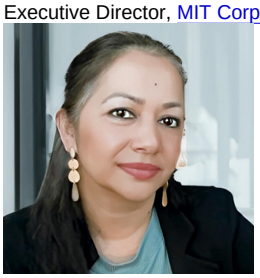
MIT Industrial Liaison Program Faculty Knowledgebase Report

2025 MIT Research and Development Conference

November 18, 2025 - November 19, 2025

Day One | Plenary

8:00 AM	Registration with Light Breakfast
9:00 AM	Welcome and Introduction Gayathri Srinivasan Executive Director, MIT Corporate Relations



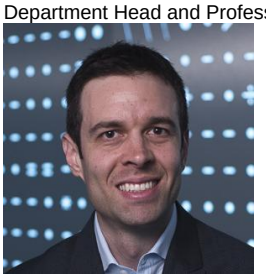
Gayathri Srinivasan
Executive Director
MIT Corporate Relations

Dr. Srinivasan is a distinguished scientist who received her PhD in Microbiology from The Ohio State University in 2004, where she contributed to the discovery of the 22nd amino acid, Pyrrolysine (2002). She first came to MIT as an NIH Postdoctoral Fellow in Prof. Tom Rajbhandary's lab, where her research focused on understanding protein synthesis mechanisms in Archaea.

Dr. Srinivasan subsequently moved into the business development and technology licensing space, serving in MIT's Technology Licensing Office, where she helped commercialize technologies in medical devices and alternative energies. She then moved to UMass Medical School's Office of Technology Management in 2009 and to Emory University in Atlanta in 2014 as the Director of Public and Private Partnerships for the Woodruff Health Sciences Center. In 2019, Dr. Srinivasan joined Emory's Office of Corporate Relations as Executive Director, and in 2021, she led the Office of Corporate and Foundation Relations.

9:15 AM

New Manufacturing Initiative and the Future of Manufacturing
John Hart
Department Head and Professor, MIT Department of Mechanical Engineering



John Hart
Department Head and Professor
MIT Department of Mechanical Engineering

John Hart is Professor of Mechanical Engineering and Head of the Department of Mechanical Engineering at MIT. He is also the Director of the MIT Laboratory for Manufacturing and Productivity and the Center for Advanced Production Technologies. John's. John's research group focuses on the science and technology of production, including work on additive manufacturing, materials processing, automation, and computational methods. John has been recognized by awards from the United States NSF, ONR, AFOSR, DARPA, SME, and ASME, along with two R&D 100 awards. He has also received the MIT Ruth and Joel Spira Award for Distinguished Teaching in Mechanical Engineering and the MIT Keenan Award for Innovation in Undergraduate Education, for his leadership in undergraduate manufacturing education using new pedagogical models and digital resources. John is a co-founder of Desktop Metal and VulcanForms, and a Board Member of Carpenter Technology Corporation.

View full bio

10:15 AM

MIT Professional Education

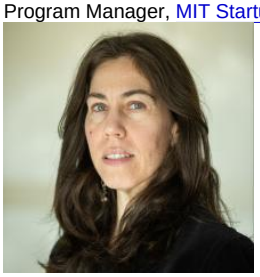
Myriam Joseph

10:20 AM

Networking Break

11:20 AM

Startup Exchange Lightning Talks
Ariadna Rodenstein
Program Manager, MIT Startup Exchange



Ariadna Rodenstein
Program Manager
MIT Startup Exchange

Ariadna Rodenstein is a Program Manager at MIT Startup Exchange. She joined MIT Corporate Relations as an Events Leader in September 2019 and is responsible for designing and executing startup events, including content development, coaching and hosting, and logistics. Ms. Rodenstein works closely with the Industrial Liaison Program (ILP) in promoting collaboration and partnerships between MIT-connected startups and industry, as well as with other areas around the MIT innovation ecosystem and beyond.

Prior to working for MIT Corporate Relations, she worked for over a decade at Credit Suisse Group in New York and London, in a few different roles in event management and as Director of Client Strategy. Ms. Rodenstein has combined her experience in the private sector with work at non-profits as a Consultant and Development Director at New York Immigration Coalition, Immigrant Defense Project, and Americas Society/Council of the Americas. She also served as an Officer on the Board of Directors of the Riverside Clay Tennis Association in New York for several years. Additionally, she earned her B.A. in Political Science and Communications from New York University, with coursework at the Instituto Tecnológico y de Estudios Superiores de Monterrey in Mexico City, and her M.A. in Sociology from the City University of New York.

Christine Yi-Ting Wang

Baptiste Bouvier

Peter Schmitt

Deep Patel

Rana Hajirasouli

Pavel Bystricky

Sanjay Manandhar

12:20 PM

Lunch with Startup Exhibit

1:30 PM

Create, Prototype, Deliver: Lincoln Laboratory’s Engine for National Security

Melissa Choi

Commercial innovation is a key component of U.S. national security strategy, but the specialized needs of national security often make harnessing this innovation difficult. As the Department of Defense’s largest Federally Funded Research and Development Center, MIT’s Lincoln Laboratory's mission is to close this gap and spark disruptive solutions. This talk will highlight how Lincoln Laboratory 1) works with the DoD to analyze its most pressing problems; 2) develops advanced technology or harnesses commercial capabilities to make new solutions possible; 3) creates prototypes to validate solutions or address urgent needs; and 4) efficiently transitions prototypes to the private sector for commercial development. These four overlapping capabilities are the fundamental building blocks of the Laboratory’s innovation engine for national security. We will feature examples of significant technologies that have moved out of the lab and into the military and marketplace for real-world impact.

2:00 PM Building Rational Robots

Leslie Pack Kaelbling

3:30 PM Networking Break

4:00 PM Technology Licensing Office Statistics and Trends in MIT Innovation

Lesley Millar-Nicholson

4:20 PM What's Next for AI

Amy Nordrum

Artificial intelligence is a core topic of coverage for the newsroom at MIT Technology Review, and the journalists who work there are always looking ahead to what's coming next. That's especially challenging for the fast-moving field of artificial intelligence, where it can be particularly difficult to distinguish hype from reality. Executive editor Amy Nordrum will share the major developments and recent advances that the newsroom is watching closely, touching on topics like generative search, AI agents, AI in gaming, small language models, AI companions, and more. Consider this your primer on which areas of AI are most important to know about and worth watching in the months ahead.

5:20 PM Networking Reception

Day Two | Track 1 | Entrepreneurship in Action: From Discovery to Disruption

Explore how groundbreaking science and technology translate into market-ready solutions and drive corporate growth. Learn to identify and capitalize on emerging opportunities, understand pathways to commercialization and innovation strategies, and see how your company can benefit from university-industry partnerships through real-world examples. Walk away with actionable insights to drive progress and growth within your organization.

Introduction

AI-Driven Enterprises: The New Arithmetic of Exponential Growth

Paul Cheek

This session unveils the rise of artificial-intelligence-driven enterprises (AIDEs) that fuse the global ambition of innovation-driven startups with the lean efficiency of SMEs. We'll examine how founders wield generative AI across R&D, go-to-market, and operations to slash innovation debt, reach $100M+ ARR with <50 people, and open pathways for regions with limited venture capital to compete globally. Attendees will leave with a framework for building, funding, and scaling their own AIDE internal ventures—and insights into what this shift means for talent, policy, and the future of corporate R&D.

Day Two | Track 2 | Power Hungry World – The Future of Sustainable Energy

Global electricity demand is projected to nearly double by 2050, driven by the rapid electrification of buildings, transportation, and manufacturing. Compounding this pressure is the exponential growth of AI. While AI offers transformative potential across industries, it is also emerging as a significant energy consumer. Data centers, the digital engines powering AI, have more than doubled their electricity consumption since 2018 and now account for 4.4% of global demand. In the U.S., they are expected to consume up to 12% of total electricity by 2028.

This track will explore how the world can meet rising energy needs through the rapid expansion of sustainable energy production. From fusion and next-generation nuclear to renewables, grid-scale storage, decentralized systems, and forward-looking policies, we will examine the innovations and frameworks critical to building a resilient, low-carbon energy future. Addressing this challenge will require a bold vision, accelerated technological advancement, and unprecedented global collaboration.

Introduction

Day Two | Track 3 | Innovation and Impact in the New Space Era

This session explores the transformative dynamics of the New Space era, where commercial innovation, rapid development cycles, and expanded access to space are redefining what's possible. Presenters will highlight emerging technologies, novel mission approaches, and cross-sector collaborations driving this shift. Topics may include advances in Earth observation and sensing, the proliferation of small satellite platforms, and research in space physiology to support human spaceflight. Whether technological, scientific, or entrepreneurial, these developments exemplify how New Space is reshaping the space ecosystem and opening new frontiers for exploration, application, and impact.

Introduction

Smallsats@MIT

Kerri Cahoy

Day Two | Track 4 | Intelligence Unleashed: Scaling and Securing Enterprises of the Future

The next wave of innovation is being shaped by AI systems that don't just respond; they act. From agentic AI that collaborates and makes decisions autonomously to decentralized architectures that push intelligence to the edge, MIT researchers are leading the charge. They are reimagining how organizations secure, interpret, and operationalize data.

This track brings together thought leaders from across MIT to explore the strategic, organizational, and human implications of AI at scale. Topics will include quantum-safe infrastructure, explainable AI, cyber-physical resilience, agent-based platforms, and the role of trust, transparency, and ethics in intelligent systems.

For enterprises navigating an era defined by autonomy, agility, and risk, this track connects frontier research with real-world impact.

Introduction

Day Two | Track 5 | Frontiers in Advanced Materials: From Molecular Design to

Functional Systems

The future of materials science lies in the seamless integration of molecular precision, functional performance, and nanoscale understanding. This session brings together leading MIT researchers whose work spans the full spectrum of advanced materials innovation—from the bottom-up design of molecular architectures to the real-world deployment of materials and the tools that reveal their behavior at the atomic scale.

Introduction

Day Two | Track 6 | Engineering Life Sciences: Interdisciplinary Pathways from Concept to Impact

Life sciences are no longer confined to the realm of biology—they have evolved into a multidisciplinary frontier. This session examines the dynamic intersection of biology, engineering, and computational science, where bold ideas give rise to transformative innovation. By integrating AI, advanced technologies, and foundational biological research, the session will highlight how cross-disciplinary collaboration accelerates the path from scientific discovery to real-world application at MIT. Emphasizing the translation of visionary research into impactful solutions, this track invites participants to reimagine what becomes possible when disciplines converge to shape the future.

Introduction

Engineered Immunology

Jessica Stark

Day Two | Optional Conference Campus Tours

On day two, after lunch at 12:40 PM, join the ILP for a unique opportunity to explore MIT through concurrent tours, each providing an in-depth look at the institute's innovation ecosystem. Sign-up boards will be available at the registration desk starting in the morning.

1:15 PM	Attendees to gather at the ILP registration desk for departure from the Marriott
1:30 PM - 2:30 PM	MIT Campus Walking Tour (15 people max) Take a guided tour of our dynamic campus and experience firsthand how MIT is making a better world. From cutting edge research to innovation, from world-renowned architecture to rich community life, the MIT campus is a treasure to explore. MIT is also the heart of the vibrant innovation district of Kendall Square, the most innovative square mile in the world – come see how academics, entrepreneurs, corporations and non-profits make it all happen.
1:30 PM - 2:30 PM	MIT Media Lab (15 people max)
1:30 PM - 2:30 PM	MIT Nuclear Reactor Laboratory (15 people max)

5:00 PM	Networking Reception