

MIT Industrial Liaison Program Faculty Knowledgebase Report

Financial Services Industry @MIT Workshop

April 11, 2017 1:00 pm - 6:45 pm

1:00pm Registration & Introduction

1:30pm IOT, Security, and Risk

Once again, much like in 1994, the world is on the brink of a new worldwide platform. The core idea is simple and transformative, connecting the physical to the virtual, the Internet of Things (IOT). Undoubtedly, a leap forward. However, from a security perspective there are significant challenges.

The recent attack on Ukraine's power grid highlighted the vulnerability of PLCs, SCADA, and industrial control systems, the backbone of industrial production. It was the first known cyber-attack resulting in power outages. Mirai was a more dramatic demonstration. The destructive tactics, techniques and procedures, could be replicated against any industrial control system. The session presents research and emerging trends to strengthen, secure, and quantify risk.

Abel Sanchez
Executive Director, [MIT Geospatial Data Center \(GDC\)](#)



Abel Sanchez
Executive Director
[MIT Geospatial Data Center \(GDC\)](#)

Dr. Abel Sanchez holds a Ph.D. from the Massachusetts Institute of Technology (MIT). He is the Executive Director of MIT's Geospatial Data Center, architect of "The Internet of Things" global network, and architect of data analytics platforms for SAP, Ford, Johnson & Johnson, Accenture, Shell, Exxon Mobil, and Altria. In cyber security, Dr. Sanchez architected impact analysis of large-scale cyber attacks designing Cyber Ranges for the Department of Defense (DOD). In password security, Dr. Sanchez led the design of a password firewall (negative authentication) for the Intelligence Advanced Research Projects Activity (IARPA) agency. In machine learning, addressing fraud detection, Dr. Sanchez designed a situational awareness framework that exploits different perspectives of the same data and assigns risk scores to entities for Accenture. He led the design of a global data infrastructure simulator, modeling follow-the-sun engineering, to evaluate the impact of competing architectures on the performance, availability and reliability of the system for Ford Motor Company. He has been involved in developing E-Educational software for Microsoft via their I- Campus Program and with establishing the Accenture Technology Academy, an online resource for over 200,000 employees. He has 10 years of experience with learning management systems and has made deployments in America, Asia, and Europe. He teaches MIT courses on cybersecurity, engineering computation, and data science and has produced over 150 educational videos.

[View full bio](#)

2:20pm

Blockchain for Finance – How Big Will the Impact Really Be?

Blockchain technology—where is it going? What are the business applications? Which country/economies will be “winners” in terms of opportunities, challenges and disruption. What will be the protocol for distributed ledgers-public and/or private? Where will the nodes be? Who will “own” them? Where is the talent? This change in the monetary system and transactions raises the issues of who will regulate, how will policy be formulated, and finally the social issue of financial inclusion.

Simon Johnson

Ronald A Kurtz (1954) Professor of Entrepreneurship
Professor of Global Economics and Management
MIT Sloan School of Management

Simon Johnson

Ronald A Kurtz (1954) Professor of Entrepreneurship
Professor of Global Economics and Management
MIT Sloan School of Management

Simon Johnson is the Ronald A. Kurtz (1954) Professor of Entrepreneurship at the MIT Sloan School of Management, where he is also head of the Global Economics and Management group and chair of the Sloan Fellows MBA Program Committee. He cofounded and currently leads the popular Global Entrepreneurship Lab (GLAB) course – over the past 16 years, MBA students in GLAB have worked on more than 500 projects with start-up companies around the world.

He also works closely with Joi Ito, head of MIT's Media Lab, on the Digital Currency Initiative (DCI). Specifically, Johnson supervises research projects related to blockchain technology, and teaches a course (with Michael Casey and Brian Forde) on this fast developing business sector. Johnson is not an investor in bitcoin or any bitcoin-related startups, but he works closely with MIT students and others who want to build better companies.

Johnson is a senior fellow at the Peterson Institute for International Economics in Washington, D.C., a cofounder of BaselineScenario.com, and a member since inception of the FDIC's Systemic Resolution Advisory Committee. In July 2014, Johnson joined the Financial Research Advisory Committee of the U.S. Treasury's Office of Financial Research (OFR); he chairs the recently formed Global Vulnerabilities Working Group.

Johnson has been a member of the private sector Systemic Risk Council since it was founded by Sheila Bair in 2012; this group is now chaired by Sir Paul Tucker. From April 2009 to April 2015, he was a member of the Congressional Budget Office's Panel of Economic Advisers. In March 2016, Johnson was the third Distinguished Visiting Fellow at the Central Bank of Barbados.

“For his articulate and outspoken support for public policies to end too-big-to-fail”, Johnson was named a Main Street Hero by the Independent Community Bankers of America (ICBA) in 2013. In April 2015, the Washington Examiner placed Johnson at #11 on their list of New Voices for 2015. In November 2015, Johnson joined the advisory council of Intelligence2 Debates.

Over the past seven years, Johnson has published more than 300 high impact pieces in the New York Times, Bloomberg, The Washington Post, The Wall Street Journal, The Atlantic, The New Republic, BusinessWeek, The Huffington Post, The Financial Times, and Project Syndicate.

“The Quiet Coup” received over a million views when it appeared in The Atlantic in early 2009. His book 13 Bankers: the Wall Street Takeover and the Next Financial Meltdown (with James Kwak), was an immediate bestseller and has become one of the mostly highly regarded books on the financial crisis. Their follow-up book on U.S. fiscal policy, White House Burning: The Founding Fathers, Our National Debt, and Why It Matters for You, won praise across the political spectrum. Johnson's academic research on economic development, corporate finance, and political economy is widely cited.

From March 2007 through the end of August 2008, Johnson was the International Monetary Fund's Economic Counsellor (chief economist) and Director of its Research Department. He also helped to found and run the NBER Africa Project; four volumes are forthcoming from the University of Chicago Press.

Johnson holds a B.A. in economics and politics from the University of Oxford, an M.A. in economics from the University of Manchester, and a Ph.D. in economics from MIT.

[View full bio](#)

3:10pm

Networking Break

Fueled by mobility, analytics, social media, cloud computing, and embedded devices, companies in every industry are mapping their way through the digital universe. Yet some firms are far outpacing others in their ability to drive new value from digital technology. Why? Drawing from his new book, *Leading Digital: Turning Technology into Business Transformation*, George shows how effective leaders can transform their businesses – customer engagement, operations, and business models — to continuously create new value from technology. This session will help leaders at all levels develop the skills needed to drive digital transformation in their organizations.

George Westerman
Founder, Global Opportunity Forum, MIT Office of Open Learning
Senior Lecturer, [MIT Sloan School of Management](#)



George Westerman
Founder, Global Opportunity Forum, MIT Office of Open Learning
Senior Lecturer
[MIT Sloan School of Management](#)

George Westerman is a Senior Lecturer at the MIT Sloan School of Management and Founder of the Global Opportunity Forum (<http://gof.mit.edu>).

George's work bridges the fields of executive leadership and technology strategy. During more than 20 years with MIT Sloan School of Management, he has written three award-winning books, including *Leading Digital: Turning Technology Into Business Transformation*. As a pioneering researcher on digital transformation, George has published papers in *Harvard Business Review*, *Sloan Management Review*, and other top journals. He is now focused on helping employers, educators, and other groups to rethink the process of workforce learning around the world through the GOF and several research collaborations.

George is cochair of the MIT Sloan CIO Leadership Awards, a member of the Digital Strategy Roundtable for the US Library of Congress, and member of the Board of Directors for Workcred. He works frequently with senior management teams and industry groups around the world. Prior to earning a Doctorate from Harvard Business School, he gained more than 13 years of experience in product development and technology leadership roles.

[View full bio](#)

4:20pm

How Big Data and Predictive and Prescriptive Analytics can Materially Affect the Financial Services Industry

Everyone wants more information. Banks want to know more about their customers, customers want a holistic optimization of all their financial services accounts, and risk managers want to assess the risk of a future breach before it happens. Join Dimitris Bertsimas to explore how predictive and prescriptive analytics can be applied across the financial services industry to optimize the experience for customers and businesses alike.

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



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

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.

[View full bio](#)

5:10pm

Fintech Startup Lightning Talks

5:40pm

Networking Reception with Wine & Cheese