

Army Futures Command Research Program

Realignment Study

Committee

Paul J. Kern

Chair

GEN Paul Kern, U.S. Army (ret.), is a Senior Counselor with The Cohen Group. He served as President and Chief Operating Officer of AM General from August 2008 through January 2010 and is currently a Director with LGS Innovations, and a member of the CoVant Board of Managers. Since retiring from the Army in 2005, he has held the Class of 1950 Chair for Advanced Technology at West Point, was a Vice President for Battelle, and a Director on the Anteon, ITT, EDO, Exelis and iRobot Corporation boards.

General Kern retired after almost 38 years with the US Army as the Commanding General of the Army Materiel Command. The command of more than 50,000 personnel has worldwide responsibility for supply and maintenance support to the Department of Defense, manages the Army depot system, and conducts research for all the ground and rotary wing equipment. In June 2004, the Secretary of Defense tapped General Kern to lead the military's internal investigation into the abuses at the Abu Ghraib prison in Iraq, a compelling assignment that he handled with integrity and resolve. Previously he served four years as the Department of the Army Military Deputy for Research, Development and Acquisition. In 1996-97 he was the Commanding General of the 4th Infantry Division, Mechanized, where they developed the organization, tactics, techniques, and equipment implemented in today's networked force. From 1993 to 1996 he was the Senior Military Assistant for Secretary of Defense Bill Perry and played a key role in International deliberations in South America, the former Soviet Union, the Middle East, and the Balkans. In 1991 he led the 2nd Brigade of the 24th Infantry Division in the attack into Iraq. He began his career commanding operational units as a platoon leader and troop commander in the Blackhorse Regiment in Vietnam.

General Kern graduated from West Point in 1967 with a Bachelor of Science degree. He holds Master Degrees in Civil and Mechanical Engineering from the University of Michigan and was elected to the National Academy of Engineering in 2006. He was a National Security Fellow at the J.F. Kennedy School, Harvard University and is currently a member of the Defense Science Board, the Defense Industrial Board, as well as the By-Light, Quantitech, Linquest, Aevex, FNA, and TenCate Advanced Armor Advisory boards. General Kern is currently the Chairman of the Advance Functional Fabrics of America (AFFOA) Board.

He has a unique career that blends technical expertise, combat operations, program management, policy development, and advisor to senior political leaders.

Jennifer A. Hitchcock

Vice Chair

Dr. Jennifer Hitchcock is a Professor of Program Management at Defense Acquisition University's (DAU). In this role she provides classroom instruction on Department of Defense (DoD) acquisition processes and policies and conducts mission assistance with DoD agencies to aid in the development and implementation of key acquisition and leadership activities. She joined DAU in August 2019 bringing over 30 years of organizational and leadership experience in military ground vehicle technologies, system engineering, acquisition, and program management. She is also a certified Executive Coach.

Dr. Hitchcock previously served as a member of the Senior Executive Service (SES) since 2011 with the U.S. Army. From 2017-2019 she was the Executive Director, Systems Integration & Engineering (SIE) at the Combat Capabilities Development Command (CCDC) Ground Vehicle Systems Center (GVSC), formerly known as the Tank Automotive Research Development and Engineering Center (TARDEC). In this role she was responsible for leading over 1,000 associates and delivering vehicle system prototypes (including design and fabrication), concepts, modeling & simulation, analysis, systems engineering, testing, and force projection technologies to the Army. Her organization was also responsible for providing engineering, sustainment, reliability, maintainability, quality assurance, standardization, and logistics support to Army Program Executive Offices (PEO) including PEO Ground Combat Systems and PEO Combat Support & Combat Service Support and the TACOM Life Cycle Management Command (LCMC). Dr. Hitchcock was dual hatted in this role covering many of the Research & Technology Integration (RTI) SES responsibilities for 2 years while the position was being filled. During this time she worked with Army Senior Leadership, Congress, and the newly established CFT's to realign \$2.2B of S&T funding across the Army to focus on ground vehicle technologies for Army modernization priorities.

Dr. Hitchcock also served as the Executive Director, Research & Technology Integration (RTI) at TARDEC from 2011 to 2017 where she was responsible for leading the research and integration of the Army ground vehicle mobility, power and energy, survivability, robotic, software and vehicle electronic architecture technologies. Dr. Hitchcock led more than 500 associates in six technical business areas, and was the executive responsible for planning and executing technology programs the Army was pursuing. Additionally, Dr. Hitchcock served as the U.S. Army lead for the Office of the Secretary of Defense (OSD) Ground and Sea Platforms Community of Interest (COI). Dr. Hitchcock also supported the OSD lead Long-Range Research and Development Planning Program-Ground Combat (LRRDPP-GC) as the conventional team lead. In this yearlong role she led the development of ground combat concepts for the OSD's Third Offset Strategy. Dr. Hitchcock also served with distinction as the Interim Director of TARDEC from March thru August 2012 while the TARDEC Director position was vacated.

Joan M. Bienvenue

Member

Dr. Joan Bienvenue is the executive director of the Oak Ridge Institute at the University of Tennessee. As the institute's first director, Dr. Bienvenue develops strategies for establishing new interdisciplinary graduate research in emerging fields, builds programs using UT and ORNL's capabilities, and leads recruitment of faculty, staff, and students. Dr. Bienvenue received a B.S. in chemistry from Rivier University, an M.S. in forensic science at the University of New Haven, a Ph.D. in chemistry from the University of Virginia, and an M.B.A. from the University of Mary Washington. She was a National Institute of Justice Research Fellow while at UVA, where her work focused on the development of microfluidic systems. This work was summarized in over fifteen peer-reviewed papers and book chapters and presented at many conferences; she is an inventor on five U.S. patents. In addition to this academic work, she is creator and conference chair for the annual Commonwealth Conference on National Defense and Intelligence, now entering its sixth year, and co-creator and Inaugural Chair of the Gordon Research Conference on Forensic Analysis of Human DNA. After completion of her graduate studies, Dr. Bienvenue was an ORISE Postdoctoral Research Fellow at the FBI. Following this appointment, she joined the Armed Forces DNA Identification Laboratory (AFDIL), as the Validation and Quality Control Supervisor where she managed a team that provided quality control and oversaw the evaluation, validation, and implementation of new technology for DNA casework analysis in support of remains identification. She joined Lockheed Martin in 2008 and most recently served as chief scientist and program manager, in support of the development of rapid microfluidic DNA analysis systems. In June of 2013, she returned to the UVA as director of the Applied Research Institute (ARI) and was promoted to senior executive director in 2017. ARI serves the university and the defense and intelligence communities as a conduit to facilitate collaboration and innovation between the academia and government, and leverages UVA's human and capital assets to support research, education, and training, with a focus on homeland security, national intelligence, and defense missions. Dr. Bienvenue is a fellow of the American Academy of Forensic Sciences, nominated due to her industry experience developing technologies for DNA analysis as well as her expertise in leading the Applied Research Institute.

Lawrence D. Burns

Member

Dr. Lawrence "Larry" Burns is the former corporate vice president of Research and Development for General Motors. Burns oversaw GM's advanced technology, innovation programs, and corporate strategy. He was a member of GM's Automotive Strategy Board and Automotive Product Board. Within GM, he personally championed vehicle electrification, "connected" vehicles, fuel cells, bio-fuels, advanced batteries, autonomous driving, and a series of innovative concept vehicles. He has been a leading advocate for design and technology innovation focused on the total customer experience and the application of operations research before his retirement in 2009. He is the author of *Autonomy: The Quest to Build the Driverless Car—And How It Will Reshape Our World* and a co-author of *Reinventing the Automobile: Personal Urban Mobility for the 21st Century*.

John W. Fischer

Member

Dr. John Fischer earned a bachelor's degree in Chemistry from Lawrence University, his doctorate in Organic Chemistry from Northern Illinois University and served as a post-doctoral research chemist at the Ohio State University. He began his career with the Navy in 1984 as a energetics materials research chemist in the Research Department at the Naval Weapons Center, China Lake, California. After serving in several technical leadership positions on weapons related chemistry and materials, he assumed the position of Advanced Technology Manager for the Tomahawk Cruise Missile Project Office. Dr. Fischer was appointed to the Senior Executive Service in 1998 and led numerous science and engineering organizations for Naval Air Systems Command including the Naval Aviation Science & Technology Office, the Research & Specialty Engineering Department and the Systems Engineering Department.

In March 2009, Dr. Fischer was selected as the Director of Defense Laboratory Programs within the Office of the Assistant Secretary of Defense (Research & Engineering). In this position, he was responsible for the development and implementation of policies for the Department of Defense's (DoD) laboratory system consisting of 62 laboratories in 22 states with an annual budget of \$30B. His responsibilities also included leadership of the DoD's Technology Transfer Program, management of the Science & Technology Manager Acquisition Career Field and policy development for the Department's Science & Technology workforce.

In March 2015, John assumed the position of Director, Chemical-Biological Defense Division within the Science & Technology Directorate of the Department of Homeland Security and most recently, in February 2019, he assumed the role of Technical Director of the DHS S&T Directorate. Dr. Fischer retired from a 36- year career with the Federal Government in September 2020 and joined the Energetics Technology Center as a Principal Scientist.

Paul G. Gaffney, II

Member

VADM Paul Gaffney II, U.S. Navy (ret.) served as the seventh president of Monmouth University from 2003 to 2013; he is President Emeritus and a fellow in Monmouth's Urban Coast Institute. He is counselor to the Dean of Engineering at the University of South Carolina. He was president of the National Defense University from 2000 to 2003. Prior to that, he was the Chief of Naval Research. He was appointed to the statutory U.S. Ocean Policy Commission and served during its full tenure from 2001 to 2004. In his military career he headed the Navy's worldwide operational meteorology and oceanography program and he commanded the Naval Research Laboratory. He is a Member of the National Academy of Engineering and is a fellow of the American Meteorological Society. He was a member of the National Research Council's Ocean Studies Board and The National Academies Gulf Research Program Advisory Board. He chaired the Federal Ocean Research Advisory Panel and was the first chair of the Federal Ocean Exploitation Advisory Board. VADM Gaffney co-chaired the NOAA Decadal Ocean Exploration Study in 2013. He is a director of Diamond Offshore Drilling Inc. He is a graduate of the U.S. Naval Academy, holds an M.S. in Ocean Engineering from the Catholic University of America, is a graduate of the Naval War College with Highest Distinction, and has earned an M.B.A. from Jacksonville University.

Merri J. Sanchez

Member

Merri Sanchez currently serves as Technical Fellow and advisor to the senior leadership of The Aerospace Corporation on matters concerning military, intelligence community, and civil space. She has more than 39 years of space engineering, management, national-level policy, and financial experience across government, industry, and academia. She has experience working complex international/multidisciplinary efforts, program management, crisis management, engineering, operations, integration, safety, root cause analysis, flight test, spacecraft development, risk management, threat analysis, and budget analysis.

Dr. Sanchez served as Chief Science and Technical Advisor, Headquarters Air Force Space Command. As principal adviser to the commander on all scientific and technical (S&T) matters, she was the authority for all S&T concerning space enterprise vision, launch, ground systems, cyberspace, and multi-domain cross-cutting areas. She drove space and cyber S&T investments, evaluated technical needs, solutions, architectures, and programs and advised on shaping command programs to ensure the infusion of S&T provided the best possible solutions.

Dr. Sanchez served 28 years as a senior executive, manager and engineer at NASA working the International Space Station (ISS), Space Shuttle, and X-38 Crew Return Vehicle. Dr. Sanchez also served as the NASA Liaison to the commanders of the Air Force Space Command, Strategic Command, Northern Command and North American Aerospace Defense Command. She was the key strategic advisor to the NASA Administrator of DoD space-related matters, including policy, operations and research and development.

Dr. Sanchez was Senior Director for the Space Systems Group at the Sierra Nevada Corporation in Louisville, Colorado, where she was Program Manager for the Dream Chaser commercial crew spacecraft development. She led development and implementation of a new strategy, organization, business area, and technical team, changing the paradigm for a human spacecraft development.

Dr. Sanchez is a Fellow in the American Institute of Aeronautics and Astronautics and served over ten years on the AIAA Board of Directors. She has received numerous national, NASA, and Air Force awards and medals, and was inducted into the Colorado Space Hero Hall of Fame. She is the author of more than 18 publications.

John F. Wharton

Member

MG (ret.) John Wharton has served the Nation for more than three decades and has extensive experience in leadership, research, development, technology, innovation and logistics. He is currently a public and private sector advisor to numerous technology companies, universities and organizations. His focus is on national security and technology acceleration in support of national priorities and homeland security. He is a Managing Partner, at One Defense, an organization originating out of the Office of the Secretary of the Department of Defense as a next generation national security enterprise to foster an expanded defense technology innovation community of practice that incorporates DOD stakeholders, traditional defense industry, the start-up and venture capital communities, and the academic research community.

John also serves as Senior Advisor at The Chertoff Group and the U.S. Department of Housing and Urban Development's Veteran's Affinity Group. Previously, he has served as a Visiting Senior Research Fellow, Institute for National Strategic Studies (INSS), National Defense University (NDU) in Washington, DC and Senior Advisor to the National Security Technology Acceleration Program (MD5) providing our Nation's leaders with expertise regarding science and technology, innovation, and engineering affecting national security.

In his last assignment, he served as Commanding General of the United States Army Research, Development and Engineering Command (RDECOM) at Aberdeen Proving Ground, Maryland. There he led 13,800 scientists, engineers, and support personnel at more than 100 global locations controlling 75% of the Army's R&D budget. Subordinate organizations included: the Army Research Laboratory (Adelphi, MD), the five Army research, development, and engineering centers: Armament (Picatinny Arsenal, NJ); Aviation and Missile (Redstone Arsenal, AL); Communication and Electronic (Aberdeen Proving Ground, MD); Soldier Support (Natick, MA); Tank and Automotive (Warren, MI) as well as the Edgewood Chemical and Biological Center (Edgewood, MD).

While there, he won and led 5 of the 7 President of the United States (POTUS) National Manufacturing Innovative Institutes, a program to stimulate the nation's economy by rapid technology development and transfer. He also developed cooperative science and technology strategic roadmaps for numerous countries. He now advises and develops strategies for countries on all technology sectors to position them and assure their economic future. He ran the Science, Technology, Education Mathematics (STEM) and Educational Outreach Programs (AEOP) for the Army and is widely recognized for his work in providing humanitarian assistance and aid to countries in need.

Before RDECOM, he served as the Commanding General, U.S. Army Sustainment Command at Rock Island Arsenal, Illinois. Prior to that he was the Chief of Staff at the U.S. Army Materiel Command in Huntsville, Alabama. He also served as Commanding General, AMC-Southwest Asia/U.S. Army Central G-4/Combined Forces Land Component Command C-4.

John has a degree from the United States Military Academy and a master's degree in National Security and Strategic Studies from the Naval War College.