8:15am  Registration and Breakfast

9:00am  Citi Welcome
Deirdre Dunn
Managing Director, Co-Head of Global Rates, Citi

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Deirdre Dunn is currently a Co-Head of Global Rates. In this capacity, she oversees the North American sales, trading, and origination businesses of Citi's Global Rates franchise. Dunn is a member of Citi's Pension Plan Investment Committee.

Prior to this appointment, Dunn was running North American G10 Rates Markets, responsible for the Trading, Structuring and North American Distribution of G10 Interest Rate Products. She joined Citi in July 2011 to run the mortgage pass through trading desk. Prior to joining Citi, she ran the US Interest Rate Swaps Trading Desk for Barclays Capital. She also spent two years with Barclays Capital in London, managing the long end of European Government Bond business, and then building out a cross currency Sovereign Supranational and Agency Trading business.

Dunn began her career in 1999 at Goldman Sachs. In 10 years there and at Lehman Brothers, she traded a variety of different residential and commercial mortgage products, ultimately running the pass through trading business.

She holds a BS in chemical engineering from the Massachusetts Institute of Technology (MIT).

Dunn is a member of the Treasury Borrowing Advisory Committee of the Securities Industry and Financial Markets Association, which is an advisory committee governed by federal statute that meets quarterly with the Treasury Department. The Borrowing Committee presents their observations to the Treasury Department on the overall strength of the U.S. economy as well as providing recommendations on a variety of technical debt management issues. She is a member of the Treasury Market Practices Group (TMPG), which is sponsored by the Federal Reserve Bank of New York. She is a member of the Executive Council of the Susan F. Smith Center for Women's Cancers at Dana Farber. Dunn is also a member of the Foundation of Paul Taylor's American Modern Dance.
Karl Koster is the executive director of MIT Corporate Relations. MIT Corporate Relations includes the MIT Industrial Liaison Program, which celebrated 69 years of service to the Institute and its corporate partners in 2017, and MIT Startup Exchange.

In that capacity, Koster and his staff work with the leadership of MIT and senior corporate executives to design and implement strategies for fostering corporate partnerships with the Institute. Koster and his team have also worked to identify and design a number of major international programs for MIT, which have been characterized by the establishment of strong, programmatic linkages among universities, industry, and governments. Most recently these efforts have been extended to engage the surrounding innovation ecosystem, including its vibrant startup and small company community, into MIT’s global corporate and university networks.

Koster also served as the Chairman of the University-Industry Demonstration Partnership (UIDP), an organization that seeks to enhance the value of collaborative partnerships between universities and corporations.

Koster graduated from Brown University with a BA in geology and economics, and received an MS from MIT Sloan School of Management. At MIT Sloan he concentrated in international business management and the management of technological innovation. Prior to returning to MIT, Koster worked as a management consultant in Europe, Latin America, and the United States on projects for private and public sector organizations.

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Forces Shaping the Future of the Internet
David Clark
Senior Research Scientist
Co-Director, MIT Communications Futures Program (CFP)
MIT Computer Science and Artificial Intelligence Laboratory

In the early days of the Internet, technical innovation shaped its future. Today, issues of economics, market dynamics, incentives, and some fundamental aspects of networked systems shape the future. This talk will summarize eleven forces that are shaping the future of the Internet, and make an argument that we are at a point of inflection in the character of the Internet, as profound as the change in the 1990’s when the Internet was commercialized.
Dr. Michael Stonebraker has been a pioneer of database research and technology for more than forty years. He was the main architect of the INGRES relational DBMS, and the object-relational DBMS, POSTGRES. These prototypes were developed at the University of California at Berkeley where Stonebraker was a Professor of Computer Science for twenty-five years. More recently at MIT, he was a co-architect of the Aurora/Borealis stream processing engine, the C-Store column-oriented DBMS, the H-Store transaction processing engine, the SciDB array DBMS, and the Data Tamer data curation system. Presently he serves as Chief Technology Officer of Paradigm4 and Tamr, Inc. Stonebraker was awarded the ACM System Software Award in 1992 for his work on INGRES. Additionally, he was awarded the first annual SIGMOD Innovation award in 1994, and was elected to the National Academy of Engineering in 1997. He was awarded the IEEE John Von Neumann award in 2005 and the 2014 Turing Award, and is presently an Adjunct Professor of Computer Science at MIT, where he is co-director of the Intel Science and Technology Center focused on big data.

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This talk (with apologies to David Letterman) will present the top ten big data mistakes witnessed in the last decade or so. These range from “not planning to move everything to the cloud” to “believing that a data lake will solve all your problems.” Also included is an eleventh blunder, which effectively means “working for a company that is not focused on avoiding these blunders.”
11:05am
Interpretable AI and its Applications in Financial Services
Dimitris Bertsimas

Boeing Professor of Operations Research
Co-Director, Operations Research Center (ORC)
Faculty Director, Master of Business Analytics
MIT Sloan School of Management

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Dimitris Bertsimas is the Boeing Professor of Operations Research, the codirector of the
Operations Research Center, and faculty director of the Master of Business analytics at MIT.
His research interests include optimization, machine learning and applied probability and
their applications in health care, finance, operations management, and transportation.
Bertsimas has coauthored more than 200 scientific papers and four graduate level
textbooks. He is the editor in Chief of INFORMS Journal of Optimization. He has supervised
67 doctoral students and is currently supervising 25 others. Bertsimas is a member of the
National Academy of Engineering, an INFORMS fellow, and has received numerous
prestigious research and teaching awards. He holds an SM in applied mathematics and a
PhD in operations research from MIT.

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This talk introduces a new generation of machine learning methods that provide state of the
art performance and are very interpretable. Optimal classification (OCT) and regression
(ORT) trees are introduced for prediction and prescription with and without hyperplanes. It
will be shown that (a) Trees are very interpretable, (b) They can be calculated in large scale
in practical times, and (c) In a large collection of real world data sets, they give comparable
or better performance than random forests or boosted trees. Their prescriptive counterparts
have a significant edge on interpretability and comparable or better performance than causal
forests. These optimal trees with hyperplanes have at least as much modeling power as
(feedforward, convolutional and recurrent) neural networks and comparable performance in
a variety of real world data sets. Finally, a variety of optimal trees applications in financial
services will be discussed.
Christina Qi serves as CEO of Elisify, the first modern data marketplace. Previously, she founded Domeyard LP, a hedge fund known for its focus on high frequency trading. She started Domeyard 8 years ago with $1000 in savings. Domeyard trades up to $1 billion USD per day. Her company’s story has been featured on the front page of Forbes and Nikkei, and quoted in the Wall Street Journal, Bloomberg, CNN, NBC, and the Financial Times. Christina is a contributor to the World Economic Forum’s research on AI in finance. She is a visiting lecturer at MIT, including Nobel Laureate Robert Merton’s “Retirement Finance” class since 2014, and alongside President Emerita Susan Hockfield and Dean David Schmittlein in 2019. Christina teaches Domeyard’s case study at Harvard Business School and other universities.

Christina was elected as a Member of the MIT Corporation, MIT’s Board of Trustees. She was elected Co-Chair of the Board of Invest in Girls in 2019. Christina also sits on the Board of Directors of The Financial Executives Alliance (FEA) Hedge Fund Group, drives entrepreneurship efforts at the MIT Sloan Boston Alumni Association (MIT SBAA), and serves on U.S. Non-Profit Boards Committee of 100 Women in Finance. Her work in finance earned her a spot on the Forbes 30 Under 30 and Boston Business Journal 40 Under 40 lists. She holds an S.B. in Management Science from MIT and is a CAIA Charterholder.

Jim Crowley
Cofounder & CEO, Forge.AI

Jim Crowley is cofounder and CEO of Forge.AI, a cloud based activity based intelligence platform. In real-time, Forge.AI captures the global flow of unstructured data and transforms it into enriched, intelligently augmented and structured data designed for computationally enhanced and quantitative based decision-making processes associated with risk modeling, seeking alpha and other forms of advanced modeling activities.

Prior to Forge.AI, Crowley led and helped build, several technology companies from startup through either an IPO or their acquisition by public companies. His key relevant experiences include: Skyhook Wireless, Inc. (CEO - Geo location - acquired by Liberty Media), Turbine (CEO - Digital Entertainment - acquired by Warner Bros.), m-Qube (COO – Mobile - acquired by VeriSign) and Network Plus, Inc. (COO - Data / Communications – took Public on NASDAQ).

Jana Eggers
CEO, Nara Logics

Jana Eggers is CEO of the neuroscience-inspired artificial intelligence platform company, Nara Logics. Eggers is an experienced tech executive focused on inspiring teams to build great products. Eggers has started and grown companies and led large organizations at public companies. She is active in customer-inspired innovation, the artificial intelligence industry, the Autonomy/Mastery/Purpose-style leadership, as well as running and triathlons. Eggers has held technology and executive positions at Intuit, Blackbaud, Los Alamos National Laboratory (computational chemistry and super computing), Basis Technology (internationalization technology), Lycos, American Airlines, Spreadshirt (ecommerce), and multiple startups.
Kurt Rohloff is the cofounder and CTO of Duality Technologies, a startup commercializing privacy-preserving data science technologies. He is also tenured as an associate professor of computer science at NJIT in Newark. He is a DARPA Director's Fellowship Awardee and has been the PI on several DARPA and IARPA projects. Prior to Duality, Rohloff worked for nine years in the US defense industry as a senior scientist in the Distributed Systems research group at Raytheon BBN Technologies. His areas of technical expertise include distributed information management, secure computing, and high assurance software design. He is the cofounder of the PALISADE open-source lattice encryption library. Rohloff received his bachelor's degree in electrical engineering from Georgia Tech and his master's and PhD in electrical engineering from the University of Michigan.

Annika Goldman is COO of Canopy, where she is responsible for the direction and execution of the overall business strategy for the company. Goldman also oversees all product decisions including Canopy-owned experiences as well as the company’s enterprise offerings. She is also charged with running Canopy’s financial operations including budgeting and fundraising.

Prior to Canopy, Goldman held a number of roles at Spotify starting as a legal counsel and later serving as Director of Music Publishing where she ran all business operations for the music publishing side of the organization.

Before joining Spotify, Goldman was an associate at Cooley, LLP. She clerked for a Federal District Court in the United States and worked in Kosovo to help establish the Constitutional Court of Kosovo. Goldman earned her JD from Harvard Law School and holds a BA from Yale University.

Dan Sturtevant cofounded Silverthread in 2013 to commercialize 15 years of Harvard and MIT research on improving business outcomes for complex software projects. From 2012 through 2015, he researched the empirical foundations of Silverthread’s predictive analytics for design quality and software economics. Sturtevant holds a BS in computer engineering from Lehigh University and an MS in engineering and management and PhD in engineering systems from MIT.
12:30pm Lunch with Startup Exhibit
Andrew McAfee studies the ways that information technology (IT) affects businesses and business as a whole. His research investigates how IT changes the way companies perform, organize themselves, and compete. At a higher level, his work also investigates how computerization affects competition, society, the economy, and the workforce.

He and Erik Brynjolfsson are co-authors of the ebook *Race Against the Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy.* The book brings together a range of data, examples, and research to show that the average US worker is being left behind by advances in technology.

He coined the phrase “Enterprise 2.0” in a spring 2006 *Sloan Management Review* article to describe the use of Web 2.0 tools and approaches by businesses. He also began blogging at that time, both about Enterprise 2.0 and about his other research. McAfee’s blog is widely read, becoming at times one of the 10,000 most popular in the world (according to Technorati). He also maintains a Facebook profile and Twitter account.

In addition to the blog that is part of this site, McAfee also writes a blog as part of harvardbusiness.org’s “HBR Voices.” His posts are also regularly reprinted at forbes.com.

McAfee’s book on Enterprise 2.0 was published in November 2009 by Harvard Business School Press.

In the July / August 2008 issue of *Harvard Business Review* McAfee and Erik Brynjolfsson published “Investing in the IT that Makes a Competitive Difference,” a summary of their research investigating IT’s links to changes in competition. This work was the first to reveal that competition began to heat up in the US in the mid 1990s – to become faster paced, more turbulent, and more winner-take-all – and that this acceleration was greater in industries that spent more on IT. This research continues, and continues to highlight that technology appears to be significantly reshaping the landscape of competition.

McAfee is the author or co-author of more than 100 articles, case studies and other materials for students and teachers of technology. This work has convinced him that modern information technology is the most powerful tool available to business leaders, yet also the most misunderstood and under-appreciated resource at their disposal.

He has written columns for the Washington Post, the Financial Times, and Canadian Manager, and been a guest on the Charlie Rose show.

In 2008 McAfee was named by the editors of the technical publishing house Ziff-Davis number 38 in their list of the “100 Most Influential People in IT.” He was also named by Baseline magazine to a separate, unranked list of the 50 most influential people in business IT that year. In 2009 he was the only non-executive in the Everything Channel’s group of the 100 most influential executives in the technology industry.

He speaks frequently to both academic and industry audiences, and has taught in executive education programs around the world.

McAfee is currently a principal research scientist at the Center for Digital Business in the MIT Sloan School of Management. He was previously a professor at Harvard Business School and a fellow at Harvard’s Berkman Center for Internet and Society.

He received his Doctorate from Harvard Business School, and completed two Master of Science and two Bachelor of Science degrees at MIT.

Want some good news about the environment? In America, we have finally learned to grow our economy while taking less from the Earth year after year: less water, timber, and metal; fewer minerals and resources; even less energy. This talk is a show and tell about this profound change. Andy McAfee will show the evidence that we’ve started getting more from less and tell how it happened. The unlikely heroes of the tale are the cost pressures that come from intense competition and powerful digital tools that reduce the need for resources.
Culture is a potent force in shaping individual and group behavior, yet it has received relatively little attention in the context of financial risk management and the recent financial crisis. In this talk, Professor Lo will present a brief overview of the role of culture and ethics according to psychologists, sociologists, and economists, and then propose a specific framework for analyzing culture in the context of financial practices and institutions in which three questions are addressed: (1) What is culture?; (2) Does it matter?; and (3) Can it be changed?
This presentation will discuss both the achievements and challenges of China’s growth model and argue that the current model is running into substantial headwinds.
Sandeep Arora
Managing Director, Global Head of FinTech & Innovation
Citi Markets & Securities Services

Sandeep Arora is the Global Head of Fintech and Innovation for Citi Markets and Securities Services, responsible for managing the FinTech investment portfolio, CitiVelocity.com, Electronification, Data, BlockChain, and Regulatory initiatives. He also represents Citi at MIT’s FinTech Alliance.

Sandeep has worked in Citi Markets since 2002, holding positions of COO of Citi Markets & Securities Services, COO of FICC, and COO/CFO of EM Sales & Trading.

Sandeep joined Citi in 1988, as a Management Associate, and has worked in a variety of positions in New York, London and India. His experiences at Citi during the period 1988-2002 have spanned Sales & Trading, Finance, Corporate & Investment Banking, Consumer Banking, Treasury and Operations & Technology.

Sandeep holds a bachelor degree in economics from Delhi University in 1986, and an MBA from Delhi University in 1988.

4:00pm
Adjournment