

2018 NATIONAL MEETING

IMPROVING HUMAN PERFORMANCE AND EFFECTIVENESS



September 25 – 26

University of Nebraska Medical Center
Truhlsen Events Center

Omaha, NE

[Training Systems.org/Events](http://TrainingSystems.org/Events)

Event Hosts:



CO-HOSTS OF THE NM&SC 2018 NATIONAL MEETING:



iEXCEL at the University of Nebraska Medical Center (UNMC) – a State of Nebraska Initiative

Global leadership in transforming human performance and effectiveness in health care.

The Interprofessional Experiential Center for Enduring Learning (iEXCEL) is a transformative model for health professions education, training and research. This model incorporates a wide range of modeling, simulation and visualization technologies that prepare health care professionals to provide the safest and highest quality of patient care. Opening in the summer of 2019, the Davis Global Center will serve as headquarters for iEXCEL. This multi-level, 192,000 gsf clinical simulation facility provides opportunities to practice and hone skills for individuals at all levels of training, as well as interprofessional team-based training. The

Davis Global Center houses advanced simulation and visualization technologies in replicated healthcare settings ranging from surgical to intensive care to home care. Visualization technologies include interactive digital walls, AR/VR, 3D immersive settings and a holographic theater. The Davis Global Center is connected to health professions training facilities across Nebraska - fostering collaboration across the state as well as globally. Additionally, the National Center for Health Security will be co-located within the Davis Global Center, thus sharing the simulation and visualization assets and staff expertise.



The National Strategic Research Institute (NSRI) at the University of Nebraska is one of 14 University Affiliated Research Centers (UARCs) in the nation. Established in 2012, NSRI is engaged in a long-term, strategic partnership with our Department of Defense (DoD) sponsor, United States Strategic Command

(USSTRATCOM). The NSRI provides mission-essential research and development capabilities for USSTRATCOM as well as other DoD components and federal agencies focused on combating weapons of mass destruction and mission-related research.



National Modeling & Simulation Coalition

The National Modeling & Simulation Coalition (NM&SC) was established to serve as an organization of organizations dedicated to promotion of Modeling and Simulation (M&S). It is a membership and simulation technology promotion organization serving industry, government, and academia. The Coalition focuses on expanding national awareness of social, economic, and technological benefits to be realized by broad application of M&S technologies, tools, & processes. Its intent is to serve the needs of all components of the modeling and simulation community of practice.

A strategic initiative is fostering and expanding strategic alliances and collaborations to promote Modeling & Simulation as a professional practice, as a recognized technical discipline, and as an industry. Coalition affiliates include AMSC, SCS, ACM SIGSIM, and SISO. Other significant efforts include, but are not limited to, leading proposals to include M&S Industry Codes within the North American Industry Classification System, and conducting simulation education campaigns for industry and members of the Congressional M&S Caucus. For more information, please visit www.thenmsc.org

AGENDA

TUESDAY, 25 SEPTEMBER

- 0715 – 0815 **REGISTRATION • CONTINENTAL BREAKFAST • VISIT DISPLAYS**
- 0815 – 0830 **NM&SC OPENING REMARKS**
 Rick Severinghaus
 Chair, NM&SC Policy Committee

 RADM James Robb, USN (Ret)
 President, NTSA
- 0830 – 0845 **SETTING THE STAGE: MS&V IN HEALTHCARE AND EDUCATION**
 Dr. Pamela Boyers
 Vice Chancellor, iEXCEL

 Lt Gen Robert Hinson, USAF (Ret.)
 Executive Director, NSRI
- 0845 – 0930 **KEYNOTE ADDRESS AND DISCUSSION: THE FUTURE OF WORK:
 ENGINEERING HUMAN PERFORMANCE IN THE AGE OF AI**
 Mr. Daniel Serfaty
 President & CEO, Aptima
- 0930 – 1000 **BREAK • NETWORKING • VISIT DISPLAYS • EXPERIENCE IEXCEL VIZ HUB /
 SIM LAB / SIM-NE**
- 1000 – 1115 **PRESENTATION/PANEL (#1): HUMAN PERFORMANCE & EFFECTIVENESS:
 MS&V – TRAINING TO COMPETENCE**
 Dr. Winston ‘Wink’ Bennett
 Warfighter Readiness Research Division, WPAFB
Moderator

Medical Mission Essential Competencies
 Dr. Christopher Kratochvil
 UNMC

 Mr. Benjamin Stobbe
 UNMC iEXCEL

Fatigue Modeling in Aviation: Readiness Monitoring and Fatigue Mitigation
 Dr. Megan Morris
 Ball Aerospace

Human Performance Related to Situational Awareness
 Dr. Douglas Derrick
 UNO

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- 1115 – 1130 **BREAK • NETWORKING • VISIT DISPLAYS • EXPERIENCE SIM-NE**
- 1130 – 1200 **HEALTHCARE PERSPECTIVE: IMPROVING HUMAN PERFORMANCE AND EFFECTIVENESS: SETTING THE STAGE**
Dr. Jeffrey Gold
Chancellor, UNMC & UNO
- 1200 – 1330 **LUNCH • VISIT DISPLAYS • EXPERIENCE IEXCEL VIZ HUB / SIM LAB / SIM-NE**
- 1330 – 1415 **KEYNOTE ADDRESS AND DISCUSSION: ADOPTING MS&V TO IMPROVE HUMAN PERFORMANCE & EFFECTIVENESS**
Dr. Robert Amyot
President, CAE Healthcare
- 1415 – 1445 **BREAK • NETWORKING • VISIT DISPLAYS • EXPERIENCE IEXCEL VIZ HUB / SIM LAB / SIM-NE**
- 1445 – 1600 **PRESENTATION/PANEL (#2): DEVELOPING THE FUTURE WORKFORCE FOR MS&V**
Mr. Mats Johansson
EON Reality
Moderator
- Impact on Economic Development / STEM Education**
Ms. Julie Sigmon
Omaha STEM Ecosystem
- Remote & Distributed Learning**
Mr. Todd Saylor
USSTRATCOM
- Workforce Development in MS&V**
Mr. Richard Madrid
ECS
- 1600 – 1615 **CLOSING REMARKS**
- 1615 **DEPART**
- 1815 – 2015 **NM&SC RECEPTION – KANEKO**
Welcome
RADM James Robb, USN (Ret)
President, NTSA
- Dr. Jeffrey Gold**
Chancellor, UNMC/UNO

WEDNESDAY, 26 SEPTEMBER

0730–0830 **REGISTRATION • CONTINENTAL BREAKFAST • VISIT DISPLAYS • EXPERIENCE IEXCEL VIZ HUB / SIMLAB / SIM-NE**

0830 – 0845 **NM&SC – FORGING AHEAD**
Plans and Activities / 2019 National Meeting
 Mr. Rick Severinghaus
 Chair, NM&SC Policy Committee

0845 – 0900 **IEXCEL: INTRODUCING THE DAVIS GLOBAL CENTER**
 Dr. Pamela Boyers
 Vice Chancellor, iEXCEL

0900 – 1015 **PRESENTATION/PANEL (#3): MS&V FOR PREDICTIVE LEADERSHIP AND DECISION-MAKING**

Ms. Marisa Fish
 USSTRATCOM
Moderator

Mind & Brain Health

Dr. Matthew Rizzo
 UNMC

Turning Big Data into Visualization

Dr. T. Hank Robinson
 UNO

Translating M&S Results into Summaries and Visualizations for Senior Leaders

Mr. Bruce Kostal
 USSTRATCOM

Training & Exercises

Mr. Mac Capello
 USSTRATCOM

1015 – 1030 **BREAK • NETWORKING • VISIT DISPLAYS • EXPERIENCE SIM-NE**

1030 – 1145

PRESENTATION/PANEL (#4): MS&V: THE FUTURE IS HERE

Dr. Pamela Boyers
UNMC iEXCEL
Moderator

Surgery of the Future

Dr. Shane Farritor
UNL

Medical Applications

Dr. Marge Zielke
UT-Dallas

Impact on Health Care

Dr. Michael Ash
Nebraska Medicine

1145 – 1200

CLOSING REMARKS

1200

DEPART



The National Training and Simulation Association (NTSA) is America's premier organization representing the interests of the modeling and simulation community worldwide. As such, it serves as a constant point of contact for government, academia, industry, research organizations and the military to exchange information, share knowledge, align business interests and in general stimulate growth and overall advancement of the industry. NTSA pursues these goals through a series of conference, meetings and exhibitions throughout the year. NTSA produces The Interservice/

Industry Training, Simulation and Education Conference (I/ITSEC), which is the world's largest conference and exhibition dedicated to modeling and simulation. While NTSA primarily serves the North American community of practice, many of its members and participants are non-US. NTSA is a key member of the International Training and Simulation Alliance (ITSA), a worldwide group of simulation associations who promotes knowledge and information about training and simulation worldwide.

BIOGRAPHIES



RICK SEVERINGHAUS

CEO & Director, CRTN Solutions, LLC
Chair, NM&SC Policy Committee

Rick is CEO & Director, CRTN Solutions, LLC. His education includes

a B.S. degree, Economics, U.S. Naval Academy; an M.S. in Systems Management, University of Southern California; and graduation from the Navy's advanced nuclear engineering and nuclear propulsion technology training programs. He served in the Navy for 23 years, with submarine command and post-command experience. He is a member of the Foundation for Innovation, a Virginia economic development organization, serving on its Board, and is a member of the Board of Advisors for

the Global Institute for Cyber Security & Research. He is also a member of the Society for Simulation in Healthcare. In recent years, working with NASA, he served as Program Coordinator & Industry Liaison for the Simulation Exploration Experience (SEE), a unique program promoting STEM education and practical experience in distributed simulation leading to post-graduation employment. He is a past member of the Simulation Interoperability Standards Organization (SISO), an international 501(c)3; in which he served as Chair, SISO Executive Committee; and Chair, SISO Conference Committee.

His research over the past 24 years has included technology and human performance study, use of M&S for training and assessment, and the application of human factors in design and training implementation — consulting in the areas of human performance assessment and improvement, training, education, and modeling and simulation. He has authored and/or contributed to over four dozen articles, papers, and technical reports addressing training, human performance, and return on investment.



RADM JAMES A. ROBB, USN (RET.)

President
National Training and Simulation Association (NTSA)

RADM Robb's last Navy assignment was as the Director, Fleet Readiness

Division (N43), Office of the Chief of Naval Operations, Washington, D.C. He assumed this position in October 2004. Robb is a native of Corpus Christi, Texas, but was raised in northern Virginia. He graduated

from Rensselaer Polytechnic Institute in 1972, earned a Master's of Science degree from the University of West Florida in 1973, and was designated a Naval Aviator in 1974.

A veteran Navy combat pilot, RADM Robb served, among numerous other assignments, as officer in command of TOPGUN, the Navy Fighter Weapons School. Navy Staff

Flag assignments included service as the Director of Aviation Plans and Requirements (N880) and as Director of Fleet Readiness (N43). His civilian career has included working as an independent consultant, specializing in strategic planning, joint operations, defense acquisition reform and global political/military affairs. Robb assumed the role of President of NTSA in 2012.

UNMC IEXCEL & NSRI HOSTS



PAMELA J. BOYERS, Ph.D.

*Associate Vice Chancellor for Clinical Simulation, iEXCEL
UNMC*

Pamela J. Boyers, Ph.D., is Associate Vice Chancellor for Clinical Simulation for the Interprofessional and Experiential Center for Enduring Learning (iEXCEL), and Assistant Professor in the Department of Surgery at the University of Nebraska Medical Center (UNMC). Previously, she served as the Executive Director of the Interprofessional Immersive Simulation Center (UT-IISC) at the University of Toledo. Prior positions held by Dr. Boyers include: Chief Academic Officer and Executive Director for the Center of Medical Education and Innovation - one of the first interprofessional simulation centers in health care; Designated Institutional Official (DIO) for Riverside, OhioHealth; and Assistant Dean for Students at The Ohio State University College of Medicine.

Dr. Boyers is leading efforts at the University of Nebraska Medical Center to launch the Davis Global Center for Advanced Interprofessional Learning. This new 192,000 sq.ft. facility will house a transformational program called iEXCEL. UNMC's vision is attaining global leadership in transforming human performance and effectiveness in health care through the application of advanced simulation technology, including 3D and Virtual Immersive Reality. Her professional goals are to advance interprofessional education and collaboration to improve the outcomes of patient care. This includes improving the safety and quality of care given to patients and lowering the costs of health care by using simulated environments to improve the performance of health care providers. Dr. Boyers believes in working closely with industry collaborators

as well as the U.S. military in order to learn from their experiences, thus ensuring best practices related to the application of simulation technologies to improve the outcomes of training and patient care.

With significant experience in designing and operating medical simulation centers, Dr. Boyers is well-published and speaks nationally and internationally about transforming the education of health care professionals. Dr. Boyers collaborates with the United States Air Force in research studies and conducting Live Virtual Constructive Exercises for SWAT Teams, First Responders and USAF Para Jumpers. Dr. Boyers also serves as a one of the public members for the American Board of Medical Specialties (ABMS) Board of Directors and is on the Policy Committee for the National Modeling & Simulation Coalition (NM&SC).



LT GEN ROBERT HINSON, USAF (RET.)

*Founding Executive Director
National Strategic Research Institute (NSRI)*

Lieutenant General (Ret) Robert Hinson serves as the founding executive director of the National Strategic Research Institute (NSRI), a national security-focused research institute created by the University of Nebraska. He leads and manages Department of Defense research opportunities for the University of Nebraska through the NSRI. NSRI is

sponsored by United States Strategic Command (USSTRATCOM), and focuses specifically on research that helps combat weapons of mass destruction. It is one of only 13 DoD designated University affiliated centers nationally.

Under Hinson's leadership, the Institute received over \$61 million and 85 contract awards in its initial contract 2012-2018. More than 110 NU faculty and students in multiple disciplines across the university system have

worked on the institute's projects. The NSRI contract has been renewed for an additional five year contract extending to 2023.

Hinson joined the NSRI in 2012, after serving for nine years as vice president of government programs and corporate lead executive at Northrop Grumman. Before joining Northrop Grumman, Hinson served 33 years in the U.S. Air Force, retiring at the rank of Lieutenant General in September 2003.

KEYNOTE SPEAKERS



JEFFREY GOLD, MD

*Chancellor
UNMC & UNO*

Jeffrey P. Gold, M.D., is a nationally recognized leader and tireless

advocate for transforming academic medicine and health care delivery.

He became the eighth chancellor of the University of Nebraska Medical Center on Feb. 1, 2014. He also chairs the board of UNMC's principal clinical care system partner, Nebraska Medicine. In April 2017, Dr. Gold also was named chancellor of the University of Nebraska at Omaha, the state's public metropolitan university. The University of Nebraska at Omaha has an enrollment of over 12,000

undergraduate students, 3,000 graduate students, a broad public service mission and an NCAA Division I athletic program.

Prior to joining UNMC, Dr. Gold served as Chancellor of the University of Toledo's health science campus, which includes the Colleges of Medicine, Nursing, Pharmacy, Health Science and Human Service, and Graduate Studies.

Dr. Gold is also a board certified thoracic surgeon and specializes in adult and pediatric cardiac surgery.

As UNMC's chief executive officer, Dr. Gold is responsible for all aspects of campus administration, including its

annual operating budget of more than \$740 million, a staff of about 5,000 and its 3,800 students. Dr. Gold holds a health professions academic appointment in the College of Medicine and in the College of Public Health. He also serves as a University of Nebraska System Vice President.

UNMC is one of the nation's rising academic medical centers and is known for its prolific research, cutting-edge education and a decade-plus building boom of state-of-the-art infrastructure. The ongoing construction includes the \$323 million Fred & Pamela Buffett Cancer Center which opened in May of 2017.



DANIEL SERFATY

*Principal Founder & President & CEO
Aptima*

Daniel is Aptima's Principal Founder, establishing and implementing a

vision for Aptima as the premier Human-Centered Engineering business in the world. Mr. Serfaty's current work involves the technical leadership and coordination of inter-disciplinary projects for government agencies and private industries in conjunction with several academic, industrial and government teams. These efforts investigate factors that drive organizational performance, expertise development and human-systems integration in large-scale technology-rich socio-technical systems.

Prior to founding Aptima in 1995, Daniel was engineering group leader and program manager at Alphatech (now BAE Systems), where he coordinated projects in the decision-making, training, and human engineering areas.

For the last 25 years Daniel's research interests have included the application of rigorous modeling and experimental methods to improve decision-making performance, develop expertise in field settings, and apply systems engineering methods to the design of large-scale organizations. In addition to his technical pursuits, his many industry activities

include participating in various technology leadership forums, and serving on the board of directors of small technology businesses.

Daniel's academic background includes undergraduate degrees in Mathematics/Physics, Psychology, and Aeronautical Engineering from the Université de Paris and the Technion, Israel Institute of Technology, an MS in aeronautical engineering (Technion), and a M.B.A. in International Management from the University of Connecticut. His doctoral work at the University of Connecticut pioneered a systematic approach to the analysis of distributed decision-making in dynamic and uncertain environments.



ROBERT AMYOT, MD

President
CAE Healthcare

Dr. Robert Amyot was appointed President, CAE Healthcare in April 2014. Dr. Amyot was previously CAE Healthcare's Vice President for Medical Programs and Chief Medical Officer, a position he held since January 2012. For two years prior to that, he served as Director of Ultrasound Education for CAE.

In 2006, Dr. Amyot initiated the VIMEDIX project and is the inventor of the first simulator for transthoracic echocardiography

to incorporate virtual reality technology. He cofounded VIMEDIX Virtual Medical Imaging Training Systems, which was acquired by CAE Healthcare in January of 2010. The CAE VIMEDIX ultrasound simulator is now used in leading medical centres around the world, including the Mayo Clinic, Beth Israel Deaconess Medical Center and Massachusetts General Hospital.

A cardiologist echocardiographer, Dr. Amyot graduated from Université de Montréal in 1992 with a degree in medicine. He completed his residency at the Université de

Montréal, and subsequently gained fellowship from the Royal College of Physicians and Surgeons of Canada in internal medicine in 1995 and in cardiology in 1996. In 2007, he was promoted to associate professor of medicine at the Université de Montréal. He has published more than 60 book chapters, abstracts and articles, and has been involved as an investigator in more than 30 clinical trials, mostly in the field of echocardiography.

PANEL 1 – HUMAN PERFORMANCE & EFFECTIVENESS: MS&V – TRAINING TO COMPETENCE



WINSTON "WINK" BENNETT, Ph.D. – MODERATOR

Senior Research Psychologist
Air Force Research Laboratory

Dr. Winston "Wink" Bennett is a Senior Principal Research Psychologist and Readiness Product Line Lead for the Warfighter Readiness Research Division, Airman Systems Directorate, 711th Human Performance Wing, Air Force Research Laboratory. Through more than 30 years

of service in the Air Force research community, he has achieved international recognition as a leader in education, training, competency definition and assessment and performance measurement research. He is an internationally recognized leader in modeling, simulation and gaming research and has driven the development and transition of training, education, and

measurement technologies and research results to operational military, scientific and commercial communities of interest. His efforts have produced groundbreaking technology and research innovations that serve as a foundation for other researchers and practitioners to follow. He is a Fellow of three distinguished professional societies and the Air Force Research Laboratory.



CHRISTOPHER J. KRATOCHVIL, MD

Associate Vice Chancellor for Clinical Research, University of Nebraska Medical Center
Vice President for Research, Nebraska Medicine

Dr. Kratochvil is the Associate Vice Chancellor for Clinical Research at the University of Nebraska Medical Center and Vice President for Research for Nebraska Medicine, leading many of the clinical research initiatives for the academic health system. He serves as the Institutional

Official for the UNMC Human Research Protection Program, Chief Medical Officer for UNeHealth, Director of the Center for Clinical and Translational Research, Director of the Nebraska Biobank, member of the Nebraska Biocontainment Unit leadership team, and member of the BioNebraska Board of Directors. Dr. Kratochvil is a Co-Principal Investigator of the federally-funded National

Ebola Training and Education Center, which serves to support research and preparedness nationally for the management of highly infectious diseases, as well as Co-Principal Investigator of the National Center for Health Security and Biopreparedness which serves to train federal partners and provide quarantine services for the U.S.



BENJAMIN STOBBE

Assistant Vice Chancellor, Clinical Simulation
iEXCEL

Benjamin Stobbe is the Assistant Vice Chancellor, Clinical Simulation, iEXCEL.

He previously served as the administrative director/business manager at The University of Toledo Interprofessional Immersive Simulation Center (UT-IISC) and as a clinical instructor in the Colleges of Surgery and Nursing. Additional positions held by Mr. Stobbe include: administrative director, Center for Medical Education and Innovation; trauma program manager, Riverside Methodist Hospital; trauma case manager, Riverside Methodist Hospital; and he served 10 years as a staff nurse in neurology, critical care step-down, trauma and vascular thoracic surgery at Riverside Methodist Hospital.

Mr. Stobbe is a registered nurse with a master's in business administration from the University of Phoenix. With his significant clinical background and simulation center administration experience, Mr. Stobbe provides expert business direction and unique simulation knowledge to contribute to the transformation of education for health professionals. He is also skilled in developing community, military and faculty support for the advancement of simulation activities in the clinical setting.

Mr. Stobbe's responsibilities include the administrative, operational and fiscal management for UNMC clinical simulation centers, including the oversight of the design, construction and equipping of the Davis Global Center for Advanced Interprofessional Learning, iEXCEL's physical entity. Mr. Stobbe also serves as a critical liaison between iEXCEL and Nebraska Medicine to identify and improve educational and clinical outcomes through simulation training.



MEGAN MORRIS, Ph.D.

Human Factors Professional
Ball Aerospace and Technologies Corp

Dr. Megan Morris is a Human Factors Professional with Ball Aerospace and Technologies Corp. working in the Cognitive

Science, Models, and Agents Branch at the Air Force Research Laboratory's Airman Systems Directorate. Within the branch, she is a member of the Multiscale Modeling Team and her work focuses on

research regarding fatigue, vigilance, and workload assessment and modeling. She earned her M.S. and Ph.D. in Industrial Organizational Psychology and Human Factors from Wright State University.



DOUGLAS DERRICK, Ph.D.

Associate Professor of IT innovation, Director of the Applied Innovations Lab, and Co-director of the Center for Collaboration Science
University of Nebraska at Omaha (UNO)

Douglas C. Derrick is an associate professor of

He received his Ph.D. in management information systems from the University of Arizona. He is a Distinguished Graduate of the United States Air Force Academy.

persuasive technology and influence. He has been awarded many contracts and grants, and has published numerous papers in these areas. He was previously a program manager at MacAulay-Brown and served as an Air Force officer.

IT innovation, director of the Applied Innovations Lab, and co-director of the Center for Collaboration Science at the University of Nebraska at Omaha.

His research interests include human-agent interactions, intelligent agents, collaboration technologies, decision support systems,

PANEL 2 – DEVELOPING THE FUTURE WORKFORCE FOR MS&V



MATS JOHANSSON – MODERATOR

Co-Founder and President
EON Reality Inc.

Mats W. Johansson is the Co-Founder and President of EON Reality Inc. which is the world's leading Virtual Reality (VR) and Augmented Reality (AR) based knowledge transfer for industry and education. In this capacity, he has developed partnerships and business with many leading companies worldwide such as Microsoft, HP, Nvidia, Atlas-Copco, Suzuki, Lexus, Boeing,

Cornell University and Imperial College to mention a few, he also played a key role in the company's rapid growth. Mats has over 20 years of experience in 3D Interactive Simulation technologies and is widely recognized as a leading innovator in his respective field. Mats specializes in strategic issues surrounding the development and transition of EON's applications particularly in the Aerospace/Defence, Education, Energy and Manufacturing sector. He has

been regarded as a subject matter expert and has been the program manager/consultant for many different projects such as Volvo Car engineering analysis, as well as Oil and Gas simulation and analysis projects in the North Sea.

Mats earned a Master's Degree in Mechanical Engineering from Chalmers University and an MBA in International Business Administration from Gothenburg School of Business.



JULIE SIGMON

Director
Omaha STEM Ecosystem

Julie Sigmon has experience in the education, non-profit and business field for over 40 years. She is currently serving as the Director for the Omaha STEM Ecosystem, an organization that encompasses a rich array of STEM learning opportunities that ensure Omaha is meeting the future skills, processes, and thinking necessary to be a successful STEM professional.

Previous experiences involved contract work around quality in STEM programs, especially Out of School Time programs in Omaha, as well as serving as the external evaluator for the NE STEM 4U program at University of NE Omaha.

Sigmon currently serves on the Board for the Heartland Workforce Solutions's

Youth Council, NE Beyond School Bells Network, Metro Science and Engineering Fair, and NE Science Festival.

Education:

MA Education Administration and Supervision – Roosevelt University, Chicago, IL

BS in Education –Special Education – University of Tulsa, Tulsa, OK



TODD SAYLOR

Chief, Organizational Development & Innovation
USSTRATCOM

Mr. Todd Saylor is the Chief, Organizational Development & Innovation. Focusing on "Team STRATCOM," he has primary responsibility for transforming USSTRATCOM into a more agile, collaborative and cognitive strategic enterprise. He oversees the Command Learning Center employing cutting edge tools and processes to ensure USSTRATCOM is a learning organization. Mr. Saylor is building consensus and facilitating the command's culture and talent vision.

Mr. Saylor previously served as the Joint Staff J7 Force Development Liaison Officer to U.S. Strategic Command providing

organizational development solutions from leader development to organizational participation in enterprise-wide development events. He created value networks that improved operational effectiveness and organizational performance through both internal and external relationships.

As a Senior Military Trainer at Joint Forces Command, Mr. Saylor developed and implemented boundary spanning, coalition-based distributed education and training processes and capabilities worldwide to build strong international relationships and enhance security cooperation and regional stability. He also led new initiatives developing

leading edge training and education technologies and was in the initial cadre of the Joint National Training Capability.

Mr. Saylor is a retired U.S. Air Force Reserve Lieutenant Colonel and has held positions as Squadron Commander, Transportation Operations Officer, and Aircraft Maintenance Officer. He also held positions as Director of University Development and as Human Resources & Information Technology Manager at the University of Buffalo.

Mr. Saylor earned a Master of Arts in Leadership and a Bachelor of Science in Business Administration. He and his wife Cindy live in La Vista, NE.



RICHARD MADRID

Director of Global Services
Engineering & Computer Simulations Inc. (ECS)

Richard A. Madrid Jr. is Director of Global Services for Engineering and Computer Simulations Inc. He is responsible for Program Management, Program Execution, Personnel and Oversight for six programs. Prior to ECS, Richard worked for the Uniformed Services University of the Health Sciences, Val G. Hemming Simulation Center. There, he worked directly with the Federal Medical Simulation and Training Consortium (FMSTC), a collaborative partnership whose mission is to enhance the medical education and training practices through knowledge management, common

goals and joint training initiatives. The FMSTC worked directly with research and education professionals at the University of California, Los Angeles (UCLA), Center for Research on Evaluation, Standards, and Student Testing (CRESST) to develop tools, templates and methodologies with the purpose of enhancing medical education and training through simulation and technology. He was instrumental in working two Research and Development initiatives directed by the FMSTC.

Richard had a distinguished military career and retired from the United States Air Force as the Medical Program Manager for the

Interservice Training Review Organization (ITRO), Directorate of Intelligence, Operations and Nuclear Integration, HQ AETC, JBSA Randolph, TX where he oversaw and reviewed ITRO studies and evaluations and made appropriate recommendations on the \$1.2B Base Realignment and Closure (BRAC) training programs. Richard has deployed to several locations in support of Operation Desert Shield/Desert Storm, Operation Sea Signal and in support of the Global War on Terrorism with two Detainee Support Missions.

PANEL 3 – MS&V FOR PREDICTIVE LEADERSHIP AND DECISION-MAKING



MARISA FISH – MODERATOR

Chief, J6 Architecture and Analysis Branch
USSTRATCOM

Marisa Fish is the Chief of USSTRATCOM J6's Architecture and Analysis Branch. In this role, Marisa serves as the Chief Architect, presiding over a team of enterprise architects responsible for the development and assessment of nuclear, space, cyber, intelligence, and strategic warning systems operational

architectures. Marisa also serves as a technical advisor to the Strategic Advisory Group (SAG) Nuclear Command, Control, and Communications (NC3) Task Force. Prior to arriving at USSTRATCOM, Marisa held positions at the Air Force Research Laboratory Information Directorate, the Air Force Global Cyberspace Integration Center, Office of Naval Intelligence Joint Deployable Intelligence Support Systems

(JDISS) Program Office, and the National Security Agency. Marisa is a graduate of the Defense Language Institute (Intermediate Russian), Excelsior College (Bachelor of Arts in Russian), and University of Maryland University (MBA); she is presently earning her Master of International Studies (Emphasis in Nuclear Deterrence) from Harvard University.



MATTHEW RIZZO, MD

Frances and Edgar Reynolds Professor and Chair of the Department of Neurological Sciences (DONS) and Chief Physician for Neuroscience Clinical Programs
University of Nebraska Medical Center (UNMC)

Dr. Matthew Rizzo is the Frances and Edgar Reynolds

Professor and Chair of the Department of Neurological Sciences (DONS) and Chief Physician for Neuroscience Clinical Programs at the University of Nebraska Medical Center (UNMC) under an entity called Nebraska Medicine (the hospital and clinics, headquartered in Omaha and extending 500 miles West). Neurosciences' missions include clinical care, teaching, research, and outreach. Programs include Neurological Sciences, Neurosurgery, Psychiatry, Pain, Physical Medicine and Rehabilitation. Care includes patients with Alzheimer's disease,

Parkinson's disease, stroke, epilepsy, ALS, Huntington's Disease, TBI, multiple sclerosis, psychoses, emotional disorders, addiction, encephalopathy, and many other conditions. Dr. Rizzo also directs the Great Plains IDeA Clinical and Translation Research network, supported by the largest NIH grant ever for UNMC, to advance clinical and translational research across the Great Plains including Nebraska (UNO, UNL, UNK, and Boys Town) and the Dakotas (NDSU, UND, USD) with links to Kansas (KUMC). Dr. Rizzo is also the Director of The Mind & Brain Health Labs (MBHL), whose mission is to improve mind and brain health, mobility, and quality of life across the lifespan.

His scientific research team conducts translational research on human behavior, performance, and physiology in health and disease, in the lab, and in the real world. They use sophisticated cognitive assessment tools, high-fidelity simulation, sensor-based measures of behavior and physiology, and innovative data analysis tools. They are also committed to engaging the community in our research, including outreach to rural and urban underserved populations. Dr. Rizzo has a career-long history of continuous extramural research funding and is Professor Emeritus at the University of Iowa, where he was founding Director of the Aging Mind and Brain cluster hire initiative.



T. HANK ROBINSON, Ph.D.

Director, Office of Institutional Effectiveness
University of Nebraska at Omaha (UNO)

For the past 25 years, Dr. Robinson has pulled

actionable insight from data as an attorney, researcher, program evaluator and senior

administrator in state government and education. He currently directs UNO's Office of Institutional Effectiveness.



BRUCE KOSTAL

Operations Research Analyst and the Chief of the Metrics and Assessments Branch, Nuclear Mission Planning Division
USSTRATCOM

Bruce Kostal is an Operations Research Analyst and the

Chief of the Metrics and Assessments Branch, Nuclear Mission Planning Division, United States Strategic Command, Offutt Air Force Base, Nebraska.

Mr. Kostal is a graduate of the University of Nebraska and the University of Missouri. He served as an Air Force officer for twenty years. For the first half of his Air Force career, Mr. Kostal worked in missile operations and testing at Whiteman AFB, MO, and Vandenberg AFB, CA. For his second decade as an Air Force officer, Mr. Kostal served as an Operations Research Analyst. He completed a Masters' Degree

in Strategic and Tactical Sciences at the Air Force Institute of Technology and served in the Pentagon and Offutt AFB, NE. Following his retirement from Air Force active duty, Mr. Kostal joined the government civil service in October 2003. Mr. Kostal currently leads the Metrics and Assessments Branch. The branch is responsible for current and future strategic assessments.



MAC CAPELLO

*Chief, Training, Exercise and Experimentation Services Division, J75
USSTRATCOM*

Mr. Manuel (Mac) Capello is the Chief of the Training, Exercise and Experimentation

Services Division, J75, United States Strategic Command, Offutt AFB, Nebraska. Mac is responsible to provide modeling and simulation (M&S) support to global exercises and training events, mission rehearsals, demonstrations, assessments and wargames; the capability and infrastructure to develop, prototype, integrate, and test current/emerging operational concepts and technologies, prospective M&S, and M&S federations. Mac also promotes cyber awareness through the use of cyber phishing/whaling events and publishing of cyber articles on the STRATWEB.

TE2S is responsible for managing USSTRATCOM's Test and Integration Facility (TIF), USSTRATCOM's Strategic Training Enterprise Network (USTEN) and training, USSTRATCOM's prototyping

networks spanning classification levels, exercise and experimentation along with Modeling and Simulation (M&S) offerings for training, exercises and wargames.

Through Mac's leadership, TE2S' responsibilities include services utilizing air, land, maritime, space, missile M&S for wargames, planning and executing joint and combined exercises with representative models and simulations, as directed by Exercise and Training Director, HQ USSTRATCOM; providing simulations support for the Defense Information Systems Agency (DISA); and supporting Commander, USSTRATCOM training program. Mac has in-depth expertise in USSTRATCOM modeling and simulation mission areas of nuclear/conventional command and control (NC2), space operations, information operations (IO), computer network operations (CNO), integrated air and missile defense (IAMD), intelligence surveillance and reconnaissance

(ISR), global strike operations, combating weapons of mass destruction (WMD), and corresponding forces.

Mac retired from the United States Navy after serving over twenty years in both enlisted and officer ranks. His service included time on submarines as a submarine supply officer and submarine squadron supply officer. Mac served as supply officer in other capacities including Supply Officer, Naval Air Station Adak, AK and as a member of the initial cadre of Naval Officers that transitioned Strategic Air Command (SAC) to USSTRATCOM from 1992 - 1996.

Mac received his bachelor's degree from the State University of New York, College of Technology in Business Management and Master's Degree in Economics from University of Oklahoma.

Mac is married to Margaret (Margie) Capello and they have 3 sons and 6 grandchildren.

PANEL 4 - MS&V: THE FUTURE IS HERE



PAMELA J. BOYERS, Ph.D.

*Associate Vice Chancellor for Clinical Simulation, iEXCEL
UNMC*

Pamela J. Boyers, Ph.D., is Associate Vice Chancellor for Clinical Simulation for

the Interprofessional and Experiential Center for Enduring Learning (iEXCEL), and Assistant Professor in the Department of Surgery at the University of Nebraska Medical Center (UNMC). Previously, she served as the Executive Director of the Interprofessional Immersive Simulation Center (UT-IISC) at the University of Toledo. Prior positions held by Dr. Boyers include: Chief Academic Officer and Executive Director for the Center of Medical Education and Innovation - one of the first interprofessional simulation centers in health care; Designated Institutional Official (DIO) for Riverside, OhioHealth; and Assistant Dean for Students at The Ohio State University College of Medicine.

Dr. Boyers is leading efforts at the University of Nebraska Medical Center to launch the Davis Global Center for Advanced Interprofessional Learning. This new 192,000 sq.ft. facility will house a transformational program called iEXCEL. UNMC's vision is attaining global leadership in transforming human performance and effectiveness in health care through the application of advanced simulation technology, including 3D and Virtual Immersive Reality. Her professional goals are to advance interprofessional education and collaboration to improve the outcomes of patient care. This includes improving the safety and quality of care given to patients and lowering the costs of health care by using simulated environments to improve the performance of health care providers. Dr. Boyers believes in working closely with industry collaborators

as well as the U.S. military in order to learn from their experiences, thus ensuring best practices related to the application of simulation technologies to improve the outcomes of training and patient care.

With significant experience in designing and operating medical simulation centers, Dr. Boyers is well-published and speaks nationally and internationally about transforming the education of health care professionals. Dr. Boyers collaborates with the United States Air Force in research studies and conducting Live Virtual Constructive Exercises for SWAT Teams, First Responders and USAF Para Jumpers. Dr. Boyers also serves as a one of the public members for the American Board of Medical Specialties (ABMS) Board of Directors and is on the Policy Committee for the National Modeling & Simulation Coalition (NM&SC).



SHANE FARRITOR, Ph.D.

Professor of Mechanical Engineering
University of Nebraska-Lincoln

Shane Farritor is a Professor of Mechanical Engineering at the University of Nebraska-Lincoln. His research interests include space robotics, surgical robotics, and biomedical sensors. Shane has founded two startup companies based on his research at UNL. Shane co-founded Virtual Incision Corporation with his

surgeon colleague Dr. Dmitry Oleynikov at the University of Nebraska Medical Center. Virtual Incision is developing miniature robotic devices that are placed inside the body during laparoscopic surgery. These new devices could have a significant impact on surgical procedures such as colon resection. Shane's second startup, MRail, is developing a method to improve railroad maintenance by the measurement of vertical rail deflection.

Shane is a native growing up in the small central Nebraska town of Ravenna. His wife is a physician at St. Elizabeth's and they have four children. He received the B.S. degree in Mechanical Engineering from the University of Nebraska-Lincoln in 1992, and the M.S. and Ph.D. degrees in Mechanical Engineering from the Massachusetts Institute of Technology, Cambridge, in 1998.



MARJORIE ZIELKE, Ph.D.

Director, Center for Modeling and Simulation/Virtual Humans and Synthetic Societies Lab
University of Texas at Dallas

Simulation/Virtual Humans and Synthetic Societies Lab and Research Professor at the University of Texas at Dallas. Working primarily in emerging forms of simulation focused on virtual humans and learning portals, she is the UT Dallas principal

Marjorie A. Zielke, Ph.D., is Director of the Center for Modeling and

investigator on several innovative simulation research projects in the military/law enforcement, education and medical sectors.

Under Dr. Zielke's direction, the Center has formed numerous research partnerships with support from the National Institutes of Health, Southwestern Medical Foundation, the Texas Department of Transportation and the National Science Foundation. The Center's projects have won first place for faculty twice at the International Meeting for Simulation in Healthcare (IMSH), the U.S.

Army's Modeling and Simulation Training Team Award as part of the HINT Federation, the government category in the I/ITSEC Serious Games Competition, and the National Training and Simulation Association (NTSA) Cross-Functional Simulation Award. Dr. Zielke served a fellowship in 2018 with the Special Operations Command. Dr. Zielke is a member of the National Modeling & Simulation Coalition (NM&SC) policy committee and chair of the education committee.



MICHAEL ASH, MD

Executive Vice President, Chief Transformation Officer
Nebraska Medicine

Officer for Nebraska Medicine responsible for Information Technology, Telehealth, Clinical Effectiveness, Process Improvement, Quality and Safety Initiatives. Dr. Ash is an Assistant Professor of General Internal Medicine at the University of Nebraska Medical Center. He graduated in 1994 with a Bachelor of Science in pharmacy and earned his medical degree from the

University of Missouri at Kansas City in 1998. Following an internal medicine residency at Baylor College of Medicine in Houston, Texas, he joined an internal medicine practice. In 2003, he joined Cerner in Kansas City, Missouri where he was the Chief Medical Officer and Vice President of Physician Strategy and Innovation.

Under Dr. Ash's leadership, Nebraska Medicine has been awarded HIMSS 7, \$10 million dollar Telehealth Grant and the Bernard A Birnbaum, MD Quality Leadership

Award. Nebraska Medicine's Vizient Quality and Accountability score card ranking went from 63rd to 10th in one year.

"I've had the unique opportunity to see how health systems operate all over the world. The way in which we access, administer and reimburse care is changing rapidly. More care will be delivered at nursing facilities, clinics and within the patient's home and all of it needs to be coordinated. As Chief Transformation Officer, the question is how do you pull all of this together to ensure high-quality, safe and efficient healthcare?"

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