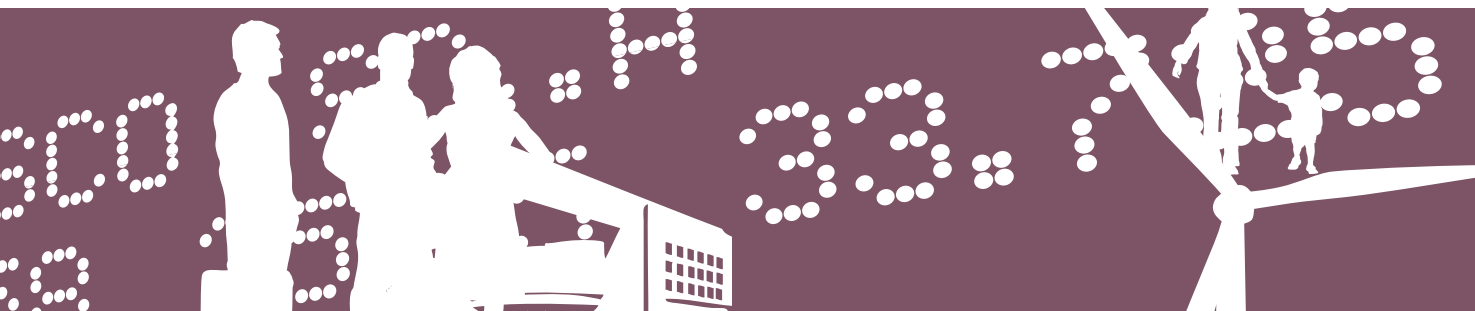


**Forum for Economic Dialogue**

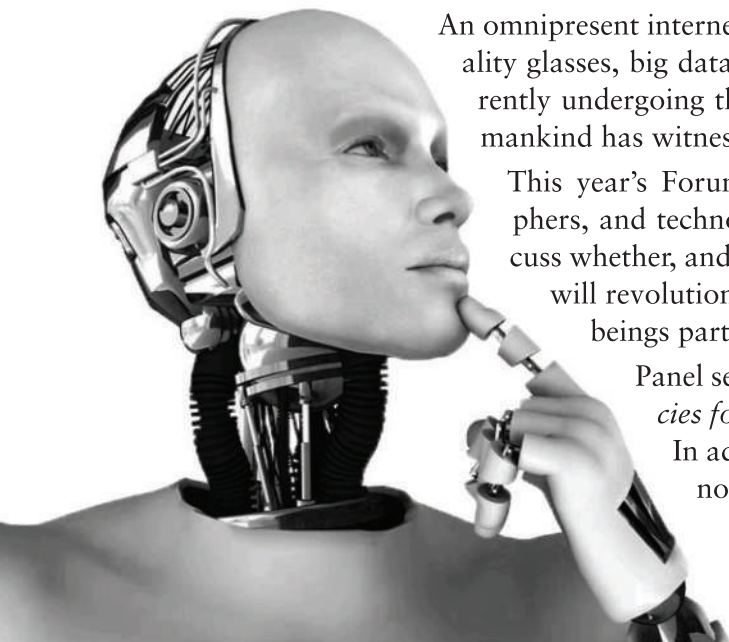
# The Rise of the Machines

Program and Speaker Bios



# The Rise of the Machines

Forum for Economic Dialogue, November 7, 2016



An omnipresent internet, industrial robots, self-driving cars, augmented reality glasses, big data, artificial intelligence; chances are that we are currently undergoing the most fundamental wave of technological change mankind has witnessed – ever.

This year's Forum will feature economists, entrepreneurs, philosophers, and technology experts from around the world who will discuss whether, and if so how, the current wave of technological change will revolutionize the way our economy operates and how human beings participate in it.

Panel sessions will focus on *Revolution or Evolution?*, *Policies for the Machine Age*, and *Boon or Bane for Workers?*

In addition to these sessions, the Forum will feature keynote speeches by **Jeremy Rifkin** and **Prof. David Autor**.

# Program

Monday, November 7, 2016,  
Kaufleuten Klubsaal, Pelikanplatz, 8001 Zurich

- 9.00 a.m.      **Door opening**
- 9.30 a.m.      **Welcome address**  
Prof. Fabrizio Zilibotti, Scientific Director of the UBS International Center of Economics in Society
- 9.45 a.m.      **Opening lecture: The Zero Marginal Cost Society**  
Jeremy Rifkin, economist, bestselling author, political advisor
- 10.45 a.m.      **Coffee break**
- 11.15 a.m.      **Morning session: The Rise of the Machines – Revolution or Evolution?**  
Dr. Alessandro Curioni, IBM Fellow, Vice President Europe and Director, IBM Research – Zurich Lab  
Prof. Joel Mokyr, Northwestern University  
Prof. Roland Siegwart, Director Autonomous Systems Lab, ETH Zurich  
*Chair: Prof. Nick Bostrom, Oxford University, Founding Director of the Future of Humanity Institute*
- 12.45 a.m.      **Lunch**
- 2.15 p.m.      **Afternoon session: Policies for the Machine Age**  
Prof. Nick Bostrom, Oxford University, Founding Director of the Future of Humanity Institute  
Prof. Jeremy Greenwood, University of Pennsylvania  
John Martin, consultant; former OECD Director for Employment, Labour and Social Affairs  
*Chair: Prof. Joel Mokyr, Northwestern University*
- 3.45 p.m.      **Coffee break**

- 4.15 p.m.      Disputation: The Rise of the Machines – Boon or Bane for Workers?  
John Markoff, *The New York Times*  
Prof. Saskia Sassen, Columbia University  
*Moderator: Dr. Martin Meyer, Neue Zürcher Zeitung*
- 5.15 p.m.      Reception
- 5.45 p.m.      Introduction  
Prof. Ernst Fehr, Director of the UBS International Center of Economics in Society
- 5.55 p.m.      Zurich Lecture of Economics in Society: Why Are There Still So Many Jobs?  
The Past and Future of Workplace Automation  
Prof. David Autor, Massachusetts Institute of Technology (MIT)
- 7.00 p.m.      End of event

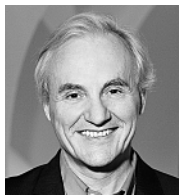
# Welcome address and introduction to the keynote speech



**Prof. Fabrizio Zilibotti**

Fabrizio Zilibotti is Professor of Macroeconomics and Political Economy at the Department of Economics at the University of Zurich and both Scientific Director and Deputy Director of the UBS International Center of Economics in Society. He is the President of the European Economic Association and co-editor at *Econometrica*.

His research interests include economic growth and development, political economy, macroeconomics, financial economics, and the Chinese economy.



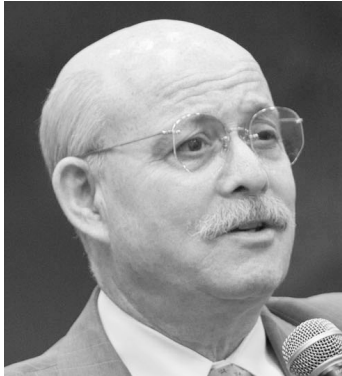
**Prof. Ernst Fehr**

Ernst Fehr is Professor of Microeconomics and Experimental Economics at the Department of Economics at the University of Zurich and Director of the UBS International Center of Economics in Society. He is also Vice Chairman of the Department of Economics and Global Distinguished Professor at New York University.

Ernst Fehr's research interests include social and biological foundations of human motivation, the effects of social and economic incentives on human behavior, and the optimal design of contracts and institutions.

## Opening lecture

# The Zero Marginal Cost Society



### Jeremy Rifkin

Jeremy Rifkin is an American economist, writer, public speaker, political advisor and activist. He is the founder and President of the Foundation on Economic Trends and the bestselling author of over twenty books on the impact of scientific and technological changes on the economy, the workforce, society, and the environment. His books have been translated into more than thirty-five languages and are used in hundreds of universities, corporations and government agencies around the world. His most recent book is *The Zero Marginal Cost Society*.

Jeremy Rifkin has been an advisor to the European Union for the past decade. He currently advises the European Commission, the European Parliament, and has been advising several EU heads of state, including Chancellor Angela Merkel of Germany, former President of France Nicolas Sarkozy, and former Prime Minister of Spain José Luis Rodríguez Zapatero.

## Morning session

# The Rise of the Machines – Revolution or Evolution?



**Dr. Alessandro Curioni**

Dr. Alessandro Curioni is an IBM Fellow and the Vice President Europe and Director of the IBM Research – Zurich Lab. Dr. Curioni is an internationally renowned leader in the area of high-performance computing and computational science, where his innovative thinking and seminal contributions have helped solve some of the most complex scientific and technological problems in several industries including healthcare, consumer goods and electronics. In 2014, Dr. Curioni was promoted to the rank of IBM Fellow, the corporation's highest technical recognition. He has received a number of prestigious prizes, the Gordon Bell Prize in 2013 and 2015, and the PRACE Award in 2012, to name just a few.



**Prof. Joel Mokyr**

Joel Mokyr is Robert H. Strotz Professor of Arts and Sciences and Professor of Economics and History at Northwestern University. Joel Mokyr conducts research on the economic history of Europe, and specializes in the period 1750–1914. His current research is concerned with the understanding of the economic and intellectual roots of technological progress and the growth of useful knowledge in European societies, as well as the impact that industrialization and economic progress have had on economic welfare.

He is currently co-editor of a book series, the *Princeton University Press Economic History of the Western World*. He was the 2006 winner of the biennial Heineken Award for History offered by the Royal Dutch Academy of Sciences and the winner of the 2015 Balzan International Prize for economic history. His latest book is *A Culture of Growth: Origins of the Modern Economy*, to be published by Princeton University Press in 2016.



**Prof. Roland Siegwart**

Roland Siegwart is Professor for Autonomous Mobile Robots at ETH Zurich, Founding Co-Director of the Wyss Translational Center Zurich and member of the Board of Directors of multiple companies, including Komax and NZZ. He studied mechanical engineering at ETH, spent ten years as professor at EPF Lausanne (1996–2006), was Vice President Research and Corporate Relations of ETH Zurich (2010–2014) and held visiting positions at Stanford University and NASA Ames.

Siegwart's research interests are in the design and navigation of wheeled, walking and flying robots autonomously operating in our complex and highly dynamical environments. He is also an active promotor of innovation and entrepreneurship for enhancing technology transfer and startup creation, and cofounder of multiple spin-off companies.

**Morning session chair: Prof. Nick Bostrom (Oxford University)**



## Afternoon session

# Policies for the Machine Age



**Prof. Nick Bostrom**

Nick Bostrom is Professor at Oxford University, where he is the Founding Director of the Future of Humanity Institute, a multidisciplinary research center which enables a set of exceptional mathematicians, philosophers, and scientists to think about global priorities and big questions for humanity.

Bostrom is the author of some 200 publications, including the academic book *Superintelligence: Paths, Dangers, Strategies* (OUP, 2014), which became a *New York Times* bestseller. His current research interests include existential risk, the simulation argument, anthropics (developing the first mathematically explicit theory of observation selection effects), impacts of future technology, especially machine intelligence, and implications of consequentialism for global strategy. Bostrom is recipient of a Eugene R. Gannon Award.



**Prof. Jeremy Greenwood**

Jeremy Greenwood is Professor of Economics at the University of Pennsylvania, a Research Associate at the National Bureau of Economic Research (NBER), and a Fellow of the Econometric Society. He is a macroeconomist whose research has focused on how technological progress has impacted, in a variety of ways, the economy. Specifically, he has analyzed how technological advance in the capital goods sector has been an engine of growth for the economy by making investment less expensive. This spurs capital accumulation and growth.

Professor Greenwood has studied how technological progress in financial markets allows investment to be directed toward the most profitable production opportunities in the economy, thereby increasing income and productivity. He has also studied how skilled-biased technology advance has promoted income inequality and led to de-unionization. Last, Professor Greenwood has estimated the worth of a personal computer for the average American.



### John Martin

John Martin is currently a consultant and Adjunct Research Fellow at the UCD Geary Institute for Public Policy, Dublin. Formerly, he was OECD Director for Employment, Labour and Social Affairs from 2000 to early 2013. Martin joined OECD in 1977 and he held many posts in the Organisation including in the Economics Department. He was the founding editor of the *OECD Employment Outlook* and also edited the *OECD Economic Outlook* for several years. He was a part-time Professor at the Institute of Political Studies (Sciences Po) in Paris for many years. His current appointments include: Research Fellow of the Institute for the Study of Labour (IZA), Bonn; member of the French Prime Minister's "Conseil d'orientation pour l'emploi"; member of the Irish Government's Labour Market Council; member of the Council of the Economic and Social Research Institute, Dublin. He has published many articles on topics in labor economics and international trade in professional journals and has also written and edited several books in these fields.

Afternoon session chair: Prof. Joel Mokyr (Northwestern University)

## Disputation

# The Rise of the Machines – Boon or Bane for Workers?



**John Markoff**

John Markoff covers science and technology for *The New York Times*. He began writing about technology in 1976 and joined *The Times* in 1988. He gained some notoriety several years ago when he stated that he thought blogs might be the CB radio of the 21st century. He still believes that.

In 2013, he was part of the team awarded the Pulitzer Prize for Explanatory Reporting “for its penetrating look into business practices by Apple and other technology companies that illustrates the darker side of a changing global economy for workers and consumers.”

He is the author of *What the Dormouse Said: How the Sixties Counterculture Shaped the Personal Computer Industry* and *Machines of Loving Grace: The Quest for Common Ground Between Humans and Robots*.



**Dr. Martin Meyer**

Martin Meyer is a Swiss journalist, publicist, essayist and author. In 1974 he started his career at the *Neue Zürcher Zeitung* as editor for the Feuilleton, and became editor-in-chief of the Feuilleton in 1992. In addition to his work as a journalist Martin Meyer has written and published several books, among others about Ernst Jünger, Thomas Mann, Switzerland and Europe, *Ende der Geschichte?* and the debates about *Krieg der Werte*. Recently he published a biography about Albert Camus. Meyer is corresponding member of the Deutsche Akademie für Sprache und Dichtung and received an honorary Ph.D. of the University of St. Gallen.



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### Prof. Saskia Sassen

Saskia Sassen is the Robert S. Lynd Professor of Sociology, and co-chairs The Committee on Global Thought, Columbia University.

Saskia Sassen's research and writing focuses on globalization (including social, economic and political dimensions), immigration, global cities (including cities and terrorism), the new technologies, and changes within the liberal state that result from current transnational conditions. Her recent books are *Territory, Authority, Rights: From Medieval to Global Assemblages* (Princeton University Press 2008), *A Sociology of Globalization* (W. W. Norton 2007), and the 4th fully updated edition of *Cities in a World Economy* (Sage 2011). *The Global City* came out in a new fully updated edition in 2001. Her books are translated into twenty-one languages. She is currently working on *When Territory Exits Existing Frameworks* (Harvard University Press). She contributes regularly to [www.OpenDemocracy.net](http://www.OpenDemocracy.net) and [www.HuffingtonPost.com](http://www.HuffingtonPost.com)

## Zurich Lecture of Economics in Society

# Why Are There Still So Many Jobs? The Past and Future of Workplace Automation



### Prof. David Autor

David Autor, one of the leading labor economists in the world and a member of the American Academy of Arts and Sciences, is Ford Professor of Economics and associate department head of the Massachusetts Institute of Technology Department of Economics. He is also a faculty research associate of the National Bureau of Economic Research and editor-in-chief of the *Journal of Economic Perspectives*. He is an elected member of the executive committee of the American Economic Association and of the Society of Labor Economists.

His current fields of specialization include labor market impacts of technological change and globalization, human capital and earnings inequality, disability insurance and labor supply, and temporary help and other intermediated work arrangements. Autor has published extensively in all major academic journals in economics.

Autor has received a number of prestigious prizes, the Alfred P. Sloan Foundation Fellowship, the Sherwin Rosen Prize in 2008 for outstanding contributions in the field of Labor Economics, and the John T. Dunlop Outstanding Scholar Award in 2006 given by the Labor and Employment Relations Association, to name just a few.

UBS International Center of Economics in Society  
University of Zurich | Department of Economics  
Schönberggasse 1 | CH-8001 Zurich

Tel. +41-44-634 57 22 | [contact@ubscenter.uzh.ch](mailto:contact@ubscenter.uzh.ch)  
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