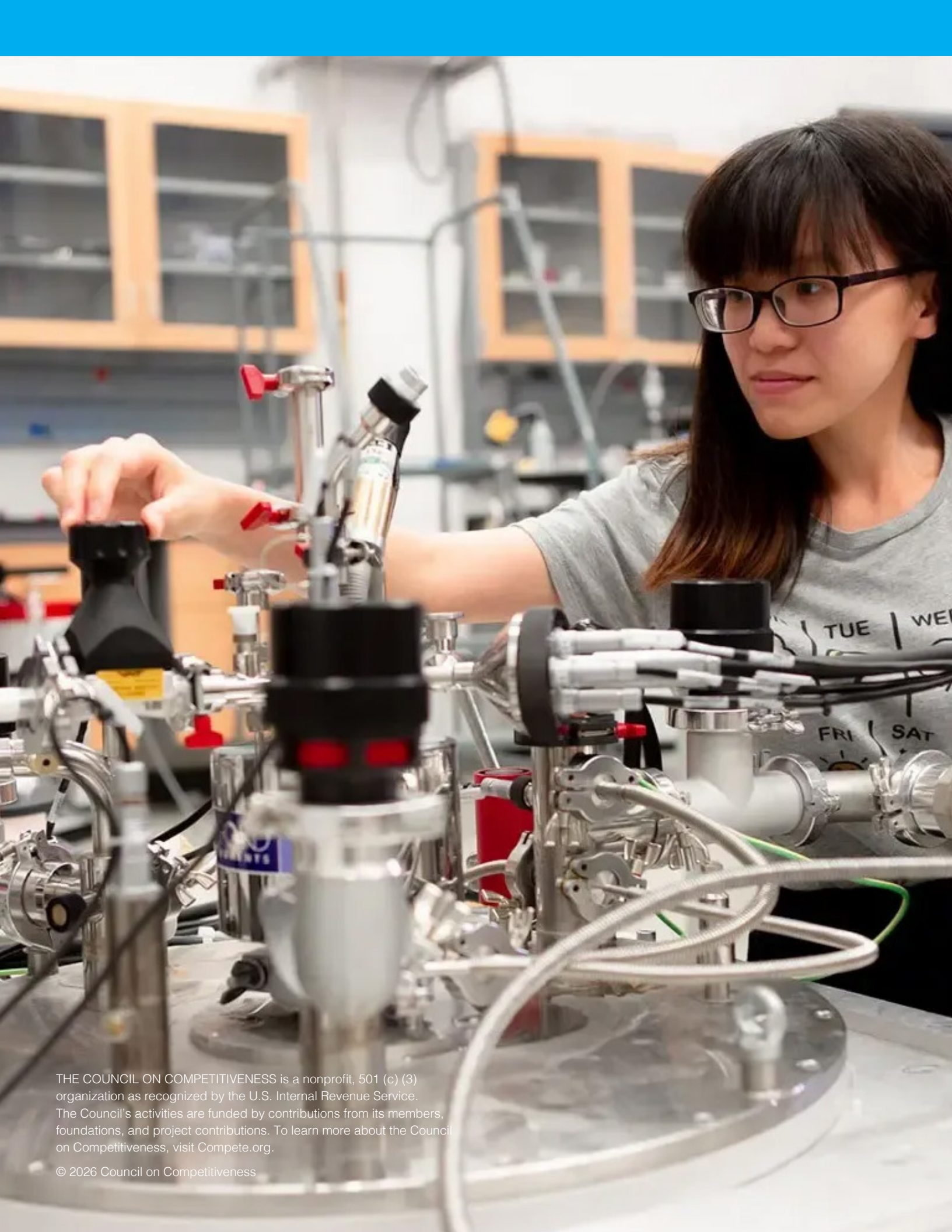


Competitiveness Conversations Across America

Maryland—Unlocking American Innovation in the AI and Quantum Era

Morgan State University
March 23, 2026

University of Maryland
March 24, 2026



THE COUNCIL ON COMPETITIVENESS is a nonprofit, 501 (c) (3) organization as recognized by the U.S. Internal Revenue Service. The Council's activities are funded by contributions from its members, foundations, and project contributions. To learn more about the Council on Competitiveness, visit [Compete.org](https://www.compete.org).

© 2026 Council on Competitiveness

Table of Contents

Agenda	3
The Capital of What's Next: Showcasing Maryland's AI and Quantum Innovation Ecosystem	12
Executive Summary	13
Day 1: Morgan State University	21
Building an Inclusive Innovation Ecosystem	24
Leadership Perspective from the State House	25
Setting the Context: Building Together	26
Technology Commercialization	27
Maryland's Anchor Universities: Catalysts for Place-Making Innovation	29
Google REACH: Building AI that Works for Everyone	32
The Genesis Mission	34
Digital Twins: From Campus to City	36
Governance and Guardrails	38
The Lightning Talks	40
Reflections, Music, and Dinner	42
The Closing Panel and a Challenge to the Nation	43
Day 2: The University of Maryland	45
Quantum Computing at Scale	48
The Ecosystem Argument	49
Capital of Quantum	52
IonQ's Anchor Role of Quantum Innovation and Commercialization	54

A Warning from the Hill	56
Integration and Scaling Quantum: Industry's Perspective	57
The Federal Architecture of Quantum	60
From Theory to Hardware	62
Access to Quantum Hardware	64
The Role of University-Affiliated Research in Quantum Innovation	66
Building the Quantum Workforce	68
The Quantum Economy and the Importance of Investing in Startups	69
The Role of Universities in Fueling Quantum Spinouts	70
Concluding Thoughts on Building the United States' Quantum Future	72
Touring the Discovery District Maryland	74
Conclusion	75
Participants	76
Council on Competitiveness Board, Executive Committee, General Members, Partners, Fellows & Staff	83

Agenda

Monday, March 23, 2026

MORNING

9:15 Registration, Continental Breakfast, and Networking

9:50 Keynote: Leadership Perspective from the Statehouse

The Hon. Wes Moore
Governor of Maryland

Introduction

Dr. David K. Wilson
President, Morgan State University

10:25 Setting the Context for the Maryland Edition of the Competitiveness Conversations Across America Series

Dr. Darryll J. Pines
President, University of Maryland, College Park

Dr. David K. Wilson
President, Morgan State University

Moderator

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

11:00 The State of Maryland's Leadership in Technology Commercialization

Maryland's concentration of leading universities and federal labs creates a powerful platform for innovation in AI, quantum, and more. This conversation will explore the state's plans to align partnerships, capital, and policy to accelerate tech transfer and move discoveries to market—with organizations, like TEDCO, playing an important role.

Dr. Patrick G. O'Shea
Vice President and Chief Research Officer,
University of Maryland, College Park and
University of Maryland, Baltimore

Mr. Wayne E. Swann
Director, Office of Technology Transfer, Morgan
State University

Moderator

Mr. Troy A. LeMaile-Stovall
CEO, TEDCO

11:30 Maryland's Anchor Universities: Catalysts for Place-Making Innovation

This panel highlights the state's innovation ecosystem underpinning leadership in AI and quantum. The session will explore how coordinated regional action—anchored by the region's premier universities and deep, multi-sector partnerships—translates breakthrough science into enduring regional and national competitiveness.

Dr. Bruce E. Jarrell
President, University of Maryland, Baltimore

Dr. Anupam Joshi
Oros Family Professor, Vice Provost and Chief AI Officer; Director, UMBC Cybersecurity Institute and The Cyberscholars Program

The Hon. Dr. Willie E. May
Vice President, Research and Economic Development, Morgan State University

Moderator

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

AFTERNOON

12:00 Lunch

1:00 Conversation Starter from the “Father of the Internet (Video)”

Dr. Vinton G. Cerf
Vice President, Chief Internet Evangelist, Google

1:02 Standards: A Strategic Competitiveness Issue (Video)

The Hon. Dr. Laurie Locascio
President and CEO, American National Standards Institute

1:05 The Opportunity and Impact of Google Reach

REACH (Representation, Evaluation, and Cultural Heuristics) is a collaborative research initiative between Google and a consortium of Historically Black Colleges and Universities (HBCUs). The program focuses on advancing methods to evaluate generative AI systems for cultural relevance, representational fidelity, and contextual appropriateness.

Dr. Kofi Nyarko
Professor of Electrical and Computer Engineering and Director for the Center for Equitable AI and Machine Learning Systems, Morgan State University

Dr. Jamila Smith-Loud
Head of Human Rights and Social Impact Research, Google

1:30 Harnessing AI, Quantum, and High Performance Computing to Power U.S. Competitiveness

Artificial intelligence is reshaping the foundations of economic growth, national security, and technological leadership. This leadership panel will dive into the emergent Genesis Mission—an executive order tasking the U.S. Department of Energy with leading a national, coordinated effort to accelerate innovation and discovery with the latest advancements in AI, quantum, and HPC. Drawing on Maryland's distinctive innovation ecosystem, panelists will explore how regional assets can turbocharge the national mission.

The Hon. Dr. Darío Gil
Under Secretary for Science, Director, Genesis Mission, U.S. Department of Energy

Dr. Sudip Parikh
CEO, American Association for the Advancement of Science (AAAS)

2:00 The Role of Digital Twins in Driving Innovation

Step inside the future of state innovation. Discover Maryland's bold plans to harness digital twins and statewide AI infrastructure—turning data into real-time, actionable insights to transform how government, education, and industry operate. Learn how cutting-edge technology and strategic partnerships are helping Maryland lead the charge in smart, connected, AI-driven systems.

Mr. Andy Lin

Vice President of Strategy and Chief Technology Officer, Mark III Systems

The Hon. Dr. Sanjay Rai

Secretary, Maryland Higher Education Commission (MHEC)

Moderator

Dr. Kofi Nyarko

Professor of Electrical and Computer Engineering and Director for the Center for Equitable AI and Machine Learning Systems, Morgan State University

2:30 Governance and Guardrails for the Post-Turing Era

The future is arriving fast—and with it, questions about how to harness AI, quantum, and frontier technologies safely and strategically. Top leaders from government, national security, and frontier-tech business will tackle the tough questions as they debate how to shape the rules, ethics, and opportunities of the post-Turing era.

Mr. Taylor Black

Director, AI and Venture Ecosystems, Office of the Chief Technology Officer, Microsoft; Founding Director, Interdisciplinary Institute on AI and Emerging Technologies, The Catholic University of America

Dr. James Moreland, Jr.

Principal Engineer, MEI Innovative Solutions

Dr. Gracie Narcho

Directorate Head for Technology, Innovation and Partnerships, National Science Foundation

Moderator

Dr. Victor McCrary

Vice Provost for National Security Innovation, The Catholic University of America; Chair, National Science Board

3:00 Break and Transition to Amphitheater

3:15 Lightning Talks: AI Shaping the Future

Facilitator

Dr. Kofi Nyarko

Professor of Electrical and Computer Engineering and Director for the Center for Equitable AI and Machine Learning Systems, Morgan State University

3:15 Growing AI Talent Pipeline and America's Future Workforce

The future of competitiveness depends on people. This session highlights the distinctive role of HBCUs and MSIs in developing the “missing millions” of AI talent essential for national and global leadership.

Dr. Gabriella Waters

Director, Center for Responsible AI, Virginia State University

3:30 Building Smarter Cities with Responsible AI

From traffic to optimizing utility operations, AI is transforming cities—but only when it is trustworthy and responsibly deployed. Learn how smart city technologies are evolving high-risk sectors with ethics and safety at the forefront.

Dr. Mansoureh Jeihani
Professor, Transportation and Urban
Infrastructure Studies, and Director, National
Transportation Center and SMARTER Center,
Morgan State University

3:45 Rethinking Innovation in an Age of Disruption

Dr. Sheena Erete
Associate Professor, College of Information, and
Associate Director of Research for the Artificial
Intelligence Interdisciplinary Institute, University
of Maryland, College Park

4:00 Investing in Modern AI for Solving Critical Climate and Nature Challenges

This session will explore how AI technologies
can deliver resilient solutions for existential
challenges.

Dr. Amen Ra Mashariki
Director, AI and Data Strategies, Bezos Earth
Fund

4:15 Morgan State's Plan for Implementing Enterprise AI

An overview of how Morgan State University will
leverage its own data to develop a fully self-
contained enterprise AI system.

Dr. Kofi Nyarko
Professor of Electrical and Computer
Engineering and Director for the Center for
Equitable AI and Machine Learning Systems,
Morgan State University

4:30 Day 1 Wrap-Up: Q&A with the Audience and Reflections on the Day

Dr. Kofi Nyarko
Professor of Electrical and Computer
Engineering and Director for the Center for
Equitable AI and Machine Learning Systems,
Morgan State University

Mr. Chad Evans
Executive Vice President and Chief Operating
Officer, Council on Competitiveness

4:45 President's Reception

Entertainment: Rahmat Shabazz Jazz Band

5:30 President's Dinner and Panel Discussion

5:30 Dinner Welcome

The Hon. Dr. Willie E. May
Vice President, Research and Economic
Development, Morgan State University

Dr. Beth Rheingold
President and CEO, Greater Baltimore Chamber
of Commerce

Selections: Morgan State University Choir

6:00 Dinner Served

7:00 What the Mid-Atlantic Teaches the United States about the Future of Competitiveness

This Day 1 concluding session reflects on the region's approach to place-making innovation, offering lessons and best practices for fostering collaborative ecosystems, anchored by institutions of higher education, to drive the region's competitiveness. The session will explore how targeted strategy, talent development, and investment position regions—and the nation—for leadership in next-generation technologies.

Mr. Jonathan R. Alger
President, American University

Dr. Wayne A. I. Frederick
President, Howard University

Dr. Gregory Washington
President, George Mason University

Dr. David K. Wilson
President, Morgan State University

Moderator

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

7:45 Closing Remarks

Dr. Hongtao Yu
Senior Vice President and Provost, Morgan State University

Tuesday, March 24, 2026

MORNING

8:30 Registration, Continental Breakfast, and Networking

9:00 Advancing AI and Quantum to Unleash U.S. Innovation and Global Competitiveness

Building on the insights from Day 1 at Morgan State, where we explored the transformative potential of AI, this session pivots to quantum and its role in driving the next frontier of U.S. innovation. Against the backdrop of Discovery District Maryland in College Park, the Cohosts will highlight the power of a concentrated ecosystem—where academic research, federal labs, large companies, and startups converge—to accelerate innovation and commercialization, and drive U.S. competitiveness.

Dr. Darryll J. Pines
President, University of Maryland, College Park

The Hon. Dr. Willie E. May
Vice President, Research and Economic Development, Morgan State University

Moderator

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

9:20 Capital of Quantum

Discover the Capital of Quantum (CoQ), Maryland's bold initiative to position the state as the national and global hub for quantum research, education, and innovation. This session will explore how CoQ fits into the national quantum landscape, highlight Maryland's significant contributions, and set the stage for a day of insights into the future of quantum science and technology—both in the state and beyond.

Dr. Gretchen Campbell

Associate Vice President for Quantum Research and Education, University of Maryland, College Park

Dr. Corey Stambaugh

Director, Capital of Quantum

9:45 Place-Making Innovation: Discovery District Maryland and IonQ's College Park Headquarters

A focused conversation on how strategic place-making and innovation district design are driving technology growth in College Park, featuring IonQ's CEO on why the company chose to build its headquarters in Discovery District Maryland and how proximity to talent, research, and ecosystem partners shapes competitive advantage.

Mr. Niccolo de Masi

Chairman and CEO, IonQ

Mr. Ken Ulman

President, Terrapin Development Company and UMD Chief Strategy Officer for Economic Development

10:15 Keynote: Address from Congress on Winning the Global Quantum Race

The Hon. Glenn Ivey

U.S. Representative, Maryland's 4th Congressional District

Introduction

Dr. Jennifer King Rice

Senior Vice President and Provost, University of Maryland, College Park

10:30 Break

10:40 Integration and Scaling Quantum: Industry's Perspective

Industry leaders examine how Maryland can convert its quantum research strengths into commercial scale. The discussion will focus on integrating the state's assets—universities, federal labs, startups, and industry—and the policies, partnerships, and infrastructure needed to position Maryland as a leader in the quantum marketplace.

Dr. Peter Heim

Chief Technology Officer, Thorlabs Quantum Electronics

Dr. Rick Muller

Senior Vice President, Federal Technical Lead, Quantum Systems, IonQ

Dr. Charlie Tahan

Partner, Microsoft Quantum

Moderator

Dr. Patrick G. O'Shea

Vice President and Chief Research Officer, University of Maryland, College Park and University of Maryland, Baltimore

11:10 Federal Leadership, Partnerships, and Innovation Driving Quantum

Dr. John Beiler

Executive Director, Applied Research Laboratory for Intelligence and Security (ARLIS), University of Maryland, College Park

Dr. James Kushmerick
 Director, Physical Measurement Laboratory,
 National Institute of Standards and Technology
 (NIST)

11:35 The Second Quantum Revolution

Dr. William D. Phillips
 Professor, Joint Quantum Institute (JQI),
 University of Maryland, College Park;
 Distinguished Visiting Professor, Morgan State
 University

Dr. Steven Rolston
 Professor and Chair, Department of Physics,
 University of Maryland, College Park

AFTERNOON

12:00 Lunch

12:45 Tech Talk: QLab

The National Quantum Laboratory (QLab) at the University of Maryland is a quantum user facility that provides access to state-of-the-art quantum computers for researchers, educators, and entrepreneurs. Originally established in collaboration with IonQ, QLab now has a broad range of national and international collaborators, accelerating quantum applications, fostering cross-disciplinary research, and developing the next generation of quantum talent.

Dr. Norbert Linke
 Associate Professor of Physics and Director,
 QLab, University of Maryland, College Park

1:00 The Role of University-Affiliated Research in Quantum Innovation

The Capital of Quantum (CoQ) is positioned to connect quantum technologies with real-world applications in national defense and

intelligence. Leaders from the Applied Research Laboratory for Intelligence and Security (ARLIS) at the University of Maryland, College Park and the Johns Hopkins University Applied Physics Laboratory will share how their labs are advancing quantum innovation, bridging research and operational use, and accelerating solutions that strengthen national security.

Dr. Joan Hoffmann
 Mission Area Executive, Research and
 Exploratory Development, Johns Hopkins
 Applied Physics Laboratory

Dr. Paul Lopata
 Visiting Research Scientist, Applied Research
 Laboratory for Intelligence and Security (ARLIS),
 University of Maryland, College Park

Moderator

Dr. Joshua Baron
 Deputy Chief Strategy Officer, OUSW(R and E),
 United States Department of War

1:30 Rapid-Fire Case Studies: Generating the Knowledge and Talent to Lead the World in Quantum

1:30 Dr. Alexey Gorshkov
 Physicist, Quantum Measurement Division,
 National Institute of Standards and
 Technology, and Fellow, Joint Quantum
 Institute Park

1:40 Dr. Mohammad Hafezi
 Minta Martin Professor of Electrical and
 Computer Engineering and Physics;
 Senior Investigator, Robust Quantum
 Simulation (RQS), University of Maryland,
 College Park

1:50 Dr. Kasra Sardashti

Assistant Research Professor of Physics,
and Principal Investigator, Laboratory for
Physical Sciences, University of Maryland,
College Park

2:00 Dr. Birol Ozturk

Professor of Physics, Morgan State
University

2:10 Prof. Maajida Murdock

Adjunct Professor of Physics, Morgan
State University

2:20 From Campus to Market: The Role of Universities in Fueling Quantum Spinouts

Universities are hotbeds of breakthrough research, but turning that science into profitable companies requires vision, support, and strategic partnerships. This panel will explore how academic institutions help researchers launch startups, navigate venture funding, and bring transformative technologies to market.

Dr. Rezlind Bushati
CEO, Phaseshift

Mr. Dan Kunitz
Executive Director, NSF Mid-Atlantic I-Corps
Hub, University of Maryland, College Park

Dr. Dennis Lucarelli
CEO and Founder, Error Corp.

Mr. Stan Smith
Managing Director, Discovery Fund and Terrapin
Fund, University of Maryland, College Park

Moderator

Dr. Dean Chang
Chief Innovation Officer, University of
Maryland, College Park

2:55 Transformation Computing as the Platform for Competitiveness: Issues, Challenges, and Opportunities

How will AI, quantum, and high-performance computing transform productivity and economic growth, prosperity, and security for all Americans? The discussion will highlight current and emerging opportunities. In addition, panelists will explore the partnerships and policies needed to translate computational breakthroughs into broad economic and societal impact.

Dr. Craig H. Martell
Vice President and Chief Technology Officer,
Lockheed Martin

Dr. Mark Peters
President and CEO, MITRE

Dr. Darryll J. Pines
President, University of Maryland, College Park

Moderator

Mr. Chad Evans
Executive Vice President and Chief Operating
Officer, Council on Competitiveness

3:30 Place-Making Innovations—Here and Now: Exploring the University of Maryland's Innovation Ecosystem

Join us on a tour of Discovery District Maryland to see the unique, world-class quantum tech facilities within the Capital of Quantum.

5:00 Final Reflections and President's Reception

After two days of exceptional discussions, tours, and insights, we leave with a deeper appreciation of both the opportunities and challenges ahead. As we take a moment to network over a concluding reception, the Cohosts will also share their reflections on what we've learned, what's next, and where we go from here.

Dr. Shirley M. Malcom
Board of Regents, Morgan State University

Dr. Darryll J. Pines
President, University of Maryland, College Park

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

6:00 Adjourn

The Capital of What's Next

Showcasing Maryland's AI and Quantum Innovation Ecosystem

Executive Summary

The Council on Competitiveness (Council) kicked off the 11th edition of its series of [Competitiveness Conversations Across America](#) on March 23, 2026, at Morgan State University and concluded the event at the University of Maryland, College Park, on March 24. [“Maryland: Unlocking American Innovation in the AI and Quantum Era”](#)—co-hosted by Dr. David K. Wilson, President of Morgan State University; Dr. Darryll J. Pines, President of the University of Maryland, College Park; and the Hon. Deborah L. Wince-Smith, President and CEO of the Council on Competitiveness—was notable for its scope as well as its ambition to meet the Council’s goal of expanding the innovation economy to more places and people across the country. Corporate executives and university presidents connected with Maryland’s Governor, and federal scientists united with entrepreneurs. A Nobel laureate shared quantum origin stories with startup founders. Conversations moved seamlessly from quantum error correction to K–12 education, from national security to housing constraints.

That cross-sector, cross-disciplinary mix reflected a core finding of the Council’s four decades of work: innovation emerges at the intersections of disciplines, institutions, and progressive leadership, where complexity generates the “osmotic” energy that drives regional productivity and pros-

perity. Since its founding in 1986, the Council has advanced core competitiveness principles in practice—helping shape policy, from the early rulemaking that facilitated advances in high-performance computing to landmark legislation such as the America COMPETES Act and the CHIPS and Science Act.

Expanding Place-Making Innovation to Strengthen U.S. Competitiveness

Beginning around 2020, Council leadership recognized that global competitiveness was entering a watershed moment, defined by two forces:

1. The convergence of multiple transformative technological revolutions, and
2. An intensifying global race for innovation leadership.

Together, these dynamics are reshaping industries, accelerating change, and redefining the skills and talent required for the United States to maintain its global competitive position.

Acting on that awareness, the Council launched the [National Commission on Innovation and Competitiveness Frontiers](#)—a flagship, multiyear initiative bringing together more than 60 Commissioners from wide-ranging geographies and sectors. The Commission was established to strengthen



The Hon. Deborah L. Wince-Smith, President and CEO, Council on Competitiveness; Dr. Darryll J. Pines, President, University of Maryland, College Park; and Dr. David K. Wilson, President, Morgan State University.

the nation's innovation capacity and capability in the service of long-term productivity, national security, and inclusive prosperity.

A central finding of the Commission's seminal [Competing in the Next Economy report \(2020\)](#) is that, despite extraordinary technological opportunity, much of America's talent remains on the sidelines. This insight brought about a key competitive imperative for the Commission: the United States must expand the definition of "place" beyond traditional coastal innovation hubs to ensure that every community can contribute to—and benefit from—the evolving innovation economy.

The Competitiveness Conversations Across America series serves as a main vehicle for advancing the Commission's mandate to broaden and strengthen America's innovation economy

by elevating the best—and next—practices of place-making innovation. The series brings the Council into communities across the country—like the Baltimore-College Park corridor in Maryland—to examine how breakthroughs emerge on the ground and to connect local dynamics to national priorities. In doing so, the series provides structured, place-based explorations of how regions organize to compete in an era defined by unprecedented disruption and accelerating change.

Maryland's Rise as a Global AI and Quantum Innovation Hub

The March 23–24, 2026, Maryland edition of the Competitiveness Conversation series focused on two technology platforms critical for the future: AI and quantum computing. Evolved from discrete



Day 1 took place at Morgan State University.

fields, AI and quantum are disrupting and rebuilding entire industries, defining investment priorities, and reprioritizing talent and infrastructure needs. Together, alongside high-performance computing, AI and quantum form a new substrate of innovation—not only for computation but also for every other technology frontier, from hypersonics, to biotechnology, to energy, and beyond.

The strategic importance of AI and quantum—and their influence on Maryland's future trajectory—brought the Council to the state.

What follows is a snapshot of lessons learned from more than 60 speakers—including Maryland Governor Wes Moore, senior federal officials, CEOs, university presidents, leading researchers, and labor and civic leaders—as well as more than 200 senior-level participants from across the

region and the nation. These insights were shared over two days and across two campuses: Morgan State University, in Baltimore, and the University of Maryland, College Park.

Maryland stands at the intersection of discovery, national security, and the deployment of advanced technologies to the marketplace. The state benefits from one of the highest concentrations of federal research investment in the nation, anchored by institutions such as the National Institute of Standards and Technology, the National Institutes of Health, the National Security Agency, and the Food and Drug Administration (FDA). This foundation is reinforced by a dense network of research universities, a growing industrial base, and a financial sector increasingly oriented toward scaling innovation at speed.

From the Maryland Competitiveness Conversation, a clear picture emerged: the state's innovation ecosystem is not simply a concentration of research excellence but also a coordinated system that strategic advantage and improves the lives of Marylanders and Americans. Increasingly, Maryland is pairing its deep research strengths with stronger strategic alignment and more focused policy and investment priorities, with Baltimore and College Park serving as distinct yet interconnected nodes within a cohesive innovation system.

“Maryland shows how a region—through the alignment of strategy, policy, and resources—can turn world-class research from anchor institutions into real-world impact,” said the Hon. Deborah L. Wince-Smith, President and CEO of the Council on Competitiveness. “We will point to Maryland as a powerful example of place-making innovation, and a model for achieving the ambitious goals of our National Commission on Innovation and Competitiveness Frontiers.”

Day 1 at Morgan State University

Morgan State University hosted Day 1 of the Maryland Competitiveness Conversation, focusing on artificial intelligence, workforce development, and building a more inclusive innovation economy across the state. Featured speakers included Maryland Governor Wes Moore, and the Hon. Dr. Darío Gil, Under Secretary for Science and Genesis Mission Director at the U.S. Department of Energy. In addition, a special panel of university presidents—including Dr. Wayne A. I. Frederick, President of Howard University; Dr. Gregory Washington, President of George Mason University; and Mr. Jonathan R. Alger, President of American University—amplified the densification of collaboration and innovation across the Maryland-D.C.-Virginia region.



Maryland Governor Wes Moore.

Together, the speakers offered powerful insights, beginning with President Wilson's elucidation of Morgan State's role as a driving force shaping the region's inclusive innovation ecosystem. He argued that the defining technologies of this era must work for everyone, and that the institutions capable of ensuring that outcome are as strategically important as those building the technologies themselves. In this context, Morgan State is actively shaping the AI economy. Initiatives like REACH, developed with Google and a consortium of Historically Black Colleges and Universities (HBCUs), are setting new standards for evaluating AI across diverse populations. Morgan State

has also launched the nation's first Ph.D. program in advanced ethical computing, further augmenting its leadership in responsible innovation. As President Wilson noted, "There is no competitiveness without inclusion."

President Pines, who joined Ms. Wince-Smith and President Wilson in the Conversation's opening panel, highlighted the state's commitment to growing Maryland's innovation economy and the importance of aligning today's investments with the nation's future competitiveness. "We are on the precipice of something great thanks to the investments we made years ago and the commitment of the Governor and General Assembly," he said.

Dr. Gil, who joined a fireside chat shortly after lunch, shared the ambitious goals of the Department of Energy's Genesis Mission. The Mission seeks to reimagine the future of scientific discovery through a national-scale initiative integrating AI, supercomputing, and quantum technologies into a unified scientific platform, to accelerate breakthroughs in energy, materials, and national security. At its core, the Genesis Mission is about building an "AI-powered scientific instrument" for the nation—connecting laboratories, datasets, and computing infrastructure into a single collaborative engine for discovery, and transforming the process of advancing science at scale.

A main thread throughout the Day 1 Conversation was the critical importance of talent, and what will be necessary to empower America's students and workforce during the rise of AI and quantum. Participants, like the Hon. Dr. Willie E. May, Vice President for Research and Economic Development at Morgan State, who emceed Day 1, noted demand for advanced computing expertise is outpacing supply, with the gap continuing to widen. "We cannot win this race if we leave talent on the sidelines," Dr. May said.



The Hon. Dr. Willie E. May, Vice President for Research and Economic Development, Morgan State University.

Day 2 at the University of Maryland, College Park

Day 2 brought the Competitiveness Conversation to the University of Maryland, College Park, and shifted the focus to quantum computing and the physical and institutional infrastructure required to scale this cutting-edge technology. If Morgan State represented the future of human-centered AI and expanding talent, the University of Maryland reflected the vision, coordination, and depth of using research capacity, commercialization pathways, and infrastructure to translate frontier discovery into impact for industry and humanity.

IonQ Chairman and CEO Dr. Niccolo de Masi; Vice President and Chief Research Officer at the University of Maryland, College Park, and University of Maryland, Baltimore, Dr. Patrick G. O'Shea; MITRE President and CEO Dr. Mark Peters; Vice President and Chief Technology Officer at Lockheed Martin Corporation Dr. Craig H.



Day 2 took place at the University of Maryland.

Martelli; Council on Competitiveness Executive Vice President and Chief Operating Officer Mr. Chad Evans; and President of the Terrapin Development Company Mr. Ken Ulman, among many other innovation leaders, provided key remarks during the day. Congressman Glenn Ivey powerfully punctuated the importance of sustained investment in research and development (R&D) as a driver of U.S. security and economic strength. Nobel Laureate and Distinguished Professor Dr. William D. Phillips reflected on the “second quantum revolution” and the profound implications of this revolution for the future of science and society.

Conversation participants witnessed firsthand how the University of Maryland, College Park anchors the state’s “Capital of Quantum” initiative and Discovery District Maryland—an expanding innovation corridor designed to collapse the distance between idea and application.

More than 10 years in the making, the Discovery District Maryland is a growing ecosystem in which companies like IonQ and Microsoft, a vibrant startup base, and deep integration with federal agencies and University Affiliated Research Centers (UARCs) come together—supported by improved connectivity provided by the future Purple Line light rail system and an expanding set of housing and quality-of-life amenities, from high-end grocery stores to hip eateries—making it a true embodiment of strategic, place-making innovation.

President Pines situated the University of Maryland, College Park’s leadership in quantum within a longer arc of transformative innovation spearheaded by both the university and the region, noting that Maryland has long been a site of pathbreaking research that has launched new

industries, from the early days of aviation to the Information Age: “We are not new to this...We are building on a legacy of discovery to lead in what comes next.”

Across both days and locations, a consistent set of themes emerged, together forming a roadmap for innovation in regions competing in the AI and quantum era.

- 1. Research strength must translate into market impact.** Maryland’s volume of research output and federal funding is formidable, but the next phase of competitiveness lies in expanding the commercialization of those ideas. The trajectory of companies emerging from university labs, the Discovery District Maryland’s venture infrastructure, and Morgan State’s growing portfolio of spinouts demonstrate what is possible, but the challenge now is to make the pathway to commercialization more robust, consistent, and predictable, particularly with quantum technologies.
- 2. Investable companies that translate breakthroughs into scalable technologies and real markets will define the U.S. quantum opportunity.** IonQ exemplifies this transition, demonstrating how quantum firms can move from university-linked research environments into public-market scale commercialization. The company’s trajectory is emblematic of a broader shift: quantum is beginning to evolve from a research frontier into an emerging industry. Those who can successfully deploy quantum capabilities, as well as advance the science, will shape the competitiveness frontier.
- 3. Patient capital is essential for quantum commercialization, but it’s insufficient without robust infrastructure.** Breakthrough fields like quantum computing require long-term, risk-tolerant investment, as well as robust physical infrastructure—from specialized facilities and supply chains to advanced energy systems—to translate innovation into real-world capability and profitable companies. The University of Maryland’s investments in the Discovery District Maryland, coupled with its efforts to align stakeholders throughout the quantum value chain, reflect a strategy to match financial and intellectual capital with the world-class infrastructure needed for commercial success.
- 4. Diverse perspectives are a source of technical strength.** AI systems that do not perform across populations are fundamentally flawed. Morgan State’s work in benchmarking AI in diverse contexts is helping build more robust, reliable systems that better reflect and serve the full breadth of the populace.
- 5. AI and quantum innovation are creating unprecedented demand for skilled talent.** Meeting this moment will require a sustained national effort to expand and strengthen the talent pipeline.

6. **AI must augment, not replace, human judgment.** Throughout discussions of national security, productivity enhancement, and workforce applications, speakers returned to a common principle: the goal is not autonomous systems operating beyond human oversight but rather human-machine collaboration that enhances decision-making. This distinction will shape governance frameworks, public trust, and the future of U.S. competitiveness.
7. **Governance, done well, enables innovation.** Standards and regulatory clarity are not obstacles to progress; they are prerequisites for scale. Those who define the rules for emerging technologies often shape the markets that follow. Leadership in standard-setting, along with thoughtful, “smart” regulation, are therefore critical competitiveness enablers.
8. **Data sovereignty will define institutional power.** As AI systems become repositories of institutional knowledge, control over data becomes a strategic asset. Morgan State’s “Obsidian Core” framework—an effort to maintain full control over its data and AI infrastructure—offers one model for navigating this emerging terrain.

9. **Place-making innovation creates a durable advantage.** The density of institutions in Maryland furthering AI and quantum—universities, federal labs, private firms—creates a network effect that is difficult to replicate. Proximity fosters collaboration, accelerates knowledge transfer, and increases the likelihood of breakthrough innovation. The Discovery District Maryland in College Park will further strengthen the connectivity of the region.

Maryland is demonstrating how a tightly integrated innovation ecosystem—linking world-class research universities, federal laboratories, private industry, and place-based infrastructure—translates scientific leadership in AI and quantum into sustained economic, technological, and national security advantage. As Governor Moore stated loudly and clearly: “We are here to design for growth. We must operate with speed, intentionality, and focus.”

Day 1: Morgan State University



Morgan State University photos by Exquisitely Composed Images, LLC.





Building an Inclusive Innovation Ecosystem

Day 1 at Morgan State set the tone for the conversations that followed. The question running through every session was not how fast Maryland is moving but who gets to take the journey. Political leaders, researchers, business leaders, and federal officials all expressed the same conviction: the future of American competitiveness will be defined by those who take charge, embrace the challenge, and get to work building it.

The Race Is Accelerating

AI and quantum are no longer emerging technologies. They are reshaping national security, economic growth, and the balance of global power now.

The Hon. Deborah L. Wince-Smith, President and CEO of the Council on Competitiveness, made clear in her opening remarks that the United States has historically won by inventing things first and deploying them faster and more broadly than anyone else. But retaining that edge is not guaranteed. China is producing more engineers, directing more capital, and moving with more urgency. The window for the United States to double down and strengthen its competitive capabil-



The Hon. Deborah L. Wince-Smith, President and CEO, Council on Competitiveness; Dr. Darryll J. Pines President, University of Maryland, College Park; and Dr. David K. Wilson, President, Morgan State University.

ity and capacity remains open, but it will not stay open. The Council's goal for this Conversation was to take stock of what Maryland is already doing well—particularly in advancing the platform technologies of quantum and AI through the leadership of institutions such as Morgan State and the University of Maryland—extract the lessons that can be applied nationally, and leave with a clearer understanding of what it will take for every region across the country to win.

Leadership Perspective from the State House

Maryland Governor Wes Moore arrived with data and proof points of what place-making innovation looks like in action. When he took office, Maryland's economy was growing at less than half the national rate. His administration responded with four consecutive balanced budgets, nearly 100,000 new jobs, and more than \$10 billion in private investment. AstraZeneca committed \$2 billion and 2,600 jobs. Samsung Biologics chose Maryland as the location for the company's first facility in the United States. The Capital of Quantum Initiative, built around IonQ and the University of Maryland, College Park, aims to bring more than \$1 billion in combined investment to the state. His vehicle for the next chapter is the DECADE Act, promoting quantum, cybersecurity, life sciences, aerospace, and biocomputing as lighthouse industries.



“We have gone from being asset-rich and strategy-poor to being asset-rich and strategy-aligned. There is not a governor in this country who, if being honest, would not trade their assets with Maryland.”

The Hon. Wes Moore
Governor of Maryland

Setting the Context: Building Together

Ms. Wince-Smith opened the panel by noting what makes Maryland stand apart is its 60 federal agencies and institutes within 60 miles of two world-class research universities. That density is a remarkable advantage. The job now is converting it to economic gain and impact on the public good. Presidents Wilson and Pines agreed on the operating framework for the task: they called it “AC²”: Alignment, Collaboration, and shared Competitiveness. Rather than chasing parallel grants, Maryland’s institutions should find where State priorities create room for joint proposals and go after the opportunities together.

Both presidents received the Council’s National Competitiveness Award, a handmade ship’s navigation instrument, in recognition of their leadership and ability to guide the region to a more productive and prosperous future.



“AC²—it is alignment, collaboration, equal competitiveness. Let’s not just immerse in competition within the institutions...How do we make sure that we are aligned with what the state is saying the needs are. And then how do we look across the sector and say, ‘This is a great place to collaborate,’ and then...take that to the state, even in a joint funding opportunity.”

Dr. David K. Wilson

President, Morgan State University

Technology Commercialization

**Dr. Patrick G. O'Shea**

Vice President and Chief Research Officer, University of Maryland, College Park, and University of Maryland, Baltimore

Mr. Troy A. LeMaile-Stovall

CEO, TEDCO

Mr. Wayne E. Swann

Director, Office of Technology Transfer, Morgan State University

Maryland has the talent and the research infrastructure to lead nationally in technology commercialization, but it has not always had the strategy to match.

Maryland Technology Development Corporation (TEDCO) CEO Mr. Troy LeMaile-Stovall opened the session by reframing the word “compete” itself, drawing on its Latin root meaning to work together.

The panel that followed made that case for competitiveness in concrete terms. Mr. Wayne E. Swann, Director of the Office of Technology Transfer for Morgan State, walked the audience through a transformation that is hard to dispute: eight years ago, the university had virtually no IP portfolio, no patents, and no startups. Today, Morgan State produces an innovation every eight days.

The comparison of Maryland with Massachusetts was equally instructive. Both states spend roughly the same dollar amount on research, yet Massachusetts consistently outperforms Maryland with regard to every major commercialization metric. The gap is not in talent or research output, but staffing. Massachusetts institutions employ about twice as many technology transfer professionals, with decades more experience. The University of Maryland's chief research officer, Dr. Patrick G. O'Shea, framed the opportunity as a relay race: the baton exists, the runners are ready, and the question is whether Maryland can pass it cleanly from lab to market for economic impact.



“We cannot afford to slow down near the finish line. Investment, collaboration, and bold policy are the three inputs needed to convert Maryland’s world-class innovation engine into economic leadership.”

Mr. Wayne E. Swann

Director, Office of Technology Transfer, Morgan State University

Maryland's Anchor Universities: Catalysts for Place-Making Innovation

**The Hon. Deborah L. Wince-Smith**

President and CEO, Council on Competitiveness

The Hon. Dr. Willie E. May

Vice President for Research and Economic Development, Morgan State University

Dr. Anupam Joshi

Vice Provost and Chief AI Officer, University of Maryland, Baltimore County

Dr. Bruce E. Jarrell

President, University of Maryland, Baltimore

The Hon. Deborah L. Wince-Smith, President and CEO of the Council on Competitiveness, opened up the conversation with several of Baltimore's top higher education leaders, seeking their assessment of the role they and their institutions play in the region's broader innovation ecosystem. In particular, she challenged the leaders to reflect on an evolution in thinking about these ecosystems and the institutions therein—conceiving them as critical stakeholders in an exercise of “place-making”: emphasizing action.

Dr. Bruce E. Jarrell, President of the University of Maryland, Baltimore (UMB), reflected on this, noting focus drives innovation. For example, UMB applies AI specifically to pharmacy and medicine rather than as an exercise in general basic science. At the moment, the constrained funding environment around the National Institutes of Health further drives this approach. Dr. Anupam Joshi, Vice Provost and Chief AI Officer at University of Maryland, Baltimore County (UMBC), shared perspective on the role strategic partnerships play in driving innovation at his institution, citing UMBC's role managing the AI and cybersecurity core of a Hopkins-UMB research grant and its pipeline of talent into nearby federal agencies.

Continuing the riff on of partnerships, Dr. Jarrell pointed to the Institute for Health Computing, a joint UMB effort using “pragmatic clinical trials”



“We compete to make each other better and stronger, and that friendly competition makes this region stronger.”

The Hon. Dr. Willie E. May

Vice President for Research and Economic Development,
Morgan State University

that let researchers adjust trial parameters in real time. And Ms. Wince-Smith hinted at other strategic partnership opportunities for the region. For example, she noted the FDA could increasingly become a first mover in AI-driven approvals, much as U.S. Department of Energy (DOE) national laboratories did for additive manufacturing. Dr. Joshi

agreed AI is accelerating early-stage discovery but cautioned a digital twin of the human body is nowhere near replacing full clinical trials, since regulation moves far slower than the technology.

Turning to manufacturing, The Hon. Dr. Willie E. May, Vice President for Research and Economic Development at Morgan State University, warned offshoring has cost the United States the scale and skills to make what it needs, though manufacturing careers are regaining appeal with students. Dr. Joshi connected cybersecurity directly to manufacturing, describing a UMBC lab where personnel from the Department of War, DOE, and private manufacturers train on additive intelligent manufacturing around a full Siemens factory floor. In that facility, researchers demonstrate how an unsecured system allows an intruder to digitally alter a part specification by a fraction of a millimeter undetected, posing severe risks before the part reaches an assembly line.

Closing the panel, Dr. May credited the region's "friendly competition" among its universities, as demonstrated by the leaders on stage, with driving innovation. Dr. Jarrell cautioned, however, that meaningful collaboration is difficult to achieve, while Dr. Joshi pointed to UMBC's cross-institutional coursework with UMB as evidence that collaboration is beginning to take hold.

Google REACH: Building AI that Works for Everyone

**Dr. Jamila Smith-Loud**

Head of Human Rights and Social Impact, Research, Google

Dr. Kofi Nyarko

Professor of Electrical and Computer Engineering and Director for the Center for Equitable AI and Machine Learning Systems, Morgan State University

Dr. Kofi Nyarko, professor of Electrical and Computer Engineering at Morgan State, and Dr. Jamila Smith-Loud, human rights and social impact research lead for Google, presented the REACH program, a joint research initiative between Google and 12 HBCUs focused on a problem most AI benchmarks ignore: cultural context. Morgan State tested sentiment analysis models against African American Vernacular English and found them performing 25 percent worse than on Standard American English. That is not a minor edge case, and, unfortunately, this performance gap affects who gets flagged by recruiters, who gets hired, and who gets served. REACH is building the evaluation tools to close that gap, with a public benchmark leaderboard open to any model. The research agreement gives HBCU faculty genuine co-leadership, not a supporting role.



“The future of AI must be built with diverse perspectives at the table. REACH recognizes the extraordinary talent and research capacity within HBCUs and creates a model where our institutions are leading the development of more accurate, inclusive, and trustworthy AI systems.”

Dr. Kofi Nyarko

Professor of Electrical and Computer Engineering,
Morgan State University

The Genesis Mission

**The Hon. Dr. Darío Gil**

Under Secretary for Science, Director, Genesis Mission, U.S. Department of Energy

Dr. Sudip Parikh

CEO, American Association for the Advancement of Science (AAAS)

The Hon. Dr. Dario Gil, Under Secretary for Science for the U.S. Department of Energy, and Dr. Sudip Parikh, CEO of the American Association for the Advancement of Science (AAAS), opened with a shared conviction: the United States is at an inflection point comparable to the 1940s, when information theory, the transistor, and early programmable systems arrived almost simultaneously. Dr. Parikh, who spent his own research career contributing protein structures to the Protein Data Bank, made the stakes personal. He noted it took 50 years to catalog 200,000 protein structures, while Google DeepMind's AlphaFold produced 200 million in two years. That, he said, is what the Genesis Mission is trying to replicate across every domain of science.

Dr. Gil outlined the architecture: a 100,000-GPU cluster at Argonne National Laboratory by 2027 and \$293 million committed to 21 national challenges, with a six-week window open for institutions to form teams.



“Just like the telescope allowed us to see what is far away, and the microscope to see what is small, these new AI supercomputers and quantum instruments are going to allow us to see the very complex.”

The Hon. Dr. Dario Gil

Under Secretary for Science, U.S. Department of Energy

Digital Twins: From Campus to City

**Mr. Andy Lin**

Vice President of Strategy and Chief Technology Officer, Mark III Systems

The Hon. Dr. Sanjay Rai

Secretary, Maryland Higher Education Commission (MHEC)

Dr. Kofi Nyarko

Professor of Electrical and Computer Engineering and Director for the Center for Equitable AI and Machine Learning Systems, Morgan State University

Dr. Kofi Nyarko moderated a panel—with Mr. Andy Lin, Vice President of Strategy and Chief Technology Officer, Mark III Systems, and the Hon. Dr. Sanjay Rai, Secretary, Maryland Higher Education Commission—that made the case that Maryland is already ahead in digital twin deployment, from flood monitoring through the state’s iMap program to Morgan State’s campus-wide twin, described as one of the most advanced in the country. Dr. Nyarko noted how AI has dramatically lowered the barrier to creating them: what once required expensive LiDAR scanning can now be done by walking through space with a camera.

The big conclusion made during the discussion is that the barriers ahead are not technical; they are organizational: fragmented data across government and university systems, and limited GPU access for researchers. Mr. Lin put it simply: AI is the brain; digital twins are the eyes. Getting the infrastructure right at present will determine who leads the next decade.



“We do not want our students to compete with AI. We want them to thrive with AI.”

The Hon. Dr. Sanjay Rai

Secretary, Maryland Higher Education Commission

Governance and Guardrails

**Mr. Taylor Black**

Director, AI and Venture Ecosystems, Office of the Chief Technology Officer, Microsoft, and Founding Director, Interdisciplinary Institute on AI and Emerging Technologies, The Catholic University of America

Dr. James Moreland, Jr.

Principal Engineer, MEI Innovative Solutions

Dr. Gracie Narcho

Directorate Head for Technology, Innovation and Partnerships, National Science Foundation

Dr. Victor McCrary

Vice Provost for National Security Innovation, The Catholic University of America, and Chair, National Science Board

The governance panel had an unusual backdrop: the White House had released a new National AI Policy Framework just days before the session. Panelists were not working from hypotheticals. Systems engineer for MEI Innovative Solutions, Dr. James Moreland, Jr., drew the line that defense planners are negotiating now: human in the loop, where a person authorizes each decision, versus human on the loop, where a system acts while a human retains the ability to stop it. Hypersonic weapons have made the first model increasingly impractical, and adversaries are moving toward full autonomy, while the United States has not.

Mr. Taylor Black, AI and venture ecosystems director for Microsoft, argued that standards enable innovation rather than constrain it, the same way car brakes made higher speeds possible. Dr. Gracie Narcho, a leader of the National Science Foundation's Technology, Innovation and Partnerships Directorate, closed with a competitiveness warning: China has studied the U.S. innovation model, matched it, and in some areas bettered it. Her challenge to the room was the most direct of the day: if everything we fund succeeds, we are not taking enough risk.



“Standards and governance can be an enabler of innovation, not just a blocker. Car brakes were an innovation that needed to happen before our cars could go fast.”

Mr. Taylor Black

Director of AI and Venture Ecosystems, Microsoft

The Lightning Talks



“The question is not if AI will transform every industry. It will. It has. The question is who gets to build it. HBCUs and MSIs are answering that question right now.”

Dr. Gabriella Waters

Director, Center for Responsible AI, Virginia State University

Five lightning talks showed the breadth of what is already being built in Maryland. Dr. Gabriella Waters, Director of the Center for Responsible AI at Virginia State University, opened with a security argument for diversity of the quantum and AI



Dr. Mansoureh Jeihani, Professor, Transportation and Urban Infrastructure Studies, and Director, National Transportation Center and SMARTER Center, Morgan State University.

workforces: homogeneous AI systems are structurally fragile, HBCUs and Minority-Serving Institutions (MSIs) are building the talent pipelines that fix that flaw, and graduates of these programs are already earning a 56 percent wage premium over their peers.

Dr. Mansoureh Jeihani, Professor of Transportation and Urban Infrastructure Studies at Morgan State, described the university’s smart transportation network, the only university AV testbed operating in real mixed city traffic, now expanding into Baltimore corridors with an integrated digital twin under development.



Dr. Sheena Erete, Associate Professor, College of Information, and Associate Director of Research for the Artificial Intelligence Interdisciplinary Institute, University of Maryland, College Park.



Dr. Amen Ra Mashariki, Director, AI and Data Strategies, Bezos Earth Fund.

Dr. Sheena Erete of the University of Maryland's AIM Institute argued that every technology disruption from the printing press forward has followed the same arc, and the question has always been who gets to shape it.

Dr. Amen Ra Mashariki, of the Bezos Earth Fund, drew a sharp line between AI that recombines existing knowledge and AI that reaches genuinely new conclusions, investing only in the latter, including world models that simulate entire ecosystems.

Dr. Kofi Nyarko closed by introducing Obsidian Core, Morgan State's sovereign AI platform that keeps institutional data in-house and compounds the university's intelligence over time rather than feeding it to commercial vendors.

Reflections, Music, and Dinner

Before dinner, Dr. Beth Rheingold, president and CEO of the Greater Baltimore Chamber of Commerce, offered a necessary and healthy dose of reality to the day's technology-forward theme. Access to AI tools is not the same as adoption of them. Small businesses operating at capacity do not have time to evaluate new platforms, and Maryland's innovation ecosystem will fall short if it stops at the university gates. Her call to the institutions in the room: become translators and on-ramps for business, not just talent pipelines.

Before dinner, the world-renowned Morgan State University Choir took the stage and performed two selections that stopped the room. The group delivered a remarkable moment of joy that no agenda can fully plan for. Attendees who had spent the day debating federal policy and AI infrastructure found themselves simply present. The applause was long and genuine. The dinner that followed was accompanied by the Morgan State University Jazz Band Ensemble.



“If the most advanced technologies remain concentrated within laboratories and large enterprises, then they are not in fact competitive. They are impressive.”

Dr. Beth Rheingold

President and CEO, Greater Baltimore Chamber of Commerce

The Closing Panel and a Challenge to the Nation

**Dr. Gregory Washington**

President, George Mason University

Dr. Wayne A. I. Frederick

President, Howard University

Dr. David K. Wilson

President, Morgan State University

Mr. Jonathan R. Alger

President, American University

The Hon. Deborah L. Wince-Smith

President and CEO, Council
on Competitiveness

The dinner panel brought together the presidents of Howard, George Mason, American, and Morgan State universities to discuss what the Mid-Atlantic region actually represents for research enterprise. The numbers are striking: 75,000 Ph.D.s in the regional workforce, \$60 billion in annual federal R&D spending, 120 colleges and universities within 30 miles of Washington, D.C. Howard President Dr. Wayne A. I. Frederick offered the evening's most personal argument for urgency: he has lived with sickle cell disease and seen a functional cure emerge in his lifetime, and he underwent robotic surgery at Howard Hospital and walked a mile the next day. The medicine of the future is already here. The question is whether medical education is keeping up.



“Talent is equally distributed, but opportunity is not. No institution in this country exercises that better than higher education. If we lose that, we lose the engine of America’s success.”

Dr. Gregory Washington
President, George Mason University

Day 2: The University of Maryland



Maryland University photos courtesy of the University of Maryland, College Park.





Quantum Computing at Scale

Just steps from the main campus of the University of Maryland, Discovery District Maryland sits along a corridor where Samuel Morse sent the nation's first telegraph message in 1844, and within sight of the College Park Airport, where the Wright Brothers trained the Army's first aviators. On the morning of March 24, 2026—the second day of the “Unlocking American Innovation in the AI and Quantum Era” Competitiveness Conversation—the Council on Competitiveness welcomed a gathering of more than 200 scientific leaders, startup founders, policymakers, educators and industry leaders to discuss the next transformative innovation moving through the same geography: quantum science and technology.

From the CEO of the world's largest quantum company to a high school math teacher introducing quantum concepts in Baltimore County classrooms, by the time the final panel concluded, everyone in attendance understood the race is real, the stakes are extraordinary, and Maryland is at the center of it all.

The Ecosystem Argument

**Dr. Darryll J. Pines**

President, University of Maryland, College Park

The Hon. Deborah L. Wince-Smith

President and CEO, Council
on Competitiveness

The Hon. Dr. Willie E. May

Vice President for Research, Morgan
State University

Council on Competitiveness President and CEO, the Hon. Deborah L. Wince-Smith, in a panel with University of Maryland President Dr. Darryll J. Pines and Morgan State University Vice President for Research the Hon. Dr. Willie E. May, opened her remarks with the observation that what is taking shape in College Park, Maryland, is similar to what Silicon Valley represented at the dawn of the information age. Central to Maryland's development as a growing quantum powerhouse is the University of Maryland's long-term visionary leadership for advanced computing and quantum, which has fostered strategic partnerships, included sustained investments over decades, and attracted an unmatched concentration of research talent.

President Pines noted that Maryland's quantum ecosystem is the product of decades of deliberate, long-term strategic investment. Key milestones include the 2006 establishment of the Joint Quantum Institute through a partnership among the University of Maryland, the National Institute of Standards and Technology (NIST), and the Laboratory for Physical Sciences, followed by the creation of the Joint Center for Quantum Information and Computer Science (QIICS) and the Quantum Technology Center.



“We need that competition. We need diversity of thought, different ways of looking at the technologies. But there will be winners and losers in quantum computing and quantum communication. And we are in the game to be a winner.”

Dr. Darryll J. Pines

President, University of Maryland, College Park



“Silicon Valley was built at the intersection of ideas, talent, capital, and collaboration. Maryland has the ingredients to create that same kind of transformational ecosystem for quantum—one that can shape an entirely new technological era.”

The Hon. Deborah L. Wince-Smith

President and CEO, Council on Competitiveness

Equally important has been the development of Discovery District Maryland—a 150-acre research and technology park adjacent to the College Park campus that serves as a public-private innovation ecosystem, bringing together more than 60 companies; federal agencies including the FDA, U.S. Department of Agriculture, and the National Oceanic and Atmospheric Administration; and university research centers to accelerate scientific discovery and technology commercialization. Together, these sustained investments, coupled with the execution of a long-term, well-executed strategy, have created one of the world’s most deeply integrated research, innovation, and commercialization quantum ecosystems.

When asked about intensifying competition from other regions and major coastal research universities, President Pines welcomed the pressure without conceding the lead.

“I hope those other regions thrive as well: Chicago, Colorado, New Mexico, MIT and Harvard, California schools. We need that competition. We need diversity of thought, different ways of looking at the technologies,” said President Pines. “But there will be winners and losers in quantum computing and quantum communication. And that’s why we’re in the game: To be a winner.”

Capital of Quantum

**Dr. Corey Stambaugh**

Director, Capital of Quantum

Dr. Gretchen Campbell

Associate Vice President for Quantum Research, and Education, University of Maryland, College Park

Following the opening panel, Dr. Gretchen Campbell, Associate Vice President for Quantum Research and Education, University of Maryland, and Dr. Corey Stambaugh, Director, the Capital of Quantum, took the stage to provide a deeper look at the Capital of Quantum initiative. The Capital of Quantum is Maryland's \$1 billion initiative to establish the state as the nation's—and ultimately the world's—leading hub for quantum science, technology, commercialization, and workforce development. The initiative is a place-making, innovation-led economic development strategy that demonstrates how sustained, coordinated investment can transform scientific excellence into new companies and value.

“The way quantum at Maryland has progressed really follows the path of the country. The ecosystem is becoming more and more interdisciplinary, going from lab to market and, at this point, the University of Maryland by far has the deepest bench of quantum researchers at least in the country, if not in the world,” said Dr. Campbell, who is also former Director of the National Quantum Coordination Office at the White House.

The Capital of Quantum Initiative is driving public-private partnerships and attracting global industry leaders eager to anchor their research strategies within Maryland's vibrant ecosystem. Attracted



“Quantum is becoming more and more interdisciplinary, going from lab to market and, at this point, the University of Maryland by far has the deepest bench of quantum researchers in the country, if not in the world.”

Dr. Gretchen Campbell

Associate Vice President for Quantum Research and Education, University of Maryland, College Park



“When I think of the Capital of Quantum, I think about it weaving together this ecosystem with universities sitting at the center of the nucleus.”

Dr. Corey Stambaugh

Director, Capital of Quantum

by state incentives and a concentration of over 350 researchers within the ecosystem, Microsoft announced last September that it is establishing a significant quantum research center within Discovery District Maryland. Building on Microsoft's announcement, IQM, a Finnish quantum company, announced plans to establish its first U.S. quantum technology center in College Park.

“When I think of the Capital of Quantum, I think about it weaving together this ecosystem with the university sitting at the nucleus but really expand-

ing out even past Maryland into D.C. and Northern Virginia, because it is really about this collective talent, all these assets that will come to bear that separates us from the other ecosystems,” said Dr. Stambaugh, who is also former Senior Policy Advisor for the National Quantum Coordination Office at the White House.

IonQ's Anchor Role of Quantum Innovation and Commercialization

**Mr. Ken Ulman**

President, Terrapin Development Company,
and UMD Chief Strategy Officer for Economic
Development

Mr. Niccolo de Masi

Chairman and CEO, IonQ

“IonQ came out of our laboratories and became the first pure-play quantum company on the New York Stock Exchange. That’s why you are here. That’s why we are the Capital of Quantum.”

Dr. Darryll J. Pines

President, University of Maryland, College Park

A major anchor of the quantum ecosystem growing in Discovery District Maryland is IonQ, the first publicly traded pure-play quantum computing company, which emerged from University of Maryland labs. IonQ’s expansion from ion trap hardware to semiconductor integration, along with a pending acquisition of SkyWater Technology, signals a shift from academic breakthrough to global enterprise.

IonQ Chairman and CEO Niccolo de Masi provided one of the clearest signals of acceleration of quantum as a commercially viable industry. Of the \$4.4 billion the company has raised, \$3.4 billion came in 2025 alone, and revenue has scaled from zero in 2019 to nine figures in 2025.

Mr. De Masi described IonQ's evolution into a platform company spanning computing, networking, sensing, and security. In his fireside chat with Mr. Ken Ulman, President, Terrapin Development Company and UMD Chief Strategy Officer for Economic Development, Mr. De Masi focused on the importance for U.S. competitiveness of having substantial domestic semiconductor fabrication capabilities. China, he noted, is targeting a cryptographically relevant quantum computer capable of breaking all commonly used public-key encryption by 2029, with some U.S. defense assessments suggesting it could arrive sooner.

Mr. De Masi went on to highlight why his rapidly growing company opted to stay in College Park, noting specifically the advantages of close proximity to talent, federal agencies, and customers. But he also pointed to the cultural advantage. "Ideas are great," he said. "But they're just ideas." The ecosystem here values both research and commercialization. "What's unique about this Capital of Quantum is that you have the nexus of all the pieces."



"I do believe that this space race, heavier-than-air flight race-Manhattan project combo that we have going is one that will deliver a century or more of advantage to our nation if we prevail and that the opposite will occur if we do not. And it is an existential race..."

"I applaud you for that visionary stance in building a quantum ecosystem and the consistency of being able to carry it forward."

Mr. Niccolo de Masi

Chairman and CEO, IonQ

A Warning from the Hill

Congressman Glenn Ivey, whose district includes Prince George's County, home of the University of Maryland, pointed out that while private investment and state-level initiatives are accelerating to advance quantum and research and development more broadly, federal support is not keeping pace and could threaten long-term competitiveness.

The Congressman pointed to shrinking research funding, constraints on university resources, and declining international student enrollment as pressures on the talent pipeline. Preventing a football team from drafting new players for years inevitably leads to decline. "Science is the same way," he said.

He contrasted what's happening domestically from a talent perspective with the scale of global competition, particularly from China, which is producing more engineers and directing them toward emerging technologies. Quantum and AI, he noted, have not yet become politically polarized, and he hoped major progress can happen to strengthen U.S. competitiveness in these two sectors while that window remains open. "It is critical for us to win this race. It is critical for us to win this competition. It is critical for us to get our house in order, too," said Congressman Ivey.



"It is critical for us to win this race. It is critical for us to win this competition. It is critical for us to get our house in order, too."

The Hon. Glenn Ivey

U.S. Representative, Maryland's 4th Congressional District

Integration and Scaling Quantum: Industry's Perspective

**Dr. Peter Heim**

Chief Technology Officer, Thorlabs Quantum Electronics

Dr. Rick Muller

Senior Vice President, Federal Technical Lead, Quantum Systems, IonQ

Dr. Charlie Tahan

Partner, Microsoft Quantum

Dr. Patrick G. O'Shea

Vice President and Chief Research Officer, University of Maryland, College Park and University of Maryland, Baltimore

Turning to the challenge of scaling and commercializing quantum technology, Dr. Charlie Tahan, Partner at Microsoft Quantum, traced the resurgence of commercial interest in the field over the past five to ten years to advances in individual

qubits, the integration of multi-qubit arrays, and improvements in algorithms that have brought commercially relevant applications within reach. Dr. Rick Muller, Senior Vice President and Federal Technical Lead for Quantum Systems at IonQ,



“Communication is the hardest thing in the world to get right, even when you know that communication is the hardest thing in the world to get right.”

Dr. Rick Muller

Senior Vice President, Federal Technical Lead, Quantum Systems, IonQ

described how his company capitalized on the growing commercial interest, expanding from computing into sensing, networking, and space, with some of the most promising applications coming from combining those platforms, such as pairing satellite networks with atomic clocks for navigation and timing.

Looking at the industry’s growth, Dr. Peter Heim, Chief Technology Officer at Thorlabs Quantum Electronics, identified integrated photonics as the next major shift, arguing moving optical systems onto semiconductor chips could lower costs and accelerate adoption, much as optics helped scale the internet.

Dr. Muller also was candid about the hurdles the industry must overcome, noting advancing quantum technology requires both technical progress, as well as willingness from policymakers to invest in the opportunity, and from students to pursue the education and skills the field requires. Communicating that quantum is arriving now, rather than some future horizon, remains another challenge. Dr. Tahan built on the idea that people, not technology, are often the primary constraint in emergence. He also observed teams tend to stick with familiar approaches until change becomes unavoidable. Dr. Heim added that component suppliers have struggled to know what to build,

citing nearly 200 laser wavelengths in use across the industry, though he noted that convergence among quantum companies is now making more targeted investment possible.

Asked how Maryland could replicate IonQ's success with other companies, Dr. Muller pointed to the region's federal ties and strong academic foundation, including the National Institute of Standards and Technology, the University of Maryland, College Park, and Morgan State University. Dr. Heim thought the state should study UC Santa Barbara's shared nanofabrication model and invest in short technician training programs, prompting Dr. Patrick G. O'Shea, Vice President and Chief Research Officer at the University of Maryland, College Park and Baltimore, and moderator of the session, to point to UMD's planned facility upgrade and new quantum minor. Closing the discussion, Dr. Tahan cautioned Maryland's advantages could erode quickly and urged the region to keep investing, preparing, and working deliberately to stay ahead of the competition as the field undergoes rapid change.



“We were fortunate to have early money from the state and the university. Early money is like yeast. It makes things grow.”

Dr. Patrick G. O'Shea

Vice President and Chief Research Officer,
University of Maryland, College Park and University
of Maryland, Baltimore

The Federal Architecture of Quantum

**Dr. John Beiler**

Executive Director, Applied Research Laboratory for Intelligence and Security (ARLIS), University of Maryland, College Park

Dr. James Kushmerick

Director, Physical Measurement Laboratory, National Institute of Standards and Technology (NIST)

What makes Maryland's ecosystem distinctive is the density of federal partners embedded in the same geography. This was a central theme of two panels during the day, revealing a federal quantum architecture that has accelerated the quantum expansion in Maryland alongside UMD's work in the field for decades.

Dr. James Kushmerick, Director of the Physical Measurement Laboratory at the National Institute of Standards and Technology (NIST), described the federal role in advancing the Maryland quantum ecosystem. NIST has been doing quantum research for decades—predating the term “quantum information science”—building the foundational measurement capabilities that underpin all quantum technologies, from atomic clocks that enable GPS to the voltage standards used in global commerce. As Dr. Kushmerick put it: “Lord Kelvin said it originally: if you cannot measure it, you cannot improve it. And that’s really core to what we do.”

Companies like IonQ have a direct lineage to work done within NIST's laboratories. And NIST's joint institutes—the Joint Quantum Institute and QuICS, both co-located at UMD—have served

as what Dr. Kushermick called “force multipliers,” embedding NIST scientists like Nobel laureate Dr. William D. Phillips into the university, giving them access to graduate students, postdocs, and the full intellectual energy of the campus.

Dr. John Beiler, Executive Director of UMD’s Applied Research Lab for Intelligence and Security (ARLIS), who joined the stage with Dr. Kushermick, highlighted complementary work his lab focuses on: near-term quantum utility across application areas in chemistry, materials science, and propulsion, and establishing a new clock lab to test next-generation optical atomic clocks under operational conditions. NIST, on the other hand, takes the lead on developing the post-quantum cryptography standards the broader ecosystem will depend on.

From Theory to Hardware

**Dr. William D. Phillips**

Professor, Joint Quantum Institute (JQI), University of Maryland, College Park, and Distinguished Visiting Professor, Morgan State University

Dr. Steven Rolston

Professor and Chair, Department of Physics, University of Maryland, College Park

Just before lunch, Dr. Phillips joined Dr. Steven Rolston, Professor and Chair, Department of Physics at UMD, to provide a historical and scientific perspective on the rise of quantum and its possible implications. In a fascinating lesson, attendees learned how the technologies emerging today build on decades of foundational work, from the transistor to the atomic clocks that enable GPS.

The defining feature of the second quantum revolution, Dr. Phillips explained, is control. Scientists can now isolate and manipulate individual quantum systems—single atoms, single ions, single superconducting circuits—and harness the phenomena of superposition and entanglement that the founders of quantum mechanics understood theoretically but never imagined putting to technological use. Dr. Phillips noted that theoretical physicist Dr. Erwin Schrödinger himself declared we never deal with single quantum systems—that attempting to do so was as silly as raising dinosaurs in a zoo. Today, some of the most valuable companies in the world are built on exactly that premise.

Just as the founders of the first quantum revolution had no idea of the impact they would have in delivering the modern technological world, Dr. Phillips could not predict the specific outcomes of the second but had enormous optimism: “If you ask me where is this going to lead, I have got to say that I have no idea, but I think it is going to be wonderful because it always has been.”

Yet on timelines, Dr. Phillips offered caution. He estimated only a 50 percent chance that by 2045 a quantum computer will exist which is capable of outperforming classical systems in the specific, strongly sought-after, task of factoring large integers.

This measured view contrasted with industry urgency but created productive tension. The challenge is not just discovery—it is scaling systems reliably and repeatedly. As Dr. Kushmerick put earlier in the day: “A physicist can make it work once. An engineer can make it work again and again and again.” That distinction, speakers across panels agreed, defines the transition the field is now navigating.

QLAB TECH TALK

Access to Quantum Hardware

Dr. Norbert Linke offered a window into one of Maryland's most important contributions to the quantum ecosystem: putting quantum hardware into the hands of people who can use it. Associate Professor of Physics and Director of the National Quantum Laboratory (QLab) at UMD, Dr. Linke helped build the first programmable trapped-ion quantum computer as a postdoctoral researcher under IonQ co-founder Dr. Chris Monroe, laying groundwork for technology that would later underpin IonQ's growth.

For those outside the field, quantum computing can present mixed signals, Dr. Linke said, with some headlines announcing breakthroughs and others predicting failure. Maryland is well positioned to navigate between those extremes, and QLab does its part by giving researchers, startups, and educators access to real quantum hardware on which they can test ideas.

Operating under a motto from University of Maryland President Dr. Darryll J. Pines, "quantum for all," and with funding from Capital of Quantum and the university, QLab provides access to a research system and commercial machines from IonQ and other companies. Users may not achieve quantum advantage today, Dr. Linke said, but working with real machines helps them learn how to map practical problems onto quantum systems while also advancing the hardware itself.



“The structure of the universe itself might work in ways that resemble a quantum error-correction code. This sounds crazy, but you can explore ideas like that on the quantum computers that exist today and get actual results.”

Dr. Norbert Linke

Associate Professor of Physics and Director, QLab,
University of Maryland, College Park

Through its fellowship, seed grant, and global user programs, QLab puts researchers to work on real hardware, exploring applications ranging from engineering risk assessment to theories about the structure of the universe. QLab also works with NIST to test quantum signal transmission in underground fiber, while its internship program gives students direct experience with IonQ machines rather than simulations.

The result, Dr. Linke said, is a growing community of people learning how to use quantum technology now—and in the process, helping push the technology toward greater capability and economic productivity.

The Role of University-Affiliated Research in Quantum Innovation

**Dr. Paul Lopata**

Visiting Research Scientist, Applied Research Laboratory for Intelligence and Security (ARLIS), University of Maryland, College Park

Dr. Joan Hoffmann

Mission Area Executive, Research and Exploratory Development, Johns Hopkins Applied Physics Laboratory

Dr. Joshua Baron

Deputy Chief Strategy Officer, OUSW(R and E), United States Department of War

Later during the Conversation, a panel on university-affiliated research centers (UARCs) examined the defense dimension of the federal partnership. Of the fifteen Department of Defense UARCs, both Johns Hopkins Applied Physics Laboratory (APL) and ARLIS have significant quantum programs and are based in Maryland.

Dr. Joan Hoffman, Mission Area Executive for Research and Exploratory Development at APL, described how UARCs serve as trusted translators from fundamental research through engineering and out to mission. Both APL and ARLIS have partnered with DARPA on the Quantum Benchmarking Initiative—a collaborative effort to develop trusted, standardized methods for measuring, testing, and comparing the performance of quantum computing hardware and systems—to assess when commercial quantum technologies are genuinely on a path to feasibility.

The through-line across both panels was that federal partners are important funders of research at UMD as well as co-residents, co-investigators, and co-builders of the quantum ecosystem. The close network across federal labs, university researchers, and industry is a unique distinction that Maryland has fully leveraged for competitive advantage.



“It is only when we really lock in on some of these key applications that we can create those virtuous cycles and keep going with the technology development.”

Dr. Paul Lopata
Chief Quantum Scientist, ARLIS

Building the Quantum Workforce

Building the quantum workforce across the nation is a major challenge discussed throughout the Conversation. Workforce challenges include physicists but extend far beyond. The field needs engineers, technicians, and specialists who can build and maintain complex quantum systems—and the training infrastructure to produce them does not yet exist at scale.

Dr. Kasra Sardashti, principal investigator at the LPS Qubit Collaboratory (LQC), described a problem hiding in plain sight: Most quantum education focuses on the mathematical representation of qubits, leaving students unprepared when they encounter the hardware reality of a lab. LQC is addressing that directly, investing in a dedicated facility with up to three dilution refrigerators to give students end-to-end exposure from chip to benchmarked qubit. LQC's EQUIP program places students in real research projects at LPS and UMD, alongside a post-baccalaureate program and planned boot camps open to students from across the country.

The pipeline, several speakers argued, needs to start even earlier. Prof. Maajida Murdock, a high school math teacher and adjunct professor at Morgan State, has spent years integrating quan-



Left: Dr. Kasra Sardashti, Assistant Research Professor of Physics, and Principal Investigator, Laboratory for Physical Sciences, University of Maryland, College Park.



Right: Prof. Maajida Murdock, Adjunct Professor of Physics, Morgan State University.

tum concepts into K-12 curricula rather than treating them as a separate subject. Her approach is deliberately scalable: train the teachers, and they reach the students. In her view, winning the quantum race is a high-stakes numbers game, which will depend on people as much as technology.

The Quantum Economy and the Importance of Investing in Startups

Afternoon rapid-fire case studies showed how theory is translating into application across the full range of quantum modalities:

- Dr. Alexey Gorshkov of NIST and the Joint Quantum Institute presented theoretical work on quantum sensor networks—showing that by optimally entangling sensors, measurement precision of spatially varying fields can be improved by a factor of the square root of the number of sensors, with applications from predicting volcanic eruptions to nanoscale thermometry of living human cells.
- Dr. Mohammad Hafezi of UMD presented work applying topological principles to photonic systems, offering a potential solution to one of integrated photonics' most stubborn problems—reproducibility and yield—with downstream applications in quantum computing, optical computing, and on-chip medical diagnostics.
- Prof. Birol Ozturk of Morgan State presented the first quantum spinout from his university: a handheld, battery-operated quantum magnetometer currently being tested on drones for GPS navigation, with a roadmap toward contactless cardiac and neural signal detection. “Imagine your couch, your chair, or your mattress sending daily reports of your heart health to your smartphone and warning you to see a doctor before a heart attack happens,” he said.



Dr. Alexey Gorshkov, Physicist, Quantum Measurement Division, National Institute of Standards and Technology, and Fellow, Joint Quantum Institute Park.

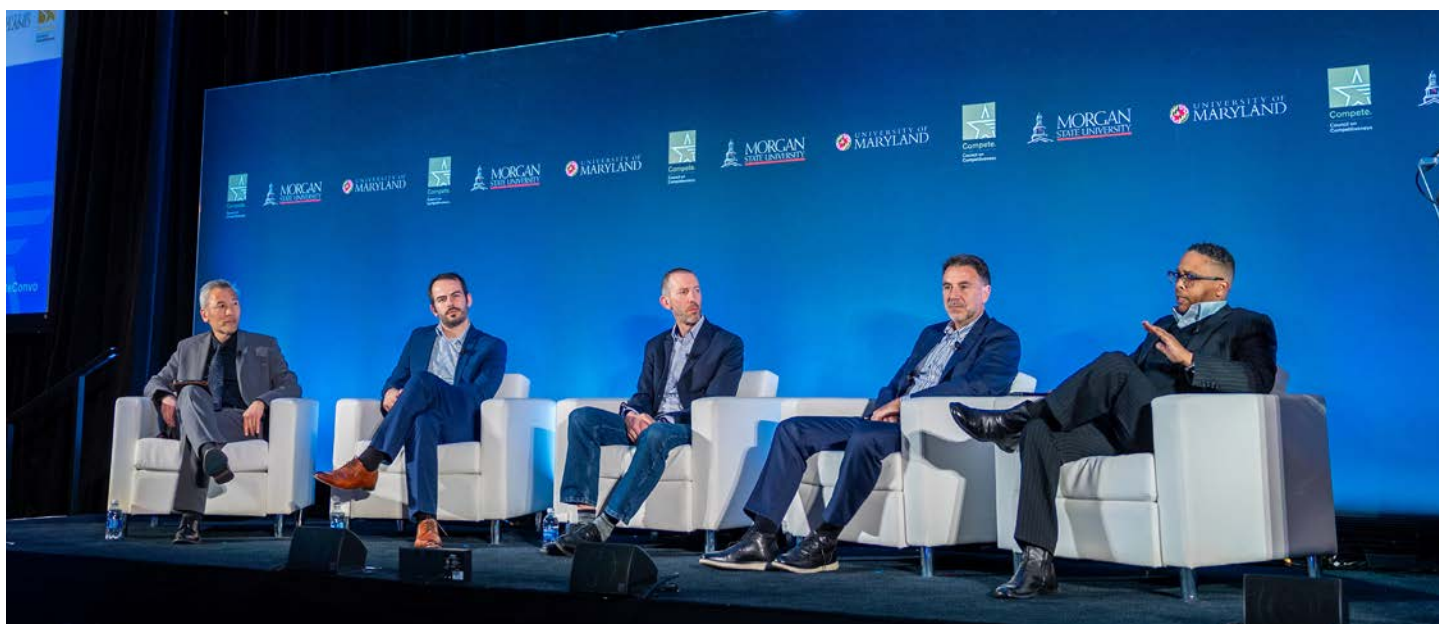


Dr. Mohammad Hafezi, Minta Martin Professor of Electrical and Computer Engineering and Physics; Senior Investigator, Robust Quantum Simulation (RQS), University of Maryland, College Park.



Dr. Birol Ozturk, Professor of Physics, Morgan State University.

The Role of Universities in Fueling Quantum Spinouts

**Dr. Dean Chang**

Chief Innovation Officer, University of Maryland, College Park

Dr. Rezlind Bushati

CEO, Phaseshift

Mr. Dan Kunitz

Executive Director, NSF Mid-Atlantic I-Corps Hub, University of Maryland, College Park

Dr. Dennis Lucarelli

CEO and Founder, Error Corp.

Mr. Stan Smith

Managing Director, Discovery Fund and Terrapin Fund, University of Maryland, College Park

UMD Chief Innovation Officer Dr. Dean Chang moderated a panel on growing commercial value from the research and development happening at the university and throughout the region. He noted the University System of Maryland ranks in the Top 10 worldwide among public institutions for patents awarded, and UMD's IP portfolio in quantum includes the original trapped-ion patents that launched IonQ.

Joining moderator Dr. Chang were CEOs and investment leaders actively navigating the commercialization journey, including Dr. Rezlind Bushati, CEO of Phaseshift; Mr. Dan Kunitz, Executive Director of the NSF Mid-Atlantic I-Corps Hub at the University of Maryland; Dr. Dennis Lucarelli, CEO and Founder of Error Corp.; and Mr. Stan Smith, Managing Director of the Discovery Fund and Terrapin Fund at the University of Maryland. Together, the panel highlighted a core takeaway that breakthrough research is necessary, but not sufficient. Building the next IonQ requires a robust innovation ecosystem that surrounds scientific discovery with experienced entrepreneurs, patient and diverse sources of capital, commercialization expertise, and the critical infrastructure needed to help quantum startups scale from the laboratory to the marketplace.

Mr. Kunitz noted that most deep-tech startups fail due to market challenges, not technical ones—and that disciplined customer discovery and hypothesis testing can effectively de-risk commercialization before significant capital is deployed. And UMD venture fund's Mr. Smith framed the challenge in two parts: “the commercialization valley of death and the funding valley of death.” The Discovery Fund helps companies navigate from early-stage through Series A, but a more mature later-stage investor network is still needed—similar to what exists for biotech. As that playbook matures, it will attract more capital and instill more confidence across the ecosystem.



“The fact that the Maryland ecosystem has so much density of facilities and talent—whether it’s UMD, NIST, ARL, APL, Navy, the list goes on and on—was really a key choice that made us choose to incubate here.”

Dr. Rezlind Bushati

Co-Founder and CEO, PhaseShift

The CEOs on the panel, Dr. Lucarelli and Dr. Bushati, offered the entrepreneur's perspective, crediting UMD's I-Corps program and the Quantum Startup Foundry for connecting them to grants, the Discovery Fund, and regional resources—and explaining why Maryland offers any quantum hardware startup an “unfair advantage.”

Concluding Thoughts on Building the United States' Quantum Future

**Dr. Darryll J. Pines**

President, University of Maryland, College Park

Dr. Craig H. Martell

Vice President and Chief Technology Officer,
Lockheed Martin

Dr. Mark Peters

President and CEO, MITRE

Mr. Chad Evans

Executive Vice President and Chief Operating,
Officer, Council on Competitiveness

The closing panel served as an appropriate capstone to a day centered on the United States' quantum future—framing a core theme as the shift from opportunity to execution. Moderated by Mr. Chad Evans, Executive Vice President, Chief Operating Officer, and Board Secretary of the Council on Competitiveness, the panel challenged participants to think beyond technological breakthroughs and focus instead on the infrastructure, policy and regulation, investment, talent, and leadership required to translate innovation—both in quantum and in other areas of next-generation computing—into lasting national advantage. As Mr. Evans observed, the challenge before the nation is to make the quantum era “legible, urgent, and inclusive enough to carry everyone forward.”

Looking ahead, Dr. Mark Peters, President and CEO of MITRE, struck an optimistic note, reminding attendees that while “society will be ready,” success depends on asking the right questions today and moving with urgency. Dr. Craig H. Martell, Vice President and Chief Technology Officer of Lockheed Martin, urged leaders to remain disciplined, cautioning that “we spend way too much time fetishizing the technology” rather than focusing on the real-world problems it must solve. University of Maryland President Dr. Darryll J. Pines reinforced that message from the perspective of higher education and commercialization, noting that generative AI “hit us like a slam dunk,” and that quantum has the same potential, and even greater, but building the next generation of quantum companies will require patient capital, adaptive institutions, and sustained investment.



“We set out about a decade ago to build the infrastructure needed so we could nurture companies like IonQ.”

Mr. Ken Ulman

President, Terrapin Development Company and UMD Chief Strategy Officer for Economic Development

Together, the discussion bookended the two-day Maryland edition of the Competitiveness Conversations Across America summit with a central insight: U.S. leadership in the quantum era will be determined, yes, by scientific discovery, but also by the ability to build the integrated innovation ecosystems, modern infrastructure, skilled workforce, patient capital, and long-term partnerships needed to translate those discoveries into greater productivity and inclusive prosperity for all Americans.

Touring the Discovery District Maryland

As the day concluded with a tour of Discovery District Maryland, participants saw a next-generation innovation and entrepreneurship ecosystem taking physical form. New headquarters, research labs, and infrastructure projects like the Purple Line are reshaping the region.

The Purple Line will open in late 2027 or early 2028, spanning 17 miles and 21 stops connecting four Metro hubs: Bethesda, Silver Spring, College Park, and New Carrollton (also an Amtrak station). Five of those stops fall on or near the UMD campus. The university negotiated a fare-free zone for anyone with a university ID—meaning students, faculty, staff, and affiliated companies in Discovery District Maryland can travel between main campus and the park every six minutes, at no cost. It is, as Mr. Ken Ulman put it, the physical infrastructure that makes the ecosystem legible.

“We set out about a decade ago to start to build the infrastructure needed so that we could nurture companies like IonQ,” said Mr. Ulman, President of the Terrapin Development Company and UMD’s Chief Strategy Officer for Economic Development, who led the tour.

The tour included IonQ’s new headquarters site; the 5700 River Tech building—a 150,000-square-foot facility acquired by UMD under President Pines’ leadership, which will house Microsoft’s Quantum Integration Lab (currently being built



out), the Quantum Startup Foundry, and IQM’s new U.S. subsidiary headquarters; and Aviation Landing, a planned development next to the historic College Park Airport site that will include more than 1,000 residential units and over one million square feet of retail and commercial research space.

Maryland’s approach represents a shift from fragmented assets to coordinated strategy. The state is building the conditions to win the quantum race. As multiple speakers highlighted throughout the conference, the region has long been asset-rich but historically strategy-poor. What is new is the intention behind how those assets are now being aligned and deployed.

Conclusion

Uncovering best and next practices for accelerating innovation and competitiveness in AI and quantum to make the nation more productive in the global marketplace was the goal, and the Maryland edition of the Competitiveness Conversations Across America series achieved that and much more. The two-day convening at Morgan State University and the University of Maryland, College Park gathered leaders and innovators from wide-ranging fields to hear and contribute their thoughts on the topic and share their relevant experiences.

The resulting discussions provided a strong base of ideas, priorities, principles and challenges: to continue the state's cultivation of its inclusive AI and quantum innovation ecosystem; to further its impressive development of quantum computing at scale; and to move the state forward to its long-planned place of leadership of these two technology platforms that are transforming the world.

The success of the event bodes well for future efforts to strengthen Maryland's competitiveness by using strategy, policy, collaboration, risk-taking and investment to better align the region's remarkable resources, including the leadership provided by its anchor universities.

Participants

CO-HOSTS

Dr. Darryll J. Pines
President
University of Maryland, College Park

Dr. David K. Wilson
President
Morgan State University

The Hon. Deborah L. Wince-Smith
President and CEO
Council on Competitiveness

PARTICIPANTS

Ms. Maricruz Abarca
Chief of Staff
Office of Maryland State Delegate Gary Simmons
Maryland General Assembly

Mr. Ndubuisi Achuko
Graduate Student
Morgan State University

Mr. Tobenna Ahanotu
Student
Morgan State University

Dr. Renu Ahuja
Lecturer
Morgan State University

Mr. Ayomide Ajibola
Grant Associate
Morgan State University

Dr. Rashada Alexander
Director
Fellowship Programs
American Association for the Advancement of Science (AAAS)

Mr. Jon Alger
President
American University

Dr. Akanksha Anand
Assistant Professor
Morgan State University

Dr. Abimbola Asojo
Dean and Professor
School of Architecture and Planning
Morgan State University

Dr. Eugene Bae
Director
Technology Policy
U.S. Department of State

Ms. Ashley Bair
Assistant to President and Director of Protocol and Events
University of Maryland

Mr. Caleb Banks
Undergraduate Research Assistant
Morgan State University

Ms. Anntoinette Barbour
Business Manager
Quantum Startup Foundry

Dr. Joshua Baron
Deputy Chief Strategy Officer
Office of the Under Secretary of War for Research and Engineering
Department of War

Dr. Oscar Barton
Dean
Morgan State University

Dr. Tahllee Baynard
Vice President of Ignite
Space Research and Development
Lockheed Martin

Dr. John Beiler
Executive Director
Applied Research Laboratory for Intelligence and Security (ARLIS)
University of Maryland, College Park

Dr. Nawal Benmouna
Vice President
STEM and Health Sciences
Montgomery College

Dr. Damien Bérubé
Associate Director of Quantum SCSP

Mr. Charles Beyrouthy
Managing Partner
Forma Prime

Ms. Jessica Bianchi
Quantum Strategist
Booz Allen Hamilton

Mr. Seth Billiau
Quantum Scientist
Booz Allen Hamilton

Dr. Nathaniel Bishop
Director
Maryland Institute for Quantum Applications (MIQA)
ARLIS

Prof. Krishna Bista
Professor
Morgan State University

Mr. Harry Bhandari
Maryland State Delegate
Maryland General Assembly

Mr. Taylor Black
Director
AI and Venture Ecosystems
Office of the Chief Technology Officer
Microsoft
Founding Director
Interdisciplinary Institute on AI and Emerging Technologies
The Catholic University of America

Dr. Jason Boehm
Chief of Staff
National Institute of Standards and Technology

Ms. Taylor Boone
Shared Services
Grant Administration
Morgan State University

Mr. Latane Brackett
Innovation Program Manager
Jackson State University

Dr. Zachary Bradshaw
Chief Scientist
CodeX Quantum

Dr. John Brandau
Director
Research Administration Operations
Morgan State University

Dr. Maria Brogren
Science Counselor
Embassy of Sweden

Dr. Nick Bronn
Global Strategic Research Development
IBM Quantum

Ms. Bridget Brown
Associate Vice President
College of Southern Maryland

Dr. Royce Burnett
Dean
Graves School of Business and Management
Morgan State University

Dr. Rezlind Bushati
CEO
PhaseShift

Dr. Maxim Bushuev
Interim Department Chair
Morgan State University

Dr. Gretchen Campbell
Associate Vice President
Quantum Research and Education
University of Maryland, College Park

Mr. Stefan Cap
Head of Business Development, North America
Riverlane

Ms. Susan Cargill-Collura
Account Executive
Cisco

Dr. Vinton G. Cerf
Vice President
Chief Internet Evangelist
Google

Mr. Khem Chand
Student
Morgan State University

Dr. Dean Chang
Chief Innovation Officer
University of Maryland, College Park

Dr. Eric Chapman
Associate Vice President for Research
Development
University of Maryland, College Park

Dr. Allen Chong
Counsellor
Science, Technology, Innovation
Embassy of Canada

Dr. Gamaliel Cherry
Instructional Technologist
Performance Edge Solutions
National Aeronautics and Space Administration

Dr. Matthew Cimino
Senior Manager
Business Development
Life Science
Maryland Department of Commerce

Mr. John Ciraldo
Chief Technology Officer
WD Advanced Materials

Dr. Charles Clancy
Senior Vice President
General Manager
Chief Technology Officer
MITRE

Mr. Christian Colon
Business Development
Tower Federal Credit Union

Ms. De Maria Cooper
Graduate Student
University of Maryland

Mr. Arthur Core III
Student
Morgan State University

Dr. Tanner Crowder
Office of Science
Department of Energy

Ms. Candace Culhane
Senior Advisor
Council on Competitiveness

Mr. Brian Darmody
Chief Strategy Officer
Association of University Research Parks
(AURP)

Mr. Juwan Davidson
Chief of Staff
Maryland General Assembly

Mr. Hudson Defoe
Technical Support Service Manager
Morgan State University

Mr. Dwayne Deloatch
Strategic Operations Director
Morgan State University

Mr. Niccolo de Masi
President and CEO
IonQ

Ms. Catherine Didion
Executive Director
Boise State University

Mr. Cole Donovan
Associate Director
Federation of American Scientists

Dr. Mary Dunaway
Associate Professor
Information Science and Systems
Morgan State University

Ms. Kathryn Dyson
STEM Resource Specialist
Professional Development Center for Excellence
in Mathematics and Science Education
Morgan State University

Mr. Gage Ealey
Senior Field Sales Engineer
ASCO

Mr. Yoni Elmalem

CEO
Quandela Federal Inc.

Dr. Sheena Erete

Associate Professor
College of Information
Associate Director of Research for the Artificial
Intelligence Interdisciplinary Institute
University of Maryland, College Park

Mr. Chad Evans

Executive Vice President
Chief Operating Officer
Council on Competitiveness

Dr. Ethan Evans

Chief Research Officer
QodeX Quantum

Mr. Liam Farrell

Assistant to the President
University of Maryland

Ms. Mirabel Fizzano

Strategic Planning Assistant
University of Pittsburgh

Ms. Ellen Flowers-Fields

Vice President
Continuing Education and Workforce
College of Southern Maryland

Ms. Whitney Frazier

Assistant Director of Partnerships
Maryland Institute College of Art

Dr. Wayne Frederick

Interim President
Howard University

Mr. Jonas Furukrona

CEO
WD Advance Materials

Ms. Olivia Gachoud

Head of Science and Technology
Embassy of Switzerland in the USA

Mr. Dinesh Ganesan

CEO
MISSIONMIND.AI

Dr. Mark Garrison

Dean
School of Graduate Studies
Morgan State University

Mr. Albin Gashi

CEO
Global Access Group

Prof. Uttam Gaulee

Professor
Morgan State University

Ms. Sara Gavin

Director
Research Communications
University of Maryland

Dr. Erwin Gianchandani

Assistant Director
Technology, Innovation, and Partnerships
Directorate
National Science Foundation

The Hon. Dr. Dario Gil

Under Secretary for Science
Director
Genesis Mission
U.S. Department of Energy

Mr. Frank Goertner

Director
Federal and Veteran Affairs
Robert H. Smith School of Business
University of Maryland

Ms. Deborah Gordon

Senior Advisor
Longview Fusion Energy Systems

Dr. Alexey Gorshkov

Adjunct Professor
University of Maryland
Physicist
National Institute of Standards and Technology

Prof. Samuel Graham

Dean
Engineering
University of Maryland

Ms. Armada Grant

Special Assistant to the President
Morgan State University

Dr. Mohammad Hafezi

Minta Martin Professor of Electrical and
Computer Engineering and Physics
University of Maryland, College Park

Ms. Christine Hagan

Associate Director
Federal Relations
University of Maryland

Mr. Kwanza Hall

Chairman
Develop Fulton

Mr. Nicholas Hamilton

Business Acceleration Leader
Cisco

Mr. Jin Han

Data Scientist
Cherokee Federal

Mr. Aaron Harawa

Chief of Staff
Office of Congressman Glenn Ivey
U.S. House of Representatives

Mr. James Hayes

Senior Vice President
Global Government Affairs
IonQ

Ms. Octavia Haysbert

Student
University of Maryland

Mr. Peter Heim

Chief Technology Officer
Thorlabs Quantum Electronics

Ms. Kemberly Henderson

Interim Director
Technology and Program Management
Morgan State University

Dr. DaMaris Hill

Chair and Professor of English
Morgan State University

Mr. Jonah Hill

Director
Government Relations
Xanadu

Dr. Joan Hoffmann

Mission Area Executive
Johns Hopkins Applied Physics Laboratory

Ms. Julie Hohl

Co-President
ARCS National, Metro Washington

Mr. Sam Hopkins

Senior Advisor
Mind Over Machines

Ms. Marie-Camille Hubault

Deputy Attachée
NTICS
Embassy of France

Dr. Nisan Hubbard

Term Assistant Professor
Advisor
George Mason University

The Hon. Glenn Ivey

Congressman
U.S. House of Representatives

Mr. Gaku Iwamura

Deputy Director
Japan Science and Technology Agency

Ms. Candace Jackson

Einstein Fellow
Office of Congressman Glenn Ivey
U.S. House of Representatives

Dr. Bruce Jarrell

President
University of Maryland, Baltimore

Dr. Mansoureh Jeihani

Professor
Transportation and Urban Infrastructure Studies
Director
National Transportation Center and
SMARTER Center
Morgan State University

Dr. Charles Johnson-Bey

Founder
Demostrata, LLC

Prof. Anupam Joshi

Vice Provost
Chief AI Officer
University of Maryland, Baltimore County

Prof. Jackie Jones

Dean
School of Global Journalism and
Communication
Morgan State University

Mr. Adam Jumba

Founder
Framework

Dr. Farin Kamangar

Associate Vice President for Research
Morgan State University

Mr. Nafiz Karabudak

Corporate Science and Technology Manager
Lockheed Martin Corporation

Dr. Nkem Khumbah

Deputy Director
African Academy of Sciences

Mr. Kwangbin Kim

Taekwondo Instructor
IT Database Administrator
Taekwondo In Action

Mr. Kevin Kimball

Deputy Associate Director for Laboratory
Programs (Acting)
National Institute of Standards and Technology

Dr. Adam Knapp

Head of Capture Management
Quantinuum

Dr. Scott Knoche

Director
Morgan State University PEARL

Mr. Dan Kunitz

Executive Director
NSF Mid-Atlantic I-Corps Hub
University of Maryland, College Park

Dr. James Kushmerick

Director
Physical Measurement Laboratory
National Institute of Standards and Technology

Ms. Camille Leboeuf

Economic Counselor
Businesses and Innovation
Embassy of France

Dr. Mike Lebson

Senior Advisor
Department of State

Mr. Matthew Lee

Senior Grant and Contract Manager
Morgan State University

Dr. Pilhwa Lee

Faculty
Morgan State University

Mr. Troy LeMaile-Stovall

CEO
TEDCO

Ms. Wendy Leonard

Chief
Partnerships Support Office
DEVCOM Army Research Laboratory

Mr. Claton Lewis

Assistant Director
Career Readiness
Morgan State University

Ms. Deshun Li

Research Development Budget Specialist
Office of Research Administration
Morgan State University

Dr. Zheng Li

Assistant Professor
Morgan State University

Mr. Andy Lin

Vice President of Strategy
Chief Technology Officer
Mark III Systems

Dr. Ming C. Lin

Distinguished University Professor, Computer
Science
University of Maryland, College Park

Dr. Norbert Linke

Associate Professor of Physics
Director of QLab
University of Maryland, College Park

Dr. Larry Liu

Assistant Professor of Sociology
Morgan State University

The Hon. Dr. Laurie E. Locascio

President and Chief Executive Officer
American National Standards Institute (ANSI)

Dr. Paul Lopata

Visiting Research Scientist
Applied Research Laboratory for Intelligence
and Security (ARLIS) University of Maryland,
College Park

Dr. Dennis Lucarelli

CEO and Founder
Error Corp.

Ms. Tiffany Majors

Chief of Staff
MHEC

Dr. Shirley Malcom

Member
Board of Trustees
Morgan State University

Dr. Dinesh Manocha

Distinguished University Professor
University of Maryland

Dr. Francesca Manzella

Science Policy Advisor
British Embassy

Mr. William Mapp

AI Research Architect
Center for Equitable AI and Machine Learning
Systems

Dr. Andre Marshall

Vice President for Research, Innovation, and
Economic Impact
George Mason University

Dr. Craig Martell

Vice President
Chief Technology Officer
Lockheed Martin

Dr. Amen Ra Mashariki

Director of AI and Data Strategies
Bezos Earth Fund

Dr. Esha Mathew

Quantum Coordinator
Microsoft

The Hon. Dr. Willie May

Vice President
Research and Economic Development
Morgan State University

Dr. Victor McCrary

Vice Provost for National Security Innovation
Catholic University of America
Chair
National Science Board

Ms. Ann McMahon

Senior Director
Programs and Digital Operations
Council on Competitiveness

Dr. Anna McPhatter

Dean, School of Social Work
Morgan State University

Ms. Virginia Meehan

Executive Director
Government Relations
University of Maryland

Ms. Holly Mercer

Dean
Libraries
University of Maryland

Dr. Andrew Merkle

Department Head
Research and Exploratory Development
Johns Hopkins University Applied Physics Lab

Ms. Melanie Miller

Program Manager
Empower Maryland ICF

Ms. Minetta Minor

Founder
Guiding Future Success, LLC

Ms. Poline Mirithu

Grants and Contract Manager
Morgan State University

Mr. Shar Mizui

Marketing Intern
Office of Marketing and Communications
University of Maryland

Mr. Ryan Mobley

Training and Communications Coordinator
Morgan State University

Dr. Keyshawn Moncrieffe

Interim Research Compliance Director
Morgan State University

Dr. Eric Moore

Director (A)
DEVCOM Army Research Laboratory

The Hon. Wes Moore

Governor
State of Maryland

Dr. James Moreland, Jr.

Principal Engineer
MEI Innovative Solutions Inc
Formerly VP for Raytheon Technologies (RTX)
and Senior Executive Service

Mr. Daniel Mosley

Legislative Aide
Maryland General Assembly

Mr. Nathaniel Moulton

Government Affairs Manager
IQM Quantum Computers

Dr. Richard Muller

Senior Vice President
Federal Technical Lead
IonQ Quantum

Prof. Maajida Murdock

Adjunct Professor of Physics
Morgan State University

Dr. Tramar Murdock

Adjunct Professor
Coppin State University

Ms. Elizabeth Muse

Client Relationship Manager
Deloitte

Ms. Meghan Music

Executive Director of External Affairs
MHEC

Dr. Gracie Narcho

Directorate Head
Technology, Innovation and Partnerships
National Science Foundation

Dr. M'bare N'gom

Dean
College of Liberal Arts
Morgan State University

Mr. Mike Nelson

Vice President
Council on Competitiveness

Mr. Torben Orla Nielsen

Counselor
Science and Innovation
Embassy of Denmark

Dr. Kofi Nyarko

Professor of Electrical and Computer
Engineering
Director
Center for Equitable AI and ML Systems
Morgan State University

Dr. Lening Olivera-Figueroa

Assistant Professor
Morgan State University

Dr. Patrick O'Shea

Vice President
Chief Research Officer
University of Maryland

Dr. Erdal Ozkaya

Chief Information Security Officer
Morgan State University

Prof. Birol Ozturk

Associate Professor of Physics
Morgan State University

Dr. Lijo Panghat

Independent researcher

Dr. Sudip Parikh

CEO
American Association for the Advancement of
Science (AAAS)

Mr. Changgyoo Park

Quantum Program Manager
Korea-US Quantum Technology Cooperation
Center

Mr. Jim Pastoriza

Partner
TDF Ventures

Dr. Lujie Peng

Assistant Professor
Morgan State University

Dr. Jill Pentimonti

Executive Director of Research Advancement
University of Notre Dame

Dr. Mark Peters

President and CEO
MITRE

Dr. William D. Phillips

Professor
Joint Quantum Institute (JQI)
University of Maryland, College Park
Distinguished Visiting Professor
Morgan State University

Mr. Joe Porter

Vice President
Information Technology
Procter & Gamble

Dr. Ken Porter

Executive Director
UM Ventures
University of Maryland, College Park

Ms. Monica Poulard-Hawkins

Founder
Managing Partner
Professional Pipeline Development Group

Ms. Ursula Powidzki

Senior Vice President
Ancora Partners

Dr. Todd Pray

Chief Strategic Partnerships Officer
Lawrence Berkeley National Laboratory

Dr. Glenda Prime

Dean
School of Education and Urban Studies
Morgan State University

Dr. Pam Queen

Maryland State Delegate
Maryland General Assembly

Dr. Padma Raghavan

Chancellor's Executive Director
Science and Technology Strategy
Vanderbilt University

Hon. Dr. Sanjay Rai

Secretary of Higher Education
Maryland Higher Education Commission

Dr. Beth Rheingold

President and CEO
Greater Baltimore Chamber of Commerce

Dr. Philippe Ribiere

Science Attaché
Emerging Technology
Embassy of France

Dr. Kevin Rice

Vice President
Planning and Strategy
Colby College

Dr. Jennifer King Rice

Senior Vice President
Provost
University of Maryland, College Park

Dr. Steven Rolston

Professor and Chair
Department of Physics
University of Maryland, College Park

Mr. Jon Rosenberger

Director
Business Development
International Brotherhood of Electrical Workers
(IBEW)

Mr. Jay Rossello

Vice President
Legal Affairs
University of Maryland

Dr. Stephen Roth

Associate Provost
Dean
University of Maryland, College Park

Dr. Stephen Roth

Associate Provost
Dean
University of Maryland, College Park

Dr. Walter Royal

Professor
Director
Brain Health Center
Morgan State University

Ms. Sephora Saint-Armand

Ecosystem and Equitech Manager
TEDCO

Dr. Kasra Sardashti

Assistant Research Professor of Physics
Principal Investigator
Laboratory for Physical Sciences
University of Maryland, College Park

Mr. Scott Satterlee

International Representative
Business Development
International Brotherhood of Electrical Workers (IBEW)

Dr. John Sawyer

Director
Strategic Research Initiatives
University of Maryland, College Park

Dr. Craig Schlenoff

Senior Advisor for AI
National Institute of Standards and Technology

Mr. Ben Seigel

Deputy Comptroller
State of Maryland

Mr. Asad Shaikh

President and CEO
Sequoia Concepts

Ms. Shruti Sharma

Research Associate
CSIS

Dr. Robert Shepard

Principal
The Shepard Institute (TSI), LLC

Ms. Winnie Shi

Program and Business Development
Coordinator
Quantum Startup Foundry

Ms. Jennifer Jheesoo Shin

Foreign Affairs Officer
U.S. Department of State

Ms. Shamon Shine-Lee

Budget Officer
Office of Research Administration
Morgan State University

Dr. Joyce Shirazi

Dean
School of Engineering, Architecture, and Aviation
Hampton University

Ms. Hafsa Siddiqi

Manager
Media Relations
University of Maryland, College Park

Ms. Beth Simmons

Guest

Mr. Gary Simmons

Maryland State Delegate
Maryland General Assembly

Dr. Phillip Singerman, Sr.

Advisor
Center for Strategic and International Studies

Ms. Amelia Skeepers

UMD Aero Engineering
Snitch Endowment Scholar
University of Maryland, College Park

Ms. Shamera Smith

Online Forms Specialist
Morgan State University

Dr. Stan Smith

Managing Director
Discovery Fund and Terrapin Fund
University of Maryland, College Park

Dr. Jamila Smith-Loud

HCAI-ML
Head of Impact Lab
Google Research

Ms. Mary Snitch

Principal
External Partnerships
Lockheed Martin

Dr. Bhanu Sood

Chief Technologist
NASA Goddard Space Flight Center

Mr. Duncan Sparrell

Chief Cyber Curmudgeon
sFractal Consulting

Ms. Patricia Sparrell

Vice President
Development
ARCS Foundation, Metro Washington Chapter

Prof. Michael Spencer

Professor
Morgan State University

Dr. Ankur Srivastava

Director
Semiconductor Initiative
University of Maryland

Dr. Corey Stambaugh

Director
Capital of Quantum

Dr. Jeffrey Starr

Director
CDMR Research and Advanced Analytics
US Air Force Concepts, Development, and Management Office

Mr. Tim Stockwell

Director
Advanced Research Informatics
Thermo Fisher Scientific

Dr. Alexandra Surcel

Legislative and Science Policy Analyst
National Science Board Office (NSBO/NSF)

Mr. Wayne E. Swann

Director
Technology Transfer
Morgan State University

Mr. Albert Sweets

Director
External Research Partnerships
Morgan State University

Dr. Charles Tahan

Partner
Microsoft

Ms. Katherine Talton

Shared Services Grant Administrator
Morgan State University

Dr. Paul Tchounwou

Dean
School of Computer, Mathematical, and Natural Sciences
Morgan State University

Mr. George Thomas

President and CEO
Connected DMV

Dr. Rebecca Thomas

Interim Dean
Science, Engineering, and Technology
Montgomery College

Mr. Hideki Tomoshige

Fellow
Center for Strategic and International Studies

Dr. Jamal Uddin

Professor
Director
Center for Nanotechnology
Coppin State University

Mr. Ken Ulman

President
Terrapin Development Company
Chief Strategy Officer for Economic Development
University of Maryland

Prof. Sennur Ulukus

Distinguished University Professor
Chair
University of Maryland

Dr. Don-Terry Veal

Vice President
State and Federal Relations
Chief of Staff
Morgan State University

Mr. Phil Vogel

Business Development Executive
IBM

Ms. Beth Wainwright

Immediate Past President
ARCS Foundation, Inc.

Dr. Paul Wang

Director and Chair
Computer Science
Morgan State University

Dr. Gregory Washington

President
George Mason University

Dr. Gabriella Waters

Director
Center of Responsible AI
Virginia State University

Dr. Kate Weber

Head of Governance and External Affairs
Google Quantum AI

Mr. Joseph Wells

Director
Masters Programs
Earl G. Graves School of Business and
Management
Morgan State University

Ms. Jennifer Whitted

PREP Program Coordinator
Morgan State University

Dr. Carl Williams

CEO
CJW Quantum Consulting, LLC

Mr. Wes Wollard

Supervisory
Special Agent FBI
Quantum Counterintelligence Protection Team
(QCPT)

Mr. Leonard Woody

Senior Director
IonQ

Prof. Guobin Xu

Associate Professor
Morgan State University

Prof. Shuhui Yang

Professor
Purdue University Northwest

Mr. Caylin Young

Maryland State Delegate
Maryland General Assembly

Dr. Hongtao Yu

Provost
Senior Vice President for Academic Affairs
Morgan State University

Dr. Hussain Zaidi

CEO
QC82

Ms. Ailing Zhang

Senior Grants Manager
Morgan State University

Prof. Chenn Zhou

Professor
Purdue University Northwest

Ms. Karen Zuccardi

Ecosystem
Director
TEDCO

Council on Competitiveness Board, Executive Committee, General Members, Partners, Fellows & Staff

BOARD

Mr. Erik Fyrwald

Chair
CEO
IFF
[National Commissioner](#)

Mr. Sundar G. Raman

Business Vice Chair
CEO
Fabric & Home Care and P&G Ventures
Procter & Gamble
[National Commissioner](#)

Ms. Joan Gabel

Academic Vice Chair
Chancellor
University of Pittsburgh
[National Commissioner](#)

Mr. Kenneth Cooper

Labor Vice Chair
International President
IBEW
[National Commissioner](#)

Mr. Charles O. Holliday, Jr.

Chairman Emeritus
[National Commissioner](#)

The Hon. Deborah L. Wince-Smith

President and CEO
[National Commissioner](#)

EXECUTIVE COMMITTEE

Mr. Jim Clifton

Chairman
Gallup
[National Commissioner](#)

Dr. Michael M. Crow

President
Arizona State University

Dr. Daniel Diermeier

Chancellor
Vanderbilt University
[National Commissioner](#)

Dr. Taylor Eighmy

President
University of Texas at San Antonio
[National Commissioner](#)

Dr. Suresh V. Garimella

President
University of Arizona

Dr. Jeffrey Gold, M.D.

President
University of Nebraska System
[National Commissioner](#)

Dr. Sheryl Handler

President and CEO
Ab Initio
[National Commissioner](#)

Mr. Rajeeb (Raj) Hazra

CEO
Quantinuum

Dr. Farnam Jahanian

President
Carnegie Mellon University

Dr. Mehmood Khan

CEO
Hevolution Foundation

Dr. Pradeep K. Khosla

Chancellor
University of California San Diego

Dr. Laurie E. Locascio

President and CEO
American National Standard Institute (ANSI)

Dr. Craig Martell

Vice President and Chief Technology Officer
Lockheed Martin

Dr. Gary S. May

Chancellor
University of California, Davis
[National Commissioner](#)

Mr. John May

CEO
Deere & Company

Mr. Kwasi Mitchell

Managing Principal—Growth and Purpose
Deloitte
[National Commissioner](#)

Mr. Jere W. Morehead

President
University of Georgia

Mr. Joshua Parker

CEO
Ancora
[National Commissioner](#)

Mr. Mark Peters

President and CEO
The MITRE Corporation

Mr. Nicholas T. Pinchuk

Chairman, President, and CEO
Snap-on Incorporated

Ms. Donde Plowman

Chancellor
University of Tennessee, Knoxville
[National Commissioner](#)

Dr. Justin Schwartz

Chancellor
University of Colorado Boulder

Ms. Randi Weingarten

President
American Federation of Teachers, AFL-CIO

Dr. David Kwabena Wilson

President
Morgan State University

Mr. Paul A. Yarossi

Executive Vice President
HNTB Holding Ltd.
[National Commissioner](#)

GENERAL MEMBERS

Dr. Michael Amiridis
President
University of South Carolina

Dr. Joseph E. Aoun
President
Northeastern University

The Hon. Sandy K. Baruah
CEO
Detroit Regional Chamber

Dr. Sian Leah Beilock
President
Dartmouth College

Mr. Rick Bierschbach
Interim President
Wayne State University

Dr. John C. Bravman
President
Bucknell University

Ms. Jill Bray
President
ARCS Foundation, Inc.

Dr. Elizabeth Cantwell
President
Washington State University

Dr. Laura A. Carlson
President
University of Delaware

Dr. David Cook
President
Iowa State University
[National Commissioner](#)

Dr. La Jerne Terry Cornish
President
Ithaca College

Dr. Jennifer Cowley
President
The University of Texas at Arlington

Dr. Gregory P. Crawford
President
Miami University

Dr. Rebecca Cunningham
President
University of Minnesota

Mr. Ernest J. Dianastasis
Managing Director
The Precisionists, Inc.

Mr. Jeff Donofrio
President and CEO
Business Leaders for Michigan

Dr. Joan Ferrini-Mundy
President
University of Maine

Mr. Mike Freeman
CEO and General Manager
Innosphere Ventures

Dr. Ellen M. Granberg
President
George Washington University

Dr. David A. Greene
President
Colby College

Dr. Kevin M. Guskiewicz
President
Michigan State University

Mr. Billy Hagstrom
CEO and Co-Founder
Bluestem Biosciences, Inc.

Dr. Bill Hardgrave
President
University of Memphis

Mr. Kevin Howell
Chancellor
North Carolina State University

Dr. S. Jack Hu
Chancellor
University of California, Riverside

Mr. Garry Jenkins
President
Bates College

Dr. Harrison Keller
President
University of North Texas

Dr. Timothy L. Killeen
President
University of Illinois System
[National Commissioner](#)

Dr. Sunil Kumar
President
Tufts University

Dr. Linda Livingstone
President
Baylor University

Dr. Prabhas V. Moghe
President
University of Texas at Dallas

Dr. Brad L. Mortensen
President
Utah State University

Dr. Juan Sánchez Muñoz
Chancellor
University of California, Merced

Dr. Jayathi Murthy
President
Oregon State University

Dr. Mark Nemec
President
Fairfield University

Dr. Ajikumar "Aji" Parayil
Founder and CEO
Manus

Dr. Darryll J. Pines
President
University of Maryland
[National Commissioner](#)

Dr. Susan Poser
President
Hofstra University

Mr. David Ricks
Chair and CEO
Eli Lilly and Company
[National Commissioner](#)

Mr. Rory Riggs
Managing Member
Balfour, LLC

Dr. Rodney Rogers
President
Bowling Green State University

The Hon. Justice Leah Ward Sears
Interim President
Emory University

Mr. Gustavo Sergi
CEO
Sustainea

Mr. Thomas Sheehan
Chair, Global Corporate and Investment
Banking
Bank of America

Mr. Gunjan Sinha
Chairman and Co-Founder
Opengrowth Ventures

Mr. Paul P. Skoutelas
President and CEO
American Public Transport Association

Ms. G. Gabrielle Starr
President
Pomona College

Dr. Elisa Stephens
President
Academy of Art University

Mr. Jim Stutelberg
CEO
Primient
[National Commissioner](#)

Ms. Gayle Terry
Chief Marketing Officer and President
Domestic and General (D&G) U.S.

Dr. Satish Tripathi
President
University at Buffalo

Dr. Marlene Tromp
President
University of Vermont
[National Commissioner](#)

Dr. Gregory Washington
President
George Mason University

The Hon. Olin L. Wethington
CEO and Co-Founder
Graham Biosciences LLC
[National Commissioner](#)

Ms. Mary Ellen Wiederwohl
President and CEO
Accelerator for America

NATIONAL LAB PARTNERS

Dr. Kimberly Budil
Director
Lawrence Livermore National Laboratory

Dr. Deborah Gracio
Laboratory Director
Pacific Northwest National Laboratory
[National Commissioner](#)

Dr. Paul Kearns
Director
Argonne National Laboratory
[National Commissioner](#)

Dr. Thomas Mason
Director
Los Alamos National Laboratory
[National Commissioner](#)

Dr. Stephen K. Streiffer
Director
Oak Ridge National Laboratory
[National Commissioner](#)

Dr. Jud Virden
Laboratory Director
National Laboratory of the Rockies
President, Alliance and Sustainable Energy
[National Commissioner](#)

NATIONAL AFFILIATES

Dr. Dean Bartles
CEO and President
Manufacturing Technology Deployment Group

Dr. David Oxtoby
President
American Academy of Arts and Sciences

DISTINGUISHED FELLOWS

Dr. Ram Charan

Dr. France Córdova
Science Philanthropy Alliance

Mr. James G. Foggo, USN (Ret.)
Allied Joint Force Command, Naples, Italy

Dr. Paul J. Hommert
Sandia National Laboratories

Mr. Steve Isakowitz

Dr. Ray O. Johnson
Bessemer

Dr. Martha Kanter
College Promise Campaign

Dr. Jon McIntyre
Nodl Advisors

Dr. Harris Pastides

Mr. Nolan Pike

Ms. Kimberly Reed
Former President
Export-Import Bank of the United States

Dr. Branko Terzic
Berkeley Research Group

Dr. Anthony J. Tether
NSIP, LLC

Mr. Andrew Thompson
LifeSpeed

Dr. Steven H. Walker

SENIOR FELLOWS

Ms. Jennifer S. Bond
Former Director
National Science Foundation

Ms. Margaret Brooks

Dr. Thomas A. Campbell
FutureGrasp, LLC

Mr. C. Michael Cassidy
Emory University

Dr. Dona L. Crawford
Livermore Lab Foundation

Dr. Tommy Gardner
HP Federal

Dr. Jerry Haar
Florida International University

Mr. Dominik Knoll
AVA Ventures

Mr. Abbott Lipsky
Latham & Watkins LLP

Ms. Julie Meier Wright
Collaborative Economics

Mr. Mark Minevich
Going Global Ventures

Mr. Toby Redshaw
Verus Advisory, LLC

Dr. David B. Williams
The Ohio State University

Mr. Michael Wolf

STAFF

Mr. Chad Evans
Executive Vice President and
Chief Operating Officer
Secretary and Treasurer to the Board

Ms. Marcy Jones
Special Assistant to the President and CEO,
Office Manager and
Director of Member Services

Ms. Ann McMahon
Senior Director

Mr. Michael Nelson
Vice President



Compete.

Council on
Competitiveness

Contact

For more information, please contact:

Mr. Chad Evans

Executive Vice President and
Chief Operating Officer
Secretary and Treasurer to the Board
cevens@compete.org

Council on Competitiveness

801 18th Street NW
Suite 800
Washington, D.C. 20006

Join the Conversation

 @CompeteNow

 /USCouncilonCompetitiveness

 /company/council-on-competitiveness/

 CompeteTV

 Compete.org

About the Council on Competitiveness

For four decades, the Council on Competitiveness (Council) has championed a competitiveness agenda for the United States to attract investment and talent, and spur the commercialization of new ideas.

While the players may have changed since its founding in 1986, the mission remains as vital as ever—to enhance U.S. productivity and raise the standard of living for all Americans.

The members of the Council—CEOs, university presidents, labor leaders and national laboratory directors—represent a powerful, nonpartisan voice that sets aside politics and seeks results. By providing real-world perspective to Washington policymakers, the Council's private sector network makes an impact on decision-making across a broad spectrum of issues—from the cutting-edge of science and technology, to the democratization of innovation, to the shift from energy weakness to strength that supports the growing renaissance in U.S. manufacturing.

The Council's leadership group firmly believes that with the right policies, the strengths and potential of the U.S. economy far outweigh the current challenges the nation faces on the path to higher growth and greater opportunity for all Americans.