Disruptive Technology for Future Warfare

4 September 2025

WELCOME!

Welcome to INSS' annual Defense Strategy and Policy Conference! The topic of this years conference is: Disruptive Technology for Future Warfare

Sponsored by National Defense University (NDU), Institute for National Strategic Studies (INSS); Disruptive Technology for Future Warfare addresses the question: How can the Department of Defense (DoD) effectively adapt emerging and disruptive technologies for future warfare and engage the defense industrial base (DIB) to compete with and remain ahead of global adversaries?

ADMINISTRATIVE NOTES

Chatham House Rule

Participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.

This conference will be recorded for notetaking purposes only.

Institute for National Strategic Studies

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0815-0830	Opening Remarks
0830-0845	Welcome
0845-0915	Morning Keynote – Preparing for Disruptive Technologies in Warfare
0915-1030	Panel 1 - Transformative Military and Battlefield Technologies
1030-1045	Break
1045-1200	Panel 2 - Information, Intelligence and Future Warfare
1200-1300	Lunch Break
1300-1330	Fireside Chat – Fortifying the Defense-Industrial Nexus to Support the Joint Warfighter
1330-1345	Break
1345-1500	Panel 3 – Disruptive Biotechnologies for Joint Warfighting
1500-1515	Coffee Break
1515-1630	Panel 4 - Leveraging Partners and Allies to Sustain Technological Advantage in Warfare.
1630-1635	Closing Remarks

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OPENING REMARKS

by

VICE ADMIRAL PETER A. GARVIN, PRESIDENT,
NATIONAL DEFENSE UNIVERSITY

VADM Pete Garvin graduated with merit from the United States Naval Academy in 1989, having earned a Bachelor of Science in Aerospace Engineering (Astronautics). He is a 2005 graduate of the National War College, where he earned a Master of Science in National Security Strategy, and a 2015 alumnus of the Massachusetts Institute of Technology's Seminar XXI.

Prior to attaining flag rank, his operational assignments included service with the "Pelicans" of Patrol Squadron (VP) 45, where he was named the 1995 Association of Naval Aviation Pilot of the Year; department head with the "Mad Foxes" of VP-5; navigator aboard USS Kearsarge (LHD 3), where he served as flag navigator for the embarked Amphibious Squadron (PHIBRON) 6; executive officer and 59th commanding officer of the "Fighting Tigers" of VP-8; and commander of Patrol and Reconnaissance Wing (CPRW) 10.

Shore assignments include service as flag lieutenant to Commander, Patrol Wings Atlantic (CPWL), and Commander, Task Force (CTF) 84; instructor pilot at the P-3 Fleet Replacement Squadron, VP-30; Washington placement officer at the Bureau of Naval Personnel (PERS-441); executive officer to the Director, Operational Plans and Joint Force Development Directorate (J-7), Joint Staff; federal executive fellow at the Council on Foreign Relations (CFR); undersea warfare branch head in the Assessments Division (N81) and deputy director of Unmanned Warfare Systems (N99) on the Office of the Chief of Naval Operations staff; and executive assistant to the Vice Chairman of the Joint Chiefs of Staff.

Flag officer assignments include service as the 22nd Commander of Navy Recruiting Command; Commander, Patrol and Reconnaissance Group; the 20th Commander of Naval Education and Training Command; and, most recently, as the 58th President of the United States Naval War College.

His decorations include the Navy Distinguished Service Medal, the Defense Superior Service Medal, the Legion of Merit (five awards), the Defense Meritorious Service Medal, the Meritorious Service Medal (two awards), the Air Medal (two strike/flight awards), and various personal, unit, and campaign decorations.

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WELCOME REMARKS

by

DR. DENISE NATALI, DIRECTOR OF INSTITUTE OF NATIONAL STRATEGIC STUDIES

Dr. Denise Natali is the Director of the Institute for National Strategic Studies (INSS) at National Defense University (NDU). She previously served as the Assistant Secretary for the Bureau of Conflict and Stabilization Operations at the Department of State. Dr. Natali has also held positions with a non-governmental organization in Peshawar, Pakistan, the American Red Cross in Washington D.C., and USAID/DART and the American University of Iraq-Sulaimani in the Kurdistan Region of Iraq.

Dr. Natali specializes in the Middle East, Iraq, Kurdish issue, and post-conflict stabilization and is the author of numerous publications op-eds, and analyses. Her books include The Kurdish Quasi-State: Development and Dependency in Post-Gulf War Iraq and The Kurds and the State: Evolving National Identity in Iraq, Turkey and Iran, which received the Choice Award for Outstanding Academic Title.

Dr. Natali received a Ph.D. in political science from the University of Pennsylvania, a Master of International Affairs from Columbia University's School of International and Public Affairs, and a B.A. in government at Franklin & Marshall College. She studied at L'Institut National des Langues et Civilisations Orientales in Paris, the University of Tehran Deh Khoda Language Program, and Tel Aviv University. Dr. Natali is a member of the Council of Foreign Relations and speaks French and conversational Kurdish and Farsi.

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MORNING KEYNOTE

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Panel 1 - Transformative Military and Battlefield Technologies

This panel focuses on the current state of emerging technologies, their implications on future warfare and the joint warfighter in the next ten to fifteen years, and how the focus, scope, and contingencies of the DIB can augment their progress.

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MODERATOR

DR. T.X. HAMMES, CENTER FOR STRATEGY AND MILITARY POWER, NATIONAL DEFENSE UNIVERSITY

Dr. Thomas X. Hammes joined INSS in June 2009. His areas of expertise include future conflict, changing character of warfare, military strategy, operational concepts, and insurgency/irregular warfare. Dr. Hammes earned a Bachelor of Science from the Naval Academy in 1975 and holds a Masters of Historical Research and a Doctorate in Modern History from Oxford University. He is a Distinguished Graduate from the Canadian National Defence College. He has published three books: Deglobalization and International Security; The Sling and the Stone: On War in the 21st Century; and Forgotten Warriors: The 1st Provisional Marine Brigade, the Corps' Ethos, and the Korean War. He has also published over 200 articles. His publications have been used widely in staff and defense college curricula in the US, UK, Canada, Australia, and Singapore. Dr. Hammes has lectured extensively at leading academic and military institutions in the United States and abroad. Prior to his retirement from active duty, Dr. Hammes served 30 years in the Marine Corps to include command of an intelligence battalion, an infantry battalion and the Chemical Biological Response Force. He participated in military operations in Somalia and Iraq and trained insurgents in various locations.

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PANELIST / SPEAKER

MAJOR GENERAL TROY ENDICOTT, VICE DIRECTOR FOR JOINT FORCE DEVELOPMENT, JOINT STAFF (J-7)

Maj. Gen. Troy L. Endicott is the Vice Director for Joint Force Development, the Joint Staff, the Pentagon, Arlington, Virginia. As the Vice Director for Joint Force Development, Maj. Gen. Endicott serves as the principal assistant to the Director for Joint Force Development (J-7), supporting the Chairman of the Joint Chiefs of Staff in enhancing the operational effectiveness of both the current and future joint force. The J-7 leads major functions of joint force development including doctrine, education, concept development, experimentation, exercises and lessons learned.

Maj. Gen. Endicott received his commission in 1994 through the Reserve Officers' Training Corps program at Embry-Riddle Aeronautical University. His career includes a range of assignments as an acquisitions officer, wartime space operator, instructor, combat planner, tactician, speechwriter and Secretary of the Air Force's space policy lead. He was also the Director for Space Policy at the National Security Council where he advised the National Security Advisor and the President on national security, civil and commercial space policies and strategies. While serving at the White House, he facilitated the historic stand up of the U.S. Space Force and re-establishment of U.S. Space Command.

Maj. Gen. Endicott deployed four times during operations Northern Watch, Iraqi Freedom, Enduring Freedom and led one of the first expeditionary space units in Iraq. He commanded the 21st Operations Support Squadron, 21st Operations Group, the 460th Space Wing and was the installation commander of Buckley Air Force Base in Aurora, Colorado. Prior to his current position, he was the Space Force's Deputy Chief Operations Officer followed by U.S. Space Command's Director for Global Space Operations.

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PANELIST / SPEAKER

MR. WADE TOLLIVER, DIRECTOR OF TACTICAL SYSTEMS, KRATOS UNMANNED AERIAL SYSTEMS

Wade Tolliver is the Director of Business Development for Tactical Systems at Kratos Unmanned Aerial Systems.He joined the company in July 2022. Mr. Tolliver leads efforts concentrated around the continued development of Kratos' Unmanned Aerial Systems (UAS) for tactical use by US and Allied Forces. His portfolio includes Domestic and International Collaborative Combat Aircraft (CCA), Next Generation Air Dominance (NGAD), Manned-Unmanned Teaming (MuM-T), and Adversary Air (ADAIR).

Prior to joining Kratos, Mr. Tolliver worked as a Senior Business Development Analyst for Advanced Targeting Systems at Lockheed Martin Missiles and Fire Control (MFC) from October 2017-July 2022. He flew as a First Officer at Southwest Airlines for eight months piloting the Boeing 737-300, -700, and -800 in 2017.

Mr. Tolliver served in the United States Air Force for 27 years. During his time in the military, he served in a variety of flying, staff, and command assignments, including tours as Chief of Combat Operations for Pacific Air Forces, Vice Wing Commander for an F-22 Wing, and as the Air Forces first fully operational F-22 Squadron Commander. Colonel Tolliver (Ret) is a Command Pilot with more than 3,300 flight hours in the F-16, F-15C, and F-22 with 350 hours flown in combat over Iraq, Bosnia, and the Former Republic of Yugoslavia.

Mr. Tolliver is a 1989 graduate of the University of Florida where he received his commission as a Distinguished Graduate of the Air Force ROTC program. He holds a Bachelor of Science degree in Mathematics from the University of Florida, a Master of Science degree in Military Operational Art from Air Command and Staff College, and a Master of National Security Strategy degree from National War College. He has completed executive leadership courses at the John F. Kennedy School of Government, Harvard and the Darden School of Business, University of Virginia.

His military decorations include the Defense Superior Service Medal, Legion of Merit Medal, Meritorious Service Medal with four oak leaf clusters, Air Medal with three oak leaf clusters, Aerial Achievement Medal with oak leaf cluster, and the USAF 1999 Anthony C. Shine Award.

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PANELIST / SPEAKER

DR. MICHAEL HOROWITZ, RICHARD PERRY PROFESSOR AND DIRECTOR OF PERRY WORLD HOUSE, UNIVERSITY OF PENNSYLVANIA

Michael C. Horowitz is the Director of Perry World House and Richard Perry Professor at the University of Pennsylvania. He is also Senior Fellow for Technology and Innovation at the Council on Foreign Relations (CFR). Before returning to the university, he served as Deputy Assistant Secretary of Defense for Force Development and Emerging Capabilities and Director of the Emerging Capabilities Policy Office.

He is the author of The Diffusion of Military Power: Causes and Consequences for International Politics, and the co-author of Why Leaders Fight. He won the Karl Deutsch Award given by the International Studies Association for early career contributions to the fields of international relations and peace research. He has published in a wide array of peer reviewed journals and popular outlets. His research interests include the intersection of emerging technologies such as artificial intelligence and robotics with global politics, military innovation, the role of leaders in international politics, and geopolitical forecasting methodology.

Professor Horowitz worked for the Office of the Under Secretary of Defense for Policy as a CFR International Affairs Fellow. He is a life member at CFR. Professor Horowitz received his Ph.D. in Government from Harvard University and his B.A. in political science from Emory University.

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COFFEE BREAK

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Panel 2 - Information, Intelligence and Future Warfare

This panel assesses how information systems (i.e. big data processing, machine learning, artificial intelligence) are affecting the contemporary and near future battlescape and how the DIB can be best leveraged to optimize progress incorporating these systems to war can facilitate progress research, development and use of AI to fortify warfighting and the joint warfighter.

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MODERATOR

DR. GWYNETH SUTHERLIN, COLLEGE OF INFORMATION CYBERSPACE, NATIONAL DEFENSE UNIVERSITY

Dr. Sutherlin is a leading expert in socio-cultural analysis--the translation of qualitative research into discrete technology design for decision-making. As a faculty member in the College of Information Cyberspace at the National Defense University, she develops curriculum to advance the leadership for Globally Integrated Operations in the Information Environment and supports the Joint Staff as a subject matter expert. She is also a visiting scientist at Pacific Northwest National Laboratory in the group for national security and artificial intelligence. Her teaching and research focus on information influence, emerging technology, and data analysis. Formerly the Director of Human Geography & Analytics Research at a commercial firm, she led teams in technology development, geospatial analysis, and social science research to support the Joint Staff, Global Combatant Commands, the Department of State, and other USG and partner nations' teams. She draws from over a decade of field experience focused on multilingual communications, risk evaluation, and cognitive pattern analysis in conflict environments.

Her hands-on experience in designing intercultural conflict resolution and strategic communication programs in North Africa garnered UN recognition for innovation. Dr. Sutherlin speaks and publishes frequently on cultural cognitive variation in UX, social science driven ML, crowdsourcing for decision-making, and localized data analysis models supporting national security policy decisions. Her research appears in security training, textbooks on emerging technology for conflict analysis, and UN special reports. Dr. Sutherlin has a degree in political science from Indiana University and a PhD in peace and conflict studies from the University of Bradford. She has worked in eight languages.

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PANELIST / SPEAKER

MR. JACKSON PERRY, CHIEF OF PRODUCT DEVELOPMENT, CHIEF DIGITAL AND ARITIFICAL INTELLIGENCE OFFICE

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PANELIST / SPEAKER

DR. WILLIAM CASEBEER, DIRECTOR, INTELLIGENT SYSTEMS CENTER

William D. Casebeer, PhD, MA, leads teams of scientists and engineers in developing novel technologies to solve today's hardest defense and intelligence challenges. Bill serves as HRL Laboratories' Director of the Intelligent Systems Center where he and his team apply artificial intelligence and machine learning to security-related research challenges.

Bill has decades of experience leading interdisciplinary teams to creative solutions to pressing national security problems in for-profit and non-profit roles, including Director, Senior Director, and Program Manager roles at Riverside Research, Scientific Systems Company, the Innovation Lab at Beyond Conflict, the Human Systems and Autonomy Lab at Lockheed Martin's Advanced Technology Laboratories, and at the Defense Advanced Research Projects Agency as program manager in the Defense Sciences Office and Biological Technologies Office.

Bill retired from active US Air Force duty as a Lieutenant Colonel and intelligence analyst in 2011 and is a graduate of the Air Force Academy, the University of Arizona, the Naval Postgraduate School, and the University of California at San Diego (where he earned his joint PhD in cognitive science and philosophy, building neural network models of human moral cognition).

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PANELIST / SPEAKER

MS. TRACY ISELER, GENERAL MANAGER, MICROSOFT NATIONAL SECURITY GROUP

Tracy Iseler is a highly accomplished professional with a wealth of experience in the field of national security and intelligence. Her recent appointment as the General Manager for Intelligence in the Microsoft National Security Group is a testament to her expertise and leadership in the sector. Prior to joining Microsoft, Tracy was the Practice Lead for Accenture Federal Services' Defense and National Security Portfolio, where she defined the portfolio's growth agenda, addressable market, competitive positioning and marketing strategies for all 17 Intelligence Community (IC) organizations, as well as the Military Intelligence and Special Operations Communities. Her focus on translating commercial success into the IC aims to maximize the return to the Government and Mission.

With over 30 years of commercial experience at Accenture, Tracy has held significant leadership roles, including the Global Managing Director for Growth and Strategy, Customer Relationship Management, where she was instrumental in transforming Accenture's Customer practice into a globally recognized customer-centric leader.

Tracy's current role leverages her experience working in the IC to help national security officers and executives navigate the market leading Microsoft technology capabilities. Her focus is to aid in the advancement and adoption of leading capabilities across various dimensions such as cloud strategy, application development and migration, and AI transformation to optimize Microsoft's power to extend the Intelligence mission to the edge.

In addition to her professional achievements, Tracy serves on the International Spy Museum Board of Directors and has previously contributed as a board member to the National Military Intelligence Foundation and the Tipping Point Community Non-Profit Organization.

Tracy Iseler's educational background includes a degree from the University of California at Santa Barbara, and she currently resides in Georgetown with her family.

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LUNCH BREAK

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Fireside Chat – Fortifying the Defense-Industrial Nexus to Support the Joint Warfighter

This discussion will explore how the industrial sector can - and should - provide transformative technological progress to support the joint warfighter and maximize strategic advantages. It will further assess how industry addresses risks, safety, and ethical considerations to optimize effectiveness and efficiency.

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MODERATOR

DR. JAMES GIORDANO, DIRECTOR, INSS CENTER FOR DISRUPTIVE TECHNOLOGY AND FUTURE WARFARE

Dr. James Giordano is the Director of the Center for Disruptive Technologies and Future Warfare in the Institute for National Strategic Studies at the National Defense University. He is Professor Emeritus in the Departments of Neurology and Biochemistry, and Senior Scholar Emeritus of the Pellegrino Center for Clinical Bioethics of Georgetown University Medical Center, Washington, DC. Dr. Giordano has served as Senior Scientific Advisory Fellow of the Strategic Multilayer Assessment Branch of the Joint Staff, Pentagon; Senior Bioethicist of the Defense Medical Ethics Center; Distinguished Fellow in Science, Technology and Ethics of the Stockdale Center for Ethics at the United States Naval Academy; and as an appointed member of the Neuroethics, Legal and Social Advisory Panel of the Defense Advanced Research Project Agency (DARPA), and an appointed member of the Department of Health and Human Services' Secretary's Advisory Committee for Human Research Protections. Dr Giordano is internationally recognized for his research on the use of neurocognitive sciences and technology in military and intelligence operations.

A widely published author of over 350 peer-reviewed papers in the international scientific literature, and 25 governmental reports, his recent books include Brains and Bioethics; Neuroscience, Neuroculture and Neuroethics; and Neurotechnology in National Security and Defense: Technical Considerations, Neuroethical Concerns.

Dr. Giordano received a Ph.D. in biopsychology from the City University of New York, a Master of Arts in neuropsychology from Norwich University; a B.Sc. in physiological psychology from St. Peter's College; completed post-doctoral training in neuropathology and toxicology at the Johns Hopkins University Medical Center, and is currently completing a D.Phil. in political philosophy of science at the East Bavaria Technical University-Regensburg, Germany. Dr. Giordano is a former Fulbright Fellow; an elected Fellow of the Hastings Center for Ethics; the European Academy of Science and Arts; and the Royal Society of Medicine (UK); and frequently lectures in German and Italian.

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PANELIST / SPEAKER

MR. DAVID APPEL VICE PRESIDENT, US FEDERAL AMAZON WEB SERVICES

David leads AWS's US Federal, Global National Security and Defense, and Aerospace and Satellite businesses. He and his team help customers realize the potential of technology to transform their organizations and fulfill their missions. In this role, he works closely with clients on their journey to cloud and other emerging technologies to deliver improved capability, more efficiently, and at the speed of relevance to the end user. David has a breadth of experience in program leadership, business operations, finance, business development, and strategic planning.

Prior to this role, David was Vice President, AWS US National Security. Previously, David worked for Raytheon Technologies for 28 years. Most recently, he led teams that helped Defense, Civil, Intelligence, and International customers develop, deploy, and sustain integrated command and control, intelligence, space, and weather systems. Additionally, David led digital innovation initiatives, seeking to integrate the latest artificial intelligence and commercial software development methods into solutions. While at Raytheon, David earned several Raytheon Technologies' awards, including the 2008 Program Leadership Award and the 2015 Leadership Award – Competitive Advantage.

David holds a bachelor's degree in accounting from Pennsylvania State University and a master's degree in business administration from George Washington University. He is also a graduate of The National Defense University; Information Resources Management College Advanced Management Program and Chief Information Officer Program, where he graduated with distinguished honors; and the Harvard University John F. Kennedy School of Government Senior Executive Fellows program. David is a member of the Virginia Tech National Security Institute Advisory Board, the Alliance for Digital Innovation Board of Directors, and the Professional Services Council Board of Directors.

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Panel 3 – Disruptive Biotechnologies for Joint Warfighting

This panel defines new biotechnological advancements, identifies and assesses gaps in science and technology and explores how engaging the DIB can minimize such gaps, and addresses the benefits, burdens, and risks these advancements pose to warfighting.

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MODERATOR

DR. DIANE DIEULIIS, CENTER FOR THE STUDY OF WEAPONS OF MASS DESTRUCTION, NATIONAL DEFENSE UNIVERSITY

Dr. Diane DiEuliis is a Distinguished Research Fellow at National Defense University. Her research areas focus on emerging biological technologies, biodefense, and preparedness for biothreats. Specific topic areas under this broad research portfolio include dual-use life sciences research, synthetic biology, the US bioeconomy, disaster recovery, and behavioral, cognitive, and social science as it relates to important aspects of deterrence. Dr. DiEuliis currently has several research grants in progress, and teaches in foundational professional military education.

Prior to joining NDU, Dr. DiEuliis was Deputy Director for Policy, and served as Deputy Assistant Secretary for Policy and Planning in the Office of the Assistant Secretary for Preparedness and Response (ASPR), Department of Health and Human Services. She coordinated policy and research in support of domestic and international health emergencies, such as Hurricane Sandy, and Ebola outbreaks. She was responsible for implementation of the Pandemic All-Hazards Preparedness Act, the National Health Security Strategy, and supported the Public Health Emergency Medical Countermeasures Enterprise (PHEMCE).

From to 2007 to 2011, Dr. DiEuliis was the Assistant Director for Life Sciences and Behavioral and Social Sciences in the Office of Science and Technology Policy (OSTP) in the Executive Office of the President. During her tenure at the White House, she was responsible for developing policy in areas such as biosecurity and biodefense, synthetic biology, social and behavioral science, scientific collections, and biotechnology. Dr. DiEuliis also worked to help coordinate agency response to public health issues such as the H1N1 flu.

Prior to working at OSTP, Dr. DiEuliis was a program director at the National Institutes of Health (NIH), where she managed a diverse portfolio of neuroscience research in neurodegenerative diseases. She completed a fellowship at the University of Pennsylvania in the Center for Neurodegenerative Disease Research and completed her postdoctoral research in the NIH Intramural research program, where she focused on cellular and molecular neuroscience.
Dr. DiEuliis is a National Merit Scholar, and has a PhD in biology from the University of Delaware in Newark, Delaware. She is the author of over 70 publications.

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PANELIST / SPEAKER

DR. PETER EMANUEL, SENIOR RESEARCH SCIENTIST FOR BIOENGINEERING, U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT COMMAND (DEVCOM)

Dr. Peter Emanuel is currently the Senior Research Scientist (ST) for BioEngineering at the US Army's Combat Capabilities Development Command Chemical Biological Center. In this role he advises Army leadership on emerging technologies in synthetic biology and bioengineering and exploitation of these new fields for applications that support national defense. Dr. Emanuel maintains active research programs in biomanufacturing and synthetic biology research that seek to strengthen national security supply chains.

Emanuel previously served six years as the Chief of ECBC's BioSciences Division where he led the biological research program for the nation's premier nonmedical research institute for chemical and biological defense. Prior to assuming this role, he served three years in the Bush and Obama administrations as the Assistant Director for Chemical & Biological Countermeasures within the Office of Science and Technology Policy in the Executive Office of the President. There, he managed the chemical and biological defense and medical countermeasures portfolio and coordinated research and development efforts across the federal government. In this position, Dr. Emanuel advocated for the role of science and technology at policy coordinating bodies within the White House and throughout the inter-agency community.

Dr. Emanuel's research interests have consistently focused on finding practical solutions to real-world problems facing the first responder and military communities. He continues to be active in science and technology policies and their implications for society and maintains an active role in the coordinating inter-agency efforts in national defense. Dr. Emanuel received a B.S. in Microbiology from the University of Maryland at College Park in 1988, and a Ph.D. in Molecular and Cellular Biology from Penn State University in 1994.

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PANELIST / SPEAKER

DR. JAMES GIORDANO, DIRECTOR, INSS CENTER FOR DISRUPTIVE TECHNOLOGY AND FUTURE WARFARE

Dr. James Giordano is the Director of the Center for Disruptive Technologies and Future Warfare in the Institute for National Strategic Studies at the National Defense University. He is Professor Emeritus in the Departments of Neurology and Biochemistry, and Senior Scholar Emeritus of the Pellegrino Center for Clinical Bioethics of Georgetown University Medical Center, Washington, DC. Dr. Giordano has served as Senior Scientific Advisory Fellow of the Strategic Multilayer Assessment Branch of the Joint Staff, Pentagon; Senior Bioethicist of the Defense Medical Ethics Center; Distinguished Fellow in Science, Technology and Ethics of the Stockdale Center for Ethics at the United States Naval Academy; and as an appointed member of the Neuroethics, Legal and Social Advisory Panel of the Defense Advanced Research Project Agency (DARPA), and an appointed member of the Department of Health and Human Services' Secretary's Advisory Committee for Human Research Protections. Dr Giordano is internationally recognized for his research on the use of neurocognitive sciences and technology in military and intelligence operations.

A widely published author of over 350 peer-reviewed papers in the international scientific literature, and 25 governmental reports, his recent books include Brains and Bioethics; Neuroscience, Neuroculture and Neuroethics; and Neurotechnology in National Security and Defense: Technical Considerations, Neuroethical Concerns.

Dr. Giordano received a Ph.D. in biopsychology from the City University of New York, a Master of Arts in neuropsychology from Norwich University; a B.Sc. in physiological psychology from St. Peter's College; completed post-doctoral training in neuropathology and toxicology at the Johns Hopkins University Medical Center, and is currently completing a D.Phil. in political philosophy of science at the East Bavaria Technical University-Regensburg, Germany. Dr. Giordano is a former Fulbright Fellow; an elected Fellow of the Hastings Center for Ethics; the European Academy of Science and Arts; and the Royal Society of Medicine (UK); and frequently lectures in German and Italian.

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PANELIST / SPEAKER

DR. JUSTIN SANCHEZ, TECHNICAL FELLOW, BATTELLE CORPORATION, WASHINGTON, D.C.

Justin C. Sanchez, PhD is a Battelle Technical Fellow. As a noted expert in biotechnology, he creates strategic vision to guide Battelle's life sciences and biotechnology businesses. Serving on the executive leadership team, Dr. Sanchez leads the organization's technical investment strategies and initiates and drives collaboration across Battelle, as well as with government, industry, and academia partners resulting in hundreds of new proposals and projects with whole of government federal agencies and commercial partners. Working in the fields of health, national security, and environment/infrastructure, Dr. Sanchez has led technical and business teams to perform advanced development of notable breakthroughs in neurotechnology, gene editing/synthetic biology, quantum, and chemical remediation in the full life cycle of idea generation, IP protection, and commercialization. Beyond advanced development, Dr. Sanchez has established an institute for neurotechnology (in partnership with The Ohio State University) and a national conference on innovations in resilience (in partnership with the National Labs). During his time at Battelle, Dr. Sanchez has driven national efforts in the establishment of a DOD microelectronics hub, HHS investor catalyst hub, and COVID testing for K-12 students.

Prior to joining Battelle, Dr. Sanchez was the Director of the Biological Technologies Office (BTO) at DARPA. He advanced the mission of BTO through strategy development focused on vital breakthrough technologies and capabilities for national security, particularly in the areas of neurotechnology, gene editing/synthetic biology, and infectious disease. Major accomplishments include developing foundational human neurotechnology for the United States BRAIN Initiative, delivering the world's most advanced prosthetic arm to military Veterans, accelerating gene editing techniques for national security/human health, and forming partnerships to deliver countermeasures in the African Ebola crisis. He was responsible for starting 31 new DARPA programs and investing more than $1.65 billion at national labs, industry, and academic institutions.

Prior to joining DARPA, he was an associate professor of Biomedical Engineering and Neuroscience at the University of Miami. He directed the Neuroprosthetics Research Group where he oversaw the development of neural-interface medical treatments. He has published more than 100 peer-reviewed papers, holds eight patents and authored two books on the design of neurotechnology.
Dr. Sanchez holds a Doctor of Philosophy and Master of Engineering degrees in Biomedical Engineering, and a Bachelor of Science degree in Engineering Science, all from the University of Florida.

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COFFEE BREAK

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Panel 4 - Leveraging Partners and Allies to Sustain Technological Advantage in Warfare.

This panel addresses ways that the DoD, through the DIB, can engage commercial and international allied partners to advance technological initiatives that support the warfighter.

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MODERATOR

AMBASSADOR MATTHEW MURRAY, THE EISENHOWER SCHOOL FOR NATIONAL SECURITY AND RESOURCE STRATEGY

Ambassador Matt Murray joined the State Department in 1998 and is a career member of the Senior Foreign Service. Prior to his appointment as Deputy Commandant of NDU's Eisenhower School for National Security and Resource Strategy, he served as the U.S. Senior Official for Asia-Pacific Economic Cooperation (APEC). He was nominated by the President and confirmed by the Senate for the rank of Ambassador during his tenure of service in this role, during which he led the coordination of the U.S. APEC host year in 2023. He previously held economic policy leadership roles as Deputy Assistant Secretary of State for Trade Policy and Negotiations and as the Department's Senior Bureau Official for Economic and Business Affairs.

Throughout his State Department career, Ambassador Murray has focused on advancing U.S. interests in the Indo-Pacific region with a particular focus on China. From 2018 to 2020, he was the Minister-Counselor for Economic Affairs at the U.S. Embassy in Beijing, and he completed earlier diplomatic assignments at the U.S. Mission in China in both Shanghai and Beijing. Ambassador Murray also has served overseas at U.S. embassies in Canberra, New Delhi, and Dar es Salaam, as well as domestically as Director of the State Department’s 24/7 Watch in the Bureau of Intelligence and Research and as Special Assistant to the Under Secretary of State for Economic Growth, Energy, and the Environment.

In 2010, he earned a Master of Strategic Studies from the U.S. Army War College where he received the Military Officers’ Association of America (MOAA) Writing Award. He also has a master’s degree from the University of Pittsburgh and a bachelor’s degree from Washington College. Ambassador Murray and his wife, Sharla, are Maryland natives and have three sons — a middle school teacher, an Army officer, and a computer engineering student.

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PANELIST / SPEAKER

MR. BRENDAN GROVES, CHIEF LEGAL OFFICER, SKYDIO

Brendan Groves is the Chief Legal Officer at Skydio, the largest U.S. drone manufacturer and a world leader in autonomous flight.

Before joining Skydio, he held senior positions in the federal government, most recently as Associate Deputy Attorney General in the U.S. Department of Justice (DOJ). In that role, he managed DOJ's national security policy portfolio and led--and scaled--DOJ's drone program. Brendan formerly served as Special Counsel to the General Counsel of the National Security Agency. He began his career as an Air Force JAG Officer, where he worked with remotely piloted aircraft and deployed to Afghanistan with joint special operations forces.

Brendan is a graduate of Yale Law School and Pepperdine University.

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PANELIST / SPEAKER

MS. LESLIE BABICH, DIRECTOR OF SOFWERX

Leslie Babich is the Director of SOFWERX, a public-private innovation platform operated in partnership with U.S. Special Operations Command (USSOCOM). A 26-year veteran of the U.S. Air Force and a graduate of the U.S. Air Force Academy, Ms. Babich brings deep expertise in national security, acquisition strategy, and defense innovation.

At SOFWERX, she leads efforts to rapidly identify and integrate emerging technologies by fostering collaboration among industry, academia, government, and non-traditional partners. Her work focuses on agile acquisition, dual-use technology adoption, and strengthening partnerships across the defense innovation ecosystem. Ms. Babich regularly represents SOFWERX at national and international forums focused on future warfare, capability development, and allied cooperation.

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INSS Contact Information
Institute for National Strategic Studies
260 Fifth Avenue SW, Building 64
Fort Lesley J. McNair
Washington, D.C. 20319-5066

Phone: (202) 685-3838
Email: INSS_Communications_@ndu.edu
Website: https://inss.ndu.edu/