

Wednesday

December
18, 2019

12:30 pm
(CET)

The **Working Group on Risk - CREAR**, with the support of the IDS dpt, Institut des Actuaire, LabEx MME-DII, and the group BFA (SFdS), has the pleasure to invite you to the seminar by:

Prof. Mathieu ROSENBAUM

Ecole Polytechnique Paris
Chair 'Analytics and Models for Regulation'

“ From quadratic Hawkes processes to rough volatility and Zumbach effect”

at ESSEC La Défense (CNIT) – Room 220, 12:30-1:30pm

It is now well-accepted in quantitative finance that volatility is rough. We show in this talk that this universal phenomenon can be explained through a suitable modeling of market microstructure with Hawkes processes. These processes enable us to encode accurately the stylized facts of high frequency financial markets and lead in the long run to a rough behavior of the volatility. We particularly focus on quadratic Hawkes processes in order to be also able to explain the time reversal asymmetry, often called Zumbach effect, observed on financial time series. The talk is based on joint work with A. Dandapani and P. Jusselin.

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Mathieu ROSENBAUM

Professor at Ecole Polytechnique Paris
Chair 'Analytics and Models for Regulation'

Mathieu ROSENBAUM is full professor at Ecole Polytechnique Paris, where he holds the chair "Analytics and Models for Regulation". His research mainly focuses on statistical finance problems, regulatory issues and risk management of derivatives. He is notably one of the most renowned experts on the quantitative analysis of market microstructure and high frequency trading. He is also at the origin (with Jim Gatheral and Thibault Jaisson) of the development of rough volatility models.

Mathieu Rosenbaum has collaborations with various financial institutions, notably BNP-Paribas since 2004, and has several editorial activities. He is one of the editors in chief of the journal "Market Microstructure and Liquidity". Furthermore, he is managing editor for "Quantitative Finance" and associate editor for: Annals of Applied Probability, Electronic Journal of Statistics, Journal of Applied Probability, Mathematical Finance, Mathematics and Financial Economics, Statistical Inference for Stochastic Processes, SIAM Journal in Financial Mathematics, Springer Briefs, Statistics and Risk Modeling.

He received the Europlace Award for Best Young Researcher in Finance in 2014 and the European Research Council Grant in 2015.

