Wealth Management Systems for Individual Investors

Four-University Rotating FinTech Conference

April 26th, 2017

Princeton University– Princeton, NJ, United States

Mass-Customisation of Goal-Based Investment Solutions:
The New Frontier in Digital Wealth Management Services
—
Goal-Based Investment via Multi-Stage Stochastic Goal
Programming for Robo-Advisor Services
—
Big Data - Yesterday, Today and Tomorrow
—
Applying Machine Learning Concepts for Asset Allocation and ALM
—
FinTech: Drawing Strengths from Computing Theories
—
Savings and Investing to Achieve Retirement Goals: an Update Given
Current Market Assumptions
—
The Rise of Robo-Advisors: A Threat or an Opportunity
for the Wealth Management Industry?

Wealth Management Systems for Individual Investors Conference

In the context of the fourth revolution, the digital revolution, which is likely to have a dramatic impact on the investment industry, four prominent academic institutions renowned for the quality and relevance of their educational and research programmes in finance and technology – **EDHEC-Risk Institute, KAIST, Princeton and Tsinghua Universities** – are partnering for the first time. Together, they will host an international series of rotational conferences on **financial technologies** and offer a forum that will facilitate discussion among all interested parties (academics, practitioners and regulators) around the world.

The conferences will be held annually, starting on 26 April 2017 with the **Four-University Rotating FinTech Conference: Wealth Management Systems for Individual Investors**, which will take place on Princeton Campus, and jointly organised by **EDHEC-Risk Institute** and the **Princeton University ORFE department**.

Leading experts from the US, Asia and Europe will be featured at the conference, including, **Andrew Yao** (Turing Award recipient and founder of IIIS FinTech Center at Tsinghua University), **Woo Chang Kim** (Associate Professor at KAIST), **Lionel Martellini** (Director of EDHEC-Risk Institute), and **John Mulvey** (Professor and founding member of the Bendheim Center for Finance at Princeton University).

Program of the Conference

8:30am–9:00am: Registration

9:00am–9:15am: Opening Address

John Mulvey, Professor of Operations Research and Financial Engineering, ORFE Department, *Princeton University*
Lionel Martellini, Professor of Finance, *EDHEC Business School*, and Director, *EDHEC-Risk Institute*
Woo Chang Kim, Associate Professor, Industrial and Systems Engineering Department, and Head, KAIST Center for Wealth Management Technologies, *Korea Advanced Institute of Science and Technology (KAIST)*
Andrew Yao, Professor and Dean of Institute for Interdisciplinary Information Sciences (IIIS), *Tsinghua University*

9:15am–10:15am: Mass-Customisation of Goal-Based Investment Solutions: The New Frontier in Digital Wealth Management Services

Lionel Martellini, Professor of Finance, *EDHEC Business School*, and Director, *EDHEC-Risk Institute*

10:15am–11:15am: Goal-Based Investment via Multi-Stage Stochastic Goal Programming for Robo-Advisor Services

Woo Chang Kim, Associate Professor, Industrial and Systems Engineering Department, and Head, *KAIST Center for Wealth Management Technologies, Korea Advanced Institute of Science and Technology (KAIST)*

11:15am–11:45am: Morning break

11:45am–12:45am: Applying machine learning concepts for asset allocation and ALM

John Mulvey, Professor of Operations Research and Financial Engineering, ORFE Department, *Princeton University*

12:45pm–2:00pm: Luncheon talk: Big Data – Yesterday, Today and Tomorrow

John Mashey, Consultant, *Techviser*

2:00pm–3:00pm: FinTech: Drawing Strengths from Computing Theories

Andrew Yao, Professor and Dean of Institute for Interdisciplinary Information Sciences (IIIS), *Tsinghua University*

3:00pm–3:30pm: Afternoon break

3:30pm–4:15pm: Savings and Investing to Achieve Retirement Goals: an Update Given Current Market Assumptions

Reading of exclusive **John C. Bogle**'s report, Founder of *The Vanguard Group* and President of the *Bogle Financial Markets Research Center* with comments from roundtable's panelists

4:15pm–5:30pm: Roundtable The Rise of Robo-Advisors: A Threat or an Opportunity for the Wealth Management Industry?

Moderator: **Amy B. Resnick**, Editor, *Pensions & Investments (P&I)*
Panelist 1: **Anil Suri**, Head of Portfolio Analytics & Innovation Development Center, *Merrill Lynch Wealth Management*
Panelist 2: **Thomas Bauerfeind**, Managing Director, *Protinus*
Panelist 3: **Changle Lin**, Assistant Professor, Wealth Management Techs Lead, Institute for Interdisciplinary Information Sciences (IIIS), *Tsinghua University*
Panelist 4: **Pierre Laroche**, Vice President – Business Strategy, Wealth Management, *National Bank of Canada*
Panelist 5: **Lisa Huang**, Head of Quantitative Analysis Research, *Betterment*
Panelist 6: **Arthur Berd**, Founder and CEO, *General Quantitative*
Panelist 7: **Ashish Gupta**, VP, Model Risk Management, *E*TRADE Financial Corp*
Panelist 8: **Alan Qi**, Chief Data Scientist, *Ant Financial*

5:30pm–6:30pm: Drinks reception

Conference Speakers

Woo Chang Kim is associate professor in the Industrial and Systems Engineering Department at the Korea Advanced Institute of Science and Technology (KAIST) and Head of KAIST Center for Wealth Management Technologies. He serves on the editorial boards for several journals, including *Journal of Portfolio Management*, *Optimization and Engineering*, and *Quantitative Finance Letters*. He is an expert on financial optimization and portfolio management, and has published many papers in leading academic and practitioner journals in the related fields as well as a textbook on robust portfolio management. He is a member of voting rights committee for Korea's National Pension System and an advisor for Samsung Asset Management. He was a visiting professor in Department of Economics and Finance at LUISS Guido Carli in Rome in 2014, a visiting fellow in Department of Operations Research and Financial Engineering at Princeton University in 2013-2014, and a guest researcher for Hausdorff Research Institute for Mathematics at University of Bonn in 2013. He has earned doctoral degree from Princeton University's Operations Research and Financial Engineering Department, and master's and bachelor's from Industrial Engineering at Seoul National University.

Lionel Martellini is a Professor of Finance at EDHEC Business School, the Director of EDHEC-Risk Institute and Senior Scientific Advisor for ERI Scientific Beta. Lionel holds Master's Degrees in Business Administration, Economics, Statistics and Mathematics, as well as a PhD in Finance from the Haas School of Business, University of California at Berkeley. He is a former member of the faculty at the Marshall School of Business, University of Southern California, and has been a visiting fellow at the Operations Research and Financial Engineering department at Princeton University. Lionel is a member of the editorial board of The Journal of Portfolio Management, The Journal of Alternative Investments, and The Journal of Retirement. He conducts active research in a broad range of topics including long-term asset allocation decisions, equity and fixed-income portfolio construction, risk management and derivatives valuation. His work has been published in leading academic and practitioner journals and has been featured in major European and global dailies such as *The Financial Times* and *The Wall Street Journal*. He has co-authored reference textbooks on topics related to Alternative Investment Strategies and Fixed-Income Securities.

John Mashey focuses on computer architecture, sensor networks and social network analysis. John's clients, past and present, include venture capitalists, law firms and technology companies. He has served on the advisory boards of several startups, including Dust Networks and Streetline. Prior to joining Techviser, John was Chief Scientist at computer pioneer Silicon Graphics, where he traveled the world evangelizing new systems and software. He pioneered talks about big data applications. He has held senior engineering management positions at MIPS, Convergent Technologies and Bell Laboratories. At Bell Laboratories he wrote significant parts of the UNIX shell. John is on the board of the Computer History Museum. He blogs to defend climate scientists and understand how messages are amplified using social media. He has a PhD in computer science and BS in mathematics from Penn State University.

John M. Mulvey is a Professor in the Operations Research and Financial Engineering Department and a founding member of the Bendheim Center for Finance at Princeton University. His specialty is financial optimization and advanced portfolio theory. For over thirty-five years, he has implemented asset-liability management systems for numerous organizations, including PIMCO, Towers Perrin/Tillinghast, AXA, Siemens, Munich Re-Insurance, and Renaissance Re-Insurance. His current research addresses regime identification and factor approaches for longterm investors, including family offices, and pension plans, with an emphasis on optimizing performance and protecting investor wealth (and surplus wealth). He has published over 150 articles and edited 5 books. He is currently editing a book "Machine Learning in Finance," and is a senior consultant for the California Public Employees Retirement System.

Andrew Chi-Chih Yao is the Dean of Institute for Interdisciplinary Information Sciences (IIIS) at Tsinghua University. He received a PhD degree in Physics from Harvard University in 1972, and a second PhD in Computer Science from University of Illinois in 1975. He served on the faculty at MIT, Stanford, UC Berkeley, Princeton University, and since 2004 he has been a professor at Tsinghua University. He is also a Distinguished Professor-at-Large at the Chinese University of Hong Kong. Professor Yao's research interests are in cryptography, quantum computing, and algorithmic economics. He is a member of the Chinese Academy of Sciences, a foreign member of the US National Academy of Sciences, and the American Academy of Arts and Sciences. In 2000 he received the A.M. Turing Award, the most prestigious prize in Computer Science, in recognition of his fundamental contributions to the theory of computation.

EDHEC-RISK Institute   KAIST   PRINCETON UNIVERSITY

Four-University Rotating FinTech Conference

Founded in 1906, EDHEC Business School offers management education at undergraduate, graduate, post-graduate and executive levels. Holding the AACSB, AMBA and EQUIS accreditations and regularly ranked among Europe's leading institutions, EDHEC Business School delivers degree courses to over 6,500 students from the world over and trains 10,000 professionals yearly through executive courses and research events. The School's 'Research for Business' policy focuses on issues that correspond to genuine industry and community expectations.

Part of EDHEC Business School and established in 2001, EDHEC-Risk Institute has become the premier academic centre for industry-relevant financial research. In partnership with large financial institutions, its team of close to 50 permanent professors, engineers, and support staff, and 38 research associates and affiliate professors, implements 6 research programmes and 10 research chairs focusing on asset allocation and risk management and has developed an ambitious portfolio of research and educational initiatives in the domain of investment solutions for institutional and individual investors.

EDHEC-Risk Institute also has highly significant executive education activities for professionals. In partnership with CFA Institute, it has developed advanced seminars based on its research which are available to CFA charterholders and have been taking place since 2008 in New York, Singapore and London.

In 2012, EDHEC-Risk Institute signed two strategic partnership agreements, with the Operations Research and Financial Engineering department of Princeton University to set up a joint research programme in the area of asset-liability management for institutions and individuals, and with Yale School of Management to set up joint certified executive training courses in North America and Europe in the area of risk and investment management.

KAIST, a research university established in 1971, has served as the gateway to advanced science, technology, and innovation for Korea. To meet the growing demand for young, competent global leaders, KAIST has developed itself as a global arena for interdisciplinary education and research opportunities.

With 1,112 faculty members working with 11,176 students, KAIST focuses on creating an atmosphere for interdisciplinary communication and collaboration for its academic units in all of its four campuses in Daejeon and Seoul to stimulate the innovative leadership and entrepreneurship needed to develop technology for the advancement of the world and for sustainable economic growth. KAIST also endeavors to strengthen its network to provide its constituents with collaboration opportunities with prominent partners from academia and industry. KAIST will continue to foster innovation and creativity for the future generation of global leaders; students who are no longer bound by the limits of specific disciplines, departments or the national borders and are dedicated to research excellence for the betterment of all mankind.

The KAIST Center for Wealth Management Technologies (KAIST WMT Center) was founded in 2016, to foster the interdisciplinary research for wealth management technologies. Under the core agenda of "enabling customized wealth management service for everyone", the center is conducting various researches to provide innovative technologies which can ultimately shift the high cost service structure of wealth management industry into scalable and affordable one. Currently, the center has 11 members from academia, industry, and regulatory agencies.

ORFE is the intersection of five core disciplines: financial mathematics, operations research, optimization, probability theory, and statistics. Research in the Department ranges from the mathematical foundations of these fields to the development of state-of-the-art methodology for solving complex problems that arise in important real-world applications in finance, engineering and the sciences. ORFE students obtain a strong quantitative and interdisciplinary training, and acquire the skills to become leaders in academia and industry.

The Bendheim Center for Finance was established in 1998 to encourage interdisciplinary research in finance, primarily from a quantitative or mathematical perspective. The research activities of the center are directed toward the study of financial markets and asset prices, the financial structure of firms, banks and other financial intermediaries, and the linkages between financial economics and other fields, such as engineering, operations research, mathematics, computer science, psychology and public policy.

Advancing a tradition of academic excellence, Tsinghua University is a pacesetter for innovation in China. It has become a leading world university in just over 100 years. Tsinghua University excels in its fundamental task of high-level personnel training, and also serves as an indispensable base for China's scientific and technological innovation. It is among the most selective universities in the Asia-Pacific region, and a trusted global partner for researchers and academics.

Institute for Interdisciplinary Information Sciences (IIIS) was established at Tsinghua University in 2010. The Institute aims to become one of the leading research centers on interdisciplinary information sciences in the world, as well as to offer an attractive environment for top quality research and education in computer science and quantum information science in China. Its special undergraduate program, nicknamed by its students as the Yao Class, has become an international brand for excellence in undegraduate computer science education.

Fees
Registration fee: USD 150.00
The registration fee includes a buffet lunch, refreshments and conference documentation. Delegates may be refused admission if payment is not received prior to the conference. Accommodation is not included.

Cancellation Policy
Given the moderate conference fee, we do not accept cancellations; invoiced sums will remain payable in full. If a registered delegate is unable to attend, a substitute delegate from the same organization is welcome at no extra charge. Conference documentation designed by EDHEC-Risk Institute and Princeton University will be made available online to all delegates. EDHEC-Risk Institute and Princeton University reserves the right to alter the program without notice.

Billing and Payment
The fee is billed following registration and must be settled before the conference begins. Payment can be made by credit card.

Further Information and Registration
For further information, contact Maud Gauchon at:
maud.gauchon@edhec-risk.com or on: +33 493187887
To register, visit: https://www.regonline.com/EDHECRiskPrinceton2017
before April 10, 2017

Venue
School of Engineering and Applied Science, Princeton University
Friend Center, corner of Olden & William Streets
Princeton, NJ 08544, USA
Tel.: +1 609-258-1741