as he can afford.

**Presentation Title: Protection of Civilians/Children in Armed Conflict VR and Strengthening Alliances and Building Partnerships Through ADL**

## DAVID TILESTON

*Cyber Security Engineer*
Software Engineering Institute

David Tileston is a cyber security engineer and exercise developer at Carnegie Mellon University's Software Engineering Institute. He has worked in cybersecurity with the Department of Defense for the past five years.

**Presentation Title: Measuring Success In Self-Guided Information Assurance Training**

## SARAH TOMS

*Executive Director*
Wharton Interactive

Sarah E. Toms is executive director and co-founder of Wharton Interactive. She is a demonstrated thought leader in the educational technology field, fueled by a passion to find and develop innovative ways to make every learning environment active, engaging, more meaningful, and learner-centered. Her drive to modernize, transform, and democratize education led Sarah and her team to co-invent Simpl. world, an open source simulation framework. She has spent more than twenty years as a leader in the technology sphere, and was an entrepreneur for over a decade, founding companies that built global CRM, product development, productivity management, and financial systems. In addition, she is coauthor with Peter S. Fader of The Customer Centricity Playbook. She is dedicated to supporting women and girls in the technology field through her work with the Women in Tech Summit and techgirlz.org. Follow her on twitter at @SarahEToms.

**Presentation Title: Good Practices in Distributed and Online Learning and Alternate Reality Courses: A Paradigm Shift in Using Games to Activate Learning**

## GEORGE VILCHES

*President*
JCA Solutions

George Vilches is the president of JCA Solutions, an e-learning standards expert consultancy. He trains organizations on SCORM and Experience API challenges and integrating these technologies within myriad environments, and oversees custom integration projects for companies looking to up their e-learning standards game. George leads a team focused on the distribution challenges of e-learning content and student tracking to find new technologies, techniques and approaches to making learning truly accessible worldwide. George also contributes to the IEEE xAPI working group and other learning standards bodies.

**Presentation Title: No Device Left Behind - Solving the Offline Learning Challenges of xAPI and cmi5**

## TIM WELCH

*Instructional System Specialist*
Naval Air Warfare Center, Training Systems Division

Tim Welch has served as the instructional lead for the Modern Learning Strategies for the Naval Air Warfare Center Training Systems Division (NAWCTSD). With MLS, Tim has explored mobile learning, augmented reality for performance support and training, 360 degree video virtual environments, and supported the adoption of xAPI in the Naval training enterprise. Recently he has supported the Navy's Ready Relevant Learning initiative as the lead instructional technologist.

**Presentation Title: Implementing xAPI Profiles in the Navy: Case Studies and Recommendations**

## DUNCAN WELDER

*Director of Client Services*
RISC Inc.

Duncan Welder is a Director of Client Services for RISC Inc. Duncan is a self-described educational technology geek and has spent over 20 years implementing learning management systems, domestically and abroad, with a focus on high compliance industries. As an xAPI enthusiast with a career grounded in instructional design and eLearning, Duncan has provided presentations to professional organizations including the Connections Forum, The eLearning Guild, and the Association for Talent Development. Duncan holds a Master of Education from Texas A&M University in Educational Technology. He is a certified Development Dimensions International facilitator, a Kirkpatrick Certified Evaluator and facilitator of the Ohio State University curriculum development program. In addition to working in industry, Mr. Welder has held adjunct faculty positions at Bowling Green State University, Ohio and the College of the Mainland, Texas. Mr. Welder has been published in Training Magazine, Learning Solutions Magazine, xAPI Quarterly as well as US Business Review.

**Presentation Title: Driving Retention: Using Technology to Support Learning Science**

## YORAM (JERRY) WIND, PH.D.

*Lauder Professor Emeritus*
The Wharton School of the University of Pennsylvania

Jerry (Yoram) Wind joined Wharton in 1967 with a doctorate from Stanford. He is the Lauder Professor Emeritus and Professor of marketing. He founded the Wharton Think Tank – The SEI Center for Advanced Studies in management and ran it for 3 decades. He has edited top marketing journals, published over 300 articles, and 25 books. A recipient of the 4 major marketing awards and inductee to the inaugural group of AMA Fellows and in 2017 to the Marketing Hall of Fame. One of the original Legends in Marketing, with an 8-volume anthology published by Sage in 2014. He has consulted with over 100 companies, sits on the executive committee of SEI and advisory boards of various companies and nonprofit organizations, and testifies in intellectual property cases. A trustee of the PMA and the Curtis Institute of Music and chairs their marketing and communication committees. A co-founder of The Interdisciplinary Center Herzliya Israel.

**Presentation Title: Who Cares? A Strategic Look at Modernizing Learning**

## JONATHAN WOODS

*Director*
DoD Voluntary Education

Jonathan Woods enlisted in the U.S. Navy in 1988, logging 110 aerial combat support missions in the Persian Gulf. Following military service Dr. Woods spent eight years teaching military tactics while earning a BS degree from Southern Illinois University, an MBA from Jacksonville University, and Ph.D. in educational administration from the University of Florida.

Dr. Woods spent 15 years developing curricula for multiple corporate and government entities, and lectured for multiple universities in the educational disciplines of learning technology and instructional design, among others. Since 2007 he has held a variety positions within the Department of Defense. He is currently the acting director of Voluntary Education within the office of the Undersecretary for Personnel and Readiness.

At home in Northern Virginia, he and his family are having a go at modern homesteading.

**Presentation Title: DoD Career Ready Portal, Open for Business!**

## LEE ZERFASS

*Founder*
Imagine-Invest-Create

Lee Zerfass worked in networking and printing technologies for many years, but had a tremendous desire to participate in the technology incubator culture of the Tampa Bay Region. Zerfass founded Imagine-Invent-Create (IIC) in 2017 to host a maker space in Odessa, Florida which quickly expanded into a legitimate technology workshop. By 2018, he shifted IIC into high tech design, taking on innovative technology projects and providing a high-tech meeting space for informal technology user groups and incubator or workshop space for development teams. Lee Zerfass, through IIC, currently specializes in using additive printing and other technologies to deliver Interactive Models, Virtual Experience Systems and Applied Technology Solutions. Lee is married with 3 kids, together you'll find them all at the hockey rink, on the ice or coaching youth hockey.

**Presentation Title: AR/VR Platforms**

## MARJORIE ZIELKE, PH.D.

*Research Professor*
University of Texas, Dallas

Dr. Marjorie Zielke is an assistant professor of arts and technology and associate director of reserach for the Institute for Interactive Arts and Engineering at The University of Texas at Dallas. She is a pioneer in serious gaming conducting award-winning gaming projects to provide cultural training for U.S. soldiers serving in the Middle East and to educate nurses caring for pediatric respiratory patients. her research focuses on exploring the intersection of human factors and visual design. her current work investigated the roll of virtual humans for training within mixed reality environments.

**Presentation Title: Collaborative Augmented Reality with Virtual Humans to Support Social Learning**

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Blackboard is the world's largest learning company. With more than 100 million learners and 20 years of experience, we've perfected the art of effective learning. Our platform supports an adaptive, agile learning environment by providing offline and online capabilities to support life-long learning and mission-centric goals.

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Yet Analytics is a leading provider of data technology solutions to learning and training organizations in the U.S. Federal Government, to commercial Learning Technology companies, and to Education and L&D organizations. Our portfolio of capabilities includes software and solutions built to support learning organizations and learning technology companies in the implementation of advanced data architecture, data fusion, and data analytics.

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Our robust learning platform is built to facilitate rich learning experiences - both with microlearning and more traditional course - to deliver the right content to learners exactly when and where they need it.

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Through our partnerships, you'll have access to hundreds of off-the-shelf microlearning courses – enabling you to meet your specific needs quickly and cost effectively.

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We provide maximum flexibility in creating course content making it easy for you to create bite-size versions of your content. You can author natively in Blackboard or select to incorporate content from almost any source.

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H5P is a free and open-source content collaboration framework based on JavaScript that makes it easier to create, share, and reuse interactive HTML5 content. The content is also responsive and mobile friendly.

### Learning on the Go

Learners can take everything on the go with Blackboard. A learner may start learning on their computer, quickly switch to mobile during the commute, then flip open an ipad at home without ever missing a beat.

# TABLE TOP DISPLAYS BY COMPANY
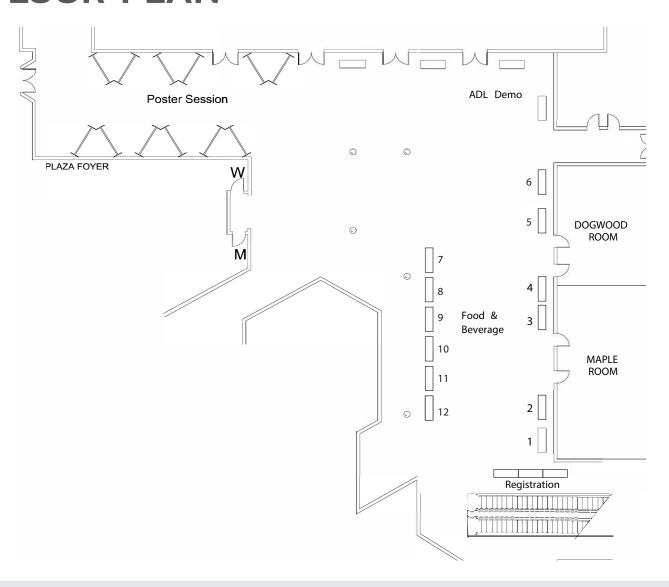
# FLOOR PLAN



# TABLE TOP DISPLAYS HOURS

**MONDAY, 26 AUGUST**
1300 – 1900

**TUESDAY, 27 AUGUST**
1000 – 1900

**WEDNESDAY, 28 AUGUST**
0930 – 1330

# TABLE TOP DISPLAYS

## ADL INITIATIVE

The Advanced Distributed Learning (ADL) Initiative is a government program that works with Defense stakeholders and other Federal agencies as well as Coalition military partners, industry, and academia to develop the next-generation of distributed learning science techniques and technologies via research, development, and collaboration. This DoD initiative reports to the Deputy Assistant Secretary of Defense for Force Education and Training (DASD(FE&T)), under the Office of the Assistant Secretary of Defense for Readiness (ASD(R)), with the goal to increase readiness, save resources, and facilitate inter-organizational collaboration. Bridging across Defense and other Federal agencies, the ADL Initiative facilitates interoperability and promotes best practices for using distributed learning to provide the highest-quality education, training, and informal learning; tailored to individual needs and delivered cost-effectively, anytime and anywhere. The ADL Initiative's Total Learning Architecture (TLA) is a research and development activity intended to provide a framework of specifications to ultimately enable "plug-and-play" interoperability among learning technologies. The TLA will define a set of technical guidelines, APIs, middleware, and data model descriptions that define how training, education, and personnel management technologies "talk" to each other—both syntactically and semantically.

## ADOBE                                                    12

Adobe Digital Government solutions enable agencies to make, manage, mobilize and measure the information, experiences and knowledge needed to achieve their missions. With 25 years of proven innovation, Adobe is transforming the way agencies interact —real-time, on any device. For more information on our digital government solutions, please visit www.adobe.com/government.

## BLACKBOARD                                               3

Blackboard is the world's largest learning company. With more than 100 million learners and 20 years of experience, we've perfected the art of effective learning. Our platform supports an adaptive, agile learning environment by providing offline and online capabilities to support life-long learning and mission-centric goals.

## DOMINKNOW LEARNING SYSTEMS                               8

dominKnow provides a continuum of products that enable collaborative creation and customization of content, unique to your organization's formal and informal needs all with no programming needed to support xAPI. Solutions include dominKnow | ONE, off-the-shelf editable content, & Clarofy.

## LINCHPIN SOLUTIONS                                       11

Linchpin Solutions offers curriculum development services that integrate modern learning methods with virtual reality software to produce dynamic customer specific and role-based solutions. For more information visit www.linchpinsolutions.com.

## MODEST TREE                                              6

Modest Tree is an award-winning software company focused on creating virtual reality, augmented reality and 3D interactive solutions for leading OEMs, airlines and military clients seeking to advance their immersive training and marketing solutions.

## ONLEARNINGPOINT                                          10

Onlearningpoint is focused on tracking the informal learning that happens outside the classroom. Their latest product offering is LEW, a xAPI enabled Learning Experience Widget that records interactions with multiple media types within the Sharepoint environment. LEW empowers learners to take charge of their informal learning and offers the organization greater visibility into their Sharepoint content.

## PRAGMATICS                                               2

Pragmatics specializes in the design, installation and support of training environments throughout the DoD and Civilian Agencies. With technology implementations from classrooms to specialized gaming/sim environments we have implemented over 4,700 environments nationally since 2011. With a focus on training, our team is aligned as direct dealers with the largest IT, Computing and Audiovisual manufacturers to lower costs and provided innovative solutions.

## RUSTICI SOFTWARE 7

Since 2002, Rustici Software has been the world's e-learning standards experts. We are the leading provider of products and services to assist with SCORM, AICC, and xAPI (also known as the Experience API or Tin Can API). Hundreds of LMSs, authoring tools, LRSs and content libraries are powered by Rustici Software technology, allowing online learning content and learning management systems to communicate and work together.

Along with vendor clients, a wide variety of organizations around the world use Rustici Software's solutions today to solve various needs, including Military and Government services, Educational institutions and enterprise clients across a variety of industries.

Rustici Software researched and drafted the first xAPI specification through a BAA from Advanced Distributed Learning (ADL). They continue to support the development of the spec and strive to help people make the best use of it.

Based in Franklin, TN, Rustici Software has been voted one of Nashville's best places to work eight years in a row.

Rustici Software is part of Learning Technologies Group plc's award-winning group of specialist learning technology businesses. For more, visit rusticisoftware.com.

## SIMULATIONDECK 4

SimulationDeck is the leading information environment simulator and training event management tool. It is helping the U.S. Department of Defense, federal, state, and local agencies, UN agencies, and private companies be better prepared to navigate the online information environment, make better decisions, save more lives,and defend brands and bottom lines. SimulationDeck is the flagship product of Nusura, a Denver-based consulting and technology firm that helps public, private, and nonprofit entities in all-hazards crisis and emergency preparedness (including cyber), strategic communications, and strategic planning. Nusura combines experience responding to crises, emergencies, and military operations with innovative technologies to solve complex problems. SimulationDeck, is a private, accessible, cloud-based application that powers training and exercises while replicating the internet, social media, blogs, video sites, and traditional media to create real-world training experiences.
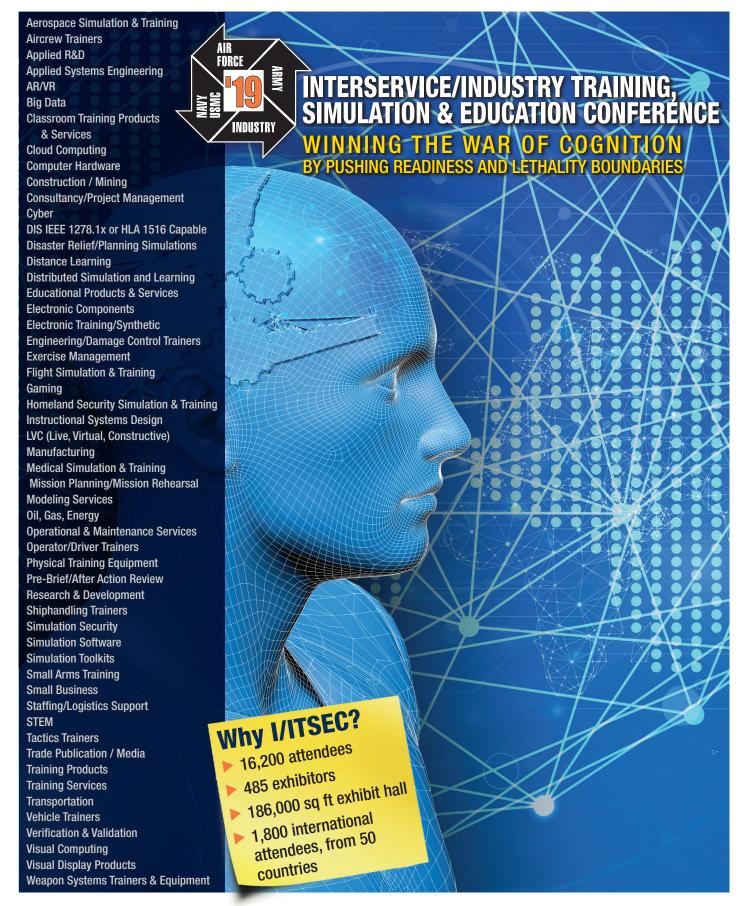
## VARJO TECHNOLOGIES 5

Varjo makes revolutionary VR/XR hardware and software that together are jumpstarting a new era in immersive computing – where real and digital worlds merge seamlessly in human-eye resolution. Our Bionic Display technology allows you to see virtual and augmented content as clearly as you see the analog world around us. Varjo's virtual and mixed reality devices will profoundly change the way professionals work, design and create. When we're done, computers will look nothing like they do right now.

## YET ANALYTICS 1

Yet Analytics is a leading provider of data technology solutions to learning and training organizations in the U.S. Federal Government, to commercial Learning Technology companies, and to Education and L&D organizations. Our portfolio of capabilities includes software and solutions built to support learning organizations and learning technology companies in the implementation of advanced data architecture, data fusion, and data analytics.

# NOTES

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President at Jefferson Institute

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**Shawn Miller**
Program Manager of Development & Production for e-Learning
Mobile & Simulations, Defense Acquisition University (DAU)

**Angie M. Gamble, Ph.D.**
Training Systems Management Specialist, CAC-T ATSC

**Paul Thurkettle**
e-Learning Programme Manager, NATO ACT

**Nunzio Quacquarelli**
CEO, QS Quacquarelli Symonds

**Federal E-learning Science & Technology**

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