AUSSEN
WIRTSCHAFT
FORUM

MIT EUROPE CONFERENCE 2025

FUTURE OF MANUFACTURING

Wednesday, March 26 – Thursday, March 27, 2025

PROGRAM (Subject to change, 21.01.2025)

Venue: Wirtschaftskammer Österreich | Julius-Raab-Saal I Wiedner Hauptstraße 63, 1045 Vienna
Language: English

in cooperation with:

supported by

a joint initiative of the Austrian Federal Ministry of Labor and Economics
and the Austrian Federal Economic Chamber

WEDNESDAY, 26.03.2025

08.00 – 09.00	**CHECK-IN**
09.00 – 09.30	**WELCOME & OPENING** **Harald Mahrer** | President, Austrian Federal Economic Chamber **Xxxx** | Representative of the Federal Ministry of Labour and Economy **Gayathri Srinivasan** | Executive Director of MIT Corporate Relations Host: **Randall S Wright** | Program Director, MIT Office for Corporate Relations Moderation: **Cornelia Ertl**
09.30– 10.05	**RISK, INNOVATION AND THE NEW MANUFACTURING PIONEERS** **Ben Armstrong** | Executive Director and Research Scientist at MIT's Industrial Performance Center Despite fears that new technologies will displace workers, the most common outcome is for new technologies to transform the jobs we do and how we do them. The question is: how can we use technologies to make jobs more enjoyable and more productive? With historical examples and recent data, MIT's Ben Armstrong will identify strategies and opportunities for "positive-sum automation" that benefits firms and workers alike.
10.05 – 10.40	**DIGITAL AND BIOLOGICAL TRANSFORMATION TBD** **Thomas Bauernhansl** | Executive Director of Fraunhofer-Institute for Manufacturing Engineering and Automation
10.40 – 11.00	**NETWORKING BREAK**
11.00 – 11.35	**INVESTING IN THE FUTURE OF MANUFACTURING: PRACTICAL APPLICATIONS OF AI AND ANALYTICS FOR COMPETITIVE ADVANTAGE** **Bruce Lawler** | Managing Director of MIT MIMO (Machine Intelligence for Manufacturing and Operations) Explore practical and successful applications of analytics and AI in manufacturing across small, medium, and large enterprises in the U.S. Learn where to invest to start and sustain a digital transformation journey, drawing on research and best practices from MIT and McKinsey. Discover impactful uses of Generative AI currently shaping the industry that will drive future investment.

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11.35 – 12.10	**TRANSFORMING BIOMANUFACTURING TO EMPOWER THE BIOECONOMY** **J. Christopher Love** | Raymond A. (1921) And Helen E. St. Laurent Professor, MIT Department of Chemical Engineering Biomanufacturing will change the food we eat, energy we use, and how we cure diseases. It has the potential to drastically reduce our reliance on greenhouse gases. But there are enormous challenges to getting promising advances from labs to the market. Standing up a large-scale manufacturing facility can run to $2 billion, the field is full of regulatory hurdles, and workers need advanced training. We'll look ahead at promising biomanufacturing solutions, and what it will take to scale them.
12.10 – 12.45	**CO-DEVELOPMENT OF MECHANISM DESIGN TBC** **Kaitlyn Becker** | Assistant Professor in the Mechanical Engineering Department
12.45 – 13.45	**NETWORKING LUNCH**
13.45 – 14.20	**CAPITALIZING ON CHANGE: FINANCING MANUFACTURING IN THE 21ST CENTURY** **Hiram Samel** | Senior Lecturer at the MIT Sloan School of Management Automation, AI, and the global drive for carbon reduction are transforming manufacturing, yet capital market allocation remains misaligned with the sector's evolving needs. The U.S. and Europe take distinct approaches: both deploy industrial policies to achieve strategic autonomy, with the U.S. leveraging larger pools of private capital alongside public incentives, and Europe prioritizing sustainability-focused funding as a key pillar of its industrial strategy. However, the tension between institutional investors' preference for efficient, asset-light models and the significant capital expenditures required for transformative manufacturing presents a substantial challenge. Engaging capital market investors early, supported by innovative business models, refined narratives, and industrial policy, is essential to mobilizing larger funding pools of capital that advance strategic priorities.
14.20 – 14.55	**EDUCATING MANUFACTURING TECHNOLOGISTS TO BE FUTURE SHOP FLOOR LEADERS** **John Liu** | Director & Principal Investigator MIT Learning Engineering and Practice Group The MIT Learning Engineering and Practice Group (LEAP Group), led by Dr. John Liu, applies design and systems principles to solving challenges in learning and develops learning experiences to better meet the increasing demand for STEM skills in tomorrow's workforce. Our research-to-practice approach includes the focus areas of mixed reality, simulations and haptics, educational technology, MOOC and blended learning, and curriculum development to enhance and scale engineering education and training. We are a group in MIT's Mechanical Engineering Department.
14.55 – 15.25	**NETWORKING BREAK**

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15.25 – 16.00	**XR IN MANUFACTURING: BUILDING THE FACTORIES OF TOMMOROW** **Sara Scheffer** | PostDoc Scientist, Research Unit of Production and Maintenance Management, TU Wien XR is reshaping manufacturing by revolutionizing how we design, produce, and maintain. From immersive training for complex tasks to enhancing collaboration and precision on the factory floor, XR has the potential to transform industries. Yet, challenges like scaling adoption, workforce readiness, and integration remain. This keynote will explore promising XR applications, their role in creating efficient, sustainable manufacturing systems, and the roadmap for overcoming barriers to unlock their full potential.
16.00 – 16.35	**GLOBALIZATION RETREATS, MANUFACTURING RESURGES** **Suzanne Berger** | Institute Professor at Department of Political Science In a world advancing towards globalization, strong competitive pressures force companies to operate as if there were a single world market with the same prices for goods, capital, and labor. After decades in which the costs of distance declined and countries lowered the border-level barriers to trade, globalization has now reversed and global markets are fragmenting. There are three main causes for this shift: political unrest blamed on globalization; supply chain failures during COVID, which reinforced the value of resilience and domestic production; and above all, national security concerns with war in Europe and US-China tensions. New border-level barriers include tariffs, export controls, import controls, and immigration restrictions. In such a world each state tries to ensure the production of vital goods and services at home or in allies through "friend-sourcing." Supporting domestic manufacturing --- which was dismissed as unimportant only a decade ago –has now become a key objective in all major countries.
17.00	**MIT CONFERENCE EVENING RECEPTION** Venue: WKÖ, Austrian Federal Economic Chamber, Christoph-Leitl-Lounge

in co-operation with:

THURSDAY, 27.03.2025

	DEEP-DIVES Instructional program with hands-on learning activities and specific takeaways with MIT faculty. Limited number of participants. There are 8 Deep-Dives in 8 different tracks available, two at 09.45, two at 10.45, two at 12.00 and two at 13.00 Plus **Roundtable** with Daniela Rus – invitation only! TBC
08.30 - 09.00	**REGISTRATION DEEP-DIVES**
09.00 – 09.30	**KEY NOTE ROBOTICS TBC** Daniela Rus | Professor of Electrical Engineering and Computer Science and Director of the Computer Science and Artificial Intelligence Laboratory
09.30 – 09.45	**BREAK**
DEEP-DIVES 1-2 **09.45 - 10.30**	Deep-Dive 1 **1. SCALING NEW TECHNOLOGIES THAT IMPROVE WORK** **Ben Armstrong** | Executive Director and Research Scientist at MIT's Industrial Performance Center Despite fears that new technologies will displace workers, the most common outcome is for new technologies to transform the jobs we do and how we do them. The question is: how can we use technologies to make jobs more enjoyable and more productive? With historical examples and recent data, MIT's Ben Armstrong will identify strategies and opportunities for "positive-sum automation" that benefits firms and workers alike.
	Deep-Dive 2 **2. HOW CAN WE TRANSFORM MANUFACTURING?** **Suzanne Berger** | Institute Professor at Department of Political Science Manufacturing today in the United States (and in those European countries about which I know something), has low productivity gains, relatively low-paid and insecure jobs, and contributes to climate change. The majority of firms are very slow to adopt new technology. Only 10% of all U.S. manufacturing firms have even one robot. As new national industrial policies invest massively in domestic production, there is the risk that we will end up with more manufacturing –but more of same. How can we inflect the future? A group of MIT engineers and social scientists have been meeting to analyze the causes of stagnation and strategies for overcoming them. Together with participants in the Deep Dive session, we will compare national experiences in manufacturing, new ideas about optimal firm structures, verticalization, and technology adoption.
10.30-10.45	**BREAK**

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DEEP-DIVES 3-4 **10.45 - 11.30**	Deep-Dive 3 **3. THE PROMISE OF BIOMANUFACTURING** **J. Christopher Love** | Raymond A. (1921) And Helen E. St. Laurent Professor, MIT Department of Chemical Engineering Biomanufacturing will change the food we eat, energy we use, and how we cure diseases. It has the potential to drastically reduce our reliance on greenhouse gases. But there are enormous challenges to getting promising advances from labs to the market. Standing up a large-scale manufacturing facility can run to $2 billion, the field is full of regulatory hurdles, and workers need advanced training. We'll look ahead at promising biomanufacturing solutions, and what it will take to scale them.
	Deep-Dive 4 **4. CO-DEVELOPMENT OF MECHANISM DESIGN** **Kaitlyn Becker** | Assistant Professor in the Mechanical Engineering Department **TBC**
11.30 - 12.00	**BREAK**
DEEP-DIVES 5-6 **12.00 - 12.45**	Deep-Dive 5 **5. INVESTING IN THE FUTURE OF U.S. MANUFACTURING: PRACTICAL APPLICATIONS OF AI AND ANALYTICS FOR COMPETITIVE ADVANTAGE** **Bruce Lawler** | Managing Director of MIT MIMO (Machine Intelligence for Manufacturing and Operations) Explore practical and successful applications of analytics and AI in manufacturing across small, medium, and large enterprises in the U.S. Learn where to invest to start and sustain a digital transformation journey, drawing on research and best practices from MIT and McKinsey. Discover impactful uses of Generative AI currently shaping the industry that will drive future investment.

DEEP-DIVES 5-6 **12.00 - 12.45**	Deep-Dive 6 **5. REIMAGINING MANUFACTURING: BUSINESS MODEL AND CAPITAL STRUCTURE INNOVATION IN A POST-GLOBAL WORLD** **Hiram Samel** | Senior Lecturer at MIT Sloan School of Management Manufacturing is undergoing a rapid transformation driven by new and emerging technologies, such as AI, robotics, additive manufacturing, and advanced automation, alongside evolving geopolitical and energy dynamics. These forces are not only reshaping traditional strategies but also driving business model innovation, as companies rethink vertical integration, regionalization, and supply chain configurations. This workshop examines how these innovations influence capital structure decisions—such as equity, debt, and hybrid instruments—potentially making companies more attractive to investors by aligning with emerging market opportunities and government priorities. With insights from U.S. and European markets, this session provides practical frameworks to integrate business model innovation with financing strategies, enabling resilience and sustained growth in a rapidly changing global environment.
12.45 - 13.15	**LIGHT LUNCH**
DEEP-DIVES 7 – 8 **13.15 – 14.00**	Deep-Dive 7 **7. THE WORLD NEEDS BETTER CORPORATE INNOVATION** **Philip Budden** | Senior Lecturer at MIT's Management School, in Sloan's TIES (Technological Innovation, Entrepreneurship and Strategic Management) Group, Deep-Dive 8 **8. DEVELOPMENT AND TRAINING OF MANUFACTURING WORKERS** **John Liu** | Director & Principal Investigator, MIT Learning Engineering and Practice Group The MIT Learning Engineering and Practice Group (LEAP Group), led by Dr. John Liu, applies design and systems principles to solving challenges in learning and develops learning experiences to better meet the increasing demand for STEM skills in tomorrow's workforce. Our research-to-practice approach includes the focus areas of mixed reality, simulations and haptics, educational technology, MOOC and blended learning, and curriculum development to enhance and scale engineering education and training. We are a group in MIT's Mechanical Engineering Department.
14.00 – 14.15	**BREAK**

ADDITIONAL WORKSHOP **14.15 – 15.15**	Additional workshop **SHAPING THE FUTURE OF MANUFACTURING WITH THE INNOVATION MAP** Marie-Therese Barth | Teamlead Innovation Map, Austrian Federal Economic Chamber Using the Innovation Map, participants will engage in a dynamic, hands-on learning experience, exploring cutting-edge manufacturing technologies, and addressing emerging challenges. This interactive session introduces an innovative foresight tool through engaging activities, empowering participants to identify transformative opportunities and craft ideas for tomorrow's manufacturing landscape. Shape the future of manufacturing with creativity, strategic thinking, and collaboration—together. More about the Innovation Map: www.innovationmap.at
15.15	**END OF DAY 2**