ARMY SCIENCE BOARD

2024 Biography Book

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Parent Board

2024
PARENT BOARD
MEMBER

Gisele B. Bennett, Ph.D.

Chair, Basic Sciences Subcommittee

Co-Founder and Managing Member, MEPSS LLC

EXPERTISE

Optical Imaging Systems

Atmospheric Turbulence and Wave Propagation

Radio Frequency Identification

Decision Support Systems

Secure Supply Chain Technology

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies (Chair)

STUDY TEAM

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED)

EXPERIENCE

Dr. Bennett is Co-Founder and managing member of MEPSS LLC, a software-based startup for decision support and automation. She has held academic, industry, and research positions for over 34 years. She has held academic, industry, and research positions for over 30 years. These positions have included Senior Vice President for Strategic and Research Initiatives and Professor at Florida Institute of Technology; and Regents' Researcher, Associate Vice President for Research (AVPR), and Professor in the School of Electrical and Computer Engineering at Georgia Institute of Technology (Georgia Tech – GT). As AVPR at GT, she was responsible for increasing research collaboration between academic and applied research. At GT Research Institute (GTRI), she held the Glenn Robinson Chair in Electro-Optics (EO), founded the Logistics and Maintenance Applied Research Center, and as the Director for the EO Systems Laboratory, grew research in the areas of optical imaging systems, EO modeling, and simulation, Light Detection and Ranging (LIDAR) development for sensing, Active-EO Systems development, and Internet of Things (IoT) sensor system development.

Presently, Dr. Bennett is the Editor-in-Chief for *Applied Optics*, is on the Board of Trustees for Riverside Research Institute and is the 2024 Vice President for Optica. She served on the board of directors for Optica (formally OSA) and was the President for the IEEE Council on Radio Frequency Identification (RFID). She is a Fellow with Optica and SPIE. She has received numerous awards including Superior Civilian Service Medal, Department of the Army, the second highest award of the Department of the Army and the Commander's Award for Public Service, Department of the Army.

EDUCATION

Georgia Institute of Technology, Ph.D., Electrical Engineering
University of Central Florida, M.S., Electrical Engineering
University of Central Florida, B.S.E., Electrical Engineering

2024
PARENT BOARD
MEMBER

Peter W. Chiarelli, GEN (Ret) USA

Chair, Medical Operations Subcommittee Nominee

Consultant, Peter Chiarelli and Associates, LLC
Former CEO, One Mind, LLC

EXPERTISE

Public Affairs/Public Relations

Congressional Relationships

Leadership

Management

Strategic Planning

Finance

Teaching/Instructing

SUBCOMMITTEE

Medical Operations (Chair Nominee)

STUDY TEAM

Medical Study

EXPERIENCE

GEN (Ret) Peter W. Chiarelli dedicated 40 years of his career to creating and implementing American defense policy for the U.S. Army and Department of Defense (DoD). Chiarelli served in a multitude of positions to include Vice Chief of Staff, Army; Senior Military Assistant for the Secretary of Defense, The Honorable Robert M. Gates during the surge of forces into Iraq (2007–2008); Multi-National Corps Commander Iraq (2006); Division Commander in Iraq (2004–2005); Chief of the Army Operations Center in the Pentagon during the attacks on September 11, 2001, and for the two years following that included the preparation for and commencement of the Afghanistan and Iraq campaigns (2011–2013); Assistant Professor and Head of Counseling, Department of Social Sciences, United States Military Academy (USMA) (1980–1984).

After retiring from the military, GEN (Ret) Chiarelli became the Chief Executive Officer of One Mind (OM) (2012–2018). OM is a 501(c)(3) focused on finding better diagnostics and treatments for those suffering from a variety of brain-related ailments including mental illness, addiction, Post-Traumatic Stress (PTS), and Traumatic Brain Injury (TBI). At One Mind, he was dedicated to fostering fundamental changes to radically accelerate the development and implementation of improved diagnostics, treatments, and cures for diseases and injuries of the brain – all while eliminating the stigma and discrimination that those affected may experience.

Today, GEN (Ret) Chiarelli is a consultant for several boards both for profit and not for profit. He continues to be involved in finding better diagnostics and treatments for those suffering from TBI and PTS. He is a member of the Board of Directors of L3Harris, 501(c)(3)'s Lighthouse for the Blind, Eden Reforestation, and President, Gates Global Policy Center.

EDUCATION

Salve Regina University, M.A., National Security and Strategic Studies
University of Washington, M.P.A.
Seattle University, B.A., Political Science

2024
PARENT BOARD
MEMBER

Mackenzie Eaglen

Vice Chair, Weapons Systems Subcommittee

Senior Fellow, American Enterprise Institute (AEI)

EXPERTISE

Defense Budget Analysis

Defense Strategy

Force Planning

Defense Industrial Base

SUBCOMMITTEE
Weapons Systems (Vice Chair)

STUDY TEAM

Data-Centric Command and Control (C2)

EXPERIENCE

Ms. Eaglen has spent over a decade as a public defense analyst, researching and testifying before Congress. She is a regular guest lecturer at universities and frequent publisher in the popular press. She previously worked on Capitol Hill in the House and in the Senate, and in the Defense Department. While working at think tanks, she also served as staff member to all three national defense strategy commissions over the past decade. She is on the board of the Alexander Hamilton Society, a member of the Steering Committee of the Leadership Council for Women in National Security and serves on the U.S. Army War College Board of Visitors. Ms. Eaglen is currently a Commissioner on the National Commission on the Future of the U.S. Navy as appointed by Congress. Her experience also includes membership on the Defense News Advisory Board, Breaking Defense Board of Directors, and Women in International Security (WIIS).

She has been published in multiple publications and media outlets including but not limited to the *Wall St. Journal*, *New York Times*, *Washington Post*, *Forbes*, *Armed Forces Journal International, Strategic Studies Quarterly*, *National Defense* magazine, *Defense One, Politico*, *Roll Call*, *The Hill*, CNN.com, FoxNews.com, *TIME*, *U.S. News & World Report*, *Washington Times*, *Washington Examiner*, *Æther: A Journal of Strategic Airpower, Foreign Policy, Foreign Affairs, War on the Rocks, Defense News*, and the *Army* magazine.

Ms. Eaglen has lectured at multiple universities to include but not limited to the U.S. Army War College, National Defense University, George Washington University, University of Texas (Austin), American University, Hofstra University, Duke University, Georgetown University Public Policy Institute, as well as at many other foundations and associations around the country.

EDUCATION

Georgetown University, M.A., School of Foreign Service, National Security Studies

Mercer University, B.A., College of Liberal Arts, International Affairs, Political Science, *cum laude*

2024
PARENT BOARD
MEMBER

Charlotte M. Farmer, D. Eng

Chair, Science and Engineering Subcommittee

Senior Vice President and Chief Operating Officer
Underwriters Laboratories Inc.

EXPERTISE

Strategy

Governance

Building high-Performing, Growth Organizations

High-tech Manufacturing

Global Operations

Finance

Digital Transformation

SUBCOMMITTEE

Science and Engineering Adoption, Adaption, Integration, and Sustainment/ Disposal Subcommittee (Chair)

EXPERIENCE

Dr. Charlotte Farmer's 36 years of experience span a diverse set of company environments including start-up, rapid growth, mature, consolidation, regulated, and traditional businesses. She is a visionary focused on accelerating growth and transforming operations. She recently joined Underwriters Laboratories Inc. in 2021 as Senior Vice President and Chief Operating Officer.

In 2011, Dr. Farmer joined the MITRE Corporation where she served as Operations Director for Enterprise Computing, Information, and Security and Operations Director for the Center for Programs and Technology. Dr. Farmer worked with industry, academia, and foreign governments in Europe and North America to foster technological advancement, innovation, and security. Her U.S. clients included Departments of Commerce, Homeland Security, Labor, Treasury, Veterans Affairs, and Health and Human Services.

At Booz Allen Hamilton (BAH), Dr. Farmer played integral roles across strategy and transformation leadership. She also led organizational turnarounds worldwide, including international government restructuring, federal government modernization, and global manufacturing cost-cutting. Prior to BAH, Dr. Farmer held several leadership roles at Eastman Chemical across research and development, manufacturing, finance, and health, safety, and the environment.

Dr. Farmer holds an MBA, B.S. and M.S. degrees in Chemical Engineering, and a doctorate degree in Systems Engineering. Her commitment to leadership, ethics, diversity, and STEM (LEADS) coalitions has been recognized with multiple accolades, including being named one of 2020's Most Influential Black Executives in Corporate America by *Savoy* magazine, a 2021 Paul Harris Fellow by Rotary International, and a 2023 inductee into the Black Engineer of the Year Hall of Fame.

EDUCATION

George Washington University, D.Eng., Systems Engineering
University of North Carolina, Kenan-Flagler Business School, M.B.A.
University of Tennessee, M.S., Chemical Engineering
Tennessee Technology University, B.S. Chemical Engineering, *magna cum laude*

2024
PARENT BOARD
MEMBER

Kimberly C. Field, BG (Ret) USA

Director, Strategic Initiatives, Office of the President
Texas A&M University

EXPERTISE

Security Policy and Strategy

International Relations

Russian

Strategy, Plans, and Policy

Violent Extremism

Conflict and Stabilization Operations

STUDY TEAM

Human-Machine Integration

RED TEAM

Member

EXPERIENCE

BG (Ret) Kimberly C. Field is currently the Director, Strategic Initiatives, Office of the President, Texas A&M University. Formerly, she was a member of the Senior Executive Service serving as the Director for Strategy, Plans, and Policy at U.S. Special Operations Command. In that position, BG (Ret) Field was responsible for developing special operations strategy and for leading the development and implementation of policy directly supporting global operations.

Prior to her role at USSOCOM, BG (Ret) Field served as the Executive Director of the Albritton Center for Grand Strategy and Professor of the Practice at the Bush School of Government and Public Service, Texas A&M University; Strategic Advisor to the Commander of Forces in Afghanistan; Director, Countering Violent Extremism at Creative Associates, a USAID implementing partner; and Deputy Assistant Secretary of State in the Bureau of Conflict and Stabilization Operations.

BG (Ret) Field's military assignments include Deputy Strategist, Army Staff; Director Middle East Policy, the Joint Staff; Assistant Professor in the Department of Social Sciences at the U.S. Military Academy at West Point; Chief of Plans and Analysis at the George C. Marshall Center; Legislative Strategist for the Army; and Executive Officer to the Commander, International Security Assistance Force Joint Command, Afghanistan. She also served two other tours with the Department of State, first as a Council of Foreign Relations Fellow at the U.S. Mission to the United Nations and then as the Senior Military Advisor in the Office of the Coordinator for Reconstruction and Stabilization (S/CRS). She has served tours of duty in Iraq, Somalia, and three in Afghanistan. BG (Ret) Field has published numerous articles and was an adjunct professor at the U.S. Army War College and Georgetown University.

EDUCATION

U.S. Army War College, Masters of Advanced Strategic Arts

Tufts University, the Fletcher School of Law and Diplomacy, Masters of International Security

U.S. Defense Language Institute, Russian

U.S. Military Academy at West Point, B.S., Russian Studies

2024
PARENT BOARD
MEMBER

James F. Geurts, The Honorable

Parent Board Nominee

Former Service Acquisition Executive for the U.S. Navy, Marine Corps, and Special Operations Command

EXPERTISE

Industrial Base

Innovation at Scale

Space

Robotics

Acquisition

STUDY TEAM

Data-Centric Command & Control (C2)

EXPERIENCE

The Honorable James “Hondo” Geurts has over three decades of leadership in national security. He is actively involved in numerous efforts to improve the Nation’s defense industrial base, serving on several commissions, study efforts, and co-hosting the innovative Building the Base Podcast. He devotes much of his time to mentoring public and private sector teams on scaling, agility, innovation, talent development, and servant leadership.

He retired from government service in 2021 after performing the duties of the Under Secretary of the Navy, the Department’s number two civilian with responsibility for the effective global business operations of the over one million personnel and a $200B for the US Navy and Marine Corps team. He previously served as the Assistant Secretary of the Navy for Research, Development, and Acquisition where he was responsible for a $150 billion annual budget and ensuring the effective procurement and sustainment of platforms, systems, technologies, and services for America’s Sailors and Marines serving around the globe.

Before joining the Department of the Navy, he served as the Acquisition Executive for the United States Special Operations Command as a member of the Senior Executive Service. He began his career as an Air Force officer, leading the acquisition of numerous weapons systems before his retirement as a Colonel. He is the founder of SOFWERX, Naval X, and the Ghost Mentor Program, all of which have been emulated as an effective means to drive innovation into large public sector organizations.

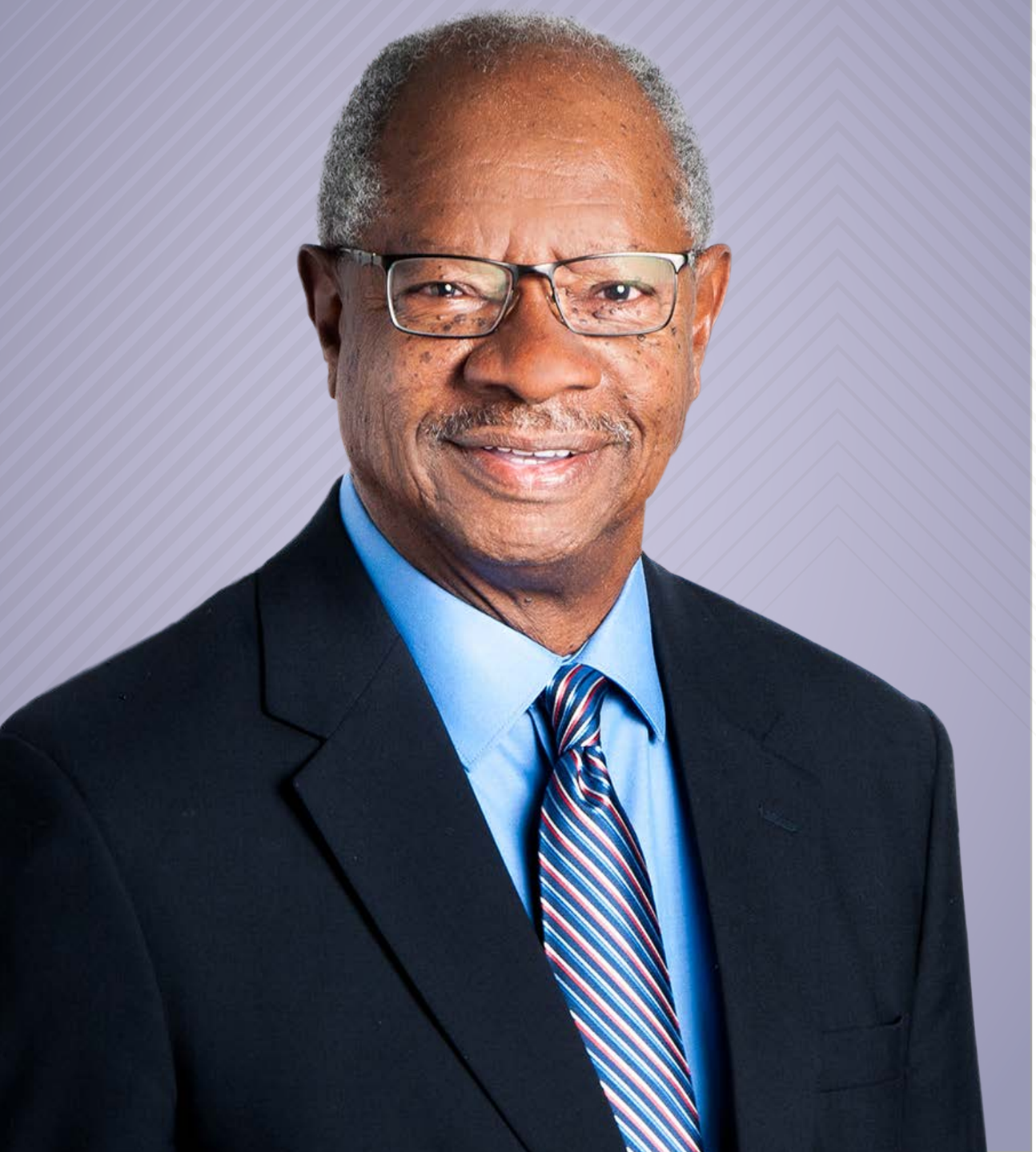
EDUCATION

National Defense University, Industrial College of the Armed Forces, M.S., National Security Resourcing

Air Force Institute of Technology, M.S., Electrical Engineering

Lehigh University, B.S., Electrical Engineering

2024
PARENT BOARD
MEMBER



William Guyton, Jr.

Former Director, Integrated Military Systems
Sandia National Laboratories

EXPERTISE

Missile Defense

Conventional Weapon Systems

Directed Energy Systems

Defense Management

Systems Engineering

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

EXPERIENCE

Mr. William Guyton, Jr., is the former Director, Integrated Military Systems, Sandia National Laboratories having served in this role for nearly a decade. At Sandia, he designed and developed missile defense test targets, operated the Kauai Test Facility, provided modeling and simulation for missile defense system prototypes, threat lethality, and designed and developed conventional systems' warheads/fuzes, penetrators, and hypersonic vehicles for the Department of Defense (DoD). He managed the Joint Munitions Program for DoD and Department of Energy (DoE) which develops dual-use munitions and sensor-related technologies, and he designed and developed directed energy technologies and subsystems in high power microwave, short pulse lasers, as well as electromagnetic applications and power sources.

Prior to his tenure at Sandia, Mr. Guyton had a 30-year career at Lockheed Martin where he served as Principal, Sr. and Jr. Engineer; Program Manager; Manager, Systems Engineering; Director, Advanced Programs; Manager, Systems Analysis and Simulation; and Vice President (VP) and General Manager, Applied Engineering and Development Lab. As the VP and General Manager, he led over 1,500 people in an organization that performs R&D and product/systems development for DoE, DoD, and the Federal Aviation Administration (FAA). Mr. Guyton has participated on a number of Army Science Board studies to include Human Interaction and Behavioral Enhancement, Countering Indirect Fires, Multi-Domain Battle, Multi-Domain Operations (MDB 2.0), 2019's Army Futures Command study and 2023's Independent Assessment of the Army's Ability to Fight and Survive on a Limited Use Nuclear Battlefield study.

EDUCATION

Rutgers University, M.S., Electrical Engineering
Fairleigh Dickenson University, B.S., Electrical Engineering

Terri S. Hogue, Ph.D.

Chair, Environmental Advisory Subcommittee

Dean of Earth and Society Programs and Professor
Colorado School of Mines

EXPERTISE

Civil and Environmental Engineering

Hydrology and Watershed Science and Engineering

Water, Human, and Ecosystem Interactions

SUBCOMMITTEE

Environmental Advisory (Chair)

STUDY TEAMS

Beneficial Use of Dredged Materials in Civil Works

Nature-Based Solutions (Chair)

EXPERIENCE

Dr. Terri Hogue currently serves as the Dean of Earth and Society programs where she oversees 10 academic departments on the Colorado School of Mines (Mines) Golden, Colorado campus. Dr. Hogue was the Department Head of the Civil and Environmental Engineering (CEE) Department prior to her appointment as Dean. She has also served as the Director of the Hydrologic Science and Engineering interdisciplinary graduate program and Director of the ConocoPhillips WE2ST Center. Dr. Hogue has been at Mines since 2012, coming from the University of California, Los Angeles (UCLA) where she was an Associate Professor in the CEE Department.

Her research area is primarily in watershed hydrology, focusing on the nexus of water, human, and ecosystem interactions. She has received over $20M in research funding including $15M as Principal Investigator (PI) coming from a range of federal agencies including the Environmental Protection Agency (EPA), the National Science Foundation (NSF), the National and Aeronautical Space Administration (NASA), the U.S. Geological Survey (USGS), and the National Oceanic and Atmospheric Administration (NOAA), as well as various state and local agencies.

She has graduated over 50 M.S. and Ph.D. students and has over 120 publications to date. Dr. Hogue has served on numerous professional boards and committees including a six-year term on the National Academies Board on Atmospheric Sciences and Climate (BASC) and a four-year term as the American Geophysical Union (AGU) Hydrology Section Secretary. Dr. Hogue was awarded the 2020 Robert E. Horton lectureship in Hydrology from the American Meteorological Society.

EDUCATION

University of Arizona, Ph.D., Hydrology and Water Resources
University of Arizona, M.S., Hydrology and Water Resources
University of Wisconsin, B.S., Geology, *summa cum laude*

David Jimenez

Vice Chair, C5ISR Subcommittee

President, Maya Engineering and Technical Services, LLC

EXPERTISE

Research, Development, Test and Evaluation

C5ISR

Chemical and Biological Defense

Test Ranges, Execution, and Infrastructure

Weapon Systems

Lethality and Survivability

Space and Terrestrial Communications

Electronics

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) and Digital (Information Technologies) (Vice Chair)

EXPERIENCE

Mr. David Jimenez is the President, Maya Engineering and Technical Services, LLC. His previous job was Vice President for Research, Development, Test and Evaluation for Jacobs Technologies. Prior to joining Jacobs, he was the Vice President of Command, Control, Computers, Communications, Cyber, Intelligence, and Reconnaissance (C5ISR) programs, SAIC after having retired from the government with over 38 years of service. He retired as the Deputy Under Secretary of the Army for Test and Evaluation in 2019. In that capacity, he served as senior advisor and subject matter expert for test and evaluation across the Department of Army while also performing duties as an OSD test and evaluation executive in the area of chemical and biological defense.

Additional assignments included Technical Director and Deputy to the Commander of the Army Test and Evaluation Command where he led the execution of the Army's test ranges, test execution and infrastructure investments for the Department of Army nationwide; Director, Army Test and Evaluation Center, the Army's independent evaluators for weapon system compliance, test design, operations systems analysis, evaluation, and reporting to Congress on weapon systems effectiveness; Executive Director, Developmental Test Command, exercising executive leadership over all Army ranges; Director, Space and Terrestrial Communications; and Deputy Director, Systems Engineering, the Communications and Electronics Center (CERDEC).

Mr. Jimenez served for 26 years in Program Management (PM) MILSATCOM, GPS, WIN-T, MILSTAR, SCOTT in Program Executive Officer (PEO) C3T, Director of the Product Realization Directorate (logistics and sustainment engineering), and other positions of technical leadership in the areas of space communications.

His awards include the David Packard award, Meritorious Service Medal (2), Superior Civilian Service Medals (4), DA Staff Instrument, Order of St. Barbara, and other awards and distinctions.

EDUCATION

National Defense University, M.A., National Resource Strategy
Florida Institute of Technology, M.S., Engineering Management
University of Puerto Rico, B.S., Electrical Engineering

2024
PARENT BOARD
MEMBER

Robert P. Lennox, LTG (Ret) USA

Chair, Weapons Systems Subcommittee

Independent Defense Consultant

EXPERTISE

- Leadership
- Financial Management
- Defense Modernization
- Team Building
- Leading Change
- Assessment Oversight

SUBCOMMITTEE

Weapons Systems (Chair)

STUDY TEAM

Human-Machine Integration

EXPERIENCE

LTG (Ret) Robert “Bob” Lennox retired from the U.S. Army in March 2014 after 37 years of service and leadership. He joined General Dynamics in 2014 as Vice President of both General Dynamics Mission Systems and General Dynamics Land Systems (GDLS). In May 2019, he was named Vice President for Strategy and Business Development at GDLS in Sterling Heights, Michigan. He retired from General Dynamics in August of 2022 and is an independent defense consultant.

Prior to joining General Dynamics LTG (Ret) Lennox was the Principal Deputy Director, Cost Assessment and Program Evaluation for the Office of the Secretary of Defense. Immediately before that he served as the Army G8. In these positions LTG (Ret) Lennox conducted evaluations of Service modernization programs, making budgetary recommendations to Senior Defense Department Officials.

During his Army career, he served at every level and commanded every echelon of the Air Defense Artillery from platoon leader to Commanding General of Fort Bliss, Texas. Concurrently, he served as Commandant of the Air Defense Artillery School. He also served as Deputy Commanding General of the U.S. Army Space and Missile Defense Command, Deputy Commanding General of the U.S. Army Accessions Command, Deputy G-3 on the Army Staff, and was an Assistant Professor, Department of Social Science, U.S. Military Academy at West Point.

LTG (Ret) Lennox received multiple U.S. military awards and decorations including the Defense Distinguished Service Medal and the Distinguished Service Medal with Oak Leaf Cluster. He has served on the Joint Staff, the Army Staff and the Secretary of Defense Staff.

EDUCATION

Stanford University, M.B.A.
National Defense University, M.S., National Security and Strategic Studies
U.S. Military Academy at West Point, B.S., Engineering

2024
PARENT BOARD
MEMBER

Marcel J. Lettre II, The Honorable

Vice President for National Security Space
Lockheed Martin Government Affairs

EXPERTISE

Space

Intelligence

Foreign Relations and Diplomacy

Strategy, Operations and Budget

Congressional and Government Affairs

SUBCOMMITTEE

Intelligence and Assessment

STUDY TEAM

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED)

EXPERIENCE

The Honorable Marcel Lettre is the Vice President for National Security Space, Lockheed Martin Government Affairs where he delivers innovative capabilities in intelligence and space capabilities. Prior to joining Lockheed Martin, he served as the Under Secretary of Defense for Intelligence. In this role, he was the top advisor to the Secretary of Defense and to the Director of National Intelligence overseeing $17B and 110,000 personnel across nine agencies and organizations. Mr. Lettre advised four different Secretaries of Defense and ensured execution on matters pertaining to Department of Defense (DoD) operations, strategy, budget, programs, personnel, and organization.

Prior to DoD, he was a Senior National Security Advisor to the Senate Majority Leader and on the staff of the House Permanent Select Committee on Intelligence where he handled defense and intelligence-related legislation, appropriations, and confirmations. Previously, he worked as a management consultant and in several national security policy research roles.

Mr. Lettre recently completed service on the Center for Strategic and International Studies (CSIS) Technology and Intelligence Task Force and a term on the Board of Directors of the Intelligence and National Security Alliance (INSA). He is a member of the Council on Foreign Relations and is a member of the Board of Trustees of the University of the South, Sewanee, Tennessee, while also serving on Lockheed Martin's CEO-chaired Corporate Diversity and Inclusion Council.

His awards include the Department of Defense Distinguished Public Service Medal (3) and the French Legion of Honor (Rank of Chevalier) for US-French counterterrorism intelligence sharing initiatives.

EDUCATION

Harvard University, John F. Kennedy School of Government, M.P.P.

University of the South, Sewanee, Tennessee, B.A., Political Science, *magna cum laude*

2024
PARENT BOARD
MEMBER

Sean B. MacFarland, LTG (Ret) USA

Senior Mentor/Highly Qualified Expert, U.S. Army
Defense Industry Consultant

EXPERTISE

Combat Leadership

Strategic Planning

Training

Leader Development

Industry Weapons Program Management

SUBCOMMITTEE

Weapons Systems

STUDY TEAM

Human-Machine Integration

EXPERIENCE

LTG (Ret) MacFarland led armor units at every echelon: an armored cavalry platoon at Fort Bliss, Texas; an armored cavalry troop in the "Fulda Gap" in Germany; and an armor battalion in Germany and the Balkans. While commanding an armored brigade combat team in Ramadi, Iraq, he is credited with fostering the Sunni Arab "Awakening" movement, which was instrumental in turning the tide of the war.

As a general officer, he served as: Commander, Joint Task Force (JTF)-North in support of U.S. border security; Provost of the Command and General Staff College; Deputy Commanding General for Operations of U.S. Forces in Afghanistan; Commanding General of 1st Armored Division and Fort Bliss, Texas; and Deputy Commanding General/Chief of Staff, U.S. Army Training and Doctrine Command (TRADOC). While commanding III Armored Corps and Fort Hood (Cavazos), Texas, he also led the war in Iraq and Syria against ISIS, during which time coalition forces seized the initiative, recaptured nearly half of the enemy's territory, and set the conditions for its final defeat.

After retiring from the Army, LTG (Ret) MacFarland taught at Georgetown University and was Vice President of Weapons Programs at General Atomics Electromagnetic Systems Group, where he formed a new division, quadrupling its revenue in four years.

In addition to earning numerous medals in peace and war, *Time Magazine* recognized him as one of 2016's 100 Most Influential People in the World.

EDUCATION

National Defense University, Industrial College of the Armed Forces, M.S., National Resource Strategy

Command and General Staff College, School of Advanced Military Studies, Master of Military Art and Science

Georgia Institute of Technology, M.S., Aerospace Engineering

United States Military Academy, B.S., Engineering

2024
PARENT BOARD
MEMBER

Thomas G. Mahnken, Ph.D.

President and CEO, Center for Strategic and Budgetary Assessments

Senior Research Professor, Johns Hopkins School of Advanced International Studies

EXPERTISE

Defense Strategy

Force Planning

Operational Planning

Nuclear Strategy

Military Innovation

Operational Concepts

Intelligence

SUBCOMMITTEE

Science and Engineering Adoption, Adaption, Integration, and Sustainment / Disposal

EXPERIENCE

Dr. Thomas G. Mahnken is President and Chief Executive Officer of the Center for Strategic and Budgetary Assessments. He is a Senior Research Professor at the Philip Merrill Center for Strategic Studies at the Johns Hopkins University's Paul H. Nitze School of Advanced International Studies (SAIS).

He currently serves as a member of the Congressionally mandated 2022 National Defense Strategy Commission. His previous government career includes service as Deputy Assistant Secretary of Defense for Policy Planning from 2006–2009, in the Office of Net Assessment, and in the Nonproliferation Policy Office in the Office of the Secretary of Defense. He served as a member of the 2018 National Defense Strategy Commission and on the Board of Visitors of Marine Corps University. He served on the staff of the Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction and the Gulf War Air Power Survey. He served for 24 years as an officer in the U.S. Navy Reserve, including tours in Iraq and Kosovo.

In 2009 he was awarded the Secretary of Defense Medal for Outstanding Public Service and in 2016, the Department of the Navy Superior Civilian Service Medal.

Dr. Mahnken's books include *Net Assessment and Military Strategy* (Cambria Press, 2020), *Learning the Lessons of Modern War* (Stanford University Press, 2020), *The Gathering Pacific Storm* (Cambria Press, 2018), *Competitive Strategies for the 21st Century* (Stanford University Press, 2012), T*echnology and the American Way of War Since 1945* (Columbia University Press, 2008), and *Uncovering Ways of War: U.S. Intelligence and Foreign Military Innovation, 1918–1941* (Cornell University Press, 2002).

EDUCATION

Johns Hopkins University, Ph.D., International Affairs

Johns Hopkins University, M.A., Strategic Studies and International Economics

University of Southern California, B.A., History

University of Southern California, B.A., International Relations

2024
PARENT BOARD
MEMBER

Katharina G. McFarland
The Honorable

Vice Chair, Army Science Board

Former: Assistant Secretary of Defense for Acquisition and
Acting Assistant Secretary of the Army (Acquisition, Logistics & Technology)

EXPERTISE

- Federal and Defense Acquisition
- Program Management
- Materials, Mechanical, Civil and Electronics Engineering
- Space Applications
- Artificial Intelligence
- Cyber
- Information Technologies
- Logistics

EXPERIENCE

The Honorable Katharina “Katrina” McFarland is widely recognized as a leading subject-matter expert on federal acquisition. She serves as Vice Chair of the Army Science Board, served as Chairman of the Board of Army Research and Development at the National Academies of Science and currently serves as a Director on a number of boards to include SAIC, Exyn Technologies, and Transphorm, Inc.

With over 30 years of government service, Ms. McFarland served as Assistant Secretary of Defense for Acquisition (2012–2017) as well as acting Assistant Secretary of the Army (Acquisition, Logistics & Technology) (2016–2017). She was President of the Defense Acquisition University 2010–2012. From 2006 to 2010, she was the Director of Acquisition, Missile Defense Agency.

Ms. McFarland is an accredited Materials, Mechanical, Civil and Electronics Engineer. She earned a Masters of Program Management from the Program Management Institute and received an Honorary Doctoral of Engineering degree from the University of Cranfield, United Kingdom.

She’s received the Presidential Meritorious Executive Rank Award, the Secretary of Defense Medal for Meritorious Civilian Service Award, the Department of the Navy Civilian Tester of the Year Award, and the Navy and United States Marine Corps Commendation Medal for Meritorious Civilian Service.

Ms. McFarland brings substantial experience from her work with the Department of Defense, the Department of the Army, and the Intelligence Community with a focus on space applications, artificial intelligence, cyber and IT technologies as well as with defense acquisition, program management, logistics, and technology.

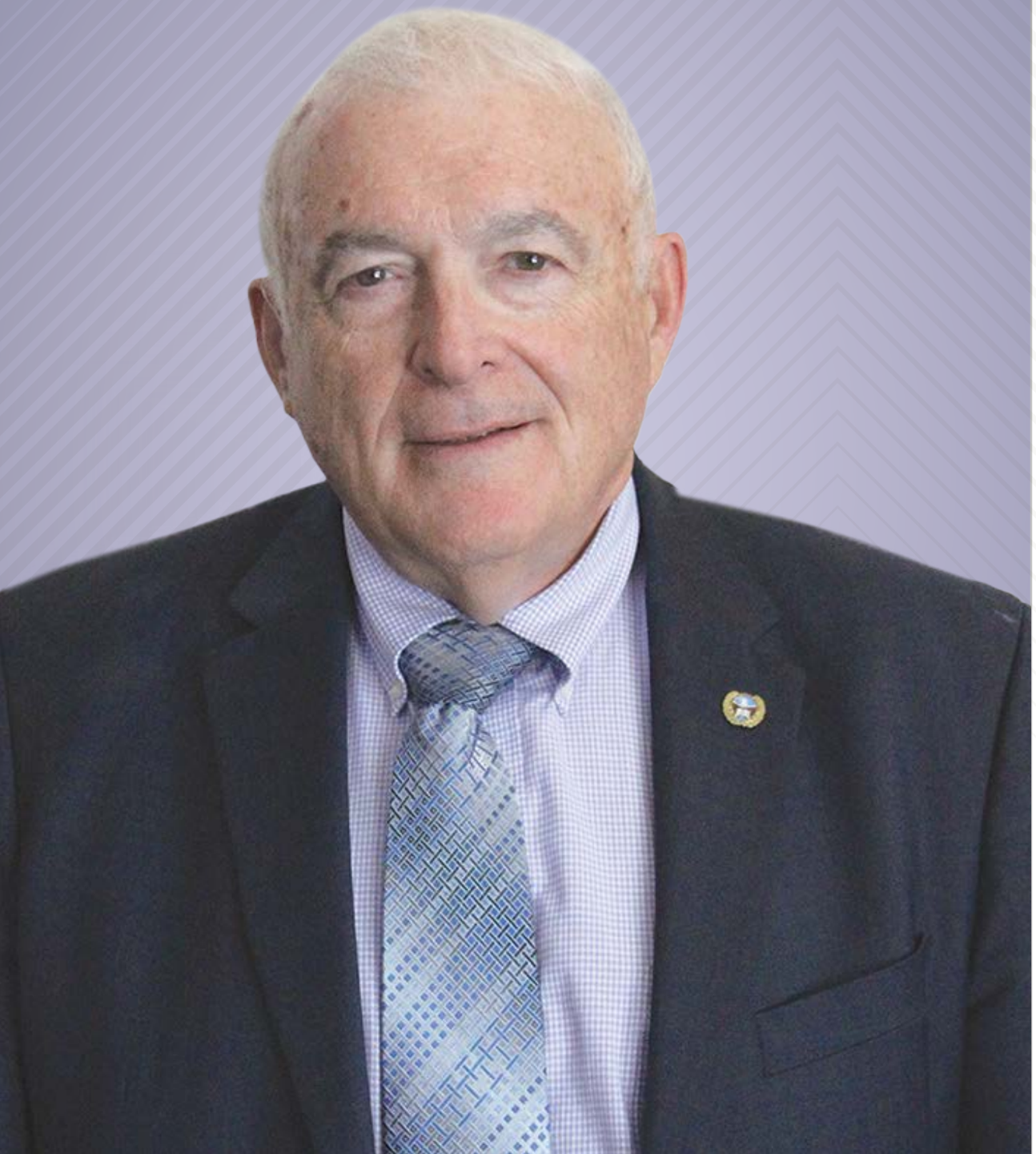
EDUCATION

University of Cranfield, United Kingdom, Honorary Ph.D., Engineering and Program Management

Program Management Institute, Masters of Program Management

Queen’s University, B.S., Applied Science

2024
PARENT BOARD
MEMBER



Terry L. Mitchell, COL (Ret) USA

Chair, Intelligence Subcommittee

Former Principal Cyber Advisor to the Secretary of the Army and the Chief of Staff, Army

EXPERTISE

Intelligence

Cyber Security

Leadership/ Management

Technology Integrator

Operational Testing

Congressional Relationships

International Outreach

Strategic Planner

SUBCOMMITTEE

Intelligence and Assessment (Chair)

STUDY TEAM

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED)

EXPERIENCE

Mr. Terry Mitchell's career spans the integration of technology, cyber, and military intelligence. A retired Level 3 SES executive and Army Colonel, he brings a wealth of experience to his work as Chair of the Intelligence Subcommittee of the Army Science Board, addressing threat issues for ASB's consideration in selecting and aligning Army technologies.

In his capstone role in Federal service, Mr. Mitchell served as Principal Cyber Advisor (PCA) to the Secretary of the Army and the Army Chief of Staff, advising them on all cyber matters, including implementing DoD Cyber Strategy across the Army. He previously served as Director, Army G-2 Plans and Integration Directorate, integrating Intelligence, Surveillance and Reconnaissance (ISR) technologies and oversaw collaboration between G-2 staff and Army Futures Command. As Assistant Deputy Under Secretary of Defense for Command and Control, he led Advanced Concept Technology Demonstrations, Joint Capability Technology Demonstrations, Technology Transition Initiative, Joint Warfare (Experimentation) Program and programs to enhance the Defense industrial base.

During his 27-year Army career, he served in myriad of Command and Staff positions concluding his career in the Office of the Secretary of Defense Operational Test and Evaluation Office. He was named DoD Military Tester of the Year for his strategy and conduct of the Year 2000 (Y2K) Operational Evaluations. He also earned the Department of Defense Distinguished Civilian Award, Distinguished Presidential Rank Award (2), Legion of Merit Awards (2), Defense Superior Service Medal, and other military awards.

Upon retirement from the Army and before going back to the government, Mr. Mitchell held position as Chief, Information Assurance Division, SNVC providing Cyber security to commercial banks. He also held a Vice President position in SAIC providing Program Management support to Defense Information Systems Agency.

EDUCATION

National War College, M.S., National Security Strategy
Boston University, M.S., Management Information Systems
Montana State University, B.S., Agriculture Business

2024
PARENT BOARD
MEMBER

Venkat B. Mummalaneni, J.D.

Senior Corporate Counsel, Northrop Grumman

EXPERTISE

Digital Engineering

AI/ML

5G

Internet of Things (IoT)

Cloud Computing and Cyber Security

Government Contracts (FAR/ DFARS and OTAs)

Intellectual Property Data Rights, Patents, and Trademarks

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) and Digital (Information Technologies)

EXPERIENCE

Mr. Venkat Mummalaneni is Senior Corporate Counsel at Northrop Grumman and supports Mission Systems Sector as the Lead Counsel for Engineering & Sciences (E&S), Operations (Manufacturing, Supply Chain, and Quality), and Advanced Technology Business Unit. He advises sector executives on management of legal issues including complex issues of significant financial and legal risks to the sector and company. Previously, Mr. Mummalaneni served as an Intellectual Property (IP) Counsel and advised Mission Systems on all IP matters related to government contracts, commercial licensing, and patents.

Mr. Mummalaneni practiced law in Washington, D.C. for nine years prior to joining Northrop. In his private practice, he advised top technology companies around the world on IP matters related to patent strategy, portfolio analysis and development, monetization, licensing, validity, and infringement.

Prior to becoming a Patent Attorney, Mr. Mummalaneni worked in the technology industry for Nortel and Ericsson for 14 years in various roles of increasing responsibilities. In leadership roles at Nortel, Mr. Mummalaneni managed organizations responsible for engineering, integrating, and supporting 4G (LTE) and 3G wireless networks for major wireless carriers in the world.

He also worked on programs of national importance such as Wireless Priority Services (WPS), Communications Assistance for the Law Enforcement Act (CALEA); and Enhanced 911 (E911). He also served on an expat assignment in Australia upgrading Telstra's network infrastructure for the 2000 Summer Olympics.

Mr. Mummalaneni is licensed to practice law in Washington, D.C., and is registered with the United States Patent and Trademark Office (USPTO).

EDUCATION

Texas A&M School of Law, J.D., *magna cum laude*

University of Texas at Dallas, M.S., Computer Science

Acharya Nagarjuna University, India, B.S., Electronics and Communication Engineering

2024
PARENT BOARD
MEMBER

Susan R. Myers
COL (Ret) USA, Ph.D.

Chair, C5ISR Subcommittee

DoD Sales Director, IBM

EXPERTISE

Cyber

Cloud

Information Technology

Data and Artificial Intelligence and Machine Learning

Logistics Teams

Quantum Computing

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) and Digital Information Technologies

(Chair)

STUDY TEAM

Human-Machine Integration (Vice Chair)

EXPERIENCE

Dr. Susan Myers is the Chairperson of the C5ISR subcommittee. She is a leader at strategic and operational levels and is responsible for developing and maintaining a pipeline of business opportunities valued at over $3B for both government and commercial sectors in DoD Cyber Security, informational technology modernization, training, and global logistics. Dr. Myers facilitates understanding of customer requirements to deliver effective solutions. As the former Director, Strategic Leadership and Management Division, U.S. Army War College and at the University of Maryland, she led and increased senior civilian and international officer enrollment by over 300 percent. She also managed the Department of Defense's and middle states' distance education program accreditation, integration of synchronous video technology, and orientation programs, increasing student retention by over 20 percent. As Battalion Commander and Instructor, U.S. Army Engineer School, COL (Ret) Myers was responsible for plans and professional development for over 1,000 faculty and students including the International Student Detachment.

She has served on the Army Science Board; the Board of Directors, National Defense Industry Association (NDIA); the National Awards Board; the Association of United States Army (AUSA); the National Education Board; the Armed Forces Communications Electronics Association (AFCEA); and the International Leadership Association.

Dr. Myers also participated in the ASB's Review of HQDA EXORD 009-20 "Army Data Plan in Support of Cloud Migration," March 2020; the International/Interservice Training, Simulation and Education Council (IITSEC); and the "Strategic Leader Development," Integral Leadership Review, 2010. Dr. Myers served as Chairman, Civilian-Military Panel, International Leadership Association (ILA) from 2007–2010 and contributed to the *S*trategic Leader Cognitive Development through Distance Education, and the *American Journal of Distance Education*, 2008.

EDUCATION

The Pennsylvania State University, Ph.D., Public Administration
U.S. Army War College, M.A., Strategic Studies
National University, M.B.A.
The Pennsylvania State University, B.S., Environmental Studies

2024
PARENT BOARD
MEMBER

William J. Neal, Ph.D.

Vice Chair Nominee, Systems Engineering Subcommittee

Independent Consultant

EXPERTISE

Command, Control, Communications, Computers and Intelligence

Systems Engineering

Computer and Information Systems Architecture

Acquisition and Technology Management

Ground Combat Vehicle Science and Technology

SUBCOMMITTEE

Systems Engineering and Sustainment

STUDY TEAM

Science and Engineering Adoption, Adaption, Integration, and Sustainent/Disposal Human-Machine Integration

EXPERIENCE

Dr. Neal was with The MITRE Corporation from 1992 to 2021. He was Executive Director of the Center for Acquisition and Systems Analysis; Consulting Engineer and Special Assistant for Army C4ISR; and Principal Engineer in the Center for Advanced Aviation Systems Development. Prior to this, he was Senior Vice President for Research and Development at Potomac Systems Engineering, Inc.

Throughout his professional career, Dr. Neal engaged with various organizations of the Department of Defense. His primary focus was systems and technologies involving computer, communication, and space capabilities in tactical, operational, and institutional environments. Dr. Neal contributed to several Army acquisitions including the Future Combat Systems, Joint Tactical Radio System, and LandWarNet. He contributed to systems architecture developments for Operations Desert Storm, Iraqi Freedom, and Enduring Freedom. In recent years, Dr. Neal supported management of defense science and technology programs for ground and sea platforms.

He previously served as a member of the Army Science Board (ASB) from: 1992 to 1998; 2006 to 2012; and 2019 to 2021. Dr. Neal chaired three ASB studies including Battlefield Visualization, An Approach to Developing an Affordable LandWarNet for Future Forces, and Wireless Tactical Networking. He contributed significantly to eight other ASB studies including Technical Information Architecture for Command, Control, Communications, and Intelligence, Concepts and Technologies for the Future Army, and Technical and Tactical Opportunities for Revolutionary Advances in Rapidly Deployable Joint Ground Forces in the 2015–2025 Era.

EDUCATION

Howard University, Ph.D., Electrical Engineering
Stanford University, M.S., Electrical Engineering
Howard University, B.S., Electrical Engineering

2024
PARENT BOARD
MEMBER

Alexis Lasselle Ross, Ph.D.

Parent Board Nominee

Founder and President of Apex Defense Strategies, LLC

EXPERTISE

- Defense Acquisition
- Defense Industrial Base
- Government Reform
- Organizational Restructuring
- Strategic Planning
- Executive Level Leadership
- Congress' involvement in National Security
- Executive-Legislative Branch relations
- DoD Policy and Programs
- Healthcare
- Personnel and Readiness

STUDY TEAM

- Human-Machine Integration

EXPERIENCE

Dr. Alexis Lasselle Ross is the President of Apex Defense Strategies, LLC, a strategic advisory firm that guides companies as they navigate the defense market. She has served more than two decades as an executive in both the public and private sectors. Most recently, she performed strategic planning at General Dynamics, advising corporate leadership on managing critical issues and navigating government business.

Prior to entering the private sector, Dr. Ross served in a variety of senior positions including as the Deputy Chief of Staff to Secretary of Defense Mark T. Esper, advising the Secretary and ensuring execution of Department of Defense (DoD) policy, programs, organizational restructuring, and external communications. During her tenure, she performed the duties of the Undersecretary of Defense for Personnel and Readiness, leading the department's healthcare and human resources systems during the early response to the COVID-19 pandemic. Previously, she served as the Deputy Assistant Secretary of the Army for Strategy and Acquisition Reform, where she designed and implemented improvements to the Army acquisition system, including new policies on intellectual property and advanced manufacturing.

Before her appointments to the DoD, she served as a professional staff member on the Armed Services Committee in the U.S. House of Representatives, the deputy director for healthcare policy at the Military Compensation and Retirement Modernization Commission, and as a civil servant in the Department of the Army.

Dr. Ross is a non-resident Senior Associate at the Center for Strategic and International Studies (CSIS), a senior fellow at the National Defense Industrial Association, a member of the Leadership Council for Women in National Security (LCWINS), and a Principal at Pallas Advisors.

EDUCATION

George Mason University, Ph.D., Public Policy
U.S. Naval War College, M.S., National Security and Strategic Studies
Bucknell University and Oxford University, B.A., International Relations

2024
PARENT BOARD
MEMBER

Michael E. Williamson
LTG (Ret) USA, Ph.D.

Chair, Army Science Board

President, Lockheed Martin International & Senior Vice President of Global Business Development and Strategy

EXPERTISE

- Army Acquisition
- Congressional Affairs
- Air Defense Artillery
- Future Combat Systems

EXPERIENCE

LTG (Ret) Michael E. Williamson currently serves as the Chair of the Army Science Board (ASB) and President, Lockheed Martin International & Senior Vice President of Global Business Development and Strategy. His role is focused on bringing integrated solutions to domestic and international customers who rely on Lockheed Martin's capabilities and technologies to support their missions and address their most pressing needs.

Prior to assuming his current role, LTG (Ret) Williamson was the Vice President and General Manager for Lockheed Martin Missiles and Fire Control (MFC). In this role, he was responsible for Missiles and Fire Control's digital transformation initiatives and IT offerings, and the newly formed Australian Defense Strategic Capabilities Office. Other positions he's held include Vice President of Program Performance responsible for leading Mission Success activities and associated Program Performance across MFC, Vice President of the Sensors & Global Sustainment line of business, and Vice President of Tactical and Strike Missiles.

Before joining Lockheed Martin, LTG (Ret) Williamson served as the Principal Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics and Technology and Director of Acquisition Career Management. He was the Army's senior acquisition officer, managing over 600 major Army programs totaling over $20B annually. LTG (Ret) Williamson served over 30 years in the U.S. Army. His most recent assignments include Deputy Commanding General, Combined Security Transition Command-Afghanistan; Deputy Program Executive Officer (PEO), Integration and Joint PEO for the Tactical Radio Systems; Director of Systems Integration, ASA (ALT) and Commander of the Software Engineering Center. He also served as a Congressional Fellow on Capitol Hill.

EDUCATION

Madison University, Ph.D., Business Administration
U.S. Naval Postgraduate School, M.S., Systems Management
Husson College, B.S., Business Administration

Senior Advisors

2024

SENIOR
ADVISOR

Leonard W. Braverman, Ph.D.

Former Army Science Board Chairman
Army Science Board Senior Advisor

EXPERTISE

Analog Electrical Engineering

High Power Electrical Devices

Pulsed Power

High Energy Lasers

Technology Development and Management

SUBCOMMITTEE

Basic Sciences and Enabling and Disruptive Technologies (Sr Advisor)

STUDY TEAM

Data-Centric Command & Control (C2)

EXPERIENCE

Dr. Leonard W. Braverman, formerly the Chairman of the Army Science Board (ASB), has worked on a number of ASB studies for the Secretary of the Army and has also served as Vice Chair, ASB.

Prior to his support for the U.S. Army, Dr. Braverman focused his work in the private sector where he personally developed and managed global sales and distribution channels for Universal Voltronics, Hipotronics, Maxwell Labs, and General Electric. Dr. Braverman has a lifetime career in the development, marketing, and management of highly sophisticated government and commercial systems. His expertise lies in transforming foreign Ministries of Defense, commercializing Deparment of Defense (DoD)-owned patents, transforming U.S. Army Headquarters, and determining the return on investment of DoD laboratories.

He was instrumental as a senior mentor during the formation of Army Futures Command (AFC). He participated in the establishment of a formal review process during the initial establishment of the AFC's Cross Functional Teams (CFTs). He also participated in a variety of science and technology (S&T) reviews aimed at aligning S&T with investigations into the Army's research priorities. He has also been a contributor to both domestic and international defense projects for Boston Consulting Group.

For the past decade, Dr. Braverman has dedicated his work to the transformation of U.S. Army organizations including work to transform Army Materiel Command (AMC) and the Training and Doctrine Command (TRADOC), which resulted in tangible savings of more than $1B per year.

EDUCATION

University of California, Berkeley, Ph.D., Electrical Engineering
University of California, Berkeley, M.S., Electrical Engineering
University of California, Berkeley, B.S., Electrical Engineering

2024

SENIOR
ADVISOR

William W. Hansen, COL (Ret) USA

Cavalry Creek Consulting Group, LLC

EXPERTISE

- Doctrinal Development
- Strategic Mobility
- Armor and Anti-Armor
- Strategic Planning
- Air and Missile Defense
- Combat Vehicle Development
- Training
- Joint and Combined Operations

SUBCOMMITTEE

Weapons Systems (Sr Advisor)

EXPERIENCE

Mr. William W. Hansen served for 24 years in positions at Ford Aerospace, Martin Marietta, and Lockheed Martin. His roles included Vice President (VP), Army Programs & Special Operations; VP, Direct Combat and Missile Defense and Strike Weapons; and VP, Information and Services Technology civil and commercial programs. Mr. Hansen is an Army veteran with 27 years of service.

Highlights of his service include Charter Membership, Chief of Staff Army Assessment and Initiatives group and Chief, Army Studies Group. He commanded the 1st Squadron, 10th Cavalry, and held positions at squadron, regiment, division, corps, Training and Doctrine Command, and at Headquarters, Department of Army staff level. His combat experience included positions in the 11th Armored Cavalry Regiment (Blackhorse).

He has contributed to the development of U.S. Army operational concepts and doctrine, led transition teams for major Army commands, published articles in professional journals and contributed to several books. He served on the Army Science Board and on the Board of Directors, National Defense University. Mr. Hansen was awarded the J. William Middendorf Award for outstanding research. His military awards include two Silver Stars, a Purple Heart, and the Vietnamese Gallantry Cross. He also received two Secretary of the Army public service awards. The U.S. Army Armor Association recognizes him as a distinguished Knight of the Order of St. George.

Mr. Hansen is the founder of Warrior Afield Legacy Foundation, a 501(c)(3) which conducts hunting, fishing, and offroad events for Combat Veterans.

EDUCATION

Massachusetts Institute of Technology Seminar XXI, Fellow
University of Utah, M.S.
University of Utah, B.S.

2024

SENIOR
ADVISOR

Michael R. Macedonia, Ph.D.

Assistant Vice President for Research
University of Central Florida

EXPERTISE

- Modeling and Simulations
- Systems Architecture
- Systems Engineering
- Computer Science
- Intelligence Technology
- Data Mining
- Networks
- High-Performance Computing

SUBCOMMITTEE

Systems Engineering and Sustainment (Sr Advisor)

STUDY TEAM

Data-Centric Command and Control (C2)

EXPERIENCE

Dr. Michael R. Macedonia is the Assistant Vice President for Research at the University of Central Florida (UCF). He is a computer scientist and an expert on modeling and simulation technologies, intelligence technology, data mining, networks, and high-performance computing. He is a former Infantry officer and an original member of the Uniformed Army Scientist Corps.

He has served as the Vice President and Chief Scientist/Chief Technology Officer/Technical Fellow for Simulation and Training Operations at SAIC. Prior to that, he was the General Manager for Forterra Systems, a virtual reality software company. Dr. Macedonia was the Director of the Disruptive Technology Office (DTO), now the Intelligence Advanced Research Projects Activity (IARPA), for the Office of the Director of National Intelligence. DTO was the U.S. Intelligence Community's centrally funded research activity for advanced technology. He also worked as the Chief Technology Officer for Program Executive Office (PEO) Simulation, Training, and Instrumentation (STRI) where he was responsible for the technology strategy of the U.S. Army's lead simulation system development organization.

Dr. Macedonia has authored over 50 scientific publications relating to virtual worlds, test and evaluation, and simulation. He has also contributed to the Army Science Board on a number of studies to include Future Character of Warfare (Chair), Robotic and Autonomous Systems of Systems (Vice-Chair), Human Interaction and Behavioral Enhancement (Chair), Battlefield Uses of Artificial Intelligence, and the 2020 study, Modeling and Simulation.

EDUCATION

U.S. Naval Postgraduate School, Ph.D., Computer Science
University of Pittsburgh, M.S., Telecommunications
U.S. Military Academy at West Point, B.S., Electrical Engineering and Political Science

2024

SENIOR
ADVISOR

David M. Maddox, GEN (Ret) USA

Consultant

EXPERTISE

Operations Research

Simulation and Modeling

Joint Operations/ Warfighting

Logistics

Organizational Design

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) and Digital (Information Technologies) (Sr Advisor)

STUDY TEAM

Human-Machine Integration

RED TEAM

Member

EXPERIENCE

GEN (Ret) David M. Maddox is a retired Army four-star general who served as Commander in Chief, U.S. Army Europe/Commander, Central Army Group (CINCUSAREUR/COMCENTAG); Commander, 7th U.S. Army (1992–1993); Commander in Chief, U.S. Army Europe (CINCUSAREUR) and Commander, 7th U.S. Army (1993–1994). In addition to commanding at every warfighting echelon, he led multiple Army analysis organizations. GEN (Ret) Maddox spent much of his time transitioning the Army in Europe to a post-Cold War stance.

Since retiring, GEN (Ret) Maddox has worked as an Independent Consultant. He has served on the Defense Science Board, the Army Science Board (ASB), the National Academy of Engineering, and the Board on Army Science and Technology (BAST) (Chair). He is a member of the George Mason University College of Engineering and Computing Board of Advisors, and Emeritus member of the Corporation of the Charles Stark Draper Laboratory.

He was appointed by the Secretary of the Army to serve on the commission to examine Army expeditionary contracting which issued the report of the *Commission on Army Acquisition and Program Management in Expeditionary Operations*. He later served as a member of the Department of the Army's study commissioned by the Secretary of the Army to conduct an *Army Acquisition Review*.

GEN (Ret) Maddox is a member of the National Academy of Engineering and has received the Military Operations Research Society's Wanner Award and the Management Sciences' J. Steinhardt prize. He is a member of the Army Operations Research Society Hall of Fame. He was the Army Science Board's first recipient of the Joseph V. Braddock Award. GEN (Ret) Maddox has been a member, consultant, senior advisor, and Red Team Member to the ASB for years. In 2019, GEN (Ret) Maddox chaired the *Reforming Talent Management* ASB study.

EDUCATION

Southern Illinois University, M.S., Operations Research
Virginia Military Institute, B.S., Mathematics

2024

SENIOR
ADVISOR

Teresa B. Smith

Retired, Northrop Grumman Corporation
Former Vice Chair, Army Science Board

EXPERTISE

- Research and Development
- Strategic Planning
- System Design and Development
- Micro-Electronics
- Large Electronic Systems Development
- Space Technologies
- Radio Frequency Transmission

RED TEAM

Member

SUBCOMMITTEE

Intelligence and Assessment (Sr Advisor)

STUDY TEAM

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED)

EXPERIENCE

Ms. Smith is a retired Defense Industry Executive and is a Senior Advisor to the Army Science Board (ASB). She is also the former Vice Chair of the ASB and the Naval Research Advisory Committee.

She worked for over 37 years at Northrop Grumman and Westinghouse Corporations. She held a number of senior leadership positions including Deputy Chief Technology Officer (CTO) and Corporate Director of Technology, Corporate Lead Executive for the Improvised Explosive Device (IED) Defeat Integration Group, Director of Advanced Program Development, and Director of Strategic Planning for Electronic Systems.

In these positions, Ms. Smith was responsible for defining and establishing future technology underpinnings as well as strategies for long-range growth for corporate sectors. Over the course of her career, her responsibilities included management of large development programs, oversight of major corporate campaigns, and analysis and planning of budgets and investments.

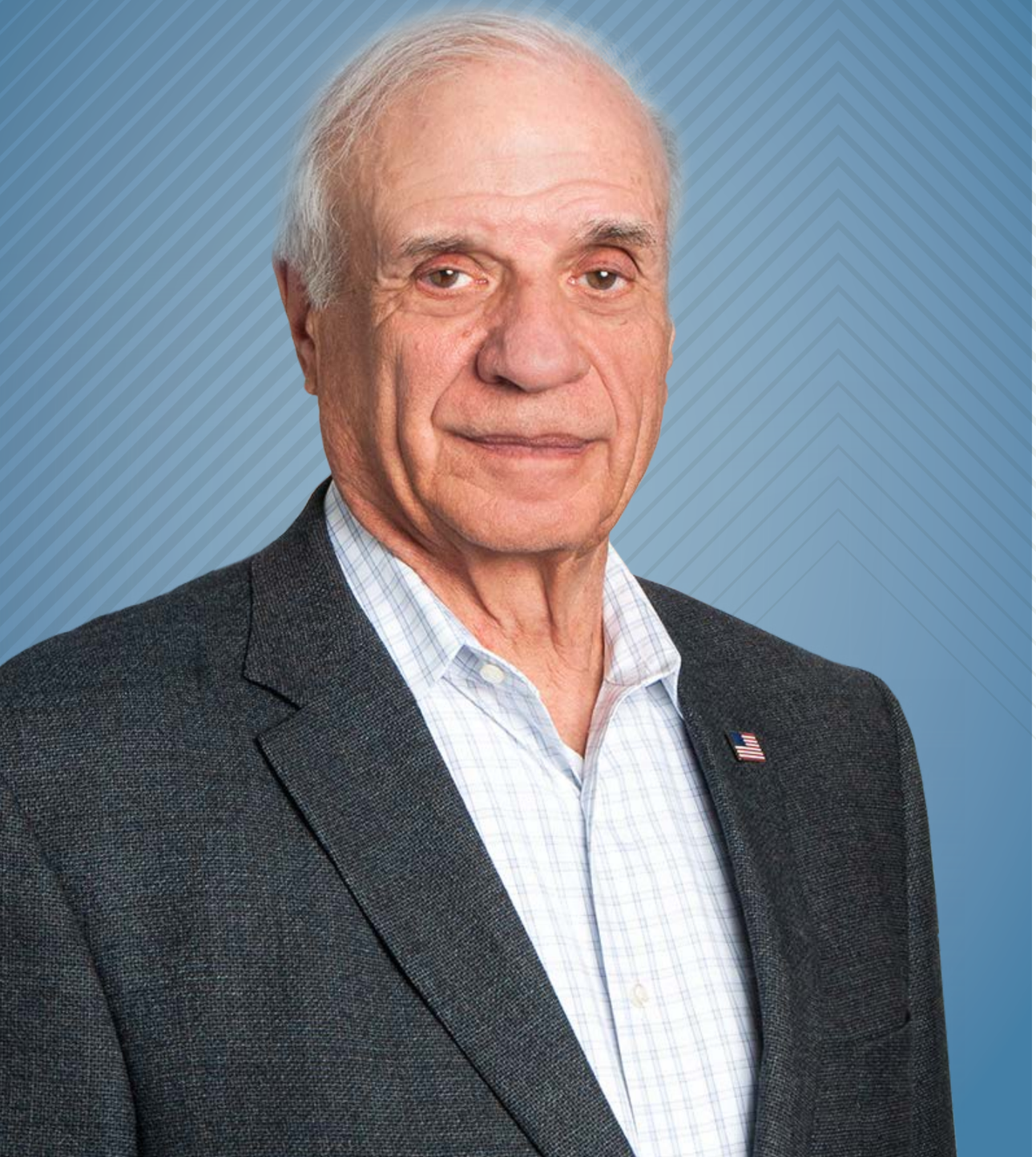
Ms. Smith has an extensive technology development background spanning large electronic systems to integrated microelectronics. She has two patents, several company invention awards, and numerous technical publications. She has been a member of several university, federal government and industry technical boards and is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE). In 1984, a presidential commission selected Ms. Smith as one of twelve White House Fellows from several thousand candidates. She served as a Special Assistant to the Administrator of the National Aeronautics and Space Administration (NASA) and as a liaison to the Strategic Defense Initiative Office.

EDUCATION

Harvard Business School, General Manager's Program
Johns Hopkins University, B.E.S., Electrical Engineering

2024

SENIOR
ADVISOR



James A. Tegnelia, Ph.D.

Former Chairman, Army Science Board
Former Deputy Director and Acting Director, Defense Advanced Research Projects Agency (DARPA)

EXPERTISE

- Management
- Physics
- Nuclear Engineering
- Science Administration

EXPERIENCE

Dr. James A. Tegnelia has over 65 years of dedicated service to the U.S. Army, the Department of Defense (DoD), the Department of Energy National Laboratories as well as the defense industry with a goal of improving national security. For the past several decades, he served in several advisory capacities to DoD. He served twice as Chairman of the Army Science Board (ASB), twice as the Vice Chair, ASB, many years as Senior Advisor, and Study Chair. He is currently a member of the Defense Science Board (DSB), the ASB, the Threat Reduction Advisory Committee, and a consultant to Sandia and Lawrence Livermore National Laboratories.

He is the former Deputy Director and Acting Director of the Defense Advanced Research Projects Agency (DARPA). He served in a multitude of positions to include Director, Defense Threat Reduction Agency (DTRA); Vice President (VP), Executive VP, and Deputy Director, Department of Defense (DoD) Programs, Sandia National Laboratories; President, Lockheed Martin Advanced Environmental Systems, Inc.; VP Engineering, Lockheed Martin Corporation; VP, Business Development, Electronics Group, Martin Marietta Corporation.

Dr. Tegnelia served as the Assistant Undersecretary of Defense and Acting Deputy Undersecretary of Defense in the Office of the Undersecretary of Defense for Research and Engineering. He also served in the National Security Advisory Panel Board of Advisors.

He previously lectured as a Research Professor at the University of New Mexico and Georgetown University. Dr. Tegnelia is the former Chairman of the Governor of New Mexico's Military Planning Commission; the former Chairman, Kirtland Air Force Base Partnership Committee (but continues as a member); and a past member of the Department of State International Security Advisory Board. He is an expert in management, physics, nuclear engineering, and science administration. Dr. Tegnelia is a Vietnam Veteran and a recipient of the Bronze Star (1970), the Defense Science Board's Eugene Fubini Award, and the ASB's Joseph V. Braddock Award.

EDUCATION

The Catholic University of America, Ph.D., Physics
The George Washington University, M.B.A.
Georgetown University, B.S., Physics

2024

SENIOR
ADVISOR

Marc A. Zissman, Ph.D.

Associate Head, Cyber Security and Information Sciences Division
Lincoln Laboratory, Massachusetts Institute of Technology *(on Loan)*

EXPERTISE

- Human Language Technology
- Speaker and Language Recognition
- Networking and Communications
- Tactical Networking on the Move
- Cyber Security
- Quantitative Test and Evaluation of Systems and Technology

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) and Digital (Information Technologies) (Sr Advisor)

EXPERIENCE

Dr. Marc A. Zissman is Associate Head of MIT Lincoln Laboratory's Cyber Security and Information Sciences Division. He joined the Laboratory in 1983. His early research focused on digital speech processing including parallel computing for speech coding and recognition, co-channel talker interference suppression, language and dialect identification, and cochlear-implant processing for the profoundly deaf. After working for one year in the Department of Defense (DoD) under the Inter-governmental Personnel Act (IPA) program, he expanded his research interests to include cyber security technology. He served in a series of Laboratory leadership roles including Associate Leader of the Human Language Technology Group, Leader of the Wideband Tactical Networking Group, and Assistant Head of the Communication Systems and Cyber Security Division.

In addition to his work at Lincoln Laboratory, Dr. Zissman served for four years as a U.S. technical specialist to the NATO IST- 011/ TG-001 task group which studies military applications of speech technology for NATO. He was elected to and served four years on the Speech and Language Processing Technical Committee of the Institute of Electrical and Electronics Engineers (IEEE) Signal Processing Society. He also served for four years on the Defense Advanced Research Projects Agency (DARPA) Information Science and Technology Study Group. He was part of the U.S. Southern Command (USSOUTHCOM) and Joint Task Force-HAITI team that responded to the January 2010 earthquake in Haiti. From 2011 through 2020 he served as a member of the Army Science Board, for which he led studies for senior Army leadership on The Future of Telemetry and the Battlefield Uses of Artificial Intelligence.

EDUCATION

Massachusetts Institute of Technology, Ph.D., Electrical Engineering
Massachusetts Institute of Technology, S.M., Electrical Engineering
Massachusetts Institute of Technology, S.B., Electrical Engineering
Massachusetts Institute of Technology, S.B., Computer Science

2024

Basic Sciences & Disruptive Technologies Subcommittee

Basic Sciences & Disruptive Technologies Subcommittee

As authorized by the Secretary of Defense and the Secretary of the Army and pursuant to the Federal Advisory Committee Act of 1972 and Government in the Sunshine Act of 1976, the Chairman of the Army Science Board (ASB) establishes the Basic Sciences and Enabling and Disruptive Technologies Subcommittee. The following Terms of Reference (TOR) outline the duties and responsibilities of the subcommittee in accordance with the ASB charter (May 2022).

The Basic Sciences and Enabling and Disruptive Technologies Subcommittee, as part of the ASB, shall provide advice and recommendations to the ASB for its thorough deliberation and decision at a properly noticed ASB meeting on matters relating to the Army's research in basic sciences and enabling and disruptive technologies, to include:

- ✯ Soldier performance enhancement, cognition improvement, and training
- ✯ Autonomous systems and human-machine teaming
- ✯ Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE)
- ✯ Countering Weapons of Mass Destruction (CWMD)
- ✯ Energetics
- ✯ Material science
- ✯ Emerging technologies, e.g., artificial intelligence (AI), machine learning (ML), additive manufacturing, quantum computing, human enhancement, etc.

Subcommittee Leadership including
Parent Board Members listed previously

Chair, Basic Sciences & Disruptive Technologies Subcommittee

Gisele B. Bennett, Ph.D.
Parent Board Member

William Guyton, Jr.
Parent Board Member

2024
SUBCOMMITTEE
MEMBER

Richard G. Ames, Ph.D.

Subcommittee Nominee

Chief Engineer, Corvid Technologies

EXPERTISE

- Weapon Effects
- Modeling and Simulation
- Conventional Warheads
- Energetic Materials
- Shock Physics
- Fluid Mechanics
- Science Policy

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

EXPERIENCE

Dr. Richard Ames is a nationally recognized leader in weapon effects, warhead technologies, threat vulnerability and weapon effects modeling and testing. He has also worked at the highest levels of the Department of Defense (DoD) on science policy, particularly as related to technology transfer that addresses critical DoD needs. He has held positions in government, big business and small business in a variety of capacities while maintaining active involvement and leadership in DoD-related professional societies.

He currently serves as Chief Engineer at Corvid Technologies, an engineering services company with more than 400 employees working mostly for defense customers across a range of technical specialties including kinetic and non-kinetic weapon effects, aerodynamics, hydrodynamics, shock physics and manufacturing. Prior to joining Corvid, Dr. Ames was with Raytheon where he served as a program manager and chief engineer on several classified technology development programs. While at Raytheon, Dr. Ames also served as the weapon effects lead for a variety of programs spanning applications in offensive hypersonics, defensive hypersonics, maritime threats, and a variety of other areas of interest to defense customers.

Prior to his time at Raytheon, Dr. Ames worked technology development programs at the Naval Surface Warfare Center, Dahlgren Division. In that role, he served as principal investigator for a variety of energetics and warheads-related technology development and demonstration programs including several related to reactive materials and multi-phase blast explosives.

Dr. Ames has 5 patents, over 10 peer-reviewed publications, over 30 conference papers and has been an invited speaker at multiple technical conferences.

EDUCATION

Georgia Institute of Technology, Ph.D., Aerospace Engineering (Fluid Mechanics/Aerodynamics)

Georgia Institute of Technology, Dupree College of Management, M.B.A.

Georgia Institute of Technology, M.S., Aerospace, Aeronautical, and Astronautical Engineering

Georgia Institute of Technology, B.S., Aerospace Engineering

2024
SUBCOMMITTEE
MEMBER

Rachel M. Azafrani

Director, Office of Responsible Artificial Intelligence
Microsoft Corporation

EXPERTISE
- Artificial Intelligence
- Cybersecurity
- Cloud
- Safety
- International Security
- Regulatory Risk

SUBCOMMITTEE
- Basic Sciences & Enabling & Disruptive Technologies

STUDY TEAM
- Human-Machine Integration

EXPERIENCE

Ms. Rachel Azafrani is Director, Office of Responsible Artificial Intelligence (AI), Microsoft Corporation. In this role, she oversees the governance of high-risk AI cloud services by developing and implementing internal and external strategy to mitigate Microsoft's exposure to safety, human rights, and regulatory risk resulting from AI systems.

Prior to this, Ms. Azafrani served as a Security Strategist for Microsoft's Digital Diplomacy team where she led company-wide public policy strategy for AI and the Internet of Things (IoT) security. Ms. Azafrani instituted a security update disclosure policy for Xbox consoles used by over 100 million consumers worldwide.

Other key roles she has had include Research Associate, Digital Ethics Lab, Oxford Internet Institute, UK and Cyber Advanced Support Operations Instructor, BlackHorse Solutions, Inc., where she managed teams for delivery of cybersecurity strategy products including for the Department of Defense. Here she trained over 400 U.S. government personnel to utilize cybersecurity, emerging technology, and social media in their counterterrorism, force protection, counterproliferation, and other mission sets.

Ms. Azafrani was named to the Women Leaders of Conversational AI Class of 2023, and in 2022, she was awarded a Special Jury Recognition from the Women in Artificial Intelligence. Other awards and recognition include being named as a German Marshall Fund Young Professional, a Rhodes Scholarship Finalist, and a Healy Scholar, Oxford University.

EDUCATION

University of Oxford, Oxford Internet Institute, M.Sc., Social Science of the Internet with Distinction

Georgetown University, Walsh School of Foreign Service, B.S.F.S., International Political Economy *magna cum laude*

2024
SUBCOMMITTEE
MEMBER

ASB
2024

Christina M. Baxter, Ph.D.

Chief Executive Officer (CEO), Emergency Response TIPS, LLC

SUBCOMMITTEE
MEMBER

EXPERTISE

Chemical, Biological, Radiological, Nuclear (CBRN)/Hazardous Materials Response

Training, Curriculum Development

Threat Analysis

Personal Protective Equipment

Chemical and Biological Detection

Decision Support System Design

Management

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

STUDY TEAM

Human-Machine Integration

EXPERIENCE

Dr. Christina Baxter is the CEO of Emergency Response TIPS, LLC, where she provides consulting services on emerging Chemical, Biological, Radiological, and Nuclear (CBRN) threats, next generation CBRN detector design, and technology transition to operational reality. She was also a partner in Hazard3, LLC, which provides practical, evidence-based solutions for emergency response through the development of next generation tools for enhanced responder safety and education in the areas of CBRNE (E-explosives), hazardous materials, and clandestine laboratory response. Hazard3, LLC was procured by Safeware, Inc. in 2023.

Prior to forming Emergency Response TIPS, LLC, Dr. Baxter was the CBRNE Program Manager for the U.S. Department of Defense (DoD) Combating Terrorism Technical Support Office (CTTSO) where she was responsible for developing and fielding next generation capabilities for the CBRNE response elements. Prior to moving to DoD, Dr. Baxter was a Senior Research Scientist at Georgia Tech Research Institute (GTRI) and, in parallel, held various positions in Atlanta-area fire and emergency management agencies.

She has over 25 years of experience in the hazardous materials/CBRN response community where she remains actively teaching, performing research, and participating in the standards development processes. She is a member of the International Association of Fire Fighters HazMat Advisory Board, the International Association of Fire Chiefs HazMat Committee, the Interagency Board for Equipment Standardization and Interoperability, the American Society for Testing and Materials (ASTM) International Committee on Personal Protective Clothing, as well as several National Fire Protection Association committees relating to hazardous materials response and protection. Dr. Baxter also sits on the National Academy of Sciences Standing Committee on Personal Protective Equipment for Workplace Safety and Health and was a member of the Safe Transportation of Liquified Natural Gas by Railroad Tank Car Committee.

EDUCATION

Georgia Institute of Technology, Ph.D., Analytical Chemistry
University of Massachusetts (Amherst), B.S., Chemistry
University of Massachusetts (Amherst), B.S., Environmental Science

2024
SUBCOMMITTEE
MEMBER

Grace M. Bochenek, Ph.D.

Director and Professor, School of Modeling, Simulation, and Training
University of Central Florida

EXPERTISE

Science

Technology Investment Strategies

Technology Maturation and Integration

Performance Analyses with an emphasis on Strategic Alliances

Partnerships

Global/International Programs

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

STUDY TEAM

Human-Machine Integration

EXPERIENCE

Dr. Grace Bochenek currently heads the University of Central Florida's modeling and simulation research and academic programs. She is leading the university's efforts to expand basic, applied, and advanced technology research, and coalescing efforts across the university colleges, schools, institutes, and labs to inspire and apply simulation. Dr. Bochenek's work in defining and growing strategic alliances for the University includes establishing partnerships with other universities, government, industry, congressional, economic development organizations, and civic leaders. She is a visionary and strategic thinker. She joined the University of Central Florida (UCF) in 2021 as the director of the School of Modeling, Simulation and Training, and the Institute for Simulation and Training.

Prior to joining UCF, Dr. Bochenek held positions in both the Department of Energy and Department of Defense as a member of the federal government Senior Executive Service and she has over 30 years of technical and managerial experience. She served as Director of the National Energy Technology Laboratory (NETL) and in the Department of Army as the Chief Technology Officer of the U.S. Army Materiel Command and Director of the Tank Automotive Research, Development and Engineering Center. Dr. Bochenek held a presidential appointment as the Acting Secretary of Energy during the 2017 administration transition. She has been recognized with numerous awards including the Presidential Rank Award as Meritorious Executive; a Silver Medal from the National Defense Industrial Association; and decorations for Exceptional Civilian Service from both Departments of the Army and Energy. Dr. Bochenek is a board member of the National Academies of Science, Engineering, and Medicine (NASEM) and a member of the Academy of Science Engineering and Medicine of Florida (ASEMFL).

EDUCATION

University of Central Florida, Ph.D., Industrial & Systems Engineering
University of Michigan-Dearborn, M.S., Industrial & Systems Engineering
Wayne State University, B.S., Electrical Engineering

2024
SUBCOMMITTEE
MEMBER

Steve A. Chien, Ph.D.

Subcommittee Nominee

Technical Fellow and Head, Artificial Intelligence Group
Jet Propulsion Laboratory, California Institute of Technology

EXPERTISE

Artificial Intelligence

Autonomous Systems

Logistics

Space Systems

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

STUDY TEAM

Human-Machine Integration

EXPERIENCE

Dr. Chien is a Technical Fellow and the head of the Artificial Intelligence Group at the Jet Propulsion Laboratory, California Institute of Technology. He and his team have deployed Artificial Intelligence (AI) software to dozens of space missions including several billion-dollar missions: European Space Agency's (ESA) Rosetta Orbiter and the Mars Science Laboratory and M2020 Mars rovers as well as the Deep Space Network. Dr. Chien has received numerous awards for this work including the Lew Allen Award for early career technical achievement, the inaugural American Institute of Aeronautics and Astronauts (AIAA) Intelligent Systems Award, and four NASA Medals for his work in developing and deploying Space Autonomy capabilities. He is a four-time honoree in the NASA Software of the Year Competition. In 2015, he was awarded a JPL Magellan Award as well as the NASA Exceptional Achievement Medal for his contributions to automated science scheduling for ESA's Rosetta mission.

He has supported the Office of the Undersecretary of Defense for Research and Engineering, the Defense Science Board, the Air Force Scientific Advisory Board, and now the Army Science Board. He has testified before the U.S. Senate on AI. In 2018, he was Congressionally appointed to the National Security Commission on AI and served for the duration of this commission through 2021.

Dr. Chien has authored hundreds of peer-reviewed publications on AI, autonomous systems, remote sensing, and science. He is a founder of the International Workshop on Automated Planning and Scheduling for Space (IWPSS) (1997) and the International Conference on Automated Planning and Scheduling (ICAPS) (2003). He was an elected Councilor for the Association for the Advancement of Artificial Intelligence (AAAI) 2003–2006.

EDUCATION

University of Illinois, Ph.D., Computer Science/Artificial Intelligence
University of Illinois, M.S., Computer Science
University of Illinois, B.S., Computer Science

2024
SUBCOMMITTEE
MEMBER

Ray Michael Dowe, Jr., Ph.D.

Subcommittee Nominee

Executive Consultant and Member of Corporate Boards

EXPERTISE

Defense Research, Development, and Acquisition (RDA)

Directed Energy

C4

Ballistic Missile Technology

Missile Defense

Fusion Power

Sensor Technology

EXPERIENCE

Dr. Ray Michael Dowe, Jr., has over 60 years of experience in defense and industrial research, development, and acquisition in the fields of space, directed energy, Command, Control, Communications, and Intelligence (C3I), ballistic missile technology, missile defense, fusion power, and sensor technology. This includes six years managing major defense programs at Advanced Research Projects Agency (ARPA) in these fields while a United States Army officer. While in the Army, he served 14 years as a unit commander, a service school instructor, and a war plans officer in Europe. During that time, he served three years in combat duty.

Prior to retiring from full-time work on his 90th birthday in 2017, Dr. Dowe served 10 years as the Chief Scientist for Raytheon's Ktech subsidiary. In the prior 12 years, as President and CEO, he built Information Systems Labs (ISL) from a six-man unit to a major Defense research and development (R&D) Corporation. Previously, he had served as a senior executive in the Titan Corporation, W. J. Shafer Associates, Jaycor, Science Applications, and Booz Allen Hamilton. Dr. Dowe also served concurrently in academia for 12 years as a professor of physics.

He has served on 16 boards of directors and over 40 distinguished government advisory committees. In addition to various awards for his industrial leadership, awards for military service include the Purple Heart. Dr. Dowe has served over ten years on the Army Science Board and has published over 100 articles in journals, books, and reports.

EDUCATION

University of Alabama, Ph.D., Physics
University of Alabama, M.S., Physics
U.S. Military Academy at West Point, B.S., Military Engineering

2024
SUBCOMMITTEE
MEMBER

Ronald G. Driggers
CDR (Ret) USNR, Ph.D.

Professor, University of Arizona's College of Optical Sciences

EXPERTISE

Infrared Systems

Targeting

Intelligence, Surveillance and Reconnaissance (ISR)

Electro-Optics

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

STUDY TEAM

Human-Machine Integration

EXPERIENCE

Dr. Ronald G. Driggers is a professor at the University of Arizona's College of Optical Sciences. Previously, he was appointed to the Senior Executive Service as the Superintendent of the Optical Sciences Division at the Naval Research Laboratory in 2008. Before 2008, he served as the Director of the Modeling and Simulation Division at the U.S. Army's Night Vision and Electronic Sensors Directorate (NVESD) and for a brief period as the Chief of the Electro-Optics and Photonics Division at the Army Research Laboratory.

He is an experienced presenter, briefing the Chief of Naval Operations, the Vice Chief, Naval Operations, the Army Vice Chief of Staff, Senate and House members, delegates, staff, the House Armed Services Committee (HASC) subcommittee members, Chief Scientists of the Air Force, Army, and Naval Research, and has provided multiple seminars to universities and labs around the world.

Dr. Driggers is the author of seven books on Infrared and Electro-Optics Systems and has published over 180 research papers. He was selected as the 2002 Army Materiel Command's Engineer of the Year, 2001 Communications-Electronics Research Development and Engineering Center (CERDEC) Technical Employee of the Year, and 2001 NVESD Technical Employee of the Year. He was a U.S. Naval Reserve Officer and was selected as the 2001 Naval Engineering Duty Officer of the Year (William Kastner Award).

He is also a Fellow of the International Society for Optical Engineering, the Optical Society of America, and the Military Sensing Symposium. He was the Editor-in-Chief of the Society of Photo-Optical Instrumentation Engineers (SPIE's) flagship journal, *Optical Engineering* from 2010–2015 and the Editor-in-Chief of the Optical Society of America's journal *Applied Optics* from 2015–2021.

EDUCATION

University of Memphis, Ph.D., Electrical Engineering
University of Memphis, M.S., Electrical Engineering
University of Memphis, B.S., Electrical Engineering

2024
SUBCOMMITTEE
MEMBER

Melissa L. Flagg, Ph.D.

Founder and President, Flagg Consulting, LLC

EXPERTISE

National Security

Government Emerging Technology

Team Building

Change Implementation

Strategic Leadership

Technology Innovation

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

EXPERIENCE

Dr. Melissa Flagg is the Founder and President of Flagg Consulting. In this role, she advises organizations navigating the emerging technology landscape in an era of great power competition. She is a Fellow at the Acquisition Innovation Research Center, Stevens Institute of Technology, a Department of Defense (DoD)-sponsored research center providing analysis on novel approaches to defense innovation and acquisition. In this position, she leads independent research on the nature of the innovation challenge within the Department of Defense culminating in a report to assure acquisition systems can respond to rapidly emerging technology. Dr. Flagg is also a Visiting Fellow at Perry World House, the University of Pennsylvania, where she provides mentoring and insights into the intersection of emerging technology and national security. Her focus is on the changing role of privately funded R&D on national security and innovation.

Other assignments have included Senior Fellow/Advisor at the GeoTech Center, Atlantic Council; Senior Fellow, Center for Security and Emerging Technology, Georgetown University; Adjunct Professor, Walsh School of Foreign Service, Georgetown University; Lead, U.S. Army Research Laboratory, Cambridge, MA; Adjunct Senior Fellow, Tech and National Security Research Program, Center for a New American Security; and Deputy Assistant Secretary of Defense where she was responsible for policy and oversight of DoD Science and Technology programs from Basic Research through Advanced Technology Development. Dr. Flagg currently serves on the Board of World Forest Illegal Deforestation (ID).

EDUCATION

University of Arizona, Ph.D., Pharmaceutical Chemistry
University of Mississippi, B.S., Pharmacy

2024
SUBCOMMITTEE
MEMBER

Maren Leed, Ph.D.

President, Lumen Analytics, LLC

EXPERTISE

Defense Strategies

National Security

Analysis

Artificial Intelligence

Political Science

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

RED TEAM

Member

EXPERIENCE

Dr. Maren Leed is a consultant providing strategic advice to defense and national security companies and non-profits, as well as dual-use startups. Her prior positions include Head of Strategy, Rebellion Defense; Executive Director, National Spectrum Consortium; Senior Professional Staff/Senior Analyst at Johns Hopkins University Applied Physics Laboratory; Senior Advisor to the Chief of Naval Operations (CNO) and prospective CNO; Adjunct Professor, U.S. Naval Academy and Georgetown School of Foreign Service; Senior Advisor and Program Director, Center for Strategic and International Studies; Senior Advisor, Chief of Staff of the United States Army (CSA); Full Policy Analyst, RAND Corporation; Special Assistant to the Vice Chairman of the Joint Chiefs of Staff; Professional Staff Member, U.S. Senate Armed Services Committee; and Analyst, Office of the Secretary of Defense (OSD), Program Analysis & Evaluation (PA&E).

She currently serves as a member of the Advisory Board for Wave Engine Corp. She previously served on the Board of Advisors, National Defense Industry Association; the Diversity and Inclusion Working Groups at Johns Hopkins University (JHU); Applied Physics Lab (APL) and Rebellion Defense; and as Acting President and Member of the Board of Advisors, Naval War College and Naval Post Graduate School.

EDUCATION

RAND Graduate School, Santa Monica, CA, Ph.D., Quantitative Policy Analysis (Distinction, General Policy Analysis)

Occidental College, Los Angeles, CA, B.A., Political Science

2024
SUBCOMMITTEE
MEMBER

Philip Perconti, D.Sc.

Subcommittee Nominee

Senior Vice President, Chief Technology Officer

EXPERTISE

Technology

Research and Development

Strategy

Quantum Information Sciences

Artificial Intelligence

Sensors & Electron Devices

Night Vision & Electronic Sensors

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

STUDY TEAM

Human-Machine Integration (Chair)

EXPERIENCE

Dr. Philip Perconti is the Senior Vice President, Chief Technology Officer, Leonardo DRS leading corporate research and development strategy development across eight diverse businesses. Previously, he served as the Deputy Assistant Secretary of the Army for Research and Technology and the Army's Chief Scientist. In these roles, he was responsible for policy and oversight of the Army's Research and Technology program which spanned 17 Laboratories and Engineering Centers.

Prior to this assignment, Dr. Perconti served as Director of the U.S. Army Research Laboratory (ARL), the senior executive responsible for setting the strategy and mission for the Army's Corporate Research Lab. He started the Army's major research initiatives in Quantum Information Sciences and Artificial Intelligence.

He also ran the ARL Sensors & Electron Devices Directorate and was responsible for leading the Army's primary basic and applied research programs in sensors, electronics, and information processing. Dr. Perconti ran the Science and Technology Division at the Night Vision & Electronic Sensors Directorate and led the Army's applied research and manufacturing technology programs for uncooled and high performance cooled infrared sensors.

Dr. Perconti entered the Army's Senior Executive Service in 2013. His commendations include the Distinguished Presidential Rank Award and the Army Distinguished Civilian Service Award. He is a Federal Laboratory Consortium Laboratory Director of the Year and a Technical Fellow of the Military Sensing Symposium. Dr. Perconti has published extensively on many aspects of military sensing and machine learning/AI technology. He has authored and co-authored over 50 publications, including three book chapters. He holds two patents.

EDUCATION

George Washington University, D.Sc., Electrical & Computer Engineering

Johns Hopkins University, M.S., Electrical Engineering

George Mason University, B.S., Electrical Engineering with distinction

2024
SUBCOMMITTEE
MEMBER

Vivek Rao, Ph.D.

Faculty Director of the Masters of Engineering in Design and Technology Innovation, Pratt School of Engineering, Duke University

EXPERTISE

Engineering Design Theory and Methodology

R&D and Innovation Strategy

Entrepreneurship

Emerging Technologies

Human-AI Teaming in Design

Curriculum Development and Instruction

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

EXPERIENCE

Dr. Vivek Rao is the Faculty Director of the Masters of Engineering in Design and Technology Innovation at Duke University's Pratt School of Engineering, where his teaching and research focuses on design theory and methodology and its intersection with emerging technologies and sociotechnical systems.

His research has received support from federal, state, and private sector organizations and has earned multiple awards including the 2020 American Society of Mechanical Engineers (ASME) International Design Engineering Technical Conference (IDETC) Best Paper Award in the Design Theory and Methodology track.

He has authored or co-authored more than 20 peer-reviewed articles in design theory and methodology and related fields. Prior to Duke, Vivek was on the professional faculty at UC-Berkeley's Haas School of Business, where he continues to teach, and was a postdoctoral researcher at UC-Berkeley's Department of Mechanical Engineering.

His work in national security includes developing and facilitating innovation workshops for more than 20 DoD organizations in partnership with the National Security Innovation Network.

Prior to returning to academia, Dr. Rao worked as an engineering designer and strategist at IDEO Global Innovation Consultancy and a plant process research and development (R&D) engineer in the wastewater enterprise with the San Francisco Public Utilities Commission.

EDUCATION

Vienna University of Technology (Austria), Fulbright Scholar, Electrical Engineering

University of California, Berkeley, Ph.D., Mechanical Engineering

University of California, Berkeley, M.S., Mechanical Engineering

University of California, Berkeley, B.S., Mechanical Engineering

2024
SUBCOMMITTEE
MEMBER

Thomas P. Russell, Ph.D.

Vice Chair, Basic Sciences Subcommittee

CEO & President, Defense Science and Technology Consultants, LLC

EXPERTISE

Basic Applied Research and Advanced Technology Development

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies (Vice Chair)

EXPERIENCE

Dr. Thomas Russell's 30-year government science and technology career has focused on leading and executing complex multi-disciplinary research programs to meet future warfighter needs. He has served with the Navy (16 years), the Air Force (6 years), and the Army (8 years).

In his last government position as the Deputy Assistant Secretary of the Army (Research and Technology)/Army Chief Scientist, he was responsible for policy and oversight of the Army's Research and Technology program spanning 16 laboratories and Research, Development and Engineering Centers. In this position, Dr. Russell was charged with setting strategic directions and identifying, developing, and demonstrating technology options that inform and enable effective and affordable capabilities for the Soldier.

He also served as Director, U.S. Army Research Laboratory, where he was responsible for the Army's premier research laboratory. Here, he provided oversight and leadership for planning and execution of research and analysis in weapons and materials, sensors and electron devices, computational and information sciences, human research and engineering, vehicle technology, and survivability and lethality analysis.

As the Director, U.S. Air force Office of Scientific Research (AFOSR), he was responsible for the management of the entire USAF basic research investment. In this role, he actively directed the research investment portfolio to identify breakthrough opportunities and revolutionary basic research that will profoundly impact the Future Air Force.

Dr. Thomas Russell is the recipient of the Army Research Laboratory, Life-time Achievement Award and the SES Presidential Rank Award for Meritorious Executive Service.

EDUCATION

University of Delaware, Ph.D., Analytical Chemistry
Muhlenberg College, B.S., Chemistry

2024
SUBCOMMITTEE
MEMBER

James R. Smith, COL (Ret) USAF

Subcommittee Nominee

Director, Defense Strategy and Capture
Corvid Technologies/Talon Analytics

EXPERTISE

Aerospace

Defense Strategy

Leading Large Global Operations

International Business

NATO

Advanced Land Warfare Systems

Missile Systems

SUBCOMMITTEE

Basic Sciences & Enabling & Disruptive Technologies

STUDY TEAM

Human-Machine Integration

EXPERIENCE

COL (Ret) James R. Smith is a consultant with the U.S. Army Science Board. He currently serves as the Director, Defense Strategy and Capture at Corvid Technologies/Talon Analytics. In this role, he provides consulting and technical services to defense industry and government organizations for new technology launches, program execution and strategy development.

Prior to this job, he worked as the Director, Global Requirements and Capabilities at Raytheon Technologies where he worked on emerging defense requirements and capability needs of the U.S. European Command and the North Atlantic Treaty Organization (NATO)/ European partner nations. He created $780M of growth in countries neglected for more than five years including Belgium, Czech Republic, Slovakia, Austria, Slovenia, Kosovo, Croatia and North Macedonia by focusing company/in-country consultants.

He also served as Director, Advanced Land Warfare Systems, Raytheon Missile Systems where he led multi-functional and matrixed team responsible for research, development and testing of new land warfare weapons technologies for U.S. and global coalition partners. His portfolio included missiles, projectiles, vehicle active protection systems, software, and high-powered microwave systems. He received Raytheon's President's award for his work with U.S. Army Special Operations Command and precision strike missile technology maturation.

His military career included service as a command pilot and instructor with over 2700 hours of flying in F-15 and F-16 fighter aircraft in the U.S., Europe, Pacific and Middle East, including contingency operations over Iraq, Bosnia, and Kosovo. He commanded at the squadron, group, and vice wing levels as well as serving on major command staffs.

EDUCATION

U.S. Air War College, Master of Strategic Studies

U.S. Army Command and General Staff College, Master of Military Arts and Sciences

Florida State University, M.A., European History

U.S. Air Force Academy, B.S.

2024

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Digital (Information Technologies) Subcommittee

2024

SUBCOMMITTEE
TOR

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) and Digital (Information Technologies) Subcommittee

As authorized by the Secretary of Defense and the Secretary of the Army and pursuant to the Federal Advisory Committee Act of 1972 and Government in the Sunshine Act of 1976, the Chairman of the Army Science Board (ASB) establishes the Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) and Digital (Information Technologies) Subcommittee. The following Terms of Reference (TOR) outline the duties and responsibilities of the subcommittee in accordance with the ASB charter (May 2022).

The C5ISR and Digital (Information Technologies) Subcommittee, as part of the ASB, shall provide advice and recommendations to the ASB for its thorough deliberation and decision at a properly noticed ASB meeting on matters relating to the Army's C5ISR and digital (information technologies) core competencies, including:

- ✯ Tactical edge command, control, and communications (C3) in contested environments
- ✯ Situational awareness overmatch
- ✯ Information Operations (IO)
- ✯ Electronic Warfare (EW)
- ✯ Intelligence analysis processes and tools and visualization methods
- ✯ Information technologies embedded in systems and in Army, Joint, and ally/coalition networks

Subcommittee Leadership including
Parent Board Members listed previously

2024

Vice Chair, C5ISR Subcommittee
David Jimenez
Parent Board Member

Chair, C5ISR Subcommittee
Susan R. Myers
Ph.D. COL (Ret) USA
Parent Board Member

Venkat B. Mummalaneni, J.D.
Parent Board Member

2024
SUBCOMMITTEE
MEMBER

Alexander M. Brofos

Senior Principal Engineer at The MITRE Corporation

EXPERTISE

Counter-Unmanned Aerial Systems

Machine Learning

Large Data Sets

Airspace Safety

Advanced Algorithms

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Digital (Information Technologies)

STUDY TEAM

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED)

EXPERIENCE

Alex Brofos is a Senior Principal Engineer at The MITRE Corporation and is presently a MITRE project leader for Marine Corps Air Command and Control and Sensor Netting (AC2SN), Ground Air Task Oriented Radar (GATOR), Medium Range Air Defense Radar (MRADR) and 5G. Alex is a specialist in data analysis, visualization, and machine learning and is also a data scientist for the Veterans Benefits Administration (VBA) focused on improving Veteran claim processing speed, accuracy, and equity.

Mr. Brofos is an inventor and is currently applying unsupervised machine learning to large data sets to improve automatic track identification. Alex has recently prototyped an advanced algorithm to recommend the best military options in the face of deceptive tactics and imperfect knowledge. He also leads an initiative whose aim is to save millions of dollars during system development by representing costly test vehicles electronically. In the past, Alex's technical leadership roles have focused on Sensor Fusion, Integrated Air and Missile Defense, Ballistic Missile Defense, Cruise Missile Defense, and Counter-Unmanned Aerial Systems for the Marine Corps, Navy, Army, Air Force and Missile Defense Agency. Alex has also conducted analyses on airspace safety for the Federal Aviation Administration, and on climate change for the Department of Commerce. Alex participates in outreach to help innovation succeed in small businesses in the State of Massachusetts and has been a judge for firms meeting the requirements of the Office of Local Defense Community Cooperation.

Prior to joining MITRE, Alex was a hardware and software design and development engineer at Raytheon.

EDUCATION

Tufts University, M.S., Electrical Engineering
Tufts University, B.S., Electrical Engineering

2024

SUBCOMMITTEE
MEMBER

Thomas M. Cole, BG (Ret) USA

President, Thomas Cole & Associates, LLC

EXPERTISE

Defense Acquisition

C5ISR Systems

Senior Level Program Management

Integrated Systems Development

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Digital (Information Technologies)

EXPERIENCE

BG (Ret) Tom Cole is the owner Thomas Cole & Associates, LLC, and is an independent consultant specializing in defense acquisition. He supports senior-level management as well as serving as an advisor and director on profit and non-profit company boards.

He has a diverse range of experiences and depth of knowledge in defense acquisition. His combination of senior-level executive experience and programmatic skills span across concept inception, integrated systems development, test and evaluation, training, and logistics necessary to deliver and sustain system capabilities. He has a strong foundation in leadership, ethics, strategic planning, program integration, and in personnel development.

BG (Ret) Cole concluded over 30 years in the U.S. Army as the Program Executive Officer (PEO) for Intelligence, Electronic Warfare, and Sensors. As PEO, he was the senior official responsible for the overall direction and program performance for intelligence, electronic and cyber warfare, and sensor targeting capabilities all integrated on ground and air platforms with a $4B annual budget authority. His competencies are derived from varied responsibilities, experiences, and assignments throughout his career. As the Deputy Program Manager for Future Combat Systems (FCS), he directed network integration of communications and sensor systems employed on manned and unmanned, ground and air platforms. At U.S. Army Special Operations Command (USASOC), he was the Deputy Acquisition Executive and led technology development and program management efforts. As Project Manager, Warfighter Information-Tactical, he was the organization leader responsible for developing, acquiring, and modernizing the Army's largest communications capability involving terrestrial and space-based communications architectures with integrated network control.

EDUCATION

Industrial College of the Armed Forces, M.S., National Resource Strategy
San Diego State University, M.S., Aerospace Engineering
U.S. Military Academy at West Point, B.S., Engineering

2024
SUBCOMMITTEE
MEMBER

Raymond K. Compton, COL (Ret) USA

Fellow, Logistics Management Institute (LMI)

EXPERTISE

Army Acquisition

Research and Development

Test and Evaluation

C5ISR

Program Management

Modeling and Simulation

Strategic Planning

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Digital (Information Technologies)

STUDY TEAM

Data-Centric Command and Control (C2) (Co-Chair)

EXPERIENCE

COL (Ret) Raymond K. Compton is currently serving as a fellow supporting the strategic development of integrated solutions for complex problems supporting National Security.

He served 30 years in the Army working in all aspects of the acquisition life cycle from research and development to production of complex systems. This includes managing one of the largest Army Acquisition Category (ACAT) ID, multi-billion dollar programs, supplying the newest digital communications to all Army units worldwide. He ended his military career as the Chief of Staff (CoS), Combat Capability Development Command (CCDC), where he led the staff in the transformation from Army Material Command (AMC) to Army Futures Command (AFC), shaping the processes and structures to modernize the Army for the future.

In support of the Army Science Board (ASB), COL (Ret) Compton provides members insight into DoD interests, science and technology, and current operational requirements by linking members with subject matter experts from his time as a Signal Officer, Lab Director, Product Manager, Test Center Commander, and Chief of Staff of CCDC. Over the past years, COL (Ret) Compton contributed to many Army, DoD, and Congressional initiatives supporting modernization to include five past ASB Studies.

He also serves on the Board of Directors of the Armed Forces Communications Electronics Association (AFCEA); the Advisory Council for George Mason University ‘s (GMU) – Institute for Biohealth Innovation (IBI), and Chair – Simulation Subcommittee for Interservice / Industry Training, Simulation, and Education Conference (I/ITSEC).

He is a Defense Acquisition Workforce Improvement Act (DAWIA) Certified Level III Program Management and Science and Technology Manager, and Level II Engineering and Information Technology Manager. COL (Ret) Compton also served as a member of the U.S. Army Uniformed Scientist and Engineering Program.

EDUCATION

U.S. Army War College, M.S., Strategic Studies
University of Central Florida, M.S., Simulation Modeling and Analysis
Christopher Newport University, B.S., Computer Science

2024
SUBCOMMITTEE
MEMBER

Portia Crowe, Ph.D.

Chief Data Strategist, Defense Portfolio and Applied Intelligence
Accenture Federal Services

EXPERTISE

C5ISR

Data Management & Technology

Digital Transformation

Procurement and Acquisitions

Cybersecurity

Artificial Intelligence & Machine Learning

Innovation

Strategic Planning

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Digital (Information Technologies)

STUDY TEAM

Human-Machine Integration

EXPERIENCE

Dr. Portia Crowe is a data executive and senior leader with experience in Industry, Academia, and the United States Army. She is currently the Chief Data Strategist for the Defense and Applied Intelligence at Accenture Federal Services. In this role, she has executive responsibility for strategic thought leadership, growth of emerging technology and data areas, and consults with clients in data science, innovation, and strategy.

Prior to joining Accenture, Dr. Crowe served in the DoD for 20 years. Most recently, she served as the Chief Data Officer for the Army Futures Command Network Cross Functional Team where she was responsible for data strategy, governance, and management of the Army's modernization tactical efforts. She was a key participant in the Army's Project Convergence leading efforts for data fabric, DevSecOps, and data convergence with the Air Force.

Her DoD experience included Chief of Cyber Engineering and Chief Information Officer at the Program Executive Office Communications, Command, and Control Tactical. She was the lead systems engineer of the Army's Command Post Computing Environment. She was instrumental in the innovation of unified data platform, tactical communications, and decreasing server infrastructure. At the Army's Communications-Electronics Research and Development Center, she was the deputy for R&D Strategic Planning for prioritizing network programs. She delivered a unified platform and services for integrated Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance capabilities.

Dr. Crowe is a 2021 Federal 100 recipient, Army Top 25 Acquisition Professionals, on the Global Data Power Women List 2023, and has received five Civilian Service Medals.

EDUCATION

Stevens Institute of Technology, Ph.D., Systems Engineering
New Jersey Institute of Technology, M.S., Engineering Management
Rutgers University, B.S., Computer Science

2024
SUBCOMMITTEE
MEMBER

J. Scott Goldstein
Maj Gen (Ret) USAF, Ph.D.

Subcommittee Nominee

Senior Vice President, Parsons

EXPERTISE

Detection Theory

Space Technology and Operations

Cyberspace Operations

Electronic Warfare

Sensor Systems and Signatures

Battle Management/ C2

Air Dominance

Multi-Domain Operations

ISR

Digital Engineering

Artificial Intelligence

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Digital (Information Technologies)

STUDY TEAM

Human-Machine Integration & Electronic Warfare

EXPERIENCE

Maj Gen (Ret) J. Scott Goldstein, U.S. Air Force, is Senior Vice President, Parsons. His previous civilian experience includes senior executive positions in industry, academia, and Federally Funded Research and Development Centers (FFRDCs). Maj Gen (Retired) Goldstein is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), a Fellow of the Washington Academy of Sciences, a Member of the National Academy of Sciences, Engineering and Medicine's Intelligence Science and Technology Experts Group, and he served on the Defense Science Board's Air Dominance Task Force. He has published more than 100 peer-reviewed articles/ book chapters and holds five U.S. patents on advanced topics in detection theory, information theory, data compression, Intelligence, Surveillance, and Reconnaissance (ISR), and communications systems. He was awarded the 2019 IEEE Warren White Award for Contributions to the Design, Development and Fielding of Multi-Domain Radar, electronic warfare (EW), and Cyber Systems.

He began his military career in the U.S. Army, where he was branch-qualified Infantry and Signal. He transferred to the U.S. Air Force in 1990, serving as a developmental engineer and in space and cyberspace operations. His General Officer assignments included the Air Force Research Laboratory, the Space and Missile Systems Center, Air Force's Cyber, and assignments as Assistant to both the Under Secretary of the Air Force and the Assistant Secretary of the Air Force for Acquisition, Logistics and Technology. Gen Goldstein's decorations include the Distinguished Service Medal (with OLC) and the Remote Combat Effects Campaign Medal (with service star) for leading Secretary of Defense authorized space and cyberspace activities during Operations Enduring Freedom and Iraqi Freedom.

EDUCATION

University of Southern California, Ph.D., Electrical Engineering
George Mason University, M.S., Electrical Engineering
George Mason University, B.S., Electrical Engineering

2024
SUBCOMMITTEE
MEMBER

Nancy Kreidler

Deloitte Advisory, Cyber & Strategic Risk

EXPERTISE

- Cybersecurity
- Risk Management
- Cyber Workforce
- Information Technology
- Business Process/ Policy Reform
- Organizational Change
- Leadershp Coaching

SUBCOMMITTEE

Command, Control Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Digital

STUDY TEAM

Human-Machine Integration

EXPERIENCE

Ms. Nancy Kreidler serves as a cyber security leader in Deloitte's Government and Public Services Advisory within the Cyber & Strategic Risk practice.

She retired from the Senior Executive Service (SES) as the Army Director of Cybersecurity, Deputy Chief of Staff, G-6. She was formally the Army Chief Information Security Officer (CISO) under the Army Chief Information Officer (CIO)/G-6 where she served as a principal advisor to the CIO/G-6 and other senior Army leaders. In these roles, Ms. Kreidler reformed the Army's Risk Management process, created a continuous monitoring cyber security maturity framework and created the Army's first Cybersecurity Risk Management Council for Operational Senior Leaders to make unified decisions based on risk and operational impact.

Ms. Kreidler worked in the Program Executive Office, Command, Control, Communications – Tactical (PEO C3T), Aberdeen Proving Ground, Maryland, for over 18 years as the Chief Information Officer (CIO) and Cybersecurity Program Manager. In these roles, she was responsible for critical information technology capabilities and the cyber security posture for a portfolio of $2.4B across 24 key acquisition programs representing over 100 tactical and enterprise systems and networks.

She has supported the Army for more than 37 years (25 years as a civilian) and is recognized as a subject matter expert in cyber security and risk management domains. Ms. Kreidler is a certified International Coach Federation (ICF) leadership coach as well as being certified as a Gallup Strengths coach.

EDUCATION

Monmouth University, NJ, M.S., Software Engineering
Monmouth University, NJ, B.S., Computer Science

2024
SUBCOMMITTEE
MEMBER

ASB
2024

Fred B. Schneider, Ph.D.

Samuel B. Eckert Professor of Computer Science, Cornell University

SUBCOMMITTEE
MEMBER

EXPERTISE

Cybersecurity

Fault-tolerance

Formal Methods

Software Systems

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Digital (Information Technologies)

EXPERIENCE

Dr. Fred B. Schneider joined Cornell's faculty in the Fall of 1978 and served as Department Chair from 2014–2018. His research concerns various aspects of trustworthy systems—systems that will perform as expected, despite failures and attacks.

He also chaired the National Academies Computer Science and Telecommunications Board (CSTB) study that produced the 1999 volume Trust in Cyberspace. Dr. Schneider was the founding chair of the National Academies Forum on Cyber Resilience where he has remained active in various roles. He also has served on the National Academies Naval Studies Board as well as the Pentagon's Defense Science Board (DSB).

Dr. Schneider has received numerous awards including the National Security Agency's (NSA) Best Scientific Cybersecurity Research Paper Award for work on verification of security properties. He was elected Fellow of the American Association for the Advancement of Science (1992), the Association of Computing Machinery (1995), and the Institute of Electrical and Electronics Engineers (2008). He was named Professor-at-Large at the University of Tromso, Norway, in 1996 and was awarded a Doctor of Science *honoris causa* by the Newcastle University (based in Newcastle upon Tyne) in 2003. The U.S. National Academy of Engineering elected Dr. Schneider to its membership in 2011. The Norges Tekniske Vitenskapsakademi, Norwegian Academy of Technological Sciences, named him a foreign member in 2010 and the American Academy of Arts & Sciences elected him to its membership in 2017.

EDUCATION

Stony Brook University, Ph.D., Computer Science
Stony Brook University, M.S., Computer Science
Cornell University, B.S., Engineering

2024
SUBCOMMITTEE
MEMBER

Samuel S. Visner

Subcommittee Nominee

Technical Fellow, The Aerospace Corporation
Chair, Board of Directors, Space Information Sharing and Analysis Center

EXPERTISE

Cybersecurity

International Security

Intelligence Strategy, Planning, and Operations; Signals Intelligence

Space Systems Security and Resilience

SUBCOMMITTEE

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Digital (Information Technologies)

STUDY TEAMS

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED)

EXPERIENCE

Mr. Samuel Sanders Visner is a Technical Fellow at the Aerospace Corporation. He is also Chair of the Board of Directors of the Space Information Sharing and Analysis Center, working to strengthen the security and resilience of the nation's space systems. He is a Senior Advisor to the Cybersecurity Solarium Commission. Mr. Visner served previously at MITRE as Director of the National Cybersecurity Federally Funded Research and Development Center sponsored by the National Institute of Standards and Technology. He is a member of the Board of Directors of the Oak Ridge Associated Universities. He is an adjunct professor of Science and Technology in International Affairs at Georgetown University, where he teaches a course on cybersecurity policy, operations, and technology. Mr. Visner is a member of the Council on Foreign Relations and the Atlantic Council and is a former member of the Intelligence Community Studies Board of the National Academy of Sciences. He is also a member of the Standards Committee of the International Data Center Authority.

He served previously as Senior Vice President at ICF (General Manager, Cybersecurity and Resilience), Vice President at CSC (General Manager, CSC Global Cybersecurity), Senior Vice President at SAIC, and as Chief of Signals Intelligence Programs at the National Security Agency, from which he received the Agency's highest award for civilian service. He also served as a member of the Board of Directors, CVG/Avtec (2008–2010). Mr. Visner served twice on the Intelligence, Surveillance, and Reconnaissance Task Force of the Defense Science Board.

EDUCATION

George Washington University, M.A., Telecommunications
Georgetown University, B.S., International Relations

2024

Environmental Advisory Subcommittee

Environmental Advisory Subcommittee

As authorized by the Secretary of Defense and the Secretary of the Army and pursuant to the Federal Advisory Committee Act of 1972 and Government in the Sunshine Act of 1976, the Chairman of the Army Science Board (ASB) establishes the Environmental Advisory (EA) Subcommittee. The following Terms of Reference (TOR) outline the duties and responsibilities of the subcommittee in accordance with the ASB charter (May 2022).

The EA Subcommittee, as part of the ASB, shall provide advice and recommendations to the ASB for its thorough deliberation and decision at a properly noticed ASB meeting on environmental matters relating to USACE civil works and military program missions, to include:

- Engineering, construction, real estate, stability operations, and environmental management products and services for the Army, Air Force, other assigned U.S. Government agencies and foreign governments.
- Development and management of the Nation's water resources for flood risk management, navigation, ecosystem restoration, hydropower, recreation, water supply, and environmental stewardship.

Subcommittee Leadership including
Parent Board Members listed previously

Chair, Environment Advisory Subcommittee

Terri S. Hogue, Ph.D.
Parent Board Member

2024
SUBCOMMITTEE
MEMBER

Eric D. Stein, D.Env

Vice Chair, Environmental Advisory Subcommittee

Biology Department Head
Southern California Coastal Water Research Project

EXPERTISE

Environmental Monitoring and Assessment

Coastal and Wetland Ecology, Aquatic Resource Restoration and Management

Stream and Riparian Ecology

Ecohydrology

Science to Policy Translation

SUBCOMMITTEE

Environmental Advisory

STUDY TEAMS

Beneficial Use of Dredged Materials in Civil Works (Chair)

Nature-Based Solutions

EXPERIENCE

Dr. Eric Stein is a head of the Biology Department at the Southern California Coastal Water Research Project (SCCWRP) where he oversees a variety of projects related to in-stream and coastal water quality, ecohydrology, bioassessment, hydromodification, watershed modeling, and assessment of wetlands and other aquatic resources. His research focuses on effects of human activities on the condition of aquatic ecosystems and on developing tools to better assess and manage those effects.

Before joining SCCWRP in 2002, Dr. Stein worked as both a private consultant and for the Regulatory Branch of the Los Angeles District Corps of Engineers on issues related to wetlands and water quality management and regulation. He has expertise in wetland delineation, design of mitigation and restoration projects, development of monitoring programs, establishment of mitigation banks, and landscape-scale assessment.

He has research experience in a variety of disciplines related to environmental assessment including multimedia distribution of environmental contaminants, stormwater monitoring and assessment, wetland functional assessment, and physiological ecology. Dr. Stein has authored over 150 journal articles, 75 technical reports, several book chapters, and participates on numerous technical workgroups and advisory committees at the federal and state levels related to water quality and wetland assessment and management. He has chaired and co-chaired technical workgroups to help develop regional monitoring programs for streams, estuaries, and the coastal ocean. He regularly advises agencies in the development of innovative bioassessment approaches, application of eDNA and metabarcoding, and advancement and application of ecohydrology tool to inform environmental flow requirements.

EDUCATION

University of California, Los Angeles, D.Env., Environmental Science and Engineering

University of California, Los Angeles, M.A., Science Education

University of California, Los Angeles, B.S., Biology

2024
SUBCOMMITTEE
MEMBER

Ram K. Mohan, Ph.D., P.E., F.ASCE

Subcommittee Nominee

Senior Partner directing Anchor QEA's Engineering-With-Nature and Coastal Engineering Practice; Adjunct Professor of Ocean Engineering and Director of the Coastal & Dredging Laboratory at Texas A&M University

EXPERTISE

Coastal Engineering

Coastal Resiliency

Coastal and Fluvial Flood Risk Management

Navigation (Dredging and Beneficial Use)

Sedimentation Analysis

Hydrodynamic Modeling

SUBCOMMITTEE

Environmental Advisory

STUDY TEAM

Beneficial Use of Dredged Materials in Civil Works

Nature-Based Solutions

EXPERIENCE

Dr. Mohan is a Senior Partner directing Anchor QEA's Engineering-With-Nature and Coastal Engineering Practice. He is also an Adjunct Professor of Ocean Engineering, and Director of the Coastal & Dredging Laboratory at Texas A&M University. For over 30 years, he has applied his expertise to developing solutions to complex coastal challenges, including coastal resiliency, coastal engineering, dredging, beneficial use, navigation, and hydrodynamic modeling.

He is a former member of the National Academy of Sciences Marine Board and Ocean Studies Board, where he was part of the National Coastal Resiliency Initiative, and the study team that peer-reviewed the U.S. Army Corps of Engineers (USACE) Planning and Policy Manual. He has authored several national guidance documents and journal publications, including, editorial board member of the U.S. Army Engineer Research and Development Center Guidance on *Natural and Nature Based Features (NNBF)*, co-author of *USACE Guidance, Thin Layer Placement of Dredged Material*, and Editor-in-Chief of the *Journal of Marine Environmental Engineering*.

In 2005, the Western Dredging Association named him its "Dredger of the Year." A former chairman of the World Organization of Dredging Associations, Dr. Mohan has advised international scientific bodies for over two decades. Dr. Mohan has also served on the boards of several professional organizations including Association of Coastal Engineers, American Shore & Beach Preservation Association, and Western Dredging Association. In 2016, the American Society of Civil Engineers elected him as a "Fellow."

EDUCATION

Texas A&M University, Ph.D., Ocean Engineering
University of Rhode Island, M.S., Ocean Engineering
Cochin University of Science and Technology, B.S., Naval Architecture
Registered Professional Engineer (PE) over 20 states

2024
SUBCOMMITTEE
MEMBER

Catherine Seavitt Nordenson

Meyerson Professor and Chair, Department of Landscape Architecture
Weitzman School of Design, The University of Pennsylvania

EXPERTISE

- Landscape Architecture
- Environmental Justice
- Decarbonization
- Plant Science
- Phytoremediation
- Wetland Restoration
- Coastal Resilience
- Post-Industrial Sites
- Community Engagement

SUBCOMMITTEE

Environmental Advisory

STUDY TEAM

Nature-Based Solutions

EXPERIENCE

Ms. Catherine Seavitt Nordenson is the Martin and Margy Meyerson Professor and Chair of the Department of Landscape Architecture at the Weitzman School of Design, The University of Pennsylvania. She also serves as the Co-Executive Director of the Ian L. McHarg Center for Urbanism and Ecology.

A licensed architect and landscape architect, Ms. Seavitt Nordenson is a Fellow of the American Academy in Rome and a Fellow of the American Society of Landscape Architects (FASLA). She previously served as Professor and Director of the Master of Landscape Architecture Program at the City College of New York. She emphasizes the essential role that landscape architecture plays in connecting social justice and equity to environmental design.

Ms. Seavitt Nordenson's research, scholarship, and design work examines the intersection of political power, environmental activism, and public health, particularly as seen through the design of equitable public space and policy in tandem with novel plant science expertise. She studies post-industrial landscapes, disturbed ruderal sites, and environmental justice communities.

She is a published author of multiple works. Her research foregrounds the role of natural and nature-based features as alternatives to traditional hard-engineered solutions and explores a multi-layered approach to resilience and decarbonization that includes natural systems. Her work at Jamaica Bay, New York, was developed through collaborative workshops with the U.S. Army Corps of Engineers North Atlantic Division and the New York District as they developed a comprehensive report on the regional impacts of Hurricane Sandy.

EDUCATION

Princeton University, M.Arch., Architecture
The Cooper Union, B.Arch., Architecture
City College of New York, B.S., Landscape Architecture
University of Michigan, B.S., Architecture

2024
SUBCOMMITTEE
MEMBER

ASB
2024

SUBCOMMITTEE
MEMBER

Fatemeh Shafiei, Ph.D.

Director, Environmental Studies and Associate Professor
Department of Political Science, Spelman College

EXPERTISE

Environmental Justice & Environmental Policy

Environmental Determinants of Health Disparity

Environmental Education

International Relations

SUBCOMMITTEE

Environmental Advisory

STUDY TEAM

Nature-Based Solutions

EXPERIENCE

Dr. Fatemeh Shafiei is the Director, Environmental Studies Program; Associate Professor, Department of Political Science; and the Co-Chair of Sustainable Spelman Committee at Spelman College, Atlanta, Georgia. She was Chair of the Department of Political Science from August 2012 to August 2021. She served as a member (2012-2018) of the U.S. Environmental Protection Agency's (EPA) National Environmental Justice Advisory Council (NEJAC), the Federal Advisory Committee that advises the EPA on environmental justice issues. She is also the Co-Founder and Co-Leader of Greater Atlanta Regional Centre of Expertise (RCE) which the United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) acknowledged as sixth in the U.S. and 164th in the world on Education for Sustainable Development.

She has published in the areas of public policy, environmental justice, environmental policy, environmental determinants of health disparities and environmental education. She has served as an invited keynote speaker, keynote listener, panelist, chair, section chair, panel organizer, moderator, and discussant in numerous conferences and forums.

She has been an expert/leader in advancing integration of sustainability into curricula for decades. She has organized and led a broad spectrum of educational projects. She has hosted and directed many projects such as "Toxics Release Inventory Regional Workshop" and "Environmental Justice Summit," among others.

Dr. Shafiei is also the recipient of the 2023 Fannie Lou Hamer Outstanding Community Service Award, the 2023 Distinguished Service Award, and the 2020 Distinguished Service Award all from the National Conference of Black Political Scientists (NCOBPS).

EDUCATION

University of California, Riverside, Ph.D., Political Science
University of California, Riverside, B.A., Political Science

2024
SUBCOMMITTEE
MEMBER

Desirée Tullos, Ph.D.

Subcommittee Nominee

Professor, Oregon State University

EXPERTISE

Environmental Fluid Mechanics

River Engineering and Restoration

Hydrodynamic Modeling

Sustainable Flood Management

Sediment Management in Reservoirs

Control of Harmful Algal Blooms

Nature-based Infrastructure

Science Communication

Transdisciplinary and Cross-cultural Collaboration

SUBCOMMITTEE

Environmental Advisory

STUDY TEAM

Nature-Based Solutions

EXPERIENCE

Dr. Desiree Tullos is a Professor in the Biological and Ecological Engineering Department at Oregon State University. Her research emphasizes the sustainable engineering and management of rivers. Her projects focus on questions that range from the particle to basin scale including physical and biological responses to dam removal, analysis of reservoir operations in systems undergoing change, turbulence and habitat of flow around vegetation and wood in rivers, and sustainable flood risk management and infrastructure. Her research also has an international dimension as she has served as the Primary Investigator (PI) of a National Science Foundation (NSF)-funded project on hydropower development in China. She is examining mountain flood risk in India, and she was a Fulbright scholar studying reservoir sediment management in Taiwan.

She serves on multiple boards and science and engineering advisory panels to help translate science into practice and policy including the Independent Scientific Advisory Board for Bonneville Power Administration's Northwest Power and Conservation Council, the Environmental Advisory Subcommittee supporting the U.S. Army Corps of Engineers, and for multiple National Research Council committees. Her teaching emphasizes design-based and systems-oriented learning: river engineering, ecohydraulic engineering, and ecological engineering. She served as the PI of an NSF-funded Research Experience for Undergraduates (REU) program on Ecosystem Informatics for twelve years as part of a broader suite of activities aimed at advancing diversity in the STEM fields. Prior to and since arriving at Oregon State University, she also worked as a design engineer on a variety of river restoration projects.

EDUCATION

North Carolina State University, Ph.D., Biological/ Biosystems Engineering

North Carolina State University, MCE, Civil Engineering

University of Tennessee-Knoxville, B.S., Civil Engineering

2024
SUBCOMMITTEE
MEMBER

Larry J. Weber, Ph.D.

Edwin B. Green Chair in Hydraulics and Full Professor
Department of Civil and Environmental Engineering, University of Iowa

EXPERTISE

- Hydroscience and Engineering
- Civil and Environmental Engineering
- Fish Passage and Behavior
- Large-scale Water Resource Projects
- Computational Fluid Dynamics Models
- Community Resiliency and Planning
- Flood Mitigation
- River Restoration and Sustainability

SUBCOMMITTEE

- Environmental Advisory

STUDY TEAM

- Nature-Based Solutions

EXPERIENCE

Dr. Larry Weber serves as the Director of IIHR – Hydroscience & Engineering, the nation's oldest academic research program focused on hydraulics, hydrology, and fluid mechanics. He has extensive knowledge in community resilience and planning, flooding, flood mapping, flood mitigation, river hydraulics, fate and transport of nutrients, hydropower, coupling individual-based ecological and fluid mechanics models, fish passage facilities, environmental hydraulics, hydraulic structures, and river restoration and sustainability. Through these research programs, Dr. Weber's impact has ranged from fundamental numerical model development and scientific discovery (as demonstrated in over 670 peer-reviewed scholarly publications) to the broad application of numerical models and systems-level design approaches to solve complex large-river ecological challenges.

He is also Co-Founder of the Iowa Flood Center and the Iowa Nutrient Research Center where he is considered a thought-leader on water resources program development throughout the state and across the country. The technology developed through this research has led to significant partnerships with state and federal agencies. Dr. Weber currently serves as the principal investigator of a $96.9M grant awarded to the state of Iowa from U.S. Housing and Urban Development's National Disaster Resilience Competition. The state of Iowa project is seen as leading the nation in watershed resilience through the Iowa Watershed Approach. Through these integrated model development and application projects, Dr. Weber has gained a deep scientific understanding and visionary approach to systems-level integrated design and development, and a genuine understanding of the complexities of engineering physics, river mechanics and ecological behavior and ecosystem response.

EDUCATION

University of Iowa, Ph.D., Civil and Environmental Engineering
University of Iowa, M.S., Civil and Environmental Engineering
University of Iowa, B.S., Civil and Environmental Engineering

2024

Intelligence and Assessment Subcommittee

Intelligence and Assessment Subcommittee

As authorized by the Secretary of Defense and the Secretary of the Army and pursuant to the Federal Advisory Committee Act of 1972 and Government in the Sunshine Act of 1976, the Chairman of the Army Science Board (ASB) establishes the Intelligence and Assessment Subcommittee. The following Terms of Reference (TOR) outline the duties and responsibilities of the subcommittee in accordance with the ASB charter (May 2022).

The Intelligence and Assessment Subcommittee, as part of the ASB, shall provide advice and recommendations to the ASB for its thorough deliberation and decision at a properly noticed ASB meeting on matters relating to the Army's intelligence and assessment core competencies, including:

- ✯ Assessment of threat technical and operational capabilities and their impact on the Army
- ✯ Assessment of U.S. vulnerabilities and potential mitigation approaches
- ✯ Interactions/integration with the other members of the Intelligence Community including access to classified intelligence up to TOP SECRET (TS) collateral, Sensitive Compartmented Intelligence (SCI), and Special Access Programs (SAP) levels as required.

Subcommittee Leadership including
Parent Board Members listed previously

Marcel J. Lettre II
The Honorable
Parent Board Member

Chair, Intelligence and Assessment Subcommittee

Terry L. Mitchell
COL (Ret) USA
Parent Board Member

2024
SUBCOMMITTEE
MEMBER

Barbara G. Fast, MG (Ret) USA

President/CEO of BGF Enterprises, LLC
Chair, Space and Rocket Center Commission

EXPERTISE

C5ISR

Cybersecurity

Aerospace Defense

Leadership and Management

SUBCOMMITTEE

Intelligence and Assessment

STUDY TEAM

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED) (Co-Chair)

EXPERIENCE

MG (Ret) Barbara Fast is the President/CEO of BGF Enterprises, LLC, a consulting services business for intelligence, cybersecurity, and operational activities. She serves on the boards of Beacon Roofing Supply (NASDAQ:BECN) and UltraViolet Cyber, as well as non-profit organizations, to include Chair, Alabama Space Science Exhibit Commission; State of Alabama Trustee, Alabama Cyber Technology and Engineering Magnet School; the Intelligence and National Security Foundation Board; and the Open Source Intelligence Foundation Board. She serves on for-profit Strategic Advisory Boards for Sierra Nevada Corporation; HUVR, Inc; and Axellio, Inc.

She previously served as Senior Vice President (SVP), Strategic Engagements and, prior, SVP of Army Defense and Intelligence Programs, CGI Federal/CGI. She developed cyber strategies for government and commercial customers and led their Cyber, Army, and Intelligence Business. Prior, she was the VP, Cyber and Information Solutions, The Boeing Company, where she led Boeing's Cyber, Unmanned Underwater Vehicle, Electronic Warfare, Fiberoptics, and NSA business.

She retired from the U.S. Army after over 32 years of service. Her final assignment was as Deputy Director, Army Capabilities Integration Center (ARCIC), Training and Doctrine Command (TRADOC). Prior key assignments included Commanding General, U.S. Army Intelligence Center, Fort Huachuca; Director of Intelligence (C2), Multinational Forces-Iraq/Combined Joint Task Force-7, Operation Iraqi Freedom; Director of Intelligence (J2), U.S. European Command; Director, S1, Signals Intelligence Directorate and Associate Deputy Director of Operations, Military Support/Deputy Director, Central Security Services, NSA; Brigade/Battalion/Company level command; and G2, 2nd Armored Division.

EDUCATION

American Military University, Ph.D. (Honorary), Public Service
Central Missouri State University, Ph.D. (Honorary), Laws
Boston University, M.S., Business Administration
University of Missouri, B.S., Education (German, Spanish)

2024
SUBCOMMITTEE
MEMBER

William C. Hix, MG (Ret) USA

Founder and Managing Partner of Next Horizon Partners

EXPERTISE

National Security

Strategic Planning

Threat, Business, and Technology-based Innovation

Change Management

Practical Application of Strategic Leadership

Forecasting

SUBCOMMITTEE

Intelligence and Assessment

EXPERIENCE

MG (Ret) William “Bill” Hix, former Army Chief Strategy Officer, is the Founder and Managing Partner of Next Horizon Partners, a strategy and innovation consultancy. Next Horizon Partners provides services to a wide range of companies and organizations across the defense, security, and technology sectors.

With over 37 years as an Infantry and Special Forces officer, MG (Ret) Hix served chiefly in Asia and the Middle East where he led thousands of U.S. Service members from all branches in combat in Iraq and Afghanistan. He served over 10 years in a variety of joint/combined assignments, from Combined Forces Command Korea to Joint Forces Command, Supreme Allied Commander Atlantic, Supreme Allied Command Transformation, Multinational Forces-Iraq, International Security Assistance Force (ISAF) Joint Command, and the Joint Staff.

Over much of his last 20 years, he had an active role in numerous efforts to transform the Armed Forces, from Force XXI to Army After Next, Stryker, the Joint Force After Next, Army 2020, and the Army’s “Big 6” modernization effort. He last served in uniform as the Deputy Director, Army Futures Command Task Force, charting the most significant change to the Army’s modernization enterprise in 40 years, delivering proposals to dramatically improve the Army’s modernization enterprise.

MG (Ret) Hix is affiliated with the Army Science Board, National Academy of Sciences’ Board on Army Research and Development, the Army Strategist Association, and the Association of Wartime Allies. He is a published author and public speaker on topics ranging from geo-politics to innovation.

EDUCATION

U.S. Army Command and General Staff College, Master of Military Art and Science

U.S. Military Academy at West Point, B.S.

2024
SUBCOMMITTEE
MEMBER

Susan N. Houde-Walter, Ph.D.

Adjunct Faculty, University of Arizona – Tucson, College of Optical Science

EXPERTISE

Laser Physics

Directed Energy

Optical Engineering

Optical Materials

Image Science

Manufacturing

Small Arms

SUBCOMMITTEE

Intelligence and Assessment

STUDY TEAM

Human-Machine Integration

EXPERIENCE

Dr. Susan N. Houde-Walter is an established academic and industry leader in the optics, photonics, imaging, and laser community. Her academic experience includes service as Professor and Director of the Chester F. Carlson Center for Imaging Science at the Rochester Institute of Technology, following long service as Professor of Optics at the University of Rochester. She is currently adjunct faculty at the College of Optical Sciences, University of Arizona – Tucson.

Dr. Houde-Walter is also a successful entrepreneur. She was Co-Founder and Chief Executive Officer (CEO) of LaserMax, Inc., a manufacturer of laser-based products for commercial and industrial markets. In addition, she founded LMD Power of Light Corp. LMD, a Woman-Owned Small Business 8(m) manufacturer of ruggedized laser systems for government and original equipment manufacturer (OEM) customers, specializing in quantum cascade laser (QCL) and diode laser technology. Dr. Houde-Walter currently holds 27 patents and is the author of over 100 peer-reviewed papers and invited presentations.

Dr. Houde-Walter has served on national security science boards including the Air Force Science Advisory Board, the National Academy of Sciences Intelligence Science and Technology Experts Group, and the Special Operations/Low Intensity Conflicts Board of the National Defense Industry Association. She was elected to the Board of Directors and later as President of Optica (formerly known as the Optical Society, or OSA).

Dr. Houde-Walter received the 2019 Keeper of the Flame Award from the National Women's Hall of Fame, the 2019 Rochester Engineer of the Year Award (Rochester Engineering Society), and the 2020 Fantone Distinguished Service Award from the Optica. She has been elected Fellow of both the American Ceramic Society and Optica. She received the Commander's Award for Public Service from the U.S. Air Force, and later from the U.S. Army.

For the Army Science Board, she contributed to at least seven studies including Soldier Resilience and Performance Sustainment where she served as Co-Chair.

EDUCATION

University of Rochester, Rochester, NY, Ph.D., Optics
University of Rochester, Rochester, NY, M.S., Optics
Sarah Lawrence College, Yonkers, NY, B.A., Liberal Arts

2024
SUBCOMMITTEE
MEMBER

Kevin P. Meiners

Consultant and Managing Member, Huddle Up Associates, LLC

EXPERTISE

Airborne Intelligence, Surveillance, and Reconnaissance (ISR) and Space Systems

Defense Acquisition

National & Defense Intelligence

Program Management

Rapid Capability Development

Resource Allocation

Technology Development

SUBCOMMITTEE

Intelligence and Assessment

STUDY TEAM

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED)

EXPERIENCE

Mr. Kevin Meiners' career spans over 36 years in the Department of Defense (DoD) and the Intelligence Community (IC). In his most recent position, until he retired in 2020, Mr. Meiners served in the Office of the Director of National Intelligence (ODNI) where, as Deputy Director of National Intelligence for Enterprise Capacity, he was responsible for all matters pertaining to the National Intelligence Program (NIP) including resources, workforce, systems acquisition, advanced technology and facilities within the IC.

Prior to his role in the ODNI, Mr. Meiners served as the Director of Advanced Technology within the Defense Airborne Reconnaissance Office (DARO) where he was responsible for overseeing the development of the fledgling Unmanned Aircraft Vehicle (UAV) programs. As the Director of Intelligence, Surveillance, and Reconnaissance (ISR) Systems within the Assistant Secretary of Defense for Command, Control, and Communication (ASD/C3I), he developed long-term acquisition strategies for future overhead satellite programs. Mr. Meiners later served as the Deputy Under Secretary of Defense for Intelligence (DUSD/I) where he oversaw long-term strategic planning and execution of the Military Intelligence Program (MIP).

He is the Founder and Managing Member of Huddle Up Associates, LLC, established in 2020 to deliver strategic and operational consultation services with a focus on national security and intelligence issues. He also created a portfolio of academic, nonprofit, and Federally Funded Research and Development Center (FFRDC) partnerships. Mr. Meiners' distinguished career as a Senior Executive and years of government experience offers a comprehensive understanding of DoD and IC procurement and resourcing practices and processes.

EDUCATION

Industrial College of the Armed Forces, M.S., National Resource Strategy

Marymount University, M.S., Information Management

Virginia Polytechnic Institute and State University, B.S., Electrical Engineering

2024
SUBCOMMITTEE
MEMBER

Teresa H. Shea

Vice Chair, Intelligence Subcommittee

President of Oplnet, LLC

EXPERTISE

Intelligence and Security

Cyber Operations

Technical Innovation and Investments

Defense

Leading Change in Complex Organizations

SUBCOMMITTEE

Intelligence and Assessment (Vice Chair)

EXPERIENCE

Ms. Teresa Shea, a recognized leader in intelligence and defense, is President of Oplnet, LLC. She serves on numerous boards and is an advisor with a passion for a safer and more secure Nation.

With more than 35 years of public and private experience, Ms. Shea was previously the Vice President of Cyber Offense and Defense Experts (CODEX) within Raytheon Intelligence and Space. CODEX is focused on providing cyber capabilities for offense, defense, and security initiatives for government and commercial customers.

Ms. Shea is an experienced executive, working within corporate and government environments. She served as Executive Vice President of Technology and Director of Cyber-Reboot at In-Q-Tel. She joined In-Q-Tel after a distinguished thirty-two-year career with the National Security Agency (NSA). She held several key leadership assignments during her career culminating as the Director of Signals Intelligence. In this position, she was the Principal Signals Intelligence (SIGINT) Advisor to the Directors of NSA, the Director of National Intelligence (DNI), countless U.S. military officers, and U.S. government senior leaders.

She is recognized within the community as a trusted partner and creative leader who is consistently mission focused. Ms. Shea received numerous awards during her career to include the President's Distinguished Rank Award from President George W. Bush and President Barack Obama, the National Intelligence Distinguished Service Medal awarded by the Honorable James R. Clapper, Director of National Intelligence, the Central Intelligence Agency's Donovan Award, and the Department of Defense Medal for Distinguished Civilian Service by Secretary of Defense Ash Carter.

EDUCATION

Johns Hopkins University, M.S., Electrical Engineering
Georgia Institute of Technology, B.S., Electrical Engineering

2024

Medical Operations Subcommittee

Medical Operations Subcommittee

As authorized by the Secretary of Defense and the Secretary of the Army and pursuant to the Federal Advisory Committee Act of 1972 and Government in the Sunshine Act of 1976, the Chairman of the Army Science Board (ASB) establishes the Medical Operations Subcommittee. The following Terms of Reference (TOR) outline the duties and responsibilities of the subcommittee in accordance with the ASB charter (May 2022).

The Medical Operations Subcommittee, as part of the ASB, shall provide advice and recommendations to the ASB for its thorough deliberation and decision making at a properly noticed ASB meeting on matters relating to the Army's core competencies in medical operations, to include:

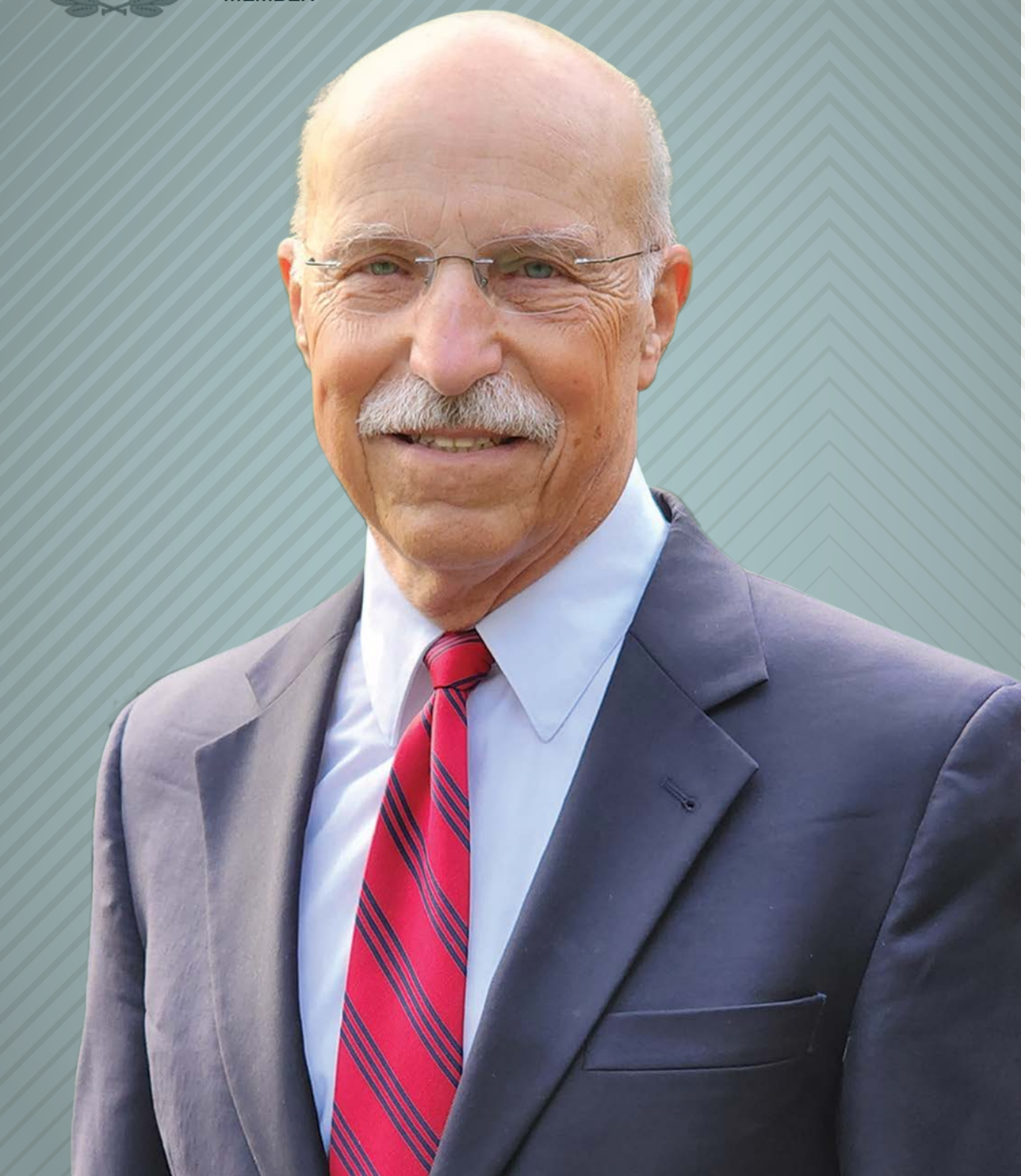
- Support and care for soldiers from the MEPS through handoff to the VA
- Systems that conserve the fighting strength of the Army through preventative medicine, routine medical care, and the treatment of wounded, ill, and injured Soldiers
- Soldier physical performance optimization
- Health threats and issues related to foreign capabilities, infectious disease, environmental health risks, radiological and nuclear effects, developments in biotechnology and chemical/ biomedical subjects of national and military importance, and force protection
- Identification, treatment, and rehabilitation of Army personnel with impairments resulting from mental disorders, addiction, and traumatic injury
- Responsibilities as DoD Executive Agent for the Biological Select Agent and Toxin (BSAT) Biosafety and Biosecurity Program and for Medical Research for Prevention, Mitigation, and Treatment of Blast Injuries

Subcommittee Leadership including
Parent Board Members listed previously

Chair, Medical Operations Subcommittee Nominee

Peter W. Chiarelli
GEN (Ret) USA
Parent Board Member

2024
SUBCOMMITTEE
MEMBER



James P. Bagian
COL (Ret) USAF, M.D., P.E.

Subcommittee Nominee

Executive Director, Center for Risk Analysis Informed Decision Engineering
University of Michigan

EXPERTISE

- NASA Astronaut
- Shuttle Mishap Investigations
- Life Sciences Spacelab
- Space Motion Sickness
- Mechanical Engineering
- Anesthesiology
- Aerospace Medicine
- Tactical Combat Casualty Care
- Environmental Medicine
- Flight Surgeon
- Safety

SUBCOMMITTEE

Medical Operations

STUDY TEAM

Medical Study

EXPERIENCE

Dr. James P. Bagian is the Executive Director, Center for Risk Analysis Informed Decision Engineering and is a professor in the Departments of Industrial and Operations Engineering, Aerospace Engineering, Civil and Environmental Engineering and Department of Anesthesiology at the University of Michigan. He has extensive experience in the fields of human factors, aerospace operations, and patient safety. Previously he served as the first and founding director of the Veterans Administration's (VA) National Center for Patient Safety and as the VA's first Chief Patient Safety Officer where he developed numerous patient safety related tools and programs that were adopted nationally and internationally. He has also been elected to membership in both the National Academy of Engineering and Medicine.

A NASA astronaut for over 15 years, he is a veteran of two Space Shuttle missions including as the lead mission specialist for the first dedicated Life Sciences Spacelab mission. Following the 1986 Challenger space-shuttle mishap he served as an investigator and dove and supervised the capsule and crew recovery from the ocean floor. He also served as the Chief Flight Surgeon and Medical Consultant for the Space Shuttle Columbia Accident Investigation Board in 2003.

Bagian served over 20 years in the Air Force in roles including Special Consultant to Air Combat Command for Combat Search and Rescue, President of the USAF Pararescue Medical Operations Advisory Board, and as a charter member of the DoD Committee on Tactical Combat Casualty Care whose work resulted in dramatic improvement in outcomes in the treatment of warfighters who have been wounded and in substantial impact nationally and internationally on civilian pre-hospital trauma care.

EDUCATION

Thomas Jefferson University, Jefferson Medical College, M.D.
Drexel University, B.S., Mechanical Engineering

2024
SUBCOMMITTEE
MEMBER

Christopher G. Cross
COL (Ret) USA, Ph.D.

Subcommittee Nominee

Program Leader, Strategic Partnership Programs
Weapons and Complex Integration Lawrence Livermore National Laboratory

EXPERTISE
- Physics
- Joint Munitions
- Tactical Warfare
- Systems/Land Warfare and Munitions
- Ground Combat Capabilities
- Development

SUBCOMMITTEE
- Medical Operations

STUDY TEAM
- Medical Study

EXPERIENCE

Dr. Christopher Cross is serving as an Interdepartmental Personnel Act (IPA) from Lawrence Livermore National Laboratory (LLNL) as a Senior Technical Advisor for Strategic Stability in the Joint Staff J-5. In this role, he provides technical support for nuclear modernization, conventional-nuclear integration, missile defense, and international partnerships.

Prior to joining the Joint Staff, he led the Strategic Partnership Programs and served as LLNL's Missile Defense Agency (MDA) Team Captain in the Strategic Deterrence Principal Directorate where he also led an Army Science Board Study assessing the readiness of the Army to fight and win on a nuclear battlefield.

Chris has recent experience as the LLNL technical liaison to MDA at Fort Belvoir, Virginia and worked as an IPA leading the Department of Defense (DoD)/Department of Energy Joint Munitions Program (DOE/JMP) for the DoD as the Technical Director at the Office of the Under Secretary of Defense (OUSD) for Acquisition and Sustainment on Tactical Warfare Systems/Land Warfare and Munitions.

He retired from the U.S. Army as the Chief Scientist and Chief Technology Officer, Capabilities Development and Learning Directorate, Army Capabilities Integration Center, Training and Doctrine Command. In this role, he was responsible for the warfighter validation of Army science and technology investment supporting current and future force developments. His assignments in the Army included multiple deployments, nuclear weapons effects analyst, physics professor at West Point, and Defense Threat Reduction Agency (DTRA) stockpile associate.

EDUCATION

U.S. Naval Postgraduate School, Ph.D., Physics
U.S. Army War College, M.S., International Studies
University of Washington, M.S., Applied Physics
North Carolina State University, B.S., Mechanical Engineering

2024
SUBCOMMITTEE
MEMBER

William K. Skinner, COL (Ret) USAF M.D.

Subcommittee Nominee

Assistant Clinical Professor, Albert Einstein College of Medicine, Bronx, NY
Assistant Professor, Uniformed Services University, Bethesda, MD
Radiation Oncologist, Baltimore Veterans Administration Hospital

EXPERTISE

Radiation Oncology

Training and Preparedness for Radiological/Nuclear Incidents

Prostate and Gynecological Cancer

Radiobiology

Weapons of Mass Destruction

SUBCOMMITTEE

Medical Operations

STUDY TEAM

Medical Study

EXPERIENCE

Dr. William “Jeff” Skinner is the Assistant Clinical Professor, Albert Einstein College of Medicine, Bronx, New York; Assistant Professor, Uniformed Services University, Bethesda, Maryland; and radiation oncologist at Baltimore Veterans Administration hospital. He is a radiation oncologist who served in the Air Force for 28 years as a military physician. He has 22 years of chemical, biological, radiological, nuclear, and explosives experience.

Previous assignments include Radiation Oncologist and Medical Director, Prostate Cancer Center, Chesapeake Urology, Gaithersburg, Maryland; Chief, Military Medical Operations, Armed Forces Radiobiology Research Institute, Bethesda, Maryland; Program Director, National Capital Consortium, Radiation Oncology Residency, Walter Reed National Military Medical Center, Bethesda, Maryland; Attending, Radiation Oncologist, Walter Reed National Military Medical Center, Bethesda, Maryland; Chief, Radiation Oncology, Wright Patterson AFB Dayton, Ohio; and Flight Surgeon at Hampton, Virginia and in Gunsan, South Korea. He also served as Principal Investigator, Armed Forces Radiobiology Research Institute, Bethesda, Maryland, and Joint Medical Augmentation Unit (JMAU) Weapons of Mass Destruction Advisor, Joint Special Operations Command, Fort Bragg, North Carolina.

He is on the Executive Committee for Radiation Injury Treatment Network; served as the Co-Chair, SHORESH research collaboration conference; and was a Course Instructor for the Medical Effects of Ionizing Radiation Course. Dr. Skinner is a member of the American Society of Therapeutic Radiation and Oncology, the American College of Radiology Radiation Research Society, and the American Brachytherapy Society. He is the recipient of many awards to include the Defense Superior Service Medal, Meritorious Service Medal, Air Force Commendation Medal, AF Outstanding Unit Award, and the AF Organizational Excellence Award, National Defense Service Medal.

EDUCATION

Montefiore Medical Center, Radiation Oncology
University of Virginia, M.D.
U.S. Air Force Academy, B.S. Biology with distinction

2024

Science and Engineering Adoption, Adaption, Integration, and Sustainment/ Disposal Subcommittee

Science and Engineering Adoption, Adaption, Integration, and Sustainment / Disposal Subcommittee

As authorized by the Secretary of Defense and the Secretary of the Army and pursuant to the Federal Advisory Committee Act of 1972 and Government in the Sunshine Act of 1976, the Chairman of the Army Science Board (ASB) establishes the Systems Engineering and Sustainment Subcommittee. The following Terms of Reference (TOR) outline the duties and responsibilities of the subcommittee in accordance with the ASB charter (May 2022).

The Systems Engineering ad Sustainment Subcommittee, as part of the ASB, shall provide advice and recommendations to the ASB for its thorough deliberation and decision at a properly noticed ASB meeting on matters relating to the Army's core competencies in science and engineering adoption, adaption, integration and sustainment/disposal, to include:

- ✯ Digital engineering to include advanced physical and digital prototyping and experimentation in operational environments and advanced tools to support prototyping and experimentation
- ✯ Adoption, adaption, and integration of emerging technologies into existing weapons systems
- ✯ Sustainment during widely distributed and contested large scale combat operations to include predictive logistics, engineered resilient systems, agile logistics, and health management
- ✯ Disposal and divestiture of weapons systems through foreign military sales, demilitarization, and other means to better use existing resources
- ✯ Acquisition, funding, fielding, and equipping policies affecting the modernization of weapon systems and the organizations in which they are employed

Subcommittee Leadership including
Parent Board Members listed previously

Chair, Science and Engineering Adoption, Adaption, Integration, and Sustainment / Disposal Subcommittee

Charlotte M. Farmer, D. Eng
Parent Board Member

Vice Chair Nominee

William J. Neal, Ph.D.
Parent Board Member

Thomas G. Mahnken, Ph.D.
Parent Board Member

2024
SUBCOMMITTEE
MEMBER

C. Forrest Burke, LTC (Ret) USA

Subcommittee Nominee

CEO, Connected Logistics

EXPERTISE

Enterprise Integration

Network Modernization

RFID & SATCOM

Logistics Planning

Supply Chain Optimization

Data Analytics

Value Realization

SUBCOMMITTEE

Science and Engineering Adoption, Adaption, Integration, and Sustainment / Disposal

STUDY TEAM

Data-Centric Command & Control (C2)

EXPERIENCE

LTC (Ret) C. Forrest Burke is the Chief Executive Officer of Connected Logistics, a Service-Disabled Veteran Owned Small Business (SDVOSB) that designs and manages enterprise systems, networks, and defense information services. Connected Logistics has ranked as number 10 on the Inc. 500, and number 3 on the Federal Fast 50 lists. Having supported over two dozen Army enterprise programs, his team has delivered over $1B in documented earned value to the Army. Earnest & Young, LLP, (EY) named Mr. Burke the Entrepreneurial Patriot of 2012.

Before founding Connected Logistics, he served as the Chief Technology Officer to the Army G-4. He led the Logistics Network Task Force that modernized the Army's $3.2B logistics portfolio delivering information systems to 325,000 global users, integrating the world's largest, most complex supply chain.

During Operation Iraqi Freedom, Mr. Burke served as the Chief Information Officer for the 3rd Army G-4, designing and fielding the Radio Frequency Identification, Movement Tracking, Logistics, and Medical Information Networks across Southwest Asia. During Operation Joint Guardian, he served as Support Operations Officer, Multi-National Brigade-East and Chief, 1st Infantry Division Materiel Management Center. During Operation Desert Storm, he served as the Battalion Motor Officer, Task Force 1-37 Armor.

He designed the Army's sustainment and medical satellite networks, led the Army's first cloud data center consolidation, and developed the Army's Information Technology Value Realization methodology. He has been a technical or functional author of a dozen DoD capability description and production documents.

EDUCATION

Florida Institute of Technology, M.S., Logistics
Air University, M.S., Military Operational Arts & Science
Auburn University, B.S., Industrial Operations

2024
SUBCOMMITTEE
MEMBER

William S. Crowder, COL (Ret) USA

Senior Consultant at Logistics Management Institute

EXPERTISE

Strategic Concepts on Logistics

Supply Chain and Deployment

Operational Logistics

Change Management

Systems Design and Engineering

Program Management of Large Programs

Contingency Contracting

Financial Management

SUBCOMMITTEE

Science and Engineering Adoption, Adaption, Integration, and Sustainment / Disposal

STUDY TEAM

Human-Machine Integration

EXPERIENCE

COL (Ret) William S. Crowder entered active duty in 1967 and retired after 26 years in 1993 as a colonel. Notable achievements included developing three major software systems in transportation and financial management, commanding at the company and battalion level in the far East, serving as Director of Strategic Mobility for the U.S. Army in Operations Desert Shield and Desert Storm, and designing and implementing major revisions to the Army approach for strategic deployment and force projection.

He has extensive experience in long-range planning, strategic mobility management, concepts and doctrine development, and technology assessments as a research program manager and Army Transportation officer. He has worked with various DoD communities on improving operational contracting support and applying analytic frameworks to their large data sets.

His expertise lies in logistics, supply chains, and strategic deployments. He recently retired from Logistics Management Institute (LMI) where he was a Senior Consultant having served there in the past as Director, Logistics Services and Future Concepts Division. He has also served at Boeing/SAIC and Defense Advanced Research Projects Agency (DARPA). His most recent efforts resulted in a DARPA project (Log-X) that focused on the analysis of large commercial data sets to derive intent.

COL (Ret) Crowder has contributed to numerous ASB studies including *T*ask Force Odin Assessment, Evaluation of the Army Use of Predictive Data for High Risk Behavior, Decisive Army Strategic and Expeditionary Maneuver, Strategies to Optimize Army Operating and Generating Forces, The Military Benefits and Risks of the Internet of Things (IoT), Dense Urban Operations (Chair), and Army Corps of Engineers 2019 study (Chair).

EDUCATION

Industrial College of the Armed Forces
University of Georgia, M.B.A., Business/System Design
University of Alabama, B.S., Accounting
Marion Military Institute, A.A., Business

2024
SUBCOMMITTEE
MEMBER

John V. Farr, Ph.D., P.E., PMP

Subcommittee Nominee

Professor Emeritus of Engineering Management
United States Military Academy at West Point

EXPERTISE

Cost and Decision Analysis

Quantitative Methods

Training and Education

Systems Engineering

SUBCOMMITTEE

Science and Engineering Adoption, Adaption, Integration, and Sustainment / Disposal

STUDY TEAM

Data-Centric Command & Control (C2)

EXPERIENCE

Dr. John Farr is a Professor Emeritus of Engineering Management at the United States Military Academy (USMA) at West Point and was the Founding Director of the Center for Nation Reconstruction and Capacity Development. He was the Founding Director of the Department of Systems Engineering and Engineering Management, and the Associate Dean for Academics in the School of Systems and Enterprises at Stevens Institute of Technology from 2000 until 2010. Before coming to Stevens, he was a Professor of Engineering Management at the USMA where he was the first permanent civilian professor in engineering.

He is a former past president and Fellow of American Society for Engineering Management and a Fellow of the American Society of Civil Engineers. He has authored or edited over 200 technical publications to include three textbooks including one 2nd edition, editor of two handbooks, ten book chapters, and 100 refereed publications mainly on cost and decision analysis, engineering education and leadership, and systems engineering and thinking.

Dr. Farr has served on numerous accreditation, defense, academic, and national advisory boards to include membership on the Army Education Advisory Committee (2019 – present, Chairperson since 2022), member/consultant to Army Science Board (2002–2010 and 2022–present) and as a member of both the Air Force Studies Board (2006–2012), and the Board on Army Research and Development (2019–present) of the National Academies of Sciences.

He has also worked on a wide variety of economic and capacity development and military assessment projects in Afghanistan, many countries in Africa, Vietnam, and the Marshall Islands. He has taught at the University of Technical Education, Ho Chi Minh City, Vietnam as a Fulbright Specialist.

EDUCATION

University of Michigan, Ph.D., Civil Engineering
Purdue University, M.S., Civil Engineering
Mississippi State University, B.S., Civil Engineering

2024
SUBCOMMITTEE
MEMBER

Emaan M. Osman

Principal Director, Acquisition Analysis and Planning Subdivision
The Aerospace Corporation

EXPERTISE

- Aerospace
- Systems-of-Systems Engineering
- C5ISR
- Improved Decision-Making and Decision Support
- Portfolio Management
- Acquisition
- International Security Cooperation
- Border Security

SUBCOMMITTEE

Science and Engineering Adoption, Adaption, Integration, and Sustainment / Disposal

STUDY TEAM

Data-Centric Command & Control (C2)

EXPERIENCE

Emaan M. Osman is the Principal Director of the Acquisition Analysis and Planning Subdivision at The Aerospace Corporation's Chantilly, Virginia, campus where she oversees an organization dedicated to improving acquisition outcomes for the space enterprise and enabling the next generation of resilient, advanced space-related capabilities to maintain U.S. superiority.

Over the course of nearly three decades of service in the federally funded research and development domain supporting national security, Ms. Osman has held many leadership roles working with a broad sponsor base including the U.S. Navy, the Department of Homeland Security, the U.S. Air Force, the Defense Advanced Research Projects Agency (DARPA), the U.S. Army, the U.S. Space Force, the Department of Energy, NASA, and the Intelligence Community. She has a proven track record of building and leveraging diverse, inclusive, multidisciplinary cross-organizational teams; attracting, developing, and retaining excellent talent; collaboration, and demonstrating strong complex systems engineering skills.

Prior to joining The Aerospace Corporation, Ms. Osman served at MITRE Corporation as the Chief Engineer and Department Head, Naval Enterprise and Sea Systems Department; Lead, Modeling and Simulation Outcome, Naval Division; Deputy Portfolio Director, Mission Enablers; and Department Head, International Operations. She also led MITRE systems engineering support for several projects and regularly advised senior customers. She has done extensive work in acquisition, portfolio management, interoperability and integration, strategic analyses, systems-of-systems engineering, modeling and simulation, architecture, and concepts of operations.

Ms. Osman also served as adjunct faculty for several years at Monmouth University in West Long Branch, New Jersey.

EDUCATION

Monmouth University, M.S., Software Engineering
University of Waterloo, B.S., Mathematics
Rutgers University, B.S., Computer Science and Mathematics

2024
SUBCOMMITTEE
MEMBER

Jeffrey P. Reed

Subcommittee Nominee

Corporate Director of Digital Engineering
Engineering Director, Northrop Grumman

EXPERTISE

Engineering Leadership

Information Technology

Program Management

Team Building

Change Management

SUBCOMMITTEE

Science and Engineering Adoption, Adaption, Integration, and Sustainment / Disposal

EXPERIENCE

Mr. Jeffrey Reed has over 35 years of experience in the Aerospace and Defense industry working on major military defense programs. For the past 15 years, he has been implementing Digital Engineering and Product Lifecycle Management capabilities for several of the largest Department of Defense (DoD) programs. He is currently the Corporate Director of Engineering responsible for leading the Enterprise-wide Digital Design Portfolio.

In this role, he is leading the digital transformation within Engineering through the implementation of enterprise systems, business architecture, and new engineering software tools deployed throughout all Sectors. Mr. Reed and his team support engineering personnel working on programs throughout the enterprise. Within the Digital Design portfolio, Jeff's team is establishing the next generation of digitally connected engineering tools, while ensuring affordable implementation for programs. His current focus includes the development of a next generation Product Lifecycle Management System.

Previously, Mr. Reed was Director of Engineering for Model Based Tool Development at the Aeronautics Systems Sector supporting programs at all Centers of Excellence (CoEs). In this role, he was leading all engineering initiatives within Northrop Grumman Integrated Digital Enterprise (NGIDE) where the Team is expanding the Digital Thread throughout the Product Lifecycle. He also led the Model Based Engineering Community of Practice (CoP).

Mr. Reed serves as the executive focal point for Florida Tech and is a member of their Engineering and Science advisory board. He also is an active member of several cross-industry teams including the Aerospace and Defense Executive Council.

EDUCATION

Florida Institute of Technology, M.B.A., Management
Fairleigh Dickinson University, B.S., Civil Engineering

2024
SUBCOMMITTEE
MEMBER

Amber M. Walker, LTC, USAR, Ph.D.

Senior Vice President of Ground, C2, and Maritime, Perry Labs
Former Technical Director for Land Systems, Anduril Industries

EXPERTISE

Research and Development Engineering

Autonomous Systems Design and Implementation

Human-Robot Interaction

Strategy and Growth

Team Building

SUBCOMMITTEE

Science and Engineering

Adoption, Adaption, Integration, and Sustainment / Disposal

STUDY TEAM

Data-Centric Command & Control (C2)

EXPERIENCE

Dr. Amber Walker is the Senior Vice President of Ground, C2, and Maritime, Perry Labs and the former Technical Director for Land Systems at Anduril, responsible for strategy and growth in that domain. She worked to advance autonomous ground vehicle design, payload and software integration, and Soldier-robot teaming through both new concepts and targeted pursuits.

Prior to this, Dr. Walker was the Associate Director for Autonomy Research at Raytheon BBN leading initiatives in advanced perception, communications-aware autonomy, and human-machine interface design. From 2017–2021, she served as a Program Manager in Defense Advanced Research Projects Agency's (DARPA) Tactical Technology Office where she developed and managed projects related to hypersonic missiles, rocket motors, ground vehicles, and robotics.

She served over 16 years on active duty with the U.S. Army and continues her service as a Lieutenant Colonel in the Army Reserves. She has held positions in the Army G-8, as faculty in the Department of Civil and Mechanical Engineering at the U.S. Military Academy at West Point, and as a tactical Signal officer in the 4th Infantry Division at Fort Hood, Texas, and Baghdad, Iraq (OIF 07-09).

Dr. Walker is a school trained Operations Research and Systems Analysis (ORSA) analyst and attended Space 200 military training in 2022. Her Ph.D. dissertation was entitled *Attitude Aware Smartphones for Tele-Operated Robot Control*. Dr. Walker is a member of the American Institute of Aeronautics and Astronautics (AIAA), the American Association of Rhodes Scholars, the Human Factors and Ergonomics Society, and the Signal Corps Regimental Association

EDUCATION

University of Oklahoma, Ph.D., Aerospace Engineering
University of Oxford (UK), MSc by Research, Engineering Science
United States Military Academy, B.S., Mechanical (Aeronautical) Engineering

2024

Weapons Systems Subcommittee

Weapons Systems Subcommittee

As authorized by the Secretary of Defense and the Secretary of the Army and pursuant to the Federal Advisory Committee Act of 1972 and Government in the Sunshine Act of 1976, the Chairman of the Army Science Board (ASB) establishes the Weapons Systems Subcommittee. The following Terms of Reference (TOR) outline the duties and responsibilities of the subcommittee in accordance with the ASB charter (May 2022).

The Weapons Systems Subcommittee, as part of the ASB, shall provide advice and recommendations to the ASB for its thorough deliberation and decision at a properly noticed ASB meeting on matters relating to the Army's weapon systems core competencies in:

- Rotorcraft Design Synthesis & Performance Assessment (DS&PA) and airworthiness/safety
- Ground combat vehicle DS&PA, Soldier interaction, and system integration
- Lethality, including impact physics, energetics, warhead DS&PA, effects modeling and simulation
- Survivability and protection, including armor and balanced approach for detection/hit/kill avoidance
- Air & missile defense DS&PA, precision fires, seekers, and precision guidance

Subcommittee Leadership including
Parent Board Members listed previously

Vice Chair, Weapons Systems Subcommittee
Mackenzie Eaglen
Parent Board Member

Chair, Weapons Systems Subcommittee
Robert P. Lennox. LTG (Ret) USA
Parent Board Member

Sean B. MacFarland
LTG (Ret) USA
Parent Board Member

2024
SUBCOMMITTEE
MEMBER

Kari Anderson

Subcommittee Nominee

Senior Technical Advisor, Mobius Consulting, LLC

EXPERTISE

- Missile Defense
- Low Observable Counter Technology
- Sensor Technology
- Special Access Programs and Sensitive Compartmentalized Information
- Congressional Reports
- Acquisition
- Program Management

SUBCOMMITTEE

- Weapons Systems

EXPERIENCE

Ms. Kari Anderson has an extensive background in missile defense, low observable/counter low observable technology, and sensor technology. She currently serves as a Senior Technical Advisor for Mobius Consulting, LLC, where she provides technical solutions and development strategies to Department of Defense (DoD) customers.

Prior to this assignment she was the Chief Architect, Missile Defense Agency (MDA) for 11 years. In this position, she developed a vision and roadmap for the future architecture for the Ballistic Missile Defense System (BMDS), an integrated worldwide network of space, ground, and ship-based sensors; ground-based and ship-based interceptors; and a Communications, Command and Control system that is used for the defense of the U.S. homeland, deployed forces, and friends and allies against the threat of ballistic missiles. She delivered over 70 Congressional reports to stakeholders including Congressional members and staffers, Office of Secretary of Defense, combatant commands, and service leadership.

Other assignments have included Deputy/Program Manager, Low and Counter Low Observable Technology, Office of Naval Research; Systems Engineer, Naval Air Systems Command (NAVAIR); and Engineer, Naval Ordnance Station.

Her awards include the Presidential Rank, Meritorious Senior Professional; Exceptional Civilian Service Award; Missile Defense Agency Director's Pinnacle Award; and the National Defense Industrial Association Award for Missile Defense Technology.

EDUCATION

National Defense University, M.S., National Security Strategy
George Washington University, M.S., Engineering Administration
University of Maryland, B.S., Chemical Engineering

2024
SUBCOMMITTEE
MEMBER

Robert M. Dyess, MG (Ret) USA

Chairman of the Board for the Marshall Legacy Institute (MLI)

EXPERTISE

Army and Missile Defense

Corporate Strategy and Development

Army Capabilities Integration

Future Concepts Development

Requirements' Integration

Force Development

Equipment Modernization

Resource Management

SUBCOMMITTEE

Weapons Systems

STUDY TEAM

Human-Machine Integration (Vice Chair)

EXPERIENCE

MG (Ret) Robert "Bo" Dyess served in the Army for 36 years including assignments in the 82nd Airborne Division, where he participated in combat operations in Operation Urgent Fury in Grenada, and 3rd Infantry Division both in Germany and Fort Stewart, Georgia. He served as the Chief of Force Integration in Operation Enduring Freedom in Afghanistan in the Combined Security Transition Command to grow and mature the Afghan National Army. His last Army assignment was as acting Director of the Army Capabilities Integration Center (ARCIC). Prior to that, Dyess served as the Director of Force Development (FD) in Army G-8.

Following retirement, Bo served as Vice President, Government Relations (Army and Missile Defense) at Northrop Grumman's Corporate Headquarters. Dyess was recently selected as Senior Vice President, Business Development, Munitions and Government, Day & Zimmermann. Bo also serves as Chairman for the Marshall Legacy Institute (MLI) a humanitarian organization founded by General Gordon R. Sullivan.

MG (Ret) Dyess was inducted into the Army's Force Management Hall of Fame in August 2021 for his significant and lasting contributions that enhanced the practice of Army force management. Dyess is a member of the Virginia War Memorial Foundation Board.

His awards include the Distinguished Service Medal (with oak leaf), Legion of Merit (with oak leaf), Bronze Star (with oak leaf), the Defense Meritorious Service Medal, the French National Order of Merit, The Combat Infantryman's badge, the Ranger Tab, and the Senior Parachutist Badge.

EDUCATION

U.S. Air War College, M.S., International I Global Studies

Virginia Polytechnic Institute and State University, M.S., Systems Engineering

U.S. Military Academy at West Point, B.S., Engineering

2024
SUBCOMMITTEE
MEMBER

Nayantara D. Hensel, Ph.D.

Chief Economist and Senior Advisor for Seaborne Defense, LLC

EXPERTISE

- Critical Materials
- Supply Chains
- National Security Budgeting
- Energy Markets
- Defense Industrial Base
- Acquisition Policy
- Defense Mergers
- Maritime Trade

SUBCOMMITTEE

Weapons Systems

EXPERIENCE

Dr. Nayantara Hensel has focused over the past two decades on defense industrial base issues, the role of critical materials on supply chains, national security budgeting, and the impact of economic forces and regulatory initiatives across a variety of industries (energy, housing, etc.). She is the Chief Economist for Seaborne Defense and is a member of the Secretary of the Air Force's Advisory Group.

As the Chief Economist for the Department of the Navy, she played a significant role in issues regarding the defense industrial base issues, the budget, and acquisition policy. As Professor of Industry and Business at the National Defense University's (NDU) Eisenhower School, she led the development of the defense resourcing program and was awarded the Department of Defense Joint Civilian Service Commendation Medal. She has also taught at the Naval Postgraduate School, Harvard University, and the Stern School of Business at New York University.

She focused on the impact of economic forces on financial stability across industries and developed regulations in her role as Chief Economist of Public Company Accounting Oversight Board (PCAOB) and Director of the Office of Economic and Risk Analysis. During her six years at the Federal Housing Financial Agency (FHFA), she led teams in analyzing changes in the housing market and regulatory initiatives. Dr. Hensel authored *The Defense Industrial Base: Strategies for a Changing World* and has written over 25 articles in peer-reviewed journals and books. She has appeared on CNBC, PBS, Fox Business TV, Voice of America, and others, and has conducted radio interviews on ABC, CBS, NPR, Wall Street Journal Radio, and Bloomberg Radio.

EDUCATION

Harvard University, Ph.D., Business Economics
Harvard University, M.A., Business Economics
Harvard University, B.A., Economics, *magna cum laude*, *Phi Beta Kappa*

2024
SUBCOMMITTEE
MEMBER

Christine M. Michienzi, Ph.D.

Subcommittee Nominee

Founder and CEO, MMR Defense Solutions, LLC

EXPERTISE

Strategy and Policy for Defense Industrial Base

Supply Chain Analysis and Risk Management

Technical Expertise:

Missiles and Munitions

Microelectronics

Strategic Materials and Chemicals

Management of Research Programs and Organizations

Science and Technology

Research and Development

SUBCOMMITTEE

Weapons Systems

EXPERIENCE

Dr. Christine Michienzi is a former senior government executive with extensive national and international leadership experience. Her strategic advice and counsel are regularly sought on issues relating to global supply chains and defense industrial base resiliency and security.

Today, she provides consulting services – bringing innovative solutions that allow companies to successfully address supply chain and technical issues using strategy, policy, and investment approaches.

Previously, Dr. Michienzi served in the Office of the Secretary of Defense as the Senior Technology Advisor for the Undersecretary of Defense for Acquisition and Sustainment and the Chief Technology Officer for the Industrial Base Policy office. Her expertise includes industrial base/supply chains and technology for critical defense capabilities such as missiles and munitions, microelectronics, critical chemicals, hypersonics, nuclear modernization, and the Defense Production Act.

She received the Secretary of Defense's Medal for Civilian Career Service, the Secretary of Defense's Medal for Exceptional Civilian Service, the Naval Sea Systems Command Scientist of the Year Award, and the Assistant Secretary of the Navy for Research, Development and Acquisition Scientist of the Year Award.

EDUCATION

University of Maryland, Ph.D,, Analytical Chemistry
University of Maryland, B.S., Chemistry

2024
SUBCOMMITTEE
MEMBER

Camille M. Nichols, MG (Ret) USA, Ph.D.

Subcommittee Nominee

President, nLight DEFENSE Systems, Inc.
Former Commanding General, U.S. Army Contracting Command

EXPERTISE

Strategic Planning

Organizational Design and Development

Performance Management

Cross-Functional and Matrix Team Leadership and Collaboration

Financial and Resource Management

DoD Procurement

Project/Program Cost and Schedule Management

Training and Leadership Development

Supply Chain Management

SUBCOMMITTEE

Weapons Systems

STUDY TEAM

Human-Machine Integration

EXPERIENCE

MG (Ret) Camille M. Nichols is a skilled senior strategist who presently serves as the President, nLight DEFENSE Systems, Longmont, Colorado. Before that, she was the Executive Vice President, Project Services, Amentum, Germantown, Maryland and Vice President, Business Operations, Fluor Government Group, Arlington, Virginia.

Prior to her retirement from the U.S. Army, MG (Ret) Nichols served in DoD acquisition for over 20 years. She served in many prestigious positions to include as the U.S. Army Contracting Command's first commanding general. She previously served as Program Executive Officer, PEO Soldier, at Fort Belvoir, VA. Additional acquisition assignments include the following: Commanding General, Expeditionary Contracting Command; Senior Military Assistant to the Under Secretary of Defense (Acquisition, Technology and Logistics); J8 Capabilities and Acquisition Division Director; Joint Program Manager, Guardian; Product Manager, Second Generation Forward-looking Infrared; Army Legislative Liaison Officer; contracting officer with the U.S. Army Corps of Engineers in Desert Shield; and systems coordinator in the office of the Assistant Secretary of the Army for Research, Development and Acquisition.

She enlisted in the Army in 1975 and was commissioned as an engineer officer upon graduation from the United States Military Academy at West Point in 1981.

Her awards and decorations include the Defense Superior Service Medal, the Legion of Merit, the Bronze Star Medal, the Defense Meritorious Service Medal, and the Humanitarian Service Medal. MG (Ret) Nichols was recognized as the Army Project Manager of the Year in 2005 and is Airborne and Air Assault qualified. She is Level 3 certified in both Contracting and Program Management, and Level 2 certified in Systems Engineering. She also was a member of the 1984 U.S. Olympic Handball Team.

EDUCATION

The George Washington University, DSc., Engineering Management
University of Southern California, M.S., Systems Management
U.S. Naval War College, M.A., Strategic Studies
Industrial College of the Armed Forces, M.S., National Resource Strategy
United States Military Academy at West Point, B.S.

2024
SUBCOMMITTEE
MEMBER

William E. Snowden, Ph.D.

Subcommittee Nominee

Technical Consultant

EXPERTISE

Materials Science

Armor/Anti-Armor Technology

Active Protection Systems (APS)

Defense Technology

Microtechnology and Applications

SUBCOMMITTEE

Weapons Systems

STUDY TEAM

Human-Machine Integration

EXPERIENCE

Dr. William “Bill” Snowden is a materials scientist and defense technologist currently working as a Technical Consultant. He has broad industrial (Corning, Inc., General Electric), national laboratory (Lawrence Livermore National Laboratory (LLNL)), and government, Department of Defense (DoD), experience as a research scientist, technical program manager, and executive.

He has a long history of involvement in the armor/anti-armor community, including work as a research scientist at LLNL, as a Defense Advanced Research Projects Agency (DARPA) program manager for the agency’s Armor/Anti-Armor Research and Technology Program (1983–1985), as a member of the DoD Senior Executive Service (SES), and as a consultant supporting the Institute for Defense Analyses (IDA). As a Senior Executive in the Office of the Secretary of Defense, he led OSD efforts to develop the Balanced Technology Initiative, a program established by Congress in the mid-1980s focused on the development of technologies of critical importance to U.S. conventional defense capabilities.

Dr. Snowden provided technical and programmatic support to DARPA’s Microsystems Technology Office, particularly focused on the development of Microelectromechanical Systems (MEMS) and nanotechnology for high-payoff applications in both military and non-military systems. He also led a study for the National Science Foundation (NSF) on Nano/Micro Technology Horizon 2040, intended to help define and prioritize NSF thrust areas within its Engineering Directorate over the next several decades.

Dr. Snowden has supported the Army Science Board as a member and consultant for many years on studies such as The Strategic Direction for Army Science and Technology; Future Armor/Anti-Armor Competition, which he led; Multi-Domain Operations; and An Independent Assessment of the 2040 Battlefield and Its Implications for 5th Generation Combat Vehicle Technologies.

EDUCATION

University of California, Berkeley, Ph.D., Materials Science and Engineering
University of California, Berkeley, M.S., Materials Science and Engineering
Alfred University, B.S., Ceramic Engineering

2024
SUBCOMMITTEE
MEMBER

James E. Thomsen

President, Seaborne Defense, LLC

EXPERTISE

National Security Systems Engineering

Research and Development

Defense Acquisition

Defense Industrial Base

Procurement

Contracting

Defense Planning, Programming, Budgeting, and Execution (PPBE)

SUBCOMMITTEE

Weapons Systems

EXPERIENCE

With over 40 years of engineering design, complex systems engineering, and large-scale defense acquisition and R&D experience, Mr. Thomsen has a proven record of serving and leading major National Security enterprises and programs. He is currently the President, Seaborne Defense, LLC, an independent consulting and advisory service that assists companies, universities, and government entities with technology development strategies.

Mr. Thomsen also currently serves on the DTC Ltd. Board (Chairman); PLASAN North America, Inc., Board (Chairman); the National Academies of Sciences Board (Army R&D Board); The Pennsylvania State University Applied Research Laboratory (Advisory Board); and Aeyon, LLC, (Advisory Board).

Previous assignments include Board member for Sparton Electronics, Inc.; Board member for VTHalter Marine; Principal Deputy Assistant Secretary of Navy (Research, Development, Acquisition); Program Executive Officer, Littoral and Mine Warfare (PEO(LMW)) and Executive Director; Department Head, Weapons Department, Naval Surface Warfare Center (NSWC), Dahlgren, Virginia; and Department Head, Warfare Systems Department, Panama City, Florida.

Mr. Thomsen's awards include the Senior Executive Service Presidential Rank Award; the Department of Defense (DoD) Award for Exceptional Civilian Service (2); DoD's Award for Distinguished Civilian Service; and induction into the Hall of Fame, Naval Sea Systems Command (Naval Surface Warfare Center).

EDUCATION

Florida State University, M.S., Management
Florida Atlantic University, B.S., Ocean Engineering

2024
SUBCOMMITTEE
MEMBER

L. Neil Thurgood, LTG (Ret) USA, Ph.D.

Subcommittee Nominee

Senior Vice President for Anduril; Strategic Planning,
Counter-Unmanned Systems, Rocket and Missile Programs

EXPERTISE

- Combat Leadership
- Training
- Leader Development
- Strategy Development
- Material Solutions in all Warfighting Domains
- Missile Systems
- Aviation Systems and Aircraft
- Hypersonic Weapons
- Directed Energy Weapons
- Special Operations Aviation Weapon Systems
- Team Building
- Analysis
- Management

SUBCOMMITTEE

Weapons Systems

STUDY TEAM

Data-Centric Command & Control (C2)

EXPERIENCE

Dr. Neil Thurgood is recognized as a global leader for developing business strategies, training and personnel development, leadership development, and strategy execution to achieve performance objectives. A successful senior leader in solving critical problems in the defense and acquisition segments, including the integration of related activities and programs across the United States and international business segments to achieve desired outcomes.

He served over 37 years in the Army retiring as a Lieutenant General, culminating as the Director to Army Rapid Capabilities and Critical Technology Office (RCCTO), over $4B series of programs designed to accelerate advance technologies into the Department of Defense (DoD) using innovative processes, unique organizations, legislative strategies and focused authorities. These efforts included Hypersonics, High Energy Lasers, missile programs, aviation programs, and hybrid technologies on rapid procurement pathways including efforts with foreign Allied and Partner Nations. As result, he reduced acquisition cycles times bringing increased output to the Army and Joint Force.

Dr. Thurgood has led organizations at all levels of increasing responsibilities and across numerous domains supporting customer-desired outcomes. He was responsible for strategy development, budget forecast and execution, international relationships, foreign military sales, as well as supporting Direct Commercial strategies and developing positive cash flow for the Army and DoD.

In addition to completing education through Ph.D., Dr. Thurgood completed additional training with executive coursework at the Harvard Business School Program of Advanced Management, The Wharton Business School for Leadership, Tuck Business School at Dartmouth, and Georgetown University Institute for Government Affairs.

EDUCATION

University of Sarasota, Ph.D., Strategic Planning
and Organizational Behavior

U.S. Naval Post Graduate School, M.S., Systems Management

U.S. Air War College, M.S., Strategic Studies

University of Utah, B.S., Business and Communications

2024
SUBCOMMITTEE
MEMBER

Angel Zajkowski, SGM (Ret) USA

Founder/President, Delphi Solutions
Managing Director, Striveworks
Board Director, Team Red, White, and Blue

EXPERTISE

Organizational Culture and Transformation

Leadership Development and Talent Management

Technology and Innovation

Special Operations

Special Missions

Sensitive Activities

Intelligence Operations and Activities

Combat Operations and Warfighting

SUBCOMMITTEES

Weapons Systems

STUDY TEAM

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED)

EXPERIENCE

SGM (Ret) Angel Zajkowski enlisted in the Army as a Human Intelligence specialist and served in Korea and Japan as a collector focused on the Indo-Pacific region. In 2002, she transitioned from an intelligence professional to a special operations professional. During her assignment in special operations, she served as a Special Operator, Operational Team Leader, Operator Training Course Instructor, Future Plans and Operations Staff Manager, Operational Detachment Leader, Joint Task Force Senior Enlisted Leader, Director of Advanced Technologies, Deputy Chief Technology Officer, Chief Restructuring Officer, and Chief of Staff.

She is the first woman in Army special missions to receive a medal for valor for courage in combat, and she has multiple operational and training deployments to combat zones and conflict areas around the world. She is the first female Chief of Staff and board member in a classified unit of the top .01 percent of the Army that conducts global operations in politically sensitive areas, shattering boundaries for future generations of women. As the Chief Restructuring Officer, she spearheaded the radical organizational transformation of an elite military unit. She is the co-founder of SOCOM Ignite, a nation-wide academic program that develops current and future leaders. She currently serves as a Special Assistant to various general and flag officers on organizational culture and change, technological transformation and innovation, and academic and private-sector partnerships.

Some of her military courses include Chinese, Arabic, Pashto, Military Freefall Jumpmaster, Surveillance and Reconnaissance, Strategic Debriefer, and Joint Special Operations Senior Enlisted Advisor.

EDUCATION

Harvard Business School, Executive Certificate
Stanford Graduate School of Business, M.S., MSx Sloan Fellow
Methodist University, B.A. (dual), Global Studies and Political Science
Cochise College, A.A., Intelligence Operations
Monterey Peninsula College, A.A., Foreign Language

Consultants

Gary W. Blohm

President, G Blohm Consulting, LLC

2024
CONSULTANT

EXPERTISE

- Satellite Communications (SATCOM)
- Networking, Radio Communications
- C5ISR Systems
- Geospatial & Geospatial-Intelligence
- Research & Development (R&D)
- Acquisition and Program Management

EXPERIENCE

Gary W. Blohm is the President of G Blohm Consulting, LLC, a management, acquisition, and strategic planning consulting company that serves a wide array of commercial and defense companies.

Before founding G Blohm Consulting, LLC, he served as Director of the Army Geospatial Center (AGC), the Geospatial Research Laboratory (GRL) and the Army's Geospatial Information Officer (GIO). He was responsible for collecting and validating geospatial requirements, formulating geospatial policy, setting priorities, and securing resources supporting the Army Geospatial Enterprise. He developed, produced, and distributed topographic, geodetic, and geospatial information, tools/services and new technologies across the Department of Defense (DoD).

He also served as the Army Chief Network Architect and the Army Chief Data Officer responsible for the planning, development and implementation of the Army's Enterprise Information Technology Architecture. He initiated the Army Data Board and developed the first Army Data Strategy.

He also served as the Director of the Communications, Electronics, Research, Development and Engineering Center where he oversaw a workforce of more than 2,400 highly skilled professionals and a $1B annual budget and was responsible for the development of innovative Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) technologies.

His 36 years of experience in leading the Army's network and data policy, and research, development of emerging technology solutions has led to the delivery of C5ISR and Geospatial capabilities to the U.S. Army.

EDUCATION

Fairleigh Dickinson University, M.B.A., Management
Stevens Institute of Technology, B.E., Electrical Engineering

Nichoel E. Brooks, COL (Ret) USA

Vice President, Defense Intelligence & Strategy, LMI

EXPERTISE

- Intelligence Operations
- C5ISR Systems
- Strategic long-range planning and conceptual development
- Intelligence information architectures
- Analytic and integrative thinking skills
- Building and connecting communities of interest
- Activating innovative projects

STUDY TEAM

Transformation of Intelligence Processing, Exploitation, and Dissemination (PED)

EXPERIENCE

COL (Ret) Nycki Brooks leads LMI's Defense Intelligence and Strategy practice. She has been a key strategic leader in the Army's intelligence community as an Intelligence Officer with over 32 years of intelligence experience.

Her previous command and senior staff positions include Director of Intelligence and Security for U.S. Army Futures Command (AFC) where she spearheaded efforts to develop the Directorate of Intelligence and Security (DoIS). She also served as Deputy Commander, U.S. Army Intelligence and Security Command (INSCOM) where she was responsible for 17 Brigade in 21 global locations supporting Army Service Component Commands and Combat Service Agencies.

Additional assignments include Army J2, Director of Intelligence Joint Special Operations Task Force, where she was responsible for providing timely, accurate, and relevant intelligence to drive combat operations in Afghanistan and Brigade Commander, National Ground Intelligence Center where she led the Army Intelligence Service center of over 3,200 people and a $500 million-dollar operating budget. In this role, she was responsible for ground force's intelligence, scientific and technical intelligence and military capabilities analysis on foreign ground forces required by the Army, warfighting commanders, the force modernization and research and development communities.

Other assignments include Commander, Counter-intelligence Cyber Battalion (310th Military Intelligence Battalion); Executive Officer, Defense Intelligence Agency; Special Advisor to Commanding General MNF-I, and Chief of Commanding General's Initiative Group, III Corps.

COL (Ret) Brooks is the recipient of the Distinguished Service Medal, three Legion of Merit medals, four Bronze Star Medals, the Defense Meritorious Service Medal, and multiple other awards including the Combat Action Badge.

EDUCATION

Joint Advance Warfighting School, Norfolk VA/National War College, Washington D.C., M.S., Strategic Planning and Strategy Development

University of Texas, Austin, M.S., Information Systems and Technology

School of Advanced Military Studies, Command & General Staff College, Fort Leavenworth KS, M.A., Military Arts and Science

2024
CONSULTANT

Ellen R. Herbert, Ph.D.

Consultant Nominee

Senior Scientist, Sustainability and Nature Based Solutions
Ducks Unlimited, National Headquarters

EXPERTISE

- Wetland Ecology
- Biogeochemistry and Geomorphology
- Quantifying Ecosystem Services
- Ecosystem Restoration
- Water Quality
- Plant-soil interactions
- Numerical Modeling
- Community Ecology
- Anthropogenic Impacts on Wetland Systems

SUBCOMMITTEE

Environmental Advisory

STUDY TEAM

Beneficial Use of Dredged Materials in Civil Works

EXPERIENCE

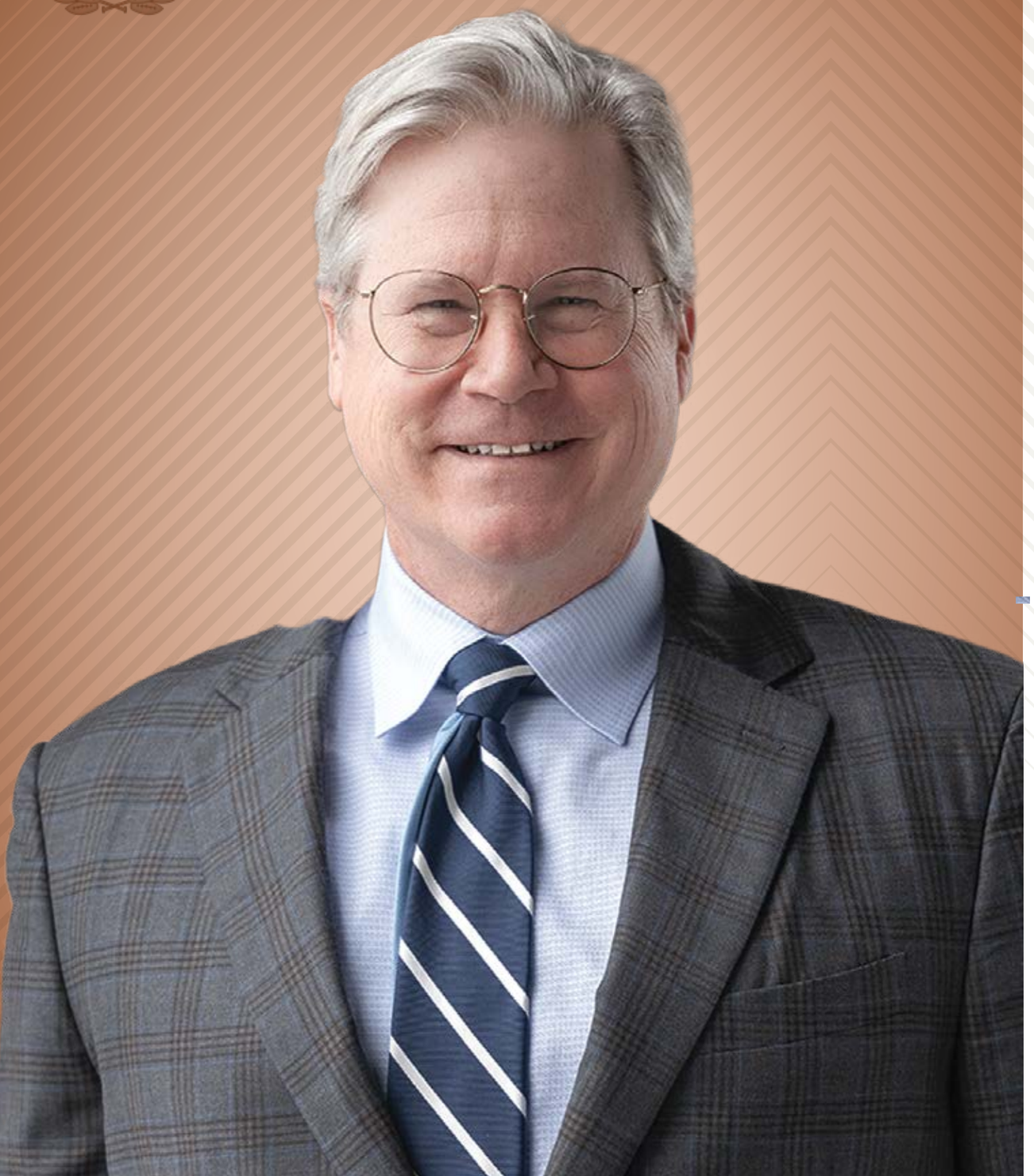
Dr. Ellen R. Herbert is Senior Scientist, Sustainability and Nature Based Solutions, Ducks Unlimited, National Headquarters. In this role, Dr. Herbert works as a member of DU's National and International Science Team to evaluate the outcomes of habitat conservation work across the continent through a combination of field experimentation, numerical modeling, and data synthesis with a special emphasis on flow regulation, climate adaptation, climate mitigation and water quality improvement. Dr. Herbert works across disciplines to engage multiple stakeholder groups to co-design research to facilitate real-world application in conservation, natural infrastructure and natural resource management.

She is the lead investigator on a $3.2M USDA-funded research project exploring the climate mitigation and adaptation functions provided by the USDA's Conservation Reserve Programs. Dr. Herbert also engages in extensive work around research and implementation of equitable natural infrastructure solutions as adaptation tools for climate and land use change. She is a member of the Steering Committee of the Natural Infrastructure Initiative and the Network for Engineering with Nature and helps leads DU's engagement with the Mississippi River Cities and Towns Initiative to deliver natural infrastructure to mitigate flood and drought hazards and provide recreational opportunities along the Mississippi River. Dr. Herbert also co-leads grant with the University of Georgia to develop a master's degree and fellowship program in natural infrastructure research and training at the Institute for Resilient Infrastructure Systems.

EDUCATION

Indiana University, Ph.D., Public and Environmental Affairs
Kenyon College, B.A., Biology

2024
CONSULTANT



Christian R. Macedonia
COL (Ret) USA, MD

CEO, Lancaster Life Sciences Group, LLC

EXPERTISE

- Telemedicine
- Program Management
- Medical Imaging
- Genomics
- Bioinformatics

STUDY TEAM

Medical Study

EXPERIENCE

COL (Ret) Christian Macedonia retired from the U.S. Army after 27 years of service. His terminal assignment was as the Medical Sciences Advisor and personal assistant to Admiral Mike Mullen, Chairman of the Joint Chiefs of Staff. In this four-year assignment, he commanded the Chairman's Gray Team, a joint project reforming the care of the combat wounded.

Dr. Macedonia started his career in Goeppingen, Germany as a medical company XO and Battalion S4. Later, while attending medical school in Bethesda, Maryland and conducting research at the National Institute of Health (NIH), he invented the first clinically operational 3D ultrasound and was subsequently granted a $5M DARPA award to further develop the technology for deployed combat casualty care. Dr. Macedonia traveled extensively to proliferate this and other telemedicine technologies to U.S. allies. He then served as the Medical Director of Women's and Children's Health for the National Capital Region before deploying for two tours in Iraq as the Deputy Commander for Clinical Services, 115th Field Hospital.

On return, he was assigned as the Chief of Research Operations, Telemedicine and Advanced Technologies Research Center, Fort Detrick, Maryland. During this time, he served as the military representative to the Defense Science Board, IED II Task Force. His selection to the Office of the Joint Chiefs of Staff followed. After his military career, Dr. Macedonia was recruited to DARPA and Johns Hopkins University School of Medicine where he served as a program manager, Defense Sciences Office running programs in human performance and artificial intelligence applications in genomics. Dr. Macedonia also started and serves as the CEO, Lancaster Life Science group as well as CEO of a biotech startup in Ann Arbor, Michigan.

EDUCATION

National Institutes of Health and Georgetown University, Bioinformatics and Maternal Fetal Medicine, Fellowship

Madigan Army Medical Center, OB/GYN (Residency)

Uniformed Services University, MD, Doctor of Medicine

Bucknell University, B.S., Chemistry

2024
CONSULTANT

David Warnick, COL (Ret) USA

Senior Director, Software Engineering and Army Programs Missiles and Space Modern Technology Solutions Incorporated

EXPERTISE

- Program Management
- Leadership
- Team building
- Development
- Mentorship

EXPERIENCE

COL (Ret) David Warnick served in the Army for 28 years. Presently, he's the Senior Director, Software Engineering and Army Programs, Program Executive Office (PEO) Missiles and Space at Modern Technology Solutions Inc., Huntsville, Alabama. In this role, he is responsible for the profit and loss of an 80-personnel business unit with $17M annual revenue across five contracts supporting Army and Missile Defense Agency programs.

Before his current job, he served as the Project Manager, Tactical Aviation and Ground Munitions for PEO Missiles and Space where he was responsible for program management of five major defense acquisition programs and in excess of 600 government and contractor employees overseeing the administration of total annual budgets exceeding $1.6 Billion. Here, he was selected as Department of Defense Project Manager of the year 2019. He provided life-cycle management of HELLIFRE, JAGM, Hydra, Javelin, and TOW missile programs and their associated launchers and test equipment, and he coordinated efforts with Army Futures Command Cross Functional Teams and Aviation and Maneuver Centers of Excellence.

He was selected above all acquisition colonels to serve as Executive Officer to the Presidentially appointed Assistant Secretary of the Army for Acquisition, Logistics and Technology. In this position, he synchronized Army Acquisition Executive efforts with 12 subordinate PEO and the Army Staff concerning $20B Acquisition budget priorities.

Other key assignments include Product Manager, HELLFIRE Missile Systems, PEO Missiles and Space; Department of the Army System Coordinator (DASC) and Executive Officer; Team Leader Senior Contingency Contracting Team, 605th Contracting Team, and many more.

EDUCATION

U.S. Air Force, Maxwell AFB, Master of Strategic Studies

U.S. Naval Post Graduate School, MBA

U.S. Military Academy at West Point, B.S., Management/Systems Engineering

2024

Massachusetts Institute of Technology/Lincoln Laboratory Liaison

2024
MIT/LL LIAISON

Carl Fossa, LTC (Ret) USA, Ph.D.

Group Leader, Tactical Networks, MIT Lincoln Laboratory

EXPERTISE

Tactical Communications and Networks

5G

Wireless Networks

Satellite Communications

STUDY TEAM

Data-Centric Command and Control (C2) (Vice Chair)

EXPERIENCE

Dr. Carl Fossa is the Group Leader of the Tactical Networks Group at MIT Lincoln Laboratory. He is responsible for the technical leadership and management of 85 people executing $35M of annual R&D efforts in support of protected military communications systems and networks. His areas of technical expertise include 5G, digital communications, wireless networks, satellite communications systems and network modelling and simulation.

Prior to joining Lincoln Laboratory in 2008, he served as an Army Signal Officer for 21 years retiring at the rank of Lieutenant Colonel. He has served in a range of tactical military positions which included deploying to Operation Desert Shield/Storm. He served in a number of technical engineering positions at major command headquarters and as an Assistant Professor of Electrical Engineering, United States Military Academy.

His military assignments included: Branch Chief of the C4I Branch, Operations Division, Headquarters Forces Command, Ft. McPherson, Georgia; Assistant Professor, Department of Electrical Engineering and Computer Science, United States Military Academy, West Point, New York; Company Commander of the 181st Signal Company, 43rd Signal Battalion in Heidelberg, Germany; Network Engineer, 5th Signal Command, Worms, Germany; Assistant Operations Officer, 67th Signal Battalion, Ft. Gordon, Georgia and Dhahran, Saudi Arabia; Platoon Leader, 67th Signal Battalion, Ft. Gordon, Georgia.

EDUCATION

Virginia Polytechnic Institute and State University, Ph.D., Electrical Engineering

Air Force Institute of Technology, M.S., Electrical Engineering

United States Military Academy, B.S., Electrical Engineering

Past ASB Leadership

Past Army Science Board Chairs

LTG (Ret) Michael E. Williamson	2022 – 2024
CAPT (Ret) USN Jeffrey A. Isaacson	2020 – 2021
Dr. Leonard W. Braverman	2017 – 2020
Dr. James A. Tegnelia	2015 – 2017
Mr. George T. Singley III	2011 – 2014
Dr. Frank H. Akers, Jr.	2005 – 2011
Dr. James A. Tegnelia	2004 – 2005
Dr. Joseph V. Braddock	2002 – 2004
Mr. Michael J. Bayer	1998 – 2002
Dr. Michael Frankel	1996 – 1998
Dr. Wilson K. Talley	1995 – 1996
Dr. Walter B. LaBerge	1992 – 1995
Mr. James Jacobs	1991 – 1992
Dr. Duane A. Adams	1990 – 1991
Dr. Dennis R. Horn	1989 – 1990
Mr. Gilbert F. Decker	1987 – 1989
Dr. Irene C. Peden	1986 – 1987
Dr. Wilson K. Talley	1983 – 1986
Dr. Richard A. Montgomery	1981 – 1983
Dr. J. Ernest Wilkins, Jr.	1978 – 1981

Past Army Scientific Advisory Panel Chairs

Dr. Bruce A. Reese	1976 – 1977
Mr. Lawrence H. O'Neill	1971 – 1976
Dr. Harold M. Agnew	1966 – 1970
Dr. Finn J. Larsen	1965
Dean Morrough P. O'Brien	1961 – 1964
Dr. Clifford C. Furnas	1960 – 1961
Dr. James W. McRae	1960
Mr. Richard S. Morse	1958 – 1959
Dr. Frederick L. Hovde	1956 – 1957
Dr. James R. Killian, Jr.	1951 – 1956

ASB
2024

Past ASB Braddock Award Winners

The Joseph V. Braddock Award was established as an honorary award of the U.S. Army for members of and consultants to the ASB. This award is intended to annually recognize an individual who has made a highly significant contribution to the Department of the Army in the ASB chartered fields of science, technology, manufacturing, acquisition, logistics, and business management while serving in a voluntary advisory capacity as a member of or consultant to the ASB.

This award is named in honor of Dr. Joseph V. Braddock, who has served as an uncompensated volunteer Chair, member, and consultant of the ASB for over 33 years.

Dr. Braddock continues to serve as a senior fellow consultant on the ASB's Red Team, where he mentors and advises the Board's executive committee, study chairs, members, and consultants. His efforts continue to develop the capacity of the ASB and its members to enable timely and relevant advice on some of the most challenging problems the Army is facing.

2016
Joseph V.
Braddock, Ph.D.

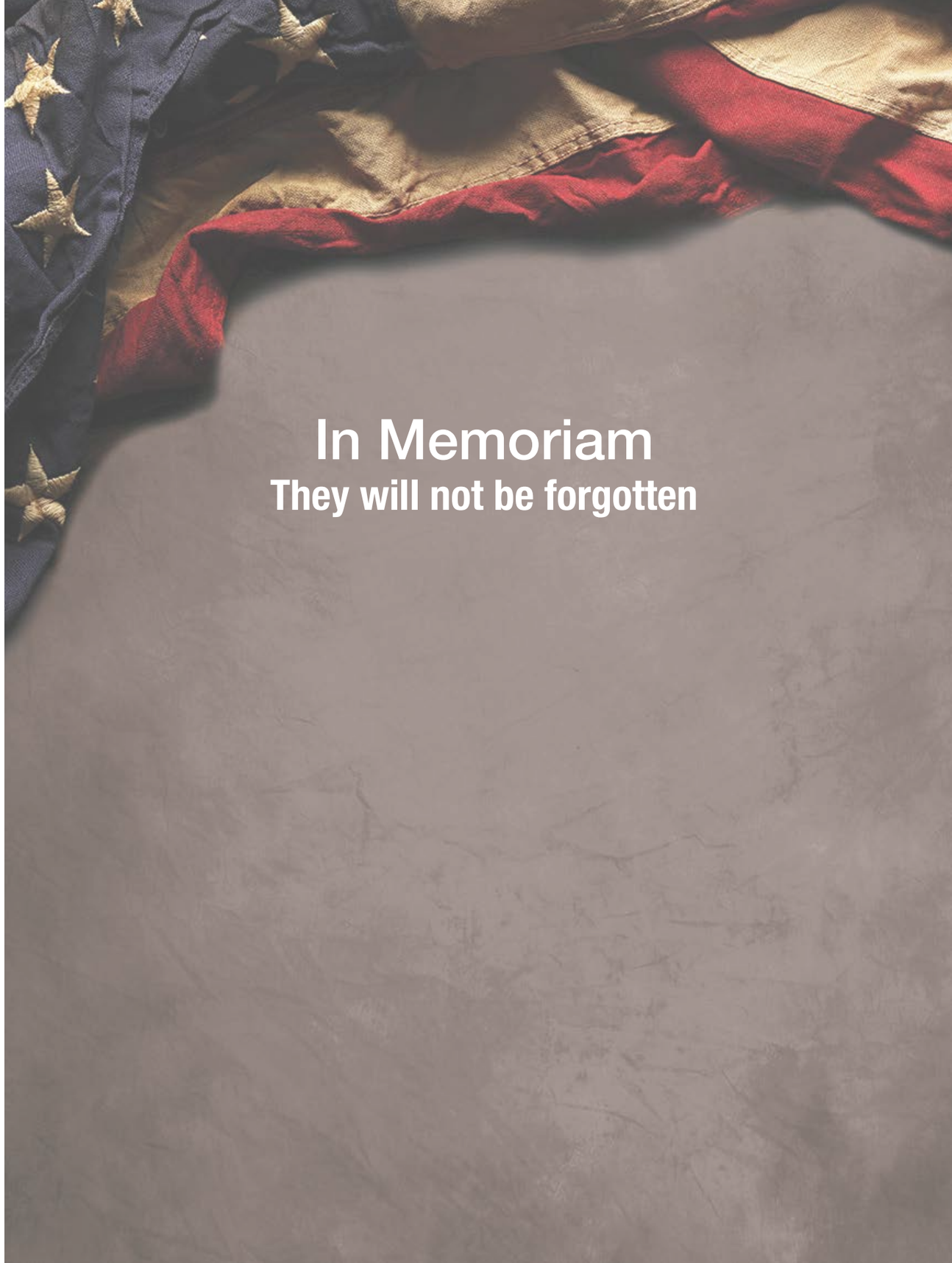
2017
GEN (Ret) USA
David M. Maddox

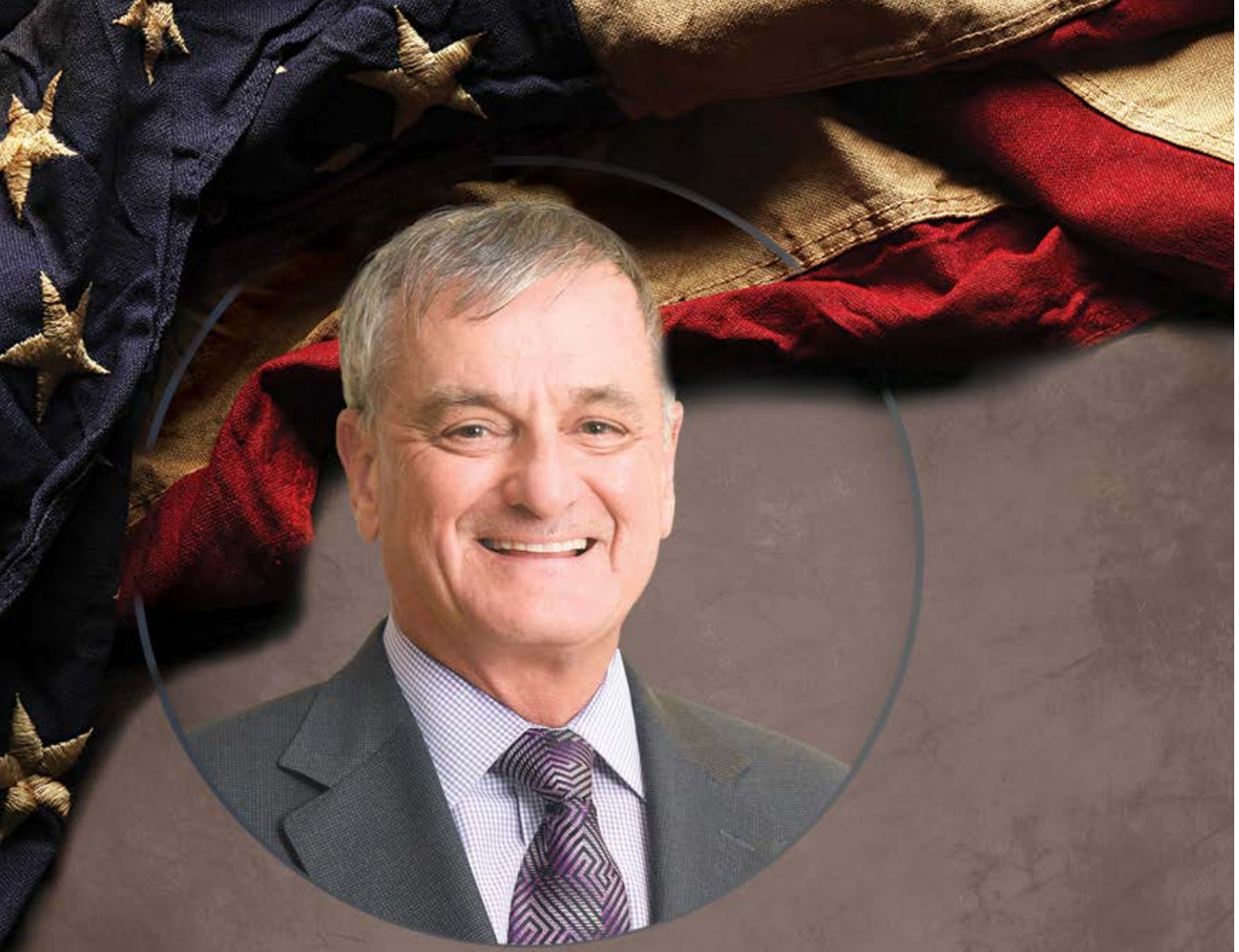
2018
George T.
Singley, III

2019
LTG (Ret) USA
Jack W.
Woodmansee, Jr.

2020
James A.
Tegnelia, Ph.D.

2024
Robert E.
Douglas, Ph.D.


In Memoriam
They will not be forgotten



IN MEMORIAM
Emo Gardner
October 16, 1951 – October 11, 2022

Lt. Gen. Emerson Gardner

Marine Lt. Gen. Emerson “Emo” Gardner had a military career that spanned 37 years. He died October 11, 2022 at age 70. Gardner was born October 16, 1951, in Chestertown, Maryland. He graduated from Annapolis High School and then went on to Duke University to major in history. After graduating in 1973, he was commissioned as an officer in the Marine Corps and became a pilot. Over the course of his career, Gardner flew every helicopter the Corps had, including the Presidential Marine One aircraft.

During Operation Desert Storm, Gardner commanded a helicopter squadron, leading combat missions, and later served as Commander of the 26th Marine Expeditionary Unit for two deployments overseeing security operations in the former Yugoslavia and multiple civilian evacuation missions in African countries. Between assignments, he graduated from the Norwegian Defense College and studied at the University of Gottingen in Germany as an Olmsted Scholar.

After the September 11, 2001, attacks, Gardner served as Assistant Deputy Commandant for Marine Aviation where he managed U.S. Central Command’s joint operations center during operations in Afghanistan. In 2002, he served in Hawaii as Director for Operations at U.S. Pacific Command at Camp Smith.

After leaving Hawaii, Gardner served in a variety of roles, including at the Pentagon where he became one of the architects of the defense budget under Defense Secretary Robert Gates. He was a driving force in rapidly fielding mine-resistant and ambush-protected vehicles (MRAPs) to Iraq and Afghanistan as deaths and injuries from improvised explosives mounted in the long, grinding conflicts. He also was a key advocate of the MV-22 Osprey, a “tilt-rotor” aircraft that has the characteristics of both a helicopter and plane but also a controversial development history.

Gardner and his family returned to Hawaii after he retired and served on the board of directors for the Japan-America Society of Hawaii and the U.S. Army Science Board, was director of the Olmsted Foundation and was involved with several other organizations.

Gardner is survived by wife Vivian, four children and two grandchildren.

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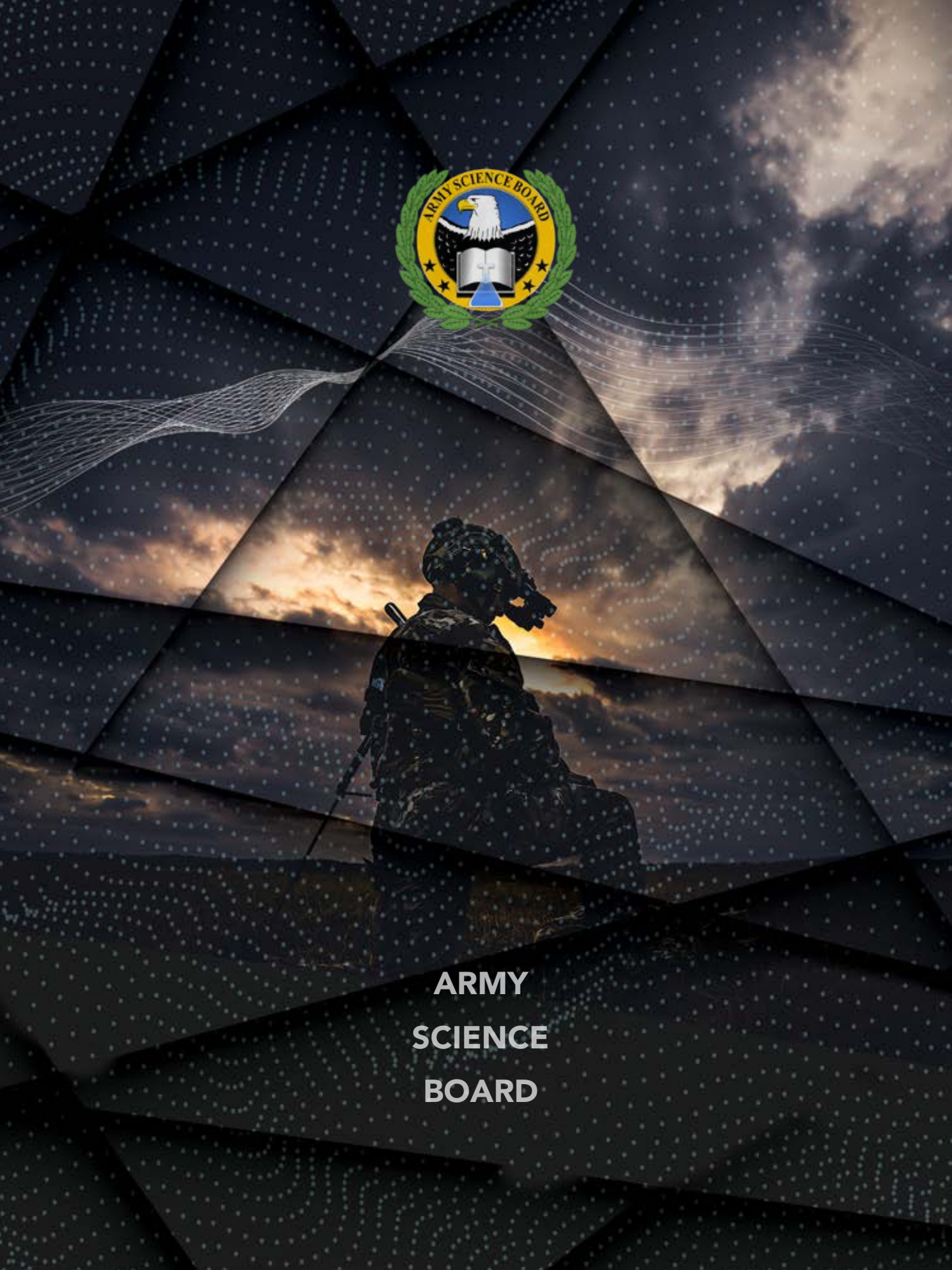

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