Breakthrough to Impact

November 30, 2018
Palais Brongniart, Paris

8:00–9:00

Registration and Coffee

Grand Auditorium

9:00–9:30

Fireside Chat: Breakthrough to Impact

Elizabeth Bramson-Boudreau, CEO and Publisher, MIT Technology Review

The opening conversation will examine two fundamental elements of digital transformation—breakthrough and impact. What are the key breakthrough technologies emerging from research, and how are these advances changing old business models and creating new ones?

Grand Auditorium

9:30–10:05

Tech Spotlight: AI Promises, Perils and Potential

Moderator: Elizabeth Bramson-Boudreau, CEO and Publisher, MIT Technology Review

How to Create with AI

Rob High, IBM Fellow; Vice President and CTO, IBM Watson

Cognitive computing offers an approach to deriving value from data that incorporates the subtlety of human exchange, in context. AI is best used as an enabling tool to create in a way that we cannot do by ourselves—a true tech evolution realizing the science and application of augmenting human intelligence.

Beyond Proof and Performance: Building Trust in AI-by-Design

Nozha Boujemaa, Director, DATAIA Institute;
Vice-Chair, AI High Level Group of the EU Commission

As more people use AI, they will need tools that detect unfairness in the underlying algorithms. Can an established regulatory policy create governance around data usage and controls, and algorithms that uncover discrimination and bias? Building trust in AI requires an international and interdisciplinary approach to designing new models and processes that instill unbiased human values.

Grand Auditorium

10:05–10:25

Fireside Chat: Augmenting Human Behavior by Design

Moderator: Elizabeth Bramson-Boudreau, CEO and Publisher, MIT Technology Review
Alexander Mankowsky, Futures Studies & Ideation, Daimler AG

Is AI simply a smart data analytics algorithm or a technology to enable voice and image recognition? Or is it possible to automate with empathy and an understanding of human behavior? Can machine learning be responsive to new problems or situations? See how Daimler is working to insert automation into the fabric of life and embed human agency into decision-making.

10:25–10:55

Break

Innovation
Leaders
Summit

MIT Technology Review

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Grand Auditorium	**Tech Spotlight: Security and Risk**
10:55–11:30	Moderator: Battista Biggio, Assistant Professor, University of Cagliari; Cofounder, Pluribus One

Resolving the Duality Between Securing AI and Using AI for Security

J.R. Rao, IBM Fellow; Director of Security Research, IBM
Nicole Eagan, CEO, Darktrace

Tech platform shifts like the advances in cloud and AI offer increased opportunity for cybercriminals to weaponize technology. Understanding the mechanisms and implications of the malicious use of AI is critical to stay ahead of these threats and mitigate the risk. Examine malware techniques and other strategies designed to conceal malevolent intent. See how to leverage AI, machine learning, and deep learning, and understand how to augment human security to bolster defense.

Grand Auditorium	**Fireside Chat: Using AI to Make Technology Disappear**
11:30–11:50	Moderator: Elizabeth Bramson-Boudreau, CEO and Publisher, MIT Technology Review
Rand Hindi, Cofounder and CEO, Snips

If AI is to serve as a ubiquitous tool that people use to augment their own intelligence and trust to take over tasks in a seamless collaboration, language and privacy will be key. That will be especially true as AI systems increasingly use deep learning and other techniques to essentially program themselves.

Grand Auditorium	**Tech Spotlight: Quantum Computing**
11:50–12:10	

From Bits to Qubits: Fueling Next-Gen Computer Power

Heike E. Riel, IBM Fellow; Director of IoT Technology and Solutions, IBM Research

Classical computers are amazing. But this session addresses the things they cannot do. Look under the hood at quantum computing and the power of exponential scaling. Evaluate challenges in optimization and chemistry where quantum computing purports to solve what no conventional supercomputer can. Learn about the community of makers using quantum computing around the world.

Grand Auditorium	**Tech Spotlight: Blockchain**
12:10–12:45	Moderator: Elizabeth Bramson-Boudreau, CEO and Publisher, MIT Technology Review

Making Sense of Blockchain in the New Token Economy

Carlos Kuchkovsky, CTO, New Digital Business, BBVA; Board Member, Hyperledger

Blockchain, or distributed ledger technology, introduces a native digital medium for value through which one can manage, store, and securely transfer any asset. The evolving token economy, driven by the explosive growth in the value and variety of those crypto assets, is changing business as we know it. Unravel the convergence of technologies enabling new business models and grasp the cross-industry impact and challenges.

The Decentralization of Supply and Demand: Blockchain, AI, and Asset Value

Bettina Warburg, Cofounder and Managing Partner, Animal Ventures

Very soon, supply chains will be autonomous, cognitive, and decentralized webs that make up an emerging tokenized economy. Blockchain, AI, additive manufacturing, and IoT are actualizing new value networks that scale to meet shifting demand, both industrial and consumer.

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La Nef
12:45–14:15

Lunch + Discussions led by Subject Matter Experts

Breakout

Track (choose one):

Various locations
14:25–15:00

AI Ethics and Bias

Moderator: Nicklas Bergman, Founder and CEO, Intergalactic Industries

Creating Value Alignment in AI from Research to Market

Jaan Tallinn, Cofounder, Centre for the Study of Existential Risk and Founding Engineer, Skype and Kazaa
Alexander Mankowsky, Futures Studies & Ideation, Daimler AG

While the need for ethics and accountability in the design and implementation of AI systems is increasingly accepted, the question of who defines and enforces these guidelines is unresolved. How do you align values toward a common good in the context of AI research and application?

Emerging Tech and Security

Moderator: J.R. Rao, Director of Security Research, IBM

How to Think like a Hacker

Battista Biggio, Assistant Professor, University of Cagliari; Cofounder, Pluribus One
Nicole Eagan, CEO, Darktrace

Machine learning's biggest strength in security is that it can be trained to understand what is "baseline" or "normal" for a system and then flag anything unusual for human review. See how to manipulate scenarios to fool both traditional and AI systems in different settings and assess if your defense systems are robust against threats and vulnerabilities.

Machines and Data

Moderator: Alessandro Curioni, IBM Fellow; Vice President, IBM Europe; Director, IBM Research – Zurich

Creating True Business Intelligence with Machine Learning Algorithms

Joseph Spisak, Project Manager, Artificial Intelligence, Facebook
Matthew Evans, Vice President, Digital Transformation, Airbus

Algorithmic innovation is happening at a blistering pace. Enterprises can now generate predictive models based on data from large, diverse, and dynamic sources such as text and metadata, speech, video, and sensor information. Evaluate machine learning as a tool to enable the scale, speed, and accuracy required for never-before-identified insights.

MIT Technology Review
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Breakout

Track (choose one):

Various locations
15:10–15:45

AI Ethics and Bias

Moderator: Max Blanchet, Managing Director, Accenture, Strategy

Achieving AI Ethics for Trust

Francesca Rossi, AI Ethics Global Leader and Distinguished Research Scientist, IBM T.J. Watson Research Centre
Nozha Boujemaa, Director, DATAIA Institute; Vice-Chair, AI High Level Group of the EU Commission

AI or augmented intelligence lets humans and machines work together to solve problems. Finding the best solutions will require creative freedom. Can principles of fairness, freedom from bias, explainability, value alignment, and trust serve as a framework for the technology and those that build the technology? What are the challenges of building a data-driven approach to AI solutions that is also rules-based?

Emerging Tech and Security

Moderator: Carlos Kuchkovsky, CTO, New Digital Business, BBVA; Board Member, Hyperledger

Smart Contracts and Blockchain

Tom Serres, Cofounder and Managing Partner, Animal Ventures

Blockchain platforms represent a shift toward a decentralized computing framework that can optimize transactional relationships between customers, suppliers, and manufacturers—enabling a single version of the truth, with the underpinning of provenance. What are the challenges to implementation?

The Keys to Quantum Cryptography

Eleni Diamanti, Professor in Quantum Communications, Sorbonne; Paris Center for Quantum Computation, Quantum Internet Alliance

In search of enhanced security against hackers, code makers are pivoting from modern (classical) to quantum protocols—exploiting the laws of quantum mechanics for future-proof transactions. Who will it impact the most, and why does it matter?

Machines and Data

Moderator: Alessandro Curioni, IBM Fellow, Vice President Europe and Director, IBM Research – Zurich

How to Build Computer Systems That Understand Us

Jakob Uszkoreit, Deep Learning Researcher, Google Brain; Member, High Level Group on AI, EU Commission
Rand Hindi, Cofounder and CEO, Snips

Typically, machine learning models need to be trained on large amounts of data to ensure that they are accurate, but for many problems, large data sets simply don't exist. The future of understanding language is in models of learning that go beyond analyzing text to incorporate user behavior or visual context.

Foyer
15:45–16:15

Break

Grand Auditorium 16:15–17:00	## Industry Spotlights

Moderator: Max Blanchet, Managing Director, Accenture Strategy

How Facebook Uses Machine Learning

Joseph Spisak, Product Manager, Artificial Intelligence, Facebook

See how the AI team at Facebook applies research and exploration, at scale, to build intelligence into Oculus and other computer vision products. Look at the suite of tools and the computing framework used to create action models and machine learning algorithms informed by large data sets.

Advanced Analytics for Asset Optimization at Airbus

Matthew Evans, Vice President, Digital Transformation, Airbus

AI surpasses its human counterparts in the ability to weigh a multitude of factors in a short space of time—and then calmly enables the most appropriate decisions. The promise is huge, and results come in unexpected and serendipitous ways.

Grand Auditorium 17:00–17:45	## A Snapshot of the Future

Moderator: Max Blanchet, Managing Director, Accenture Strategy

The Genius of Groups and Computers Thinking Together

Thomas Malone, Professor of Management, MIT Sloan;
Director, Center for Collective Intelligence

Organizations are seeking insights generated from technologies like artificial intelligence and employing strategies that enable predictive insights and smarter decision-making. How can people and computers work together more effectively to achieve greater intelligence?

Adapting to Uncertainty in the Innovation Economy

Nicklas Bergman, Founder and CEO, Intergalactic Industries

Research illustrates a correlation between an organization's ability to innovate and its capacity for growth. While breakthrough technologies are a competitive necessity, the path to realization requires a skeptic's acumen and a blueprint for discovery.

Grand Auditorium 17:45–18:00	## Closing Toast

Elizabeth Bramson-Boudreau, CEO and Publisher, MIT Technology Review
Alessandro Curioni, IBM Fellow; Vice President, IBM Europe; Director, IBM Research – Zurich