



Crossroads 2014
Biomanufacturing, Robots, and 4D Printing:
The Next Decade of Disruptive Innovation

Building E51-345, March 25 2014

8:00 am *Registration*

8:20 am *Introduction & Welcome*

8:30 am **The Future of Manufacturing and Innovation**
Prof. Suzanne Berger, Raphael Dorman-Helen Starbuck Professor of Political Science and Director of MIT-France program in the MIT International Science and Technology Initiatives
In 2013 MIT completed a major research project on the future of manufacturing and innovation in the United States. This session will explore the findings from that study.

9:30 am **Big Data Challenges and Opportunities**
Prof. Sam Madden, Director, MIT Big Data Initiative
Big Data has attracted huge attention in the supply chain domain, and advances in hardware and software technology promise to extend our analytical capabilities even further. The session will explore the opportunities and risks that lie ahead in the Big Data space.

10:30 am *Break*

11:00 am **Is Cyber Security the Next Risk Frontier?**
Dr. Abel Sanchez, Executive Director and Chief Technology Architect, MIT Geospatial Data Center
An overview of both existing and future cyber threats and the vulnerability of global supply chains to data theft and other criminal activities. This session will also address possible solutions including new approaches to computer security and risk management.

12:00 pm *Lunch*

- 1:15 pm **The New Robot Age**
*Prof. Julie Shah, Head of the Interactive Robotics Group, MIT
Computer Science and Artificial Intelligence Lab*
Advances in robot technology mean that these machines can work alongside human operators in production lines. A new generation of robots that improves just in time operations through more precise sequencing and increases production flexibility will also be described in this session.
- 2:15 pm **4-D Printing and the Self-Assembly Revolution**
Skylar Tibbits, Director, MIT Self-Assembly Lab
The session will describe how programmable materials promise to redefine outdated assembly operations as well as the potential for 4-D printing. Supply chain implications including the elimination of manual labor on production lines and new ways to ship products will be covered.
- 3:15pm *Break*
- 3:45 pm **Transforming Education Through Online Learning**
Dr. Sanjay Sarma, Director, Digital Learning, MIT
In 2014 MIT CTL will launch an online education program for supply chain professionals. This session will explain why the program represents a new chapter in professional education, and the implications for future practitioners and the talent pipeline.
- 4:45 pm *Adjourn*