

VOLATILITY CONFERENCE 2023

Seminar Room 4.1, Level 4

School of Economics
Singapore Management University
90 Stamford Road
Singapore 178903

20 – 21 June 2023
Tuesday – Wednesday

Keynote Speaker: Professor Robert Engle

Professor Emeritus of Finance
New York University
Nobel Laureate of 2003 Nobel Prize in Economics

Presented by:



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PROGRAMME

20 JUNE 2023, TUESDAY

8:30AM - 8:45AM

Registration

8:45AM - 9:00AM

Opening Remarks

Kim Christensen, Aarhus University
Mathieu Rosenbaum, École Polytechnique
Jun Yu, Singapore Management University

9:00AM - 10:00AM	CHAIR	PRESENTER	TITLE
	SESSION 1		
	Torben Andersen Northwestern University	Robert Engle New York University	Have Capital Markets Forgotten about Sustainability? Portfolios, Greenwashing, Stress Testing and Long Run Risk

10:00AM - 10:15AM

Tea / Coffee Break

10:15AM - 12:15PM	SESSION 2		
	Jia Li Singapore Management University	Torben Andersen Northwestern University	Real-Time Detection of No-Arbitrage Violations
		Jim Gatheral City University of New York	Pricing in Affine Forward Variance Models
		Yongmiao Hong University of Chinese Academy of Sciences	Can Interval-valued Data Help Improve Volatility Forecasts: Evidence from Foreign Exchanges Markets

12:15PM - 1:30PM

Lunch

1:30PM - 3:30PM	SESSION 3		
	Mathieu Rosenbaum École Polytechnique	Viktor Todorov Northwestern University	Intraday Volatility Patterns from Short-Dated Options
		Shuping Shi Macquarie University	Weak Identification of Long Memory with Implications for Volatility Modelling
		Yingying Li Hong Kong University of Science and Technology	Factor Modeling for Volatility

3:30PM - 3:45PM

Tea / Coffee Break

3:45PM - 5:45PM	SESSION 4		
	Shuping Shi Macquarie University	Kim Christensen Aarhus University	Warp Speed Price Moves: Jumps after Earnings Announcements
		Peter Hansen University of North Carolina at Chapel Hill	Robust Estimation of Realized Correlation
		Masaaki Fukasawa Osaka University	On the Term Structure of The Leverage Effect

6:30PM - 8:30PM

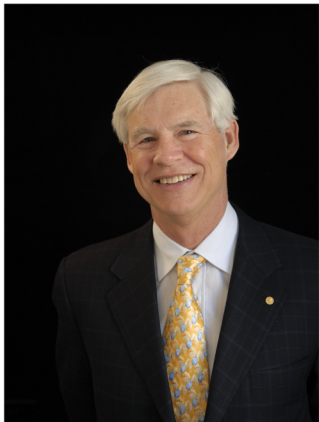
Conference Dinner

Lei Garden, #01-24 Chijmes, 30 Victoria Street, Singapore 187996

21 JUNE 2023, WEDNESDAY

	CHAIR	PRESENTER	TITLE
9:00AM - 11:00AM	SESSION 5		
	Kim Christensen Aarhus University	Federico Bandi Johns Hopkins University	Structural Stochastic Volatility
		Carsten Chong Columbia University	Volatility of Volatility and Leverage Effect from Options
		Jun Yu Singapore Management University	Maximum Likelihood Estimation of Fractional Ornstein-Uhlenbeck Process with Discretely Sampled Data
11:00AM - 11:15AM	Tea / Coffee Break		
11:15AM - 12:35PM	SESSION 6		
	Federico Bandi Johns Hopkins University	Mathieu Rosenbaum École Polytechnique	From No-arbitrage to Rough Volatility via Market Impact
		Xiaohu Wang Fudan University	Modeling and Forecasting Realized Volatility of Cryptocurrency
12:35PM - 2:00PM	Lunch		
2:00PM - 4:00PM	SESSION 7		
	Peter Hansen University of North Carolina at Chapel Hill	Jia Li Singapore Management University	Optimal Nonparametric Range-Based Volatility Estimation
		Mikko Pakkanen University of Waterloo	A GMM Approach to Estimate the Roughness of Stochastic Volatility
		Nour Meddahi Toulouse School of Economics	Forecast Comparison Tests Under Fat Tails
4:00PM - 4:15PM	Tea / Coffee Break		
4:15PM - 5:35PM	SESSION 8		
	Jun Yu Singapore Management University	Rene Aid Paris-Dauphine University	Equilibrium Price in Intraday Electricity Market
		Roberto Reno ESSEC	Realized Drift

KEYNOTE SPEAKER



PROFESSOR ROBERT ENGLE

Professor Emeritus of Finance

New York University

Nobel Laureate of 2003 Nobel Prize in Economics

Robert Engle, Professor Emeritus of Finance at New York University Stern School of Business, was awarded the 2003 Nobel Prize in Economics for his research on the concept of autoregressive conditional heteroskedasticity (ARCH). He developed this method for statistical modeling of time-varying volatility and demonstrated that these techniques accurately capture the properties of many time series. Professor Engle shared the prize with Clive W. J. Granger of UCSD. Professor Engle is the Co-Director of the Volatility and Risk Institute at NYU Stern. In this role he has developed research tools to track risks in the global economy and make these publicly available on the V-LAB website.

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SINGAPORE MANAGEMENT UNIVERSITY

A premier university in Asia, the Singapore Management University (SMU) is internationally recognised for its world-class research and distinguished teaching. Established in 2000, SMU's mission is to generate leading-edge research with global impact and to produce broad-based, creative, and entrepreneurial leaders for the knowledge-based economy. SMU's education is known for its highly interactive, collaborative, and project-based approach to learning.

Home to over 12,000 students across undergraduate, postgraduate professional and postgraduate research programmes, SMU comprises eight schools:

- College of Integrative Studies
- College of Graduate Research Studies
- School of Accountancy
- Lee Kong Chian School of Business
- School of Economics
- School of Computing and Information Systems
- Yong Pung How School of Law
- School of Social Sciences

SMU offers a wide range of bachelors', masters', and PhD degree programmes in the disciplinary areas associated with its schools, as well as in multidisciplinary combinations of these areas.

SMU emphasises rigorous, high-impact, multi- and interdisciplinary research that addresses Asian issues of global relevance. SMU faculty members collaborate with leading international researchers and universities around the world, as well as with partners in the business community and public sector. SMU's city campus is a modern facility located in the heart of downtown Singapore, fostering strategic linkages with business, government, and the wider community.

SMU SCHOOL OF ECONOMICS

The School of Economics and Social Sciences was established on 1 July 2002 to launch the Bachelor of Science undergraduate degree programme in Economics, and subsequently the Bachelor of Social Science undergraduate degree programme majoring in Psychology, Sociology, or Political Science.

In April 2007, the School of Economics and the School of Social Sciences were established as separate schools to better focus on the development of the undergraduate and graduate curricula and programmes, as well as faculty research in the respective disciplines.

Today, the School of Economics has a total of 47 full-time faculty with extensive experience from around the world. It has an enrolment of more than 1,000 undergraduate and postgraduate students and offers the following degree programmes:

- Bachelor of Science in Economics,
- Master of Science in Economics,
- Master of Science in Financial Economics,
- Master of Philosophy in Economics, and
- PhD in Economics.

The mission of the School of Economics is to accelerate the growth of SMU by creating a world-class centre of research and teaching in economics. Economic research forms a key factor in the development of SMU as a foremost academic institution in generating cutting-edge research with global impact and producing broad-based, creative and entrepreneurial leaders for the knowledge-based economy. Faculty members in the School of Economics are active in research, and have published in journals such as *Econometrica*, *American Economic Review*, *Journal of Political Economy*, *Journal of Economic Theory*, *Econometric Theory*, *Review of Economic Studies*, *International Economic Review*, *Review of Economics and Statistics*, *Journal of Econometrics*, *Journal of International Economics*, *Social Choice and Welfare*, *Journal of Business and Economic Statistics*, *Journal of the Royal Statistical Society*, *Journal of the American Statistical Association*, and *Biometrics*.

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AARHUS UNIVERSITY

The main campus of Aarhus University (AU) is located in the middle of Aarhus. Rooted in strong disciplines, researchers and students have been generating new knowledge here for over 90 years. Aarhus University is Denmark's second-largest university, with 38,000 students, five faculties, research activities all over the country and campuses in Aarhus, Herning and Emdrup.

Research and education of the highest international quality are at the core of our mission, and strong partnerships with our society are at the heart of our activities. Thanks to its size and reputation as a leading research-intensive university, Aarhus University has strong impact and influence across the entire spectrum of disciplines, locally, nationally and globally.

Today, Aarhus ranks among the top 100 universities in the world in several international rankings – out of over 17,000 universities worldwide.

ÉCOLE POLYTECHNIQUE

École Polytechnique is an engineering school located in Palaiseau, France. The school was founded in 1794 by mathematician Gaspard Monge during the French Revolution and was militarized under Napoleon I in 1804. It is still supervised by the French Ministry of Defense. Originally located in the Latin Quarter in central Paris, the institution moved to Palaiseau in 1976, in the Paris-Saclay technology cluster.

After a very selective entrance process, most Polytechnique graduates, especially those from the engineering graduate program, go on to become top executives in companies, senior civil servants, military officers, or researchers.

Its alumni from the engineering graduate program include five Nobel Prize winners, a Fields Medalist, three Presidents of France and many CEOs of French and international companies.

École Polytechnique is a founding member, along with ENSTA Paris, ENSAE Paris, Télécom Paris and Télécom SudParis, of Institut Polytechnique de Paris, which provide to its students, faculty members and staff, a dynamic environment to develop together a world-class institute of science and technology.



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