

Organizational Models for the Cyber Forces of the U.S. Armed Forces

Committee

Richard M. Murray

Chair

Dr. Richard M. Murray is the Thomas E. and Doris Everhart professor of control & dynamical systems and bioengineering at the California Institute of Technology. His group researches the application of feedback and control to networked systems, with applications in biology and autonomy. From 2016 to 2021, he served as a member of the Defense Innovation Board and co-chaired the Software Acquisition and Practices (SWAP) study and was a member of the AI Principles project. He is a member of the National Academy of Engineering. Murray received a PhD in electrical engineering and computer sciences from the University of California, Berkeley. Previously, he served as chair of the National Academies' Aerospace Engineering Search Committee, member of the Committee on Defense Research at Historically Black Colleges and Universities and Other Minority Institutions, chair of the Committee on Future Biotechnology Products and Opportunities to Enhance Capabilities of the Biotechnology Regulatory System, and co-chair of the Forum on Synthetic Biology.

Timothy Booher

Member

Mr. Timothy Booher is Senior Vice President of Special Projects at Leidos, where he drives the intersection of defense and technology to deliver war-winning capabilities. Previously, he was Vice President of Autonomy at Boeing, leading the development of autonomous systems across commercial and defense, and Vice President of Strategy & Corporate Development Strategic Initiatives, shaping Boeing's enterprise strategy and portfolio. Before Boeing, Booher was Vice President of Engineering at Lockheed Martin Aeronautics, Managing Director and CTO of Cyber at HSBC, and held senior technology and security leadership roles at Colgate-Palmolive. He served as a DARPA program manager advancing the state of the art in autonomy, formal methods, and complex systems, and continues to serve as a US Air Force Reservist. Booher received a BS in aeronautical and astronautical engineering from the Massachusetts Institute of Technology, an MS in operations research from the Air Force Institute of Technology, and additional certifications in finance, computer science, and divinity. He serves as a member of the National Academies' Forum on Cyber Resilience and previously served as a member of the Committee on Enhancing the Assurance and Nimbleness of Large-Scale Integrated Software-Based Systems.

David Dorsey

Member

Dr. David Dorsey is a Vice President with the Human Resources Research Organization (HumRRO). He was previously a Senior Executive at the National Security Agency, where he held roles such as a directorate level Senior Data Scientist. Prior to working in government, Dorsey was a Vice President at Personnel Decisions Research Institutes. He has conducted innovative research and development in the areas of understanding adaptive performance, building assessments for mission critical skills (e.g., cyber, language, data science), innovating performance management, using modeling and simulation technologies for learning, understanding career paths, and building corporate level data science platforms and communities, including for artificial intelligence. Dorsey has received numerous awards, including an Intelligence Community award for building a pioneering Cyber Selection System. Dorsey is a Fellow of the Society for Industrial and Organizational Psychology. He received a PhD in industrial-organizational psychology, with a minor in computer science from the University of South Florida. He previously served as a member of the National Academies' Committee on Foreign Language Assessment for the US Foreign Service Institute.

John C. Inglis

Member

The Honorable John Christopher Inglis serves on the boards of AIG, Mitre, and Huntington Bancshares and as an advisor to Paladin Capital and Ballistic Ventures. Mr. Inglis was U.S. National Cyber Director from 2021-23, National Security Agency Deputy Director from 2006-14, and member of the departments of Computer/Cyber Science, and Mechanical Engineering at the US Military, Naval, and Air Force Academies. He served on the Defense Science Board, Navy Science Board, National Intelligence University Board, and Cybersecurity and Infrastructure Agency Advisory Council. Mr. Inglis received graduate degrees in mechanical engineering and computer science from Columbia, Johns Hopkins, and George Washington Universities, and an honorary doctorate from the National Intelligence University. He was a US Air Force command pilot and a Brigadier General in active/reserve service. He serves as a member of the National Academies' Forum on Cyber Resilience, Cyber Security Working Group, and as Co-Chair for the Committee on an English-Chinese Chinese-English Glossary of Cybersecurity Terms. He previously served as a member of the Committee on International Security and Arms Control.

David Luber

Member

Mr. David P. Luber is the former Director of the National Security Agency's (NSA) Cybersecurity Directorate and served as the Deputy National Manager for National Security Systems. In this capacity, he led efforts to prevent and eradicate threats to US National Security Systems and critical infrastructure. Previously, Luber served as Deputy Director of the Cybersecurity Directorate and was the Executive Director at United States Cyber Command (USCYBERCOM), the highest-ranking civilian and third-in-command at USCYBERCOM. His other senior roles included Director of NSA Colorado; Program Director in the Office of the Secretary of Defense for Intelligence; Chief of NSA's Remote Operations Center within Tailored Access Operations, and Chief of NSA's Advanced Network Operations. Luber is a recipient of the NSA Distinguished Civilian Service Medal, the Chairman of the Joint Chiefs of Staff Joint Meritorious Civilian Service Award, the Office of the Secretary of Defense Exceptional Civilian Service Medal, three Presidential Meritorious Rank Awards, the National Reconnaissance Office Distinguished Service Medal, two NSA Meritorious Civilian Service Awards, and the Knowlton Award. He received a MS in network security and cybersecurity from Capitol College.

John L. Manferdelli

Member

Dr. John Manferdelli is an independent consultant with extensive experience across government, industry, and academia. He previously served as Confidential Computing Incubation Project Leader in the Office of the CTO at VMware, Professor of the Practice and Executive Director of the Cybersecurity and Privacy Institute at Northeastern University, and Engineering Director for Production Security Development at Google. Earlier roles include Senior Principal Engineer at Intel and co-Principal Investigator for the Intel Science and Technology Center for Secure Computing at the University of California, Berkeley, as well as distinguished engineer at Microsoft, where he led the development of secure computing and rights management technologies integrated into Windows. A member of the Defense Science Board and former advisor to DARPA's Information Science and Technology group, Manferdelli brings deep expertise in cryptography, secure systems, and organizational cybersecurity—highly relevant to the Department of Defense's cyber mission. Manferdelli received a BS in physics from Cooper Union and a PhD in Mathematics from the University of California, Berkeley. He is a member of the National Academy of Engineering, Chairs the National Academies' Forum on Cyber Resilience, and serves as an Ex Officio member on the Computer Science and Telecommunications Board. He previously Chaired the Committee on Cyber Hard Problems and second Cyber Resilience Workshop Series.

Judith A. Miller

Member

Ms. Judith A. Miller is an independent consultant, who was founder and Co-Chair of, and is now senior advisor to, the American Bar Association's Cybersecurity Legal Task Force. Miller served as general counsel to the Department of Defense from 1994 to 1999. She recently served as the Co-Chair of the Defense Science Board Task Force on Dependencies on Critical Infrastructure and was previously a member of Defense Science Board's Task Force on Cyber Deterrence. Additionally, Miller was a senior vice president, general counsel, and member of the board of directors of the Bechtel Group and a partner with Williams & Connolly LLP, where her practice included a range of complex civil litigation and issues affecting the defense industry. She is a member the Council of the American Law Institute, the Bord of the Atlantic Council of the United States, and served on the Markle Foundation Task Force on National Security in the Information Age. She is a recipient of the Department of Defense Medal for Distinguished Public Service and the Bronze Palm. Miller received a JD from Yale Law School. She serves as a member of the National Academies' Policy and Global Affairs Committee and previously Chaired the Workshop on Section 230 Protections and served as a member of the Committee on Protecting Critical Technologies for National Security in an Era of Openness and Competition and the Committee on Science, Technology, and Law.

Scott H. Stalker

Member

Master Gunnery Sergeant Scott Stalker, US Marine Corps (ret.), is the founder & CEO of S2- Stalker Solutions, a Service-Disabled Veteran-Owned small business delivering leadership development, professional speaking, and national-security consulting. His three-decade military career spans leadership roles including the Command Senior Enlisted Leader for the Defense Intelligence Agency, US Cyber Command, the National Security Agency, and US Space Command and the Intelligence Chief for Marine Corps Forces Special Operations Command. MGySgt Stalker completed seven combat tours, including in Iraq and Somalia; executed a Non-Combatant Evacuation Operation in Albania. He deployed with HMM-365, 26th MEU (SOC), 1st Battalion, 7th Marines, and 7th Marine Regiment, and deployed while assigned to all three active-duty Marine Corps Divisions. Scott has deployed onboard the USS Guam, USS Nashville, USS Nassau, and USS Blue Ridge. He authored Left of Leadership, translating battlefield-tested principles into practical frameworks. He is a Senior Fellow at the National Defense University and supports Veteran and national-security nonprofits. He received a MS in cybersecurity from American Public University.

Jan Tighe

Member

Vice Admiral Jan Tighe, US Navy (ret.), served as the Deputy Chief of Naval Operations for Information Warfare and as the 66th Director of Naval Intelligence. Previously, she served as the Commander of US Fleet Cyber Command and US 10th Fleet, responsible for the Navy Component of US Cyber Command and the National Security Agency. Other flag officer assignments include President of the Naval Postgraduate School and deputy director of operations for US Cyber Command. A career cryptologist, she specializes in Signals Intelligence and Cyber Operations. VADM Tighe currently serves on the public company Boards of Directors for General Motors, Goldman Sachs, and the Huntsman Corporation. She is a member of the Board of Trustees for the MITRE Corporation and serves on non-profit boards including The Alliance for Decision Education and the United States Naval Academy Foundation. VADM Tighe received an MS in applied mathematics from the Naval Postgraduate School and a PhD in electrical engineering with a focus in cellular communications technology from the US Naval Academy.

Natalie Vanatta

Member

Colonel Natalie Vanatta, US Army (ret.), is the Head of Information Security at Anduril. Prior to Anduril, she served more than 24 years as a cyber officer, including as the deputy of the China Outcomes Group (a joint US Cyber Command & National Security Agency group), a Distinguished Visiting professor at the National Security Agency, the technical director at Joint Task Forces Ares, the Emerging Technology Research Group Lead at the Army Cyber Institute, and a Team Leader within the Cyber National Mission Forces focused on defending critical infrastructure for the nation. COL Vanatta was selected as one of the first Army officers to transition to the cyber career field when the branch began. Throughout her career, she brought her unique perspective of offense, defense, and capability development to work on the nation's hardest problems. She has served as an adjunct Associate Professor at Columbia University, teaching on cyber topics within their School of International and Public Affairs, and as a permanent professor at the US Military Academy. COL Vanatta received a PhD in applied mathematics from the Naval Postgraduate School, as well as degrees in computer engineering and systems engineering.

Peter J. Weinberger

Member

Dr. Peter J. Weinberger is presently a Software Engineer at Google. Previously, he was Director of Technology at the hedge fund Renaissance Technologies and Information Sciences Research Vice President at Bell Labs. He has worked on large software projects and has an interest in security. He is a Fellow of the American Association for the Advancement of Science. Weinberger received a PhD in mathematics from the University of California, Berkeley. He previously Co-Chaired the National Academies' Committee on Future Research Goals and Directions for Foundational Science in Cybersecurity and served as a member of the Committee on the Future of Encryption, the Committee on C4ISR for Future Naval Strike Groups, and the Computer Science and Telecommunications Board.

Timothy J. White

Member

Vice Admiral Timothy James "TJ" White, US Navy (ret.), presently serves as the Chief of the Texas Cyber Command. In this capacity, he is responsible for securing, protecting, and defending Texas and Texans from cyber incidents, as well as promoting Texas's cyber readiness and resiliency. Previously he was a national security practitioner with over 35 years of experience as a strategist and cyber operations expert leading joint military formations and combined intelligence community organizations. VADM White commanded at all levels within the Navy and Joint Force, most recently as the Commander of US Fleet Cyber Command, US 10th Fleet, and US Navy Space Command and previously as the Commander of the US Cyber National Mission Force and US Cyber Command. He served as Director of Intelligence for United States Indo-Pacific Command and served globally in various combat zones and conflict areas supporting competition dynamics. A 1989 CINCPACFLT Shiphandler-of-the-Year, he misses his days driving a battleship. VADM White is a graduate of the US Naval Academy and holds additional diplomas from the Naval Postgraduate School, Naval War College, National Defense University, and various professional education institutions.

Ryan Murphy

Staff Officer