



EXPONENTIAL FINANCE

NYC

JUNE 10-11

2014

LINCOLN CENTER

PRESENTED BY



SINGULARITY
UNIVERSITY



CONFERENCE PROGRAM*

Exponential Finance, Singularity University's two-day conference in partnership with CNBC and Deloitte, takes a unique look into the future of business and finance to identify the industries being impacted by accelerating technologies. With visionaries including Peter Diamandis, Ray Kurzweil, Vern Brownell, Avi Reichental and others, Exponential Finance brings together the technologists with industry analysts and the innovators with the Fortune 50 to look at the influences of AI, robotics, 3D printing and quantum computing on today's markets. June 10-11, Lincoln Center, NYC.

**program subject to change*

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BREAKFAST/REGISTRATION: 8am-9am**WELCOME ADDRESS (Will Weisman, Peter Diamandis)**

Welcome

Introduction to Exponential Technologies

TOPIC | ARTIFICIAL INTELLIGENCE

AI capabilities are exploding and the increasing implications to finance are enormous. With a very real potential to create dramatic disruptions for Wall Street and many Fortune 500 companies, AI will kick off the Exponential Finance conference. AI is now over 50 years old, and is embedded in everyday life. Applications include: medicine, engineering, art, transportation, logistics and finance. High frequency trading algorithms use a form of artificial intelligence to execute buy and sell orders in fractions of a second. As AI advances and computing moves into the quantum realm, such algorithmic trading may become even more prominent. The technology has the potential to make markets more efficient—or more volatile. We will explore these issues and more while providing you with a clearer understanding of how AI will become an increasingly important part of the world of Finance.

SESSIONS**Understanding the AI Landscape (Neil Jacobstein)**

Singularity University's Co-Chair on AI Neil Jacobstein will discuss how businesses, financial institutions and individuals are utilizing AI to address credit risk analysis, investment decisions, sentiment analysis, high frequency trading and avoiding corporate/market flash crashes. Neil will also provide an overview of AI—from 50 years of successful AI applications to augmenting humans with AI—and what this means for the world at large.

Will IBM's Watson & Other AIs Overtake Wall Street?**(Michael D Rhodin)**

This fireside chat with Michael Rhodin of IBM will explain how Watson has moved beyond Jeopardy into finance, and what this and other AI solutions mean for Wall Street. Specifics include: The Watson Applications Ecosystem; Automating finance sector jobs; Role of AI on global financial centers; and the future of Watson.

Is AI Your Enemy or New Best Friend?**(Daniel Nadler)**

Daniel Nadler describes the virtual artificially intelligent, financial industry-focused assistant that his company, Kensho, is creating. Why is this possible now for the first time, and what will this mean for the playing field in five years' time? This high-level conversation will cover the implications of these Virtual AI Assistants—from the labor market to risk management to financial advisors.

TOPIC | DATA SCIENCE/DATA ANALYTICS

Advances in big data analysis may change the way analysts do their job, augmenting or replacing spreadsheets with intelligent analytics software that can harvest key insights from the daily deluge of financial and economic data or keep a watchful eye on consumer behavior and activity to prevent fraud.

SESSIONS**The Data Science Revolution**

Data science (big data, data analysis, machine learning) is said to represent a larger potential disruption than the industrial revolution. This session will address the impact on the financial world by data driven decision-making, predictive modeling, machine learning, intelligent computing and more.

Harvesting Gold from Your Data—Finally!**(Keith Collins)**

Fireside chat with Keith Collins, CIO of SAS. What applications are available now and will be available in the future to assist in making the most of your data? How do you differentiate between relevant/representative data and "big" data?

Disruptive Tools In The Data Science Toolkit (Dr. Gurjeet Singh)

Gurjeet Singh of Ayasdi, named Fast Company's 2014 Most Innovative Company in Big Data, addresses the cutting edge of big data and how machine learning/big data is and will be used in business going forward.

LUNCH

TOPIC | NETWORKS & COMPUTING SYSTEMS

Breakthroughs addressed during this topic will highlight the rapidly shifting networks and computing systems landscape, and the trillions of dollars of disruption that these changes will bring over the coming decade. Sessions will cover: breakthroughs in computer processing; the enormous impact of autonomous vehicles; optimized asset allocation using quantum computing; arbitrage opportunity discovery; and more.

SESSIONS**The Global Evolution of Networks and Computing Systems**

As processing power continues to grow exponentially, as trillions of devices and sensors come online, and as technology costs continue to decrease dramatically, we are entering an era of new possibilities. This session will dive into Moore's Law, abundant bandwidth, the trillion-dollar impact of autonomous vehicles, the network of everything, and more.

Quantum Computing: A Threat to Financial Services? (Vern Brownell)

As the former CTO of Goldman Sachs, Vern Brownell understands the technical challenges facing large financial institutions. He'll share his unique perspective as the head of the leading quantum computer manufacturer, D-Wave, to provide an understanding of quantum computing and its radical impact on present and future computing.

Insights from the World's First Quantum Computer Software Company (Dr. Phil Goddard)

By harnessing the power of quantum mechanics, quantum computers offer the potential to solve extremely large-scale optimization problems faster than traditional computers. Dr. Goddard will provide us with insight into some of these problems that are now becoming addressable with a particular emphasis on the financial world.

TOPIC | 3D PRINTING

3D printing is creating entirely new industries. Major advancements in the last year alone have redesigned supply chains, impacted IP and liability issues, and reduced working capital needed to fuel manufacturing, not to mention innovation.

SESSION | The Imminent Disruption of the \$10T Manufacturing Industry (Avi Reichental)

With applications ranging from cars, décor and consumer products to custom implants, jet engines and hearing aids—3D printing is revolutionizing product design and supply chain management, and opening a world of possibilities for creatives. There is growing interest in using the technology in direct manufacturing: In the last two years, the technology has become available to consumers, finding its way into homes, middle schools and garages through 3D printers and cloud printing. This talk will also touch on the potential unintended consequences of 3D manufacturing technology, such as fraud and 3D printed weapons.

BREAK (30 MINUTES)**TOPIC | DIGITAL MEDICINE**

Technology is allowing humans to live much longer and much healthier than ever before. These advances will cause (and are causing) huge disruptions across multiple businesses—from life insurance to retirement to gene privacy to asset allocations.

SESSIONS**Digital/Synthetic Biology (Raymond McCauley)**

The digitization of biology is driving massive disruption in the life sciences field. Human genome sequencing is the single best example of faster, better, cheaper. Previously confined to research tools, these new solutions are now entering the clinical and consumer markets. This session will shine light on the drivers in this field, new business models, where technology costs are trending, and innovative startups that have the potential to be significant disruptors.

The Technological Disruption of Healthcare (Dr. Daniel Kraft)

Convergence of fast-moving technology is rapidly changing the face of health and medicine. From mobile health and wearable sensors to artificial intelligence and personal 'omics, this talk will explore implications for personal health, workforce health and the corresponding areas of emerging investment opportunity.

KEYNOTE: DR. PETER DIAMANDIS**TOPIC | CAPITAL FORMATION**

Many new ways of sourcing capital have arisen as the result of technology and have the potential to bypass existing incumbents. We're in the early days of this disruption and we will address what these new ways of raising capital mean for investors, brokers and regulators, and what other types of innovative finance are on the horizon.

SESSIONS**The Global Explosion of Crowdfunding (Kay Koplovitz)**

Fireside chat led by Kay Koplovitz with Crowdfunder's Chance Barnett and others, addressing how crowdsourcing models are impacting and disintermediating traditional capital sources.

Innovative Regulations: Not an Oxymoron (David Weild)

The "Father of the JOBS Act," David Weild will offer insights into what Congress, the SEC and other regulatory groups are doing to keep America competitive and foster innovation.

VIP DINNER (7:30pm- 10:00pm)

BREAKFAST (Day starts at 7:30am)**DAY 1 SYNTHESIS & DAY 2 OVERVIEW****TOPIC | ROBOTICS**

New developments in robotic technologies open up many doors for businesses that embrace them, and will hurt many companies that don't. Robots have the potential to completely remake the U.S. and global labor force. Discover what sectors are being disrupted by robotics, as well as the implications on demographics, the labor force, deflationary risks and the impact on insurance/liability demands.

SESSION* | Robots: Changing Everything (Rob Nail)

Rob Nail will provide an overview of robotics technology, the far-reaching impact this technology is having throughout the world, and how what is coming will change business globally. As robotics use accelerates, many branches of the financial world will change. In this session we'll address: Why companies like Google are making massive bets on Robotics; Massive labor force implications; Machine to machine payments; and Insurance and liability issues.

*Additional sessions and speakers to be announced shortly

BREAK (20 MINUTES)**TOPIC | DIGITAL CURRENCIES, SMART CONTRACTS & MORE**

This topic will provide a glimpse into what's next in the world of digital commerce and finance by taking a look at Bitcoin and other digital currencies. We will also cover digital derivatives, smart contracts, wire-based settlement, cross border payments and peer-to-peer banking—all of which are experiencing dramatic change driven by new technologies.

SESSIONS***The Transformative World of Digital Commerce and Finance (Brad Templeton)**

Board Member of the Electronic Frontier Foundation (EFF), founder of the first internet-based business, and Networks & Computing Chair for Singularity University, Brad Templeton provides an overview of digital currencies and how this emerging area has the potential to radically change how we bank, how payments are made, what a trusted transaction means, and more.

Short and Medium-term Implications of Cryptocurrencies (Barry E Silbert)

Fireside chat and Q&A with Barry E. Silbert of Second Market. We will cover digital currency, federal and state regulatory issues, and Bitcoin as an investable asset class (the Bitcoin Index Trust).

*Additional sessions and speakers to be announced shortly

KEYNOTE: RAY KURZWEIL

Ray Kurzweil has been called "the restless genius" by *The Wall Street Journal* and "the ultimate thinking machine" by *Forbes* magazine. In his role as a Director of Engineering at Google, Kurzweil heads up a team developing machine intelligence and natural language understanding. During this keynote he will share his thoughts on accelerating technology with a particular focus around artificial intelligence and machine understanding.

LUNCH

BILLION PERSON OPPORTUNITIES: Solving Global Problems with Technology**TOPIC | CYBER SECURITY & BEYOND**

Bio hacking, identity theft, malicious innovations—how will crime be defined in the era of exponential technologies? What do you, your business, your country need to know in order to not be vulnerable to malicious innovations?

SESSIONS***Malicious Innovations: The Future of Crime & Security (Marc Goodman)**

Founder of the Future Crimes Institute, Leading Cybercrime Consultant for the FBI, and Singularity University's Faculty Chair for Policy, Law & Ethics, Marc Goodman explores cybercrime threats from the digital underworld. This session will specifically explore many of these innovations that directly impact large, global financial services companies.

*Additional sessions and speakers to be announced shortly

TOPIC | EXPONENTIAL ORGANIZATIONS

We cover how to think differently and evolve your organization and business model to thrive as the pace of change quickens.

SESSIONS**Exponential Organizations: The New Breed of Business (Salim Ismail)**

In this talk, successful entrepreneur, renowned speaker and Singularity University's global ambassador, Salim Ismail will take you through a new breed of organizational structure that has started to emerge over the last few years. "Exponential Organizations" leverage externalities like big data, community, crowd, user engagement, gamification and other techniques to achieve 10x performance benchmarks relative to their competitors.

Ensure Your Financial Advisory Company's Survival (Ric Edelman)

How are you going to deliver advice when Wealthfront, Personal Capital and other firms are charging .25% v. your 1.5% fee? How will the typical money management firm survive when information is accessed as a commodity? With the role of money managers and financial advisors quickly being impacted by emerging technologies and business models, hear how to implement exponential thinking to stay ahead of the competition.

SINGULARITY UNIVERSITY SYNTHESIS**CLOSING REMARKS****CLOSING RECEPTION (6:30pm-11:00pm)**

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