MIT Industrial Liaison Program Faculty Knowledgebase Report

Future of Manufacturing @MIT

March 4, 2021 1:00 pm - 3:00 pm

1:00pm

Welcome and Introduction
Randall Wright
Program Director, MIT Corporate Relations

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Randall S. Wright is a program director with MIT's Industrial Liaison Program. He manages the interface between the managements of companies, headquartered in the United States and Europe, and the senior administration and faculty of MIT.

As a program director for MIT, he convenes teams of researchers and faculty members to provide on-going emerging technology intelligence and strategic advice for the world's leading technology companies. He is a sought-after speaker, delivering keynote speeches focused on emerging technology opportunities and challenges, and counter-intuitive insights in executive panels and discussions. Randall draws on extensive experience advising executives on a range of emerging technology areas including digital transformation, big data, robotics, green buildings, water efficiency, energy storage, biofuels, advanced materials, and manufacturing. He provides navigation and recommendations on the emerging technologies and adoption landscapes critical to future business growth, as well as creation, development, and execution of programs of research between industry and MIT.

Randall has been bestowed by Federal President of Austria Dr. Heinz Fischer with the decoration Cross of Honor in Gold for Services to the Republic of Austria for his "outstanding contribution to the development of relations between Austria and MIT".

Prior to MIT, Randall was a marketing manager for Pfizer, Inc., a major U.S. pharmaceuticals company. He was also a strategic planning analyst for Pennzoil Company--a Fortune 500 oil and natural resources company. Randall is an invited lecturer at Northeastern University's Executive M.B.A. Program where he lectures on innovation and corporate strategy. His column Innovation Counterculture looks at ideas and perspectives on strategy, organization, and thinking to help executives connect to the world of innovation outside their organizations and he is published regularly in Research-Technology Management, the award-winning journal of the Industrial Research Institute.

1:05pm

Panel Discussion on The Future of Manufacturing
Brian W Anthony

Principal Research Scientist, Department of Mechanical Engineering
Associate Director, MIT.nano
Director of Technical Operations, Center for Clinical and Translational Research

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Dr. Brian Anthony is a leading expert in the design of intelligent, or smart, instruments and methodologies for monitoring, measuring, and controlling complex physical systems. His interdisciplinary work spans mechanical, electrical, and optical engineering, seamlessly integrated with computer science and optimization, to deliver innovative solutions across manufacturing, healthcare, and other industries.

At the core of Dr. Anthony's research is computational instrumentation—the development of advanced tools and techniques to observe and manage intricate systems, particularly in manufacturing and medical diagnostics. His contributions include pioneering measurement and imaging technologies that enhance precision and performance in both industrial and clinical settings.

With over 30 years of experience, Dr. Anthony combines deep academic insight with practical industry expertise in technology innovation, product development, and entrepreneurship. He has successfully guided market-driven solutions from concept to commercialization, especially at the intersection of information technology and advanced manufacturing. His achievements include receiving an Emmy Award from the Academy of Television Arts and Sciences for technical innovation in broadcast engineering.

In the classroom, Dr. Anthony is dedicated to teaching the modeling and analysis of large-scale systems to support decision-making in domains such as manufacturing, medicine, and entertainment. He also leads efforts in developing optimization algorithms and software tools for system design and evaluation.

Dr. Anthony's dual roles in academia and industry position him as a bridge between cutting-edge research and real-world application, driving impactful technologies that shape the future of engineering and innovation.

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David E. Hardt
Ralph and Eloise Cross Professor, Mechanical Engineering
Professor, Engineering Systems
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Professor, Engineering Systems

Professor Hardt is a graduate of Lafayette College (BSME, 1972) and MIT (SM, PhD, 1978). He has been a member of the Mechanical Engineering faculty at MIT since 1979. His teaching focuses on control, dynamics and manufacturing processes. His disciplinary focus is system dynamics and control, as applied to manufacturing at both the process and system level.

Dr. Hardt has served as Director of the MIT Laboratory for Manufacturing and as Engineering Co-Director for the MIT Leaders for Manufacturing Program. He is currently leader of the Manufacturing Systems and Technology Program, part of distance teaching and research collaboration between MIT and Singapore.

Dr. Hardt also serves as the Graduate Officer for the Department of Mechanical Engineering.

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Richard Braatz
Edwin R. Gilliland Professor, MIT Department of Chemical Engineering