

## MIT Industrial Liaison Program Faculty Knowledgebase Report

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AI and Autonomy @MIT

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February 25, 2021 1:00 pm - 3:00  
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1:00pm – 1:45pm

Panel Discussion: Paths to The Future AI  
Sophie Vandebroek  
Board Director, Trustee, Scholar  
2020 MIT School of Engineering Inaugural Visiting Scholar  
Former COO of IBM Research



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Board Director, Trustee, Scholar  
2020 MIT School of Engineering Inaugural Visiting Scholar  
Former COO of IBM Research

*Dr. Sophie Vandebroek is a seasoned executive with extensive C-level experience including Chief Operating Officer at IBM Research and Chief Technology Officer at Xerox Corporation and has served on public company boards since 2008. She is an expert in the creation and application of technologies that drive growth and in the governance of inclusive and innovative global organizations. Full profile [here](#)*

Most recently, Sophie was MIT's School of Engineering Inaugural Visiting Scholar. Her last corporate position was as Chief Operating Officer of [IBM Research](#) where she was instrumental in creating the [MIT-IBM Watson AI Lab](#). Previously Sophie was Xerox's Chief Technology Officer and led Xerox's global laboratories, including [PARC, Inc.](#), an innovation services company.

Sophie is a member of the Board of Directors of [IDEXX Laboratories](#), the global leader in veterinary diagnostics, and on the Supervisory Board of [Wolters Kluwer](#), a global provider of professional information, software solutions, and services. Sophie has been a member of the advisory council of the dean of engineering at Massachusetts Institute of Technology ([MIT](#)) for the past decade. She is also a trustee at the [Boston Museum of Sciences](#) and very much enjoys her time serving as a member of the international advisory board of the [Flanders AI Research Program](#).

Sophie is a Fellow of the Institute of Electrical & Electronics Engineers ([IEEE](#)). She is a frequent public speaker with keynote presentations at, among others, the [IEEE International Solid State Circuit Conference](#) and the USA [Department of Energy, ARPA-e Summit](#). Sophie was inducted into the [Women in Technology International Hall of Fame](#) and elected into the [Royal Flemish Academy for Arts & Sciences](#). Sophie's passion for creating inclusive organizations where innovation thrives has earned her many awards among which is Xerox's [Inaugural Lifetime Diversity Leadership Award of Distinction](#).

Sophie grew up in Belgium and earned a master's degree in Engineering Magna from [KU Leuven](#), Belgium and a Ph.D. in Engineering from Cornell University, Ithaca, New York.

Aude Oliva  
MIT Director, the MIT-IBM Watson AI Lab  
Director, MIT Quest Corporate



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Director, MIT Quest Corporate

Aude Oliva is the MIT Executive Director of the MIT-IBM Watson AI Lab and the Director of Quest Corporate, MIT Quest for Intelligence, an MIT-wide initiative which seeks to discover the foundations of human and machine intelligence and deliver transformative new technology for humankind. Her research program is cross-disciplinary, spanning human perception and cognition, computer vision, and cognitive neuroscience, focusing on research questions at the intersection of the three domains.

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Bilge Yildiz  
Professor, Nuclear Science and Engineering  
Professor, Materials Science and Engineering  
Bilge Yildiz  
Professor, Nuclear Science and Engineering

1:45pm – 2:30pm

Panel Discussion: The Promises and Perils of Autonomous Systems - Video time stamp starts at: 46.06

David Mindell  
Dibner Professor, History of Engineering and Manufacturing  
Professor, Aeronautics and Astronautics and Engineering Systems  
Founder & CEO, Humatics



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Dibner Professor, History of Engineering and Manufacturing  
Professor, Aeronautics and Astronautics and Engineering Systems  
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David Mindell is an engineer and historian. An expert in human relationships with robotics and autonomous systems, he has led or participated in more than 25 oceanographic expeditions. From 2005 to 2011 he was Director of MIT's Program in Science, Technology, and Society. He is the author of five books and co-founder of Humatics Corporation, which develops technologies to transform how robots and autonomous systems work in human environments.

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Nicholas Roy  
Bisplinghoff Professor, Aeronautics & Astronautics  
Director of Quest Systems Engineering, MIT Quest for Intelligence



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Bisplinghoff Professor, Aeronautics & Astronautics  
Director of Quest Systems Engineering, MIT Quest for Intelligence

Nicholas Roy is the Bisplinghoff Professor of Aeronautics & Astronautics and a member of the Computer Science and Artificial Intelligence Laboratory (CSAIL) at the Massachusetts Institute of Technology. He has a B.Sc. in Physics and Cognitive Science and an M.Sc. in Computer Science, both from McGill University. He received his Ph. D. in Robotics from Carnegie Mellon University in 2003. He has made research contributions to planning under uncertainty, machine learning, human-computer interaction and aerial robotics. He founded and led Project Wing at Google [X] from 2012-2014. He is currently the Director of Quest Systems Engineering in MIT's Quest for Intelligence.

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Sertac Karaman  
Associate Professor, Aeronautics and Astronautics



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Associate Professor, Aeronautics and Astronautics

Sertac Karaman is the Class of '48 Career Development Chair Associate Professor of Aeronautics and Astronautics at the Massachusetts Institute of Technology. He is a member of the Laboratory for Information and Decision Systems and the Institute for Data, Systems and Society. He has obtained B.S. degrees in mechanical engineering and in computer engineering from the Istanbul Technical University, Turkey, in 2007, an S.M. degree in mechanical engineering from MIT in 2009, and a Ph.D. degree in electrical engineering and computer science also from MIT in 2012. His research interests lie in the broad areas of robotics and control theory. In particular, he studies the applications of probability theory, stochastic processes, stochastic geometry, formal methods, and optimization for the design and analysis of high-performance cyber-physical systems. The application areas include driverless cars, unmanned aerial vehicles, distributed aerial surveillance systems, air traffic

2:30pm – 3:00pm

Strategic Recruiting at the Department of Electrical Engineering and Computer Science at MIT - Video time stamp starts at: 1.29.05

Tomás Palacios

Professor, Electrical Engineering and Computer Science

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Tomás Palacios is a Professor in the Department of Electrical Engineering and Computer Science at MIT. He received his PhD from the University of California - Santa Barbara in 2006, and his undergraduate degree in Telecommunication Engineering from the Universidad Politécnica de Madrid (Spain). His current research focuses on new electronic devices and applications for novel semiconductor materials such as graphene and gallium nitride. His work has been recognized with multiple awards including the Presidential Early Career Award for Scientists and Engineers, the 2012 and 2019 IEEE George Smith Award, and the NSF, ONR, and DARPA Young Faculty Awards, among many others. Prof. Palacios is the founder and director of the MIT MTL Center for Graphene Devices and 2D Systems, as well as the Chief Advisor and co-founder of Cambridge Electronics, Inc. He is a Fellow of IEEE.

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