

AI and the FUTURE OF WORK



Massachusetts
Institute of
Technology



November 1-2, 2017

Kresge Auditorium
48 Massachusetts Avenue
Cambridge, MA 02139

MIT CSAIL and the MIT IDE will host a 2-day conference to help industry effectively navigate the opportunities and challenges of the AI Revolution, as well as provide valuable insight to individuals charting their career paths across the many fields impacted by advances in AI.

Day 1 | Wednesday, November 1, 2017 *(EDT time zone)*

- 8:00am - 8:30am **Breakfast and Networking**
- 8:30am - 8:40am **Welcome**
Rafael Reif, President, MIT
- 8:40am - 8:50am **Opening Remarks**
Daniela Rus, Director, MIT CSAIL, and Professor, MIT EECS
- 8:50am - 9:20am **Open Plenary**
Yann LeCun, Director, Facebook AI Research, and Professor, NYU
- Day 1 Panel Moderator:**
John Markoff, Fellow, Center for Advanced Study in the Behavioral Sciences
- 9:20am - 10:05am **The AI Revolution: Why now? What it means and how to realize the potential**
Erik Brynjolfsson, Director, MIT Initiative on the Digital Economy, and Professor, MIT Sloan School of Management
Kai-Fu Lee, Chairman and CEO, Sinovation Ventures
James Manyika, Chairman and Director, McKinsey Global Institute, and Senior Partner, McKinsey & Company
Mona Vernon, CTO, Thomson Reuters Labs
- 10:05am - 10:15am **Break**
- 10:15am - 11:00am **Positioning for Success: Augmentation vs. Automation**
Dimitris Papageorgiou, Partner, People Advisory Services, Ernst & Young
John Van Reenen, Professor, MIT Department of Economics and MIT Sloan School of Management
Krystyn Van Vliet, Professor of Material Science and Engineering and Biological Engineering, MIT Dept. of Materials Science and Engineering
Sophie Vandebroek, Chief Operating Officer, IBM Research
- 11:00am - 11:40am **Strategies to Navigate the First Phase**
Allen Blue, Co-Founder & Vice President of Product Management, LinkedIn
Jennifer Chayes, Technical Fellow & Managing Director, Microsoft Research New England; Microsoft Research New York City; Microsoft Research Maluuba, Montreal
Sam Madden, Professor, MIT CSAIL, and Faculty Co-Director, SystemsThatLearn@CSAIL
Alex "Sandy" Pentland, Professor, MIT Sloan School of Management, and Founding Director, MIT Connection Science Research Initiative

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Day 1 | Wednesday, November 1, 2017 *(continued)*

11:40am- 12:25pm **Lunch Talk: The State of AI in China**

Kai-Fu Lee, Chairman and CEO, Sinovation Ventures, and President, Sinovation Ventures Artificial Intelligence Institute

A former artificial intelligence researcher, former head of Microsoft Research Asia and Google China, and long time investor in Chinese startups, Dr. Kai-Fu Lee will discuss that everyone should understand about cutting edge A.I. applications and tech powerhouses in China.

12:25pm - 1:10pm **Thinking Machines: Robots Rising**

Daniela Rus, Director, MIT CSAIL, and Professor, MIT EECS

Moshe Vardi, Professor, Computational Engineering, Rice University, and Director, Ken Kennedy Institute for Information Technology

Manuela Veloso, University Professor, and Head, Machine Learning Department, School of Computer Science, Carnegie Mellon University

1:10pm - 1:50pm **Intelligent Automation: Opportunities and Challenges**

Josh Tenenbaum, Professor, MIT CSAIL

Simon Thompson, Head of Big Data and Customer Experience Practice, BT

Patrick Winston, Professor, MIT CSAIL

1:50pm - 2:20pm **Afternoon Plenary: Fireside Chat**

Eric Schmidt, Executive Chairman, Alphabet

Host: Daniela Rus, Director, MIT CSAIL, and Professor, MIT EECS

2:20pm - 3:05pm **Reality Check: What Major Technological Challenges Still Need to be Addressed to Realize Full Potential?**

Cynthia Breazeal, Director Personal Robots Group and Co-founder and Chief Scientist of Jibo

John Leonard, Professor, MIT CSAIL and Toyota Research Institute

Daniel Theobald, Co-Founder Vecna Robotics, Co-Founder & President, MassRobotics

Antonio Torralba, Professor of Electrical Engineering and Computer Science, MIT CSAIL

3:05pm - 3:50pm **AI, Ethics, Law and Policy**

Todd Solomon, Head of Employee Benefits, Compensation & Employment Practice Group, McDermott Will & Emery

Katie Stebbins, Vice President of Economic Development, University of Massachusetts

Catherine Tucker, Chair, MIT Sloan PhD Program, and Professor of Marketing, MIT Sloan School of Management

Daniel Weitzner, Principal Research Scientist, MIT CSAIL, and Founding Director, MIT Internet Policy Research Initiative

3:50pm - 4:30pm **Vision: Industry 2020-2050**

Rod Brooks, Founder, Chairman and CTO, Rethink Robotics, and Co-Founder, iRobot

Tom Kochan, Co-Director and Professor, Work and Employment Research, MIT Sloan School of Management

Andrew McAfee, Co-Director, MIT Initiative on the Digital Economy, and Principal Research Scientist, MIT Sloan School of Management

4:30pm - 4:35pm **Closing Remarks**

Lori Glover, Managing Director, Alliances, and Executive Director, SystemsThatLearn@CSAIL

November 1-2, 2017

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Day 2 | Thursday, November 2, 2017 *(EDT time zone)*

8:00am - 8:50am **Breakfast and Networking**

8:50am - 9:00am **Opening Remarks**

Erik Brynjolfsson, Director, MIT Initiative on the Digital Economy, and Professor, MIT Sloan School of Management

9:00am - 9:50am **Mind vs Machine: Implications for Productivity, Wages and Employment**

Moderator: Daron Acemoglu, Professor, MIT Department of Economics

Erik Brynjolfsson, Director, MIT Initiative on the Digital Economy, and Professor, MIT Sloan School of Management

Robert Gordon, Professor of Social Sciences, Northwestern University

Joel Mokyr, Professor, Northwestern University

9:50am - 10:30am **Fireside Chat**

Rusty Justice, Co-Owner, Bit Source

Host: Maria T. Zuber, Vice President for Research and E. A. Griswold Professor of Geophysics, MIT

10:30am - 10:50am **Break**

10:50am - 11:40am **Mind Plus Machine- How can AI help workers?**

Moderator: Anant Agarwal, CEO, edX, Inc.

Fred Goff, CEO, Jobcase

Andrew Lo, Professor, MIT Sloan School of Management; Director, MIT Laboratory for Financial Engineering; and Principal Investigator, MIT CSAIL

Sanjay Podder, Managing Director, Accenture Labs (India)

11:40am - 12:30pm **The AI Skill Set**

Moderator: Barbara Dyer, Senior Lecturer, MIT Sloan School of Management

Becky Frankiewicz, President, Manpower Group, Inc.

Tom Hopcroft, President & CEO, Mass Technology Leadership Council (MassTLC)

Tod Loofbourrow, CEO, ViralGains, and Digital Fellow, MIT Initiative on the Digital Economy

12:30pm - 1:30pm **Lunch and Networking**

1:30pm - 2:15pm **Retrain and Retain**

Moderator: David Autor, Professor of Economics and Associate Head, MIT Economics

Lavea Brachman, Vice President of Programs, Ralph C. Wilson, Jr. Foundation

Randall Davis, Professor, MIT CSAIL

George Westerman, Principal Research Scientist, MIT Initiative on the Digital Economy

Christopher White, Head, Network Algorithms, Analytics, Control and Security Research Lab, Nokia Bell Labs

2:15pm - 2:30pm **Break**

2:30pm - 2:40pm **Video Presentation**

Jeffrey Sachs, University Professor and Director, Center for Sustainable Development, The Earth Institute, Columbia University

(continued)

November 1-2, 2017

**AI and the
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Day 2 | Thursday, November 2, 2017 *(continued)*

- 2:40pm-3:40pm **A Call to Action**
Moderator: Kathleen Kennedy, Director, Special Projects, MIT
Erik Brynjolfsson, Director, MIT Initiative on the Digital Economy, and Professor, MIT Sloan School of Management
Barbara Dyer, Senior Lecturer, MIT Sloan School of Management
Tom Kochan, Co-Director and Professor, Work and Employment Research, MIT Sloan School of Management
Elisabeth B. Reynolds, Executive Director, MIT Industrial Performance Center
Daniela Rus, Director MIT CSAIL, and Professor, MIT EECS
Sanjay Sarma, Vice President for Open Learning, MIT, and Professor, MIT Department of Mechanical Engineering
- 3:40pm - 4:10pm **Spotlight: Inclusive Innovation Challenge**
Devin Cook, Executive Producer, Inclusive Innovation Challenge, MIT Initiative on the Digital Economy
- 4:10pm - 4:30pm **Closing Remarks**
Erik Brynjolfsson, Director, MIT Initiative on the Digital Economy, and Professor, MIT Sloan School of Management
Daniela Rus, Director, MIT CSAIL, and Professor, MIT EECS

AI- artificial intelligence- is in the news almost daily. Businesses are looking for strategies to incorporate AI for efficiency and a competitive advantage. The workforce is concerned about the changes AI will bring for jobs and required skill sets.

At MIT, the Computer Science and Artificial Intelligence Lab (CSAIL) and the Sloan School of Management's Initiative on the Digital Economy (IDE) have joined together to host a 2-day conference November 1 & 2, 2017 which will bring together thought leaders from academia, business leaders, economists and visionaries for a thoughtful dialogue on AI's impact. The first day will focus on helping industry understand how to navigate the opportunities and challenges of the "AI Revolution", where the second day will provide valuable insight to individuals in the workforce on charting career paths across many fields impacted by the advancements in AI.



Connect with MIT CSAIL

Your organization's pathway to CSAIL connections. CSAIL Alliances is a gateway into the lab for organizations seeking a closer connection to the work, researchers and students of CSAIL.

The program provides a proactive and comprehensive approach to developing strong connections with all CSAIL has to offer.

Learn more at: cap.csail.mit.edu



About the MIT Initiative on the Digital Economy

The MIT Initiative on the Digital Economy (IDE) is a major effort focused on the impact of digital technology on businesses, the economy, and society. The IDE is analyzing the broad sociological changes brought about by the advance and spread of digital technology. Learn more at: ide.mit.edu

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