

MIT Industrial Liaison Program Faculty Knowledgebase Report

Challenges and Opportunities for Sustainability

March 9, 2021 11:00 am - 1:00 pm

11:00am

Welcome and Introduction
Corey Cheng
Program Director, MIT Corporate Relations
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Dr. Corey Cheng joined the Office of Corporate Relations (OCR) as an Senior Industrial Liaison Officer in December 2011. He has broad interests in science and technology, and uses his technical research experience to better serve ILP members in Asia and the United States.

Cheng spent six years in industrial research at Dolby Laboratories, San Francisco, where he contributed to sound compression (Dolby Digital, AAC, MP3), wireless networking, fingerprinting, and spatial/"3-D audio" technologies. Later, he was Associate Professor and Director of the undergraduate and graduate programs in music engineering technology at the University of Miami, Florida, where he also held a dual appointment in Electrical and Computer Engineering. Cheng holds various U.S. and international patents, has published technical papers, and has presented at various conferences. His technical work includes collaborations and consulting work with the U.S. Naval Submarine Medical Research Laboratory, Fujitsu-Ten USA, Starkey Laboratories, America Online, and the Chicago Board of Trade (CBOT). Cheng was an IEEE Distinguished Lecturer for the Circuits and Systems Society from 2009-2010, and was a Westinghouse (Intel) Science Talent Search national finalist many years ago.

Cheng holds degrees in Electrical Engineering (Ph.D., M.S.E. University of Michigan), Electro-Acoustic Music (M.A. Dartmouth College), and physics (B.A. Harvard University).

Personally, Dr. Cheng is an American Born Chinese (ABC), serves as his family's genealogist, and traces his roots back to Toi San, Guang Dong Province and Xing Hua, Jiang Su Province, China. He also has a background in music, and his electro-acoustic compositions have been presented at various U.S. and international venues.

Irina Sigalovsky
Program Director, MIT Corporate Relations
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Program Director, MIT Corporate Relations

Irina Sigalovsky works in the Office of Corporate Relations at MIT where she builds mutually beneficial partnerships between corporations and MIT. Dr. Sigalovsky comes to MIT with 10 years of international experience in innovation strategy, technology forecasting and external innovation. Prior to MIT, Irina worked at GEN3 Partners, Inc. as a senior principal collaborating with Fortune 1000 companies to focus their innovation investments, execute strategic innovation agendas, and develop business globally. Throughout her career, Irina has taught at Tufts University, MIT Sloan, X-Prize Lab@MIT, MIT HST, Boston and Harvard Universities.

Eduardo Garrido
Program Director
MIT Corporate Relations Industrial Liaison Program

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Eduardo Garrido is a Program Director at the Office of Corporate Relations at MIT.

Eduardo Garrido has a strong multicultural and multidisciplinary background, with deep expertise in higher education, banking and management consulting, acquired in Argentina, Spain and USA. He currently serves as Program Director at the Industrial Liaison Program, Office of Corporate Relations (MIT), the largest conduit between corporations and MIT.

Before joining MIT, Eduardo was the Director of Santander Universities at Santander Bank, N.A., based in Boston, MA. In this role, he managed the institutional and business relationship with 46 universities, mainly in the northeastern US. He also served as Santander US representative at President Obama's 100,000 Strong in the Americas initiative and the Woman for Africa Foundation, among other relevant global higher education projects, and as Member of the Global President's Council at NYU and the Advisory Boards of the Deming Cup, ECLA (Columbia University) and Newcastle University Business School.

Before coming to the US, Eduardo had several roles at Banco Santander Rio (Argentina). As Director of Santander Universities, he started the first entrepreneurship initiative at Grupo Santander worldwide, including the launching of a business plan competition, the Technology Innovation Venture Capital Fund, and a national competitiveness development initiative. He also sponsored the first edition of MIT 50K in Argentina. As Director of Organization and Quality at Banco Santander Rio, he led the team that obtained the first Global ISO 9001:2000 certificate for a financial institution in Latin America, certifying all main processes and areas of the bank. He also steered the business process reengineering project for the whole Bank, partnering with Ernst & Young and McKinsey and Co and implemented the Retail Banking new operating model.

Before joining Banco Santander Rio, Eduardo was Senior Manager of the Financial Services and Capital Markets Group at Price Waterhouse Management Consultants in Madrid, Spain.

Materials Recovery, Recycling, and Materials Extraction
Elsa Olivetti

Thomas Lord Career Development Assistant Professor in Materials Science Engineering
MIT Department of Materials Science and Engineering

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Elsa Olivetti began her position as a Thomas Lord Assistant Professor of Materials Science and Engineering in January 2014. She completed her Ph.D. at MIT's Department of Materials Science and Engineering, and since then has been working in MIT's Materials Systems Lab, currently holding the position of Research Scientist. She holds a Bachelor of Science with Highest Distinction in Engineering Science and Materials Science from the University of Virginia. Olivetti's research focuses on characterizing and understanding sustainable materials systems, examining the economic and environmental implications of all aspects of the materials cycle, from selection, to manufacturing, to recycling or disposal decisions. She works with several research teams, including a consortium working on environmental assessment of electronic products and MIT's Concrete Sustainability Hub. At MIT, Olivetti has taught subjects for the Department of Materials Science and Engineering, the Sloan School, and the MIT-Portugal Program.

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The Joint Program on Science and Policy of Global Change: Advancing a Sustainable World through Interconnected Global and Regional Systems
Sergey Paltsev

Deputy Director, MIT Joint Program on the Science and Policy of Global Change
Senior Research Scientist, MIT Energy Initiative and MIT Center for Energy and Environmental Policy Research (CEEPR)
Director, [Energy at Scale Center](#)



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Senior Research Scientist, MIT Energy Initiative and MIT Center for Energy and Environmental Policy Research (CEEPR)
Director, [Energy at Scale Center](#)

Dr. Sergey Paltsev is a Deputy Director of the MIT Joint Program on the Science and Policy of Global Change and a Senior Research Scientist at MIT Energy Initiative and MIT Center for Energy and Environmental Policy Research (CEEPR), Massachusetts Institute of Technology (MIT), Cambridge, USA. He is the lead modeler in charge of the MIT Economic Projection and Policy Analysis (EPPA) model of the world economy. His research covers a wide range of topics including energy economics, climate policy, taxation, advanced energy technologies, and international trade. Sergey is an Advisory Board Member for the Global Trade Analysis Project (GTAP) Consortium and a Member of the Economy-Wide Modeling Panel for the US Environmental Protection Agency (EPA) Science Advisory Board. Dr. Paltsev is an author of more than 100 peer-reviewed publications in scientific journals and books. He is a recipient of the 2012 Pyke Johnson Award (by the Transportation Research Board of the National Academies, USA, for the best paper in the area of planning and environment), the Best Policy Analysis Paper of 2012 by Environmental Science and Technology Journal of the American Chemical Society and the Best 2004 Research Award by Tokyo Electric Power Company, Japan. Sergey was a Lead Author of the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC). In 2007-2008 Dr. Paltsev was a member of the Expert Panel on the Economics of Climate Change for the U.S. Government Accountability Office (GAO). Before joining MIT in 2002, Sergey Paltsev worked as a Consultant for International Management and Communication Corporation and The World Bank, and as an Executive Director of the Program in Economics and Management of Technology at Belarusian State University. He received a Diploma in Radiophysics and Electronics from Belarusian State University and PhD in Economics from University of Colorado at Boulder.

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When to Embrace Sustainability in a Business (and When Not To)

Yossi Sheffi

Elisha Gray II Professor of Engineering Systems, MIT
Director, MIT Center for Transportation and Logistics (MIT CTL)
Professor, MIT Civil and Environmental Engineering
Professor, MIT Institute of Data Science and Society



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Director, MIT Center for Transportation and Logistics (MIT CTL)
Professor, MIT Civil and Environmental Engineering
Professor, MIT Institute of Data Science and Society

Yossi Sheffi is an expert in systems optimization, risk analysis and supply chain management. He is author of a text book and four award-winning management books. His latest book is "The New Abnormal," came out on October 1, 2020

Under his leadership, MIT CTL has launched many educational, research, and industry/government outreach programs, including the MIT SCALE network involving six academic centers round the world. In 2015, CTL has launched the on-line Micromaster's program, enrolling 350,000 students in 196 countries.

Outside the institute, Dr. Sheffi has consulted with numerous organizations. He has also founded or co-founded five successful companies, all acquired by large enterprises.

Dr. Sheffi has been [recognized](#) in numerous ways in academic and industry forums and won dozens of awards.

He obtained his B.Sc. from the Technion in Israel in 1975, and Ph.D. from MIT in 1978.

For more information visit: <http://sheffi.mit.edu/>

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The MIT Environmental Solutions Initiative (ESI)
John Fernández

Professor of Architecture, Building Technology and Engineering Systems
Head, Building Technology (Architecture)
Director, MIT Environmental Solutions Initiative
Director, Urban Metabolism Group
Director, Emergent Materials Group
Co-Director, International Design Center (Singapore University of Technology and Design)
MIT Department of Architecture



John Fernández

Professor of Architecture, Building Technology and Engineering Systems
Head, Building Technology (Architecture)
Director, MIT Environmental Solutions Initiative
Director, Urban Metabolism Group
Director, Emergent Materials Group
Co-Director, International Design Center (Singapore University of Technology and Design)
MIT Department of Architecture

John E. Fernández '85 is a professor of building technology in the Department of Architecture and a practicing architect. Fernández founded and directs the MIT Urban Metabolism Group, a highly multidisciplinary research group focused on the resource intensity of cities and design and technology pathways for future urbanization. He is author of two books, numerous articles in scientific and design journals including *Science*, the *Journal of Industrial Ecology*, *Building and Environment*, *Energy Policy* and others, and author of nine book chapters. He is Chair of Sustainable Urban Systems for the International Society of Industrial Ecology and Associate Editor of the journal *Sustainable Cities and Society*. Fernández served as Director of the Building Technology Program in the Department of Architecture from 2010 to 2015 and as the Director of the International Design Center at MIT from 2012 to 2015. He previously served as the Director of Research for Sustainable Energy Systems of the MIT Portugal Program.

Fernández is a member of the Board for New Ecology, Inc., and a member of the Board of Advisors for the Center for Sustainable Energy of the Fraunhofer Institute. At MIT, Fernández serves on the Committee on the Innovation Initiative, the Faculty Policy Committee, and the Institute Planning Committee, as well as the Campus Sustainability Task Force, the MIT Materials and Waste Management Working Group, and the Metropolitan Warehouse Advisory Group. Fernández is Housemaster for MIT's Baker House.

Fernández has served on several National Science Foundation Review Panels, as a member of the Department of Energy Roadmap 2020 Advisory Committee, and as a member of the Board of Directors of the Building Envelope Technology and Environmental Council of the National Institute of Building Science. He also served as a member of the Research Committee of the United States Green Building Council. Fernández has participated in the launch of two startup companies in the past 5 years. With his partner and wife, Malvina Lampietti, Fernández has been designer of more than 2.5 million square feet of new construction. As senior designer in two major New York City architecture firms Fernández led the design and construction of major commercial, institutional, and residential buildings in Washington D.C., New York City, Philadelphia, Los Angeles, Honolulu, Jakarta, Tokyo, Shanghai, and other locations.

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MIT Sloan Sustainability Initiative
Jason Jay

Senior Lecturer, Sustainability
Director, Sustainability Initiative at MIT Sloan
MIT Sloan School of Management

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Senior Lecturer, Sustainability
Director, Sustainability Initiative at MIT Sloan
MIT Sloan School of Management

Jason Jay is a Senior Lecturer at the MIT Sloan School of Management and Director of the [Sustainability Initiative at MIT Sloan](#). His research focuses on how people navigate the tensions between personal, business, and social goals in sustainability efforts. His first book is [Breaking Through Gridlock: The Power of Conversation in a Polarized World](#) and he has published articles in the Academy of Management Journal and California Management Review. He teaches courses on strategy, innovation, and leadership for sustainable business at MIT, and engages students and alumni in hands-on projects with leading companies and organizations. Prior to MIT, Jason was a management consultant for Dialogos International, where he consulted on leadership development and organizational change for major international corporations and NGO's including BP and the World Bank. Jason holds a Ph.D. in Organization Studies from the MIT Sloan School of Management, and an AB and M.Ed from Harvard University. He lives in Newton, Massachusetts.

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