



2023 Engineering Deans

Public Policy Colloquium

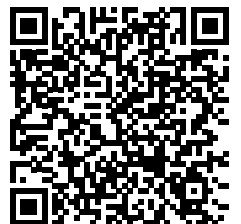
Fairmont Georgetown

Washington, D.C. | February 6 – 8, 2023

MEETING PROGRAM

Schedule of Events & Speaker Biographies

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ABOUT THE COLLOQUIUM

This year the PPC will focus on the themes of engineering talent, innovation, and impact. In 2022, the US Congress and Biden Administration invested heavily in critical technology areas through passage of the historic CHIPS and Science Act, the Inflation Reduction Act, and annual appropriations. This investment, focused on growing the country's talent base, broadening capacity, and advancing use-inspired research around the nation, will enable tremendous opportunities for expanding engineering education and research. Federal agency and thought leaders will join deans to discuss these issues and ways that the federal government can collaborate with engineering colleges to build equitable and catalytic innovation ecosystems

that enhance our national competitiveness. Deans will hear from agency leaders at the National Science Foundation, Department of Energy, National Institute of Standards and Technology, and Department of Defense as well as thought leaders on innovation and security issues. The sessions will provide insights into a new vision for federal research and education investments and pathways for engineering deans to get involved in helping to shape future activities. On February 8th, attendees will come together to advocate for critical priorities in funding and policy through in-person congressional visits. To prepare, the meeting will include discussion of the outlook for engineering education and research in 2023 and congressional visits training.

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MONDAY, FEBRUARY 6, 2023

<p>Starting at 3:00 p.m. <i>Imperial Wall</i></p>	<p>Registration</p>
<p>3:30 p.m. – 5:30 p.m. <i>Roosevelt</i></p>	<p>New Deans' Orientation</p> <p>This interactive orientation will feature an overview of the federal government and advocacy for research and higher education as well as an introduction to ASEE, the Engineering Deans Council (EDC), and the Public Policy Colloquium (PPC). Deans will have the opportunity to share their federal concerns and interests.</p> <p>The orientation will familiarize new deans with key issues and the process of working with legislators and their staffs. Deans who would like a refresher on these topics are welcome to attend as well.</p> <p><u>Speakers:</u> Miriam Quintal and Amanda Bruno, <i>Lewis-Burke Associates LLC</i></p> <p><u>Organizers:</u> Kazem Kazerounian, <i>University of Connecticut</i> Vijay Kumar, <i>University of Pennsylvania</i></p>
<p>6:00 p.m. – 7:30 p.m. <i>Colonnade</i></p>	<p>Opening Reception</p> <p><u>Speaker:</u> Jenna Carpenter, <i>Campbell University; ASEE President</i></p>

TUESDAY, FEBRUARY 7, 2023

<p>7:30 a.m. – 5:00 p.m. <i>Imperial Wall</i></p>	<p>Registration</p>
<p>7:45 a.m. – 8:45 a.m. <i>Grand Ballroom</i></p>	<p>Breakfast</p>
<p>8:45 a.m. – 9:00 a.m. <i>Grand Ballroom</i></p>	<p>Welcome and Introduction</p> <p><u>Speaker:</u> Kenneth Ball, <i>George Mason University; Chair, Engineering Deans Council</i></p>

TUESDAY, FEBRUARY 7, 2023

<p>9:00 a.m. – 10:00 a.m. <i>Grand Ballroom</i></p>	<p>Session 1: Lewis-Burke Washington Update</p> <p><u>Speaker:</u></p> <p>Amanda Bruno, <i>Senior Associate, Lewis-Burke Associates LLC</i> Miriam Quintal, <i>ASEE Washington Representative and Managing Principal, Lewis-Burke Associates LLC</i></p> <p><u>Moderator:</u></p> <p>Paul Tikalsky, <i>Chair, Oklahoma State University</i></p> <p>ASEE's federal relations partners at Lewis-Burke Associates LLC will discuss the current state of play in Washington and the outlook for ASEE's 2023 advocacy priorities, including the political outlook for the 118th Congress, funding for research and education, Biden Administration priorities, higher education and STEM policy, and immigration.</p>
<p>10:00 a.m. – 10:15 a.m. <i>Ballroom II Foyer</i></p>	<p>Refreshment Break</p>
<p>10:15 a.m. – 11:45 a.m. <i>Grand Ballroom</i></p>	<p>Session 2: Workforce Development for Critical Mission Agencies</p> <p>Congress has made major investments in research to meet energy and defense challenges. How can engineering education evolve to ensure a diverse workforce to meet the needs of the national security and energy ecosystems that power our national competitiveness? This session will explore the role of workforce development in these priorities and in upcoming programs under development, such as Energy Earthshots.</p> <p><u>Introductory Remarks:</u></p> <p>Pamela Holland Obiomon, <i>Prairie View A&M University</i> Heidi Shyu, <i>Under Secretary for Research and Engineering, Department of Defense</i> Dan Arvizu, <i>Chancellor, New Mexico State University</i></p> <p><u>Speakers:</u></p> <p>Tony Reames, <i>Deputy Director for Energy Justice, Department of Energy</i> Bindu Nair, <i>Director of Basic Research, Department of Defense</i></p> <p><u>Moderator:</u></p> <p>Kim Lascola Needy, <i>University of Arkansas</i></p> <p><u>Organizers</u></p> <p>Kim Lascola Needy, <i>University of Arkansas</i> Pamela Holland Obiomon, <i>Prairie View A&M University</i> Amanda Bruno, <i>Lewis-Burke Associates LLC</i></p>

TUESDAY, FEBRUARY 7, 2023

<p>11:45 a.m. – 1:00 p.m. <i>Grand Ballroom</i></p>	<p>Lunch</p>
<p>1:00 p.m. – 2:00 p.m. <i>Grand Ballroom</i></p>	<p>Session 3: Agency Opportunities Keynote</p> <p>Congress funded major investments in new semiconductor and microelectronics programs under the CHIPS and Science Act. Much of this funding will be managed by the National Institute of Standards and Technology (NIST), greatly enhancing its budget and responsibility. This session will explore a new vision for NIST in light of these investments, strategies and opportunities emerging from the CHIPS funding, and how the academic engineering community can best engage with NIST and deliver the workforce needed to compete in the long-term in microelectronics, manufacturing, bioengineering, and other critical technologies of relevance.</p> <p><u>Speaker:</u> Laurie Locascio, <i>Undersecretary of Commerce for Standards and Technology</i></p> <p><u>Moderator:</u> Wendi Heinzelman, <i>University of Rochester</i></p> <p><u>Organizers:</u> Wendi Heinzelman, <i>University of Rochester</i> John Lach, <i>George Washington University</i> Aaron Bobick, <i>Washington University in St. Louis</i> Miriam Quintal, <i>Lewis-Burke Associates LLC</i></p>
<p>2:00 p.m. – 2:45 p.m. <i>Grand Ballroom</i></p>	<p>Preparation for Congressional Visits</p> <p><u>Speaker:</u> Miriam Quintal, <i>ASEE Washington Representative and Managing Principal, Lewis-Burke Associates LLC</i></p> <p>In this session, the Lewis-Burke Associates team will discuss how to use Wednesday’s congressional visits to advance ASEE’s policy goals and will provide an overview of the talking points and materials for these meetings. The session will also explore best practices for conducting congressional meetings and how to prepare your group.</p>
<p>2:45 p.m. – 3:00 p.m. <i>Ballroom II Foyer</i></p>	<p>Refreshment Break</p>

3:00 p.m. – 4:00 p.m.

Grand Ballroom

Session 4: Science and Security

Congress and several presidential administrations have long been focused on research security as a key pillar of national competitiveness. At the same time, the Biden Administration, Congress, and many outside groups are pushing for more openness and transparency in the research and innovation ecosystem. These values are potentially in tension, and the communities that focus on each are often having their own conversations without the other perspective. This session will explore how to get the balance right between security and openness and how research in critical technologies can best be pursued to maximize the country's innovation and competitiveness.

Speakers:

Susan Gordon, *Former Principal Deputy Director, National Intelligence (invited)*

Charles Clancy, *Senior Vice President & General Manager, MITRE Labs and MITRE's Chief Futurist*

Robert Atkinson, *President, Information Technology & Innovation Foundation*

Moderator:

Alexander Wolf, *University of California Santa Cruz*

Organizers:

Alexander Wolf, *University of California Santa Cruz*

Sam Easterling, *Iowa State University*

Miriam Quintal and Mia Luckett, *Lewis-Burke Associates LLC*



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<p>4:00 p.m. – 5:30 p.m. <i>Grand Ballroom</i></p>	<p><i>Session 5: National Science Foundation Leaders</i></p> <p>In the wake of the CHIPS and Science Act, a historic appropriations increase, and the establishment of the Directorate for Technology, Innovation, and Partnerships, NSF stands at an exciting crossroads. How is the agency adapting to an expanded mission and budget that calls for increased focus on regional innovation, addressing the Missing Millions and reaching more people and communities, and launching new priority initiatives in engineering biology and microelectronics? Three NSF leaders will discuss these issues and share their visions for how NSF can meet the challenges and opportunities ahead.</p> <p><u>Speakers:</u></p> <p>Susan Margulies, <i>National Science Foundation, Assistant Director for Engineering</i> Erwin Gianchandani, <i>National Science Foundation, Assistant Director for Technology, Innovation, and Partnerships</i> James Moore, <i>National Science Foundation, Assistant Director for STEM Education</i></p> <p><u>Moderator:</u></p> <p>Elaine Scott, <i>Santa Clara University</i></p> <p><u>Organizers:</u></p> <p>Sheryl Ehrman, <i>San Jose State University</i> Elaine Scott, <i>Santa Clara University</i> Paul Tikalsky, <i>Oklahoma State University</i> Miriam Quintal, <i>Lewis-Burke Associates LLC</i></p>
<p>6:00 p.m. – 7:30 p.m. <i>Kennedy Ballroom</i></p>	<p><i>Closing Reception</i></p> <p><u>Speaker:</u></p> <p>Jacqueline El-Sayed, <i>ASEE, Acting Executive Director, & Chief Academic Officer</i></p>

WEDNESDAY, FEBRUARY 8, 2023

<p>All Day</p>	<p><i>Group Meetings with Members of Congress and Staff</i></p> <p>Participants are encouraged to conduct congressional visits in state groups. This year congressional visits should be in-person if possible. Please note that deans are responsible for making their own arrangements for congressional visits. Lewis-Burke Associates will be coordinating federal relations representatives helping institutions with their visits— please make sure to include the name of any staff member helping with your visits on your registration so they can be made aware of talking points and other resources. If you do not have a federal relations representative to help with your state group, please contact mia@lewis-burke.com for assistance. The PPC Planning Committee does not arrange for group congressional meetings.</p>
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2023 PPC SPEAKERS BIOGRAPHIES

DAN ARVIZU, *Chancellor, New Mexico State University*



Dan Arvizu became Chancellor and the 28th Chief Executive of the New Mexico State University System in 2018. He is the

second alumnus and first Hispanic to be hired as the NMSU System Chancellor and Chief Executive. Arvizu has set a new vision and strategic direction for the NMSU system, focused on student success and upward mobility, elevating research and creativity, and amplifying outreach and economic development.

Arvizu has had a long-distinguished career in advanced energy research and development, materials and process sciences, and technology commercialization. He started his career in 1973 at Bell Labs, and after four years transferred to Sandia National Labs, where he spent the next 21 years, 14 in executive roles. In 1998 he joined CH2M Hill Companies, Ltd. for six years, his last two years as a CTO. In January of 2005 he was appointed the 8th Director of the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) in Golden, Colorado, and became the first Hispanic Lab Director in the history of any of the 17 U.S. DOE's National Labs. He retired from NREL in December of 2015 and is presently Director Emeritus.

Arvizu serves on a number of boards, panels, and advisory committees, including the State Farm Mutual Insurance Board of Directors, the Singapore International Advisory Panel on Energy, and the Stanford Precourt Institute for Energy Advisory Council. In 2004 he was appointed

by President George W. Bush, and subsequently in 2010 reappointed by President Barack Obama (twice confirmed by the full Senate), to serve six-year terms on the National Science Board (NSB), the governing body of the \$8.5 billion National Science Foundation. He was twice elected NSB Chairman by his peers and served in that role for four years (2012-2016), where he testified annually on NSF's budget before Congress. He was the first Hispanic Chair of the National Science Board. In September of 2021 Arvizu was appointed by President Joe Biden to serve on the President's Council of Advisors for Science and Technology (PCAST).

Arvizu is an elected Fellow of the National Academy of Engineering and the National Academy of Public Administration and in 2016 received the Secretary of Energy's Exceptional Service Award for more than three decades of energy contributions. He has received numerous awards and recognitions, including induction as a member of the *U.S. News and World Report* STEM Leadership Hall of Fame and the Great Minds in STEM Hispanic Science and Engineering Hall of Fame, and in 2010 he was awarded the Hispanic Scientist of the Year by the Museum of Science and Industry in Tampa, Florida.

Arvizu has a Bachelor of Science in mechanical engineering from New Mexico State University, and a Master of Science and PhD in mechanical engineering from Stanford University.

ROBERT ATKINSON, *President and Founder, Information Technology and Innovation Foundation (ITIF)*



As founder and president of the Information Technology and Innovation Foundation (ITIF), Robert D. Atkinson leads

a prolific team of policy analysts and fellows that is successfully shaping the debate and setting the agenda on a host of critical issues at the intersection of technological innovation and public policy.

He is an internationally recognized scholar and a widely published author. President Clinton appointed Atkinson to the Commission on Workers, Communities, and Economic Change in the New Economy; the Bush administration appointed him chair of the congressionally created National Surface Transportation Infrastructure Financing Commission; the Obama administration appointed him to the National Innovation and Competitiveness Strategy Advisory Board; as co-chair of the White House Office of Science and Technology Policy's China-U.S. Innovation Policy Experts Group; to the U.S. Department of Commerce's National Advisory Council on Innovation and Entrepreneurship; and the Trump administration appointed him to the G7 Global Partnership on Artificial Intelligence. The Biden administration appointed him as a member of the U.S. State Department's Advisory Committee on International Communications and Information, and a member of the Export-Import Bank of the United States' Council on China Competition.

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Atkinson also served on the UK government's Place Advisory Group to advise the Minister for Science, Research and Innovation on how policy can drive innovation in more regions. He is a member of the Polaris Council, a body of cross-sectoral, interdisciplinary science and technology policy experts who advise the U.S. Government Accountability Office's Science, Technology Assessment, and Analytics (STAA) team on emergent and emerging issues.

Atkinson is a member of the Special Competitive Studies Project. He served on the Markle Foundation Task Force on National Security in the Information Age and serves on the boards or advisory councils of the University of Oregon's Institute for Policy Research and Innovation, and the State Science and Technology Institute. Additionally, Atkinson is on the editorial boards of the *Journal of Electronic Government* and the *Journal of Internet Policy*; a member of the Global Innovation Forum Brain Trust; a nonresident senior fellow at the Brookings Institution; a fellow at the Columbia University Institute of Tele-Information; a fellow of Glocom, a Tokyo-based research institute. He is also an adjunct professor at the Georgetown School of Foreign Service.ice. Atkinson was previously vice president of the Progressive Policy Institute, where he directed the Technology & New Economy Project.

Atkinson holds a Ph.D. in city and regional planning from the University of North Carolina, Chapel Hill, where he was awarded the prestigious Joseph E. Pogue Fellowship. He earned his master's degree in urban and regional planning from the University of Oregon, which named him a distinguished alumnus in 2014.

KENNETH BALL, *Dean, College of Engineering and Computing, George Mason University*



Kenneth Ball was appointed Dean of the Volgenau School of Engineering in August 2012. He previously served as the

L.S. Randolph Professor and Head of the Department of Mechanical Engineering at Virginia Tech from 2004–2012, overseeing rapid growth in the department with research expenditures increasing five-fold to approximately \$20 million, and with large increases in student enrollment. Prior to his appointment at Virginia Tech, he served for 15 years on the mechanical engineering faculty at The University of Texas at Austin, where he was the Temple Foundation Endowed Faculty Fellow in Engineering. He is recognized internationally for his research in computational fluid dynamics and heat transfer. He has chaired three international conferences, is a past Associate Technical Editor of the *ASME Journal of Heat Transfer*, and has served on several other engineering journal editorial boards. He is very involved in engineering program assessment and accreditation activities, both in the U.S. and internationally, particularly in the Middle East. Ball has supervised 13 PhD dissertations and 29 MS theses. He has obtained externally sponsored funding (excluding high-performance computing grants) in excess of \$20 million for projects and program development in mechanical engineering, including the thermal/fluid sciences and nuclear engineering. The estimated commercial value of his supercomputer grants is in excess of \$10 million. Ball is the

Chair of ASEE's Engineering Deans Council. He holds a BS, MS, and PhD in mechanical engineering from Lehigh University and Drexel University, respectively.

AMANDA BRUNO, *Senior Associate, Lewis-Burke Associates LLC*



Amanda Bruno is a Senior Associate at Lewis-Burke Associates LLC with issue expertise in education policy,

workforce issues, engineering, emerging technologies, transportation policy, economic development, and international affairs. Bruno advises Lewis-Burke clients on federal activities that impact education, immigration, economic development, and workforce policy. She provides strategic guidance on upcoming research opportunities and potential Congressional action in these key areas. Bruno previously served as a Government Affairs Associate in The Ohio State University's Office of Federal Relations in Washington, D.C., where her portfolio covered higher education issues and administrative functions. Her previous work in the higher education community brings an important perspective to Lewis-Burke. Bruno holds bachelor's degrees in political science and international studies from Miami University, where she graduated summa cum laude. She is currently pursuing a master's in public policy from George Mason University.

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JENNA CARPENTER, *Founding Dean and Professor, School of Engineering, Campbell University*



Jenna P. Carpenter is Founding Dean and Professor of Engineering at Campbell University.

With a hands-on, project-based approach all four years, Campbell School of Engineering focuses on design and utilizes unique classlabs to seamlessly integrate lecture and lab. The program also emphasizes teaming, communication skills, student internships, professional engineering licensure, professional development training, and service learning. The school has earned a Bronze Award from the ASEE Diversity Recognition Program and is a KEEN Partner Institution. Carpenter serves as the 2022–2023 President of ASEE.

Prior to coming to Campbell, Carpenter was Wayne and Juanita Spinks Endowed Professor, Associate Dean for Undergraduate Studies, and Director of the Office for Women in Science and Engineering at Louisiana Tech University's College of Engineering and Science. Carpenter is a member of the U.S. Engineering Deans Council Executive Committee, where she co-chairs the Undergraduate Experience Committee. She is also a member of the Executive Committee for the Global Engineering Deans Council. She is chairing the Pilot Program Ad-Hoc Committee on the Gulf Scholars Program for the National Academies of Science, Engineering, and Medicine. Carpenter served for seven years as chair of the Steering Committee for the National Academy of Engineering Grand Challenges

Scholars Program. She is a Fellow of the American Society for Engineering Education and an Engineering Program Evaluator for ABET. She is a past president of the Women in Engineering ProActive Network, past Vice President of Professional Interest Councils for the American Society for Engineering Education, and past First Vice-President of the Mathematical Association of America. She has a TEDx Talk entitled "Engineering: Where Are the Girls and Why Aren't They Here?" She was awarded the Sharon Keillor Award for Women in Engineering from the American Society for Engineering Education in 2019. In October 2015, Dreambox Learning named Carpenter one of its 10 Women in STEM Who Rock.

A Corsicana, Texas, native, Carpenter earned her bachelor's degree in mathematics from Louisiana Tech and her master's and PhD degrees in mathematics from Louisiana State University, where she was an Alumni Federation Fellow. Her research focuses on integrated STEM curricula and improving the number and success of women in engineering, with over \$4.3 million in funding to date.

CHARLES CLANCY, PH.D.
Senior Vice President, General Manager, & Chief Futurist, Mitre Labs



Charles Clancy is senior vice president, general manager of MITRE Labs, and chief futurist. He is responsible for sparking

innovative disruption, accelerating risk-taking and discovery, and delivering real-time technology capabilities and execution through

the company's laboratories, solution platforms, and MITRE Fellows program. He leads technical innovation to anticipate and meet the future demands of government sponsors and industry and academic partners.

Clancy is an internationally recognized expert on topics at the intersection of wireless, cybersecurity, and artificial intelligence.

Before joining MITRE in 2019 as vice president for intelligence programs, Clancy served as the Bradley Professor of Cybersecurity at Virginia Tech and executive director at the Hume Center for National Security and Technology. There, he led Virginia Tech's research and experiential learning programs in defense and intelligence.

He started his career at the National Security Agency, filling a variety of research, engineering, and operations roles, with a focus on wireless communications. He has co-authored more than 250 patents and academic publications, as well as six books. He co-founded several venture-backed security startup companies that apply commercial innovation to national security challenges.

Clancy is an IEEE Fellow and sits on the AFCEA Board of Directors' Executive Committee, the AFCEA Intelligence Committee, the Intelligence and National Security Alliance Advisory Committee, the Systems Engineering Research Center Advisory Board, the Alliance for Telecommunications Industry Solutions NextG Alliance, and the Center for New American Security Task Force on Artificial Intelligence and National Security. He also serves on advisory boards at Howard University, Norfolk State University, North Carolina A&T State University, and Virginia Tech. In 2021 *WashingtonExec* magazine

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named Clancy one of the nation's Top Climate Executives to Watch.

Clancy holds a bachelor's degree in computer engineering from the Rose-Hulman Institute of Technology, a master's degree in electrical engineering from the University of Illinois at Urbana-Champaign, and a doctorate in computer science from the University of Maryland, College Park.

JACQUELINE EL-SAYED, *Acting Executive Director, & Chief Academic Officer, ASEE*



Jacqueline El-Sayed is the Acting Executive Director and Chief Academic Officer for ASEE. She has leadership experience with

the entire pipeline of engineering education and most recently served as the Chief Academic Officer & Vice President for Academic Affairs at Marygrove College. She is a professor emerita of mechanical engineering and served on the faculty at Kettering University for 18 years, eventually earning the position of Associate Provost. In addition to her work in academia she has served in industry and government. She is a four-time gubernatorial appointee to the Michigan Truck Safety Commission and, as commissioner, served as Chair for two terms. She also chaired the Driver's Education Advisory Committee and the Motorcycle Safety Advisory Committee for the Michigan Department of State—work that resulted in new legislation for Michigan. She began her career as an engineer for General Motors Truck Group and has been nationally recognized in higher

education as both an American Council on Education Fellow and a New Leadership Academy Fellow.

As an ACE Fellow she was placed at Harvey Mudd College, visited over 30 campuses, and completed a national benchmark study on experiential education. The study's recommendations were then implemented at her home institution. El-Sayed served on the Bloomfield Hills Board of Education for 10 years. Currently, she serves on the Women in Engineering ProActive Network (WEPAN) Board of Directors and on the Advancement Committee for the Society for College and University Planning (SCUP). She is married and has three adult children. El-Sayed holds a BS in mechanical engineering from Kettering University, and an MSE and PhD in mechanical and aerospace engineering from the University of Missouri-Columbia.

ERWIN GIANCHANDANI, *Assistant Director for Technology, Innovation and Partnerships, National Science Foundation*



Erwin Gianchandani is the National Science Foundation's Assistant Director for Technology, Innovation and

Partnerships, leading the newly established TIP Directorate.

Gianchandani has worked at NSF since 2012. Prior to becoming the Assistant Director for TIP, he served as the Senior Advisor for Translation, Innovation and Partnerships for over a year, where he helped develop plans for the new TIP Directorate in collaboration with colleagues at NSF, other

government agencies, industry, and academia. During the previous six years, Gianchandani was the NSF Deputy Assistant Director for Computer and Information Science and Engineering (CISE), twice serving as Acting Assistant Director for CISE. Gianchandani's leadership and management of CISE included the formulation and implementation of the directorate's \$1 billion annual budget, strategic and human capital planning, and oversight of day-to-day operations for a team of over 130. Gianchandani has led the development and launch of several new NSF initiatives, including the Smart & Connected Communities program, Civic Innovation Challenge, Platforms for Advanced Wireless Research, and the National Artificial Intelligence Research Institutes.

Before joining NSF in 2012, Gianchandani was the inaugural Director of the Computing Community Consortium, providing leadership to the computing research community in identifying and pursuing bold, high-impact research directions such as health information technology and sustainable computing. Gianchandani has published extensively and presented at international conferences on computational systems biology. In 2021, Gianchandani received the Distinguished Presidential Rank Award, awarded to members of the federal government's Senior Executive Service for sustained extraordinary accomplishment. In 2018, he was awarded the Outstanding Young Engineering Graduate Award from the University of Virginia. He holds a bachelor's degree in computer science and master's and doctoral degrees in biomedical engineering, all from the University of Virginia.

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SUSAN GORDON, former Principal Deputy Director for National Intelligence, National Security Council



Susan Gordon was the fifth Principal Deputy Director of National Intelligence at the Office of the Director of

National Intelligence (DNI) from August 2017 to August 2019. As PDDNI, she was a key advisor to the President and National Security Council and led the 17-member Intelligence Community. With more than three decades of experience in the IC, Gordon has served in a variety of leadership roles spanning numerous intelligence organizations and disciplines. Prior to the DNI, she served as the Deputy Director of the National Geospatial-Intelligence Agency from 2015 to 2017, helping the director lead the agency and manage the National System of Geospatial Intelligence.

Before joining the NGA, Gordon served for 27 years at the Central Intelligence Agency, rising to senior executive positions in each of the Agency's four directorates: operations, analysis, science and technology, and support. In 1998, she designed and drove the formation of In-Q-Tel, a private, non-profit company whose primary purpose is to deliver innovative technology solutions for the agency and the IC. She is the recipient of numerous government and industry awards, including the Distinguished Intelligence Medal and the Distinguished Presidential Rank Award. Gordon is a fellow at Duke and Harvard Universities and serves on several boards, including those for CACI International, Avantus Federal, and

BlackSky. She is a senior advisor for Pallas Advisors, the Draper Richards Kaplan Foundation, Primer, Rebellion Defense, and ColdQuanta.

Gordon holds a bachelor's degree in zoology from Duke University.

LAURIE LOCASCIO, Director and Undersecretary of Commerce, National Institute of Standards & Technology



Laurie E. Locascio is the 17th director of the National Institute of Standards and Technology (NIST) and

the fourth Under Secretary of Commerce for Standards and Technology. In this role, she provides high-level oversight and direction of NIST.

Locascio most recently served as Vice President for Research at the University of Maryland, College Park and University of Maryland, Baltimore, where she focused on the development of large interdisciplinary research programs, technology commercialization, innovation and economic development efforts, and strategic partnerships with industry, federal, academic, and nonprofit collaborators. She also served as a professor in the Fischell Department of Bioengineering at the A. James Clark School of Engineering with a secondary appointment in the Department of Pharmacology in the School of Medicine.

Before joining the University of Maryland, Locascio worked at NIST for 31 years, rising from a research biomedical engineer to eventually leading the agency's Material

Measurement Laboratory (MML). She also served as the Acting Associate Director for Laboratory Programs, the No. 2 position at NIST, providing direction and operational guidance for NIST's lab research programs.

As director of MML, one of NIST's largest scientific labs, Locascio oversaw 1,000 research staff in eight locations around the United States and a \$175 million annual budget and recruited top talent, fostered excellence, and built a collegial and collaborative workplace. She implemented strategic partnerships with universities, industry, and other government labs, including a partnership with the University of Maryland's Institute for Bioscience and Biotechnology Research at the Universities at Shady Grove. Before that, Locascio served as chief of MML's Biochemical Sciences Division.

Locascio's most recent honors and awards include 2021 induction as a fellow of the National Academy of Inventors, the 2017 American Chemical Society Earle B. Barnes Award for Leadership in Chemical Research Management, and the 2017 Washington Academy of Sciences Special Award in Scientific Leadership. She has published 115 scientific papers and has received 12 patents in the fields of bioengineering and analytical chemistry. Her honors and awards also include the Department of Commerce Silver and Bronze Medal Awards, the American Chemical Society Division of Analytical Chemistry Arthur F. Findeis Award, the NIST Safety Award, and the NIST Applied Research Award. She is also a fellow of the American Chemical Society and the American Institute for Medical and Biological Engineering.

Locascio has a BS in chemistry

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from James Madison University, an MS in bioengineering from the University of Utah, and a PhD in toxicology from the University of Maryland, Baltimore.

SUSAN MARGULIES, *Assistant Director for Engineering, National Science Foundation*



Susan Margulies is the head of the National Science Foundation's (NSF's) Directorate for

Engineering (ENG). As Director, Margulies leads ENG in their work to further engineering education and the engineering workforce through programs, centers, and partnerships. As the agency's first biomedical engineer to lead the Directorate, Margulies seeks to expand on ENG's mission through national and international partnerships with industry, other agencies, academia, institutions, and engineering communities. Prior to working with NSF ENG, Margulies served as the chair of the Wallace H. Coulter Department of Biomedical Engineering at the Georgia Institute of Technology. She also taught as a professor of biomedical engineering at Emory University, and of bioengineering and neurosurgery at the University of Pennsylvania. Margulies holds a BSE in mechanical and aerospace engineering from Princeton University and master's and doctoral degrees in bioengineering from the University of Pennsylvania.

JAMES MOORE, *Assistant Director for STEM Education, National Science Foundation*



As a member of the executive leadership team at the National Science Foundation (NSF), James L. Moore III is

the Assistant Director for the Directorate for STEM Education (EDU). With an annual budget of over \$1 billion and personnel oversight for nearly 200 employees, he serves as the senior leader for EDU, which supports science, technology, engineering, and mathematics (STEM) projects focusing on K-12 education, undergraduate and graduate education, workforce and human resource development, and learning in formal and informal settings. Prior to his NSF appointment, Moore served for over five years as the university's Vice Provost for Diversity and Inclusion, Chief Diversity Officer, and leader of the Office of Diversity and Inclusion (one of the nation's oldest, largest, and most comprehensive offices of its kind) at The Ohio State University. From 2015 to 2017, he served as a program director for Broadening Participation in Engineering in the Directorate for Engineering at NSF, and, during that time, he was one of the program directors who helped launch the highly acclaimed, cross-directorate NSF INCLUDES, a \$100 million-plus national Broadening Participation in STEM initiative. From 2011 to 2015, Moore was an Associate Provost for Diversity and Inclusion at The Ohio State University, where he managed numerous nationally acclaimed

programs and units.

Moore is nationally recognized for his work on African American males, and he has served on The Ohio State University's faculty since 2002. He is the first Executive Director for the Todd Anthony Bell National Resource Center on the African American Male and is the inaugural EHE Distinguished Professor of Urban Education at The Ohio State University. His research agenda focuses on school counseling, gifted education, urban education, higher education, multicultural education/counseling, and STEM education, and Moore is often quoted, featured, and mentioned in publications such as *New York Magazine*, *New York Times*, *St. Louis Post-Dispatch*, *Columbus Dispatch*, *Spartanburg Herald*, *Cincinnati Enquirer*, *Journal of Blacks in Higher Education*, *Chronicle of Higher Education*, and *Diverse: Issues in Higher Education*. Since 2018, he has been cited annually by *Education Week* as one of the 200 most-influential scholars and researchers in the United States.

Moore has co-edited and co-authored seven books: *African American Students in Urban Schools: Critical Issues and Solutions for Achievement*; *African American Male Students in PreK-12 Schools: Informing Research, Policy, and Practice*; *Black Males and Intercollegiate Athletics: An Exploration of Problems and Solutions*; *Advancing Educational Outcomes in Science, Technology, Engineering, and Mathematics at Historically Black Colleges and Universities*; *Gifted Children of Color Around the World: Diverse Needs, Exemplary Practices and Directions for the Future*; *Black Boys are*

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Lit: Engaging PreK-3 Gifted and Talented Black Boys Using Multicultural Literature and Ford's Bloom-Banks Matrix; and African American Young Girls and Women in PreK12 Schools and Beyond: Informing Research, Policy, and Practice. He has published over 160 publications; obtained over \$40 million in grants, contracts, and gifts; and given over 200 scholarly presentations and lectures throughout the United States and other parts of the world (e.g., Dominican Republic, Brazil, Bermuda, Bahamas, Jamaica, Canada, England, Spain, China, India, Indonesia, Ireland, and France).

BINDU NAIR, *Director of Basic Research, Department of Defense*



Bindu R. Nair is the Deputy Director for Basic Research within the Office of the Secretary of Defense (OSD).

In this role, she

is responsible for oversight and coordination of the Department's \$2.2 billion investment in basic science. This investment supports high-risk and high pay-off basic research projects in fields including physical science, life science, environmental science, applied mathematics, and others that probe the limits of today's technologies and discover new phenomena and know-how that may ultimately lead to future technologies for the department. From 2012-2017, Nair served in various roles including Acting Director and Deputy Director in the Human Performance, Training, and Biosystems (HPT&B) Directorate within the Office of the Secretary of Defense. In this role,

Nair was involved in overseeing a broad range of DoD's science and technology programs that support warfighter effectiveness. Her specific areas of responsibilities in the office were in environmental technologies, bio-assist technologies (for exoskeletons and prosthetics), human machine teaming, and social behavioral modeling in the information environment. Prior to her assignment to OSD, Nair worked for the Department of the Army with oversight responsibilities over the science and technology program in power and energy. She has worked in the DoD laboratory system at the Natick Soldier Research, Development and Engineering Center as well as in private industry at Foster Miller (Waltham, MA). Her research expertise is in the field of material science and engineering, including nanomaterials, polymers, and organic electronic materials, and she has taught graduate-level courses in polymer synthesis. She has published primarily in membrane and materials development fields and holds patents in fuel cell technologies. Nair holds a BS from the University of Florida and a PhD from the Massachusetts Institute of Technology in materials science and engineering.

MIRIAM QUINTAL, *Managing Principal, Lewis-Burke Associates LLC*



Miriam Quintal, ASEE Washington Representative and Managing Principal at Lewis-Burke Associates, boasts a decade of advocacy

and client success at Lewis-Burke, managing the federal

relations portfolios for large academic institutions, scientific societies, and facility management organizations. Quintal leads Lewis-Burke's efforts representing ASEE, promoting engineering education to Congressional and Federal officials and helping to spur grassroots advocacy efforts by engineering deans and other constituent groups. As Managing Principal, she oversees the firm's client engagement and issue practices to ensure success and advancement across the firm. Quintal fiercely protects client priorities, leveraging her unique combination of scientific training with political insight.

Quintal is a prominent leader in National Science Foundation advocacy, co-chairing the Coalition for National Science Funding (CNSF) and working closely with the higher education and research advocacy community to guide policy for and champion the foundation. Her wealth of knowledge and federal research enterprise acumen provide value to all components of client interests: supporting university leadership, shepherding research initiatives, and shaping policy across a range of issues. Major advocacy efforts have included successfully guiding large-scale science projects through the appropriations process, restoring funding for key programs proposed to be eliminated in the President's budget request, establishing new agency funding for research infrastructure, and creating opportunities for clients to showcase research and leadership in Administration initiative areas. Quintal holds a bachelor's degree in chemistry from Smith College and a master's degree in organic chemistry from Harvard University.

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TONY REAMES, *Deputy Director for Energy Justice, Department of Energy*



Tony G. Reames is the Deputy Director for Energy Justice at the U.S. Department of Energy. He leads the Department's

new Office of Energy Justice Policy and Analysis in the Office of Economic Impact and Diversity. Reames was most recently an Associate Professor of Environment and Sustainability at the University of Michigan, where he established the Urban Energy Justice Lab and the Energy Equity Project, focusing on research and solutions to the production and persistence of racial, income, and geographic energy-related disparities. Reames also served as a commissioned officer in the U.S. Army Corps of Engineers and worked in both the private and public sectors as a licensed professional engineer. He earned a BS in civil engineering from North Carolina Agricultural & Technical State University, a Master of Engineering Management from Kansas State University, and a PhD in public administration from the University of Kansas.

HEIDI SHYU, *Undersecretary of Defense for Research and Engineering, Department of Defense*



Heidi Shyu is the Under Secretary of Defense for Research and Engineering (OUSD(R&E)).

In this role, she serves as the Chief Technology Officer for the Department of Defense (DoD),

mandated with ensuring the technological superiority of the U.S. military, and is responsible for the research, development, and prototyping activities across the DoD enterprise. She also oversees the activities of the Defense Advanced Research Projects Agency (DARPA), the Missile Defense Agency (MDA), the Defense Innovation Unit (DIU), the DoD Laboratory and Engineering Center enterprise, and the Under Secretariat staff focused on developing advanced technology and capability for the U.S. military.

Previously, Shyu served as the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA (ALT)), from September 2012 to January 2016. Prior to this, she was Acting ASA (ALT) beginning in June 2011 and appointed the Principal Deputy in November 2010. As the ASA (ALT), she served as the Army Acquisition Executive, the Senior Procurement Executive, the Science Advisor to the Secretary of the Army, and the Army's Senior Research and Development official. She had principal responsibility for all Department of the Army matters related to logistics. Shyu also led the execution of the Army's acquisition function and the acquisition management system. Her responsibilities included providing oversight for the life cycle management and sustainment of Army weapons systems and equipment from research and development through test and evaluation, acquisition, logistics, fielding, and disposition.

Prior to her government service, Shyu was the Vice President of Technology Strategy for Raytheon Company's Space and Airborne Systems. A member of the Air Force Scientific Advisory Board from 2000 to 2010, she served as the Vice Chairman from 2003 to 2005 and Chairman from 2005

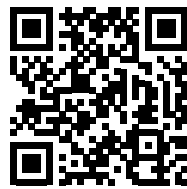
to 2008. Shyu is a member of the National Academy of Engineering and an AIAA Honorary Fellow.

Shyu holds a Bachelor of Science in mathematics from the University of New Brunswick in Canada and Master of Science degrees in mathematics from the University of Toronto and system science (electrical engineering) from UCLA. She received an Honorary Doctorate of Science from the University of New Brunswick. She is also a graduate of the UCLA Executive Management Course Program.



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Public Policy Colloquium



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2023 Engineering Deans

Public Policy Colloquium

Fairmont Georgetown

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PROGRAM ADDENDUM:

Please note that the Lewis-Burke Washington Update session will now be held from 1:00 PM to 2:00 PM and the Agency Opportunities Keynote session will be held from 9:00 AM to 10:00 AM.

Further, please note that Susan Gordon (one of the speakers for Session 4: Science and Security) has confirmed her attendance.