

# Hong Kong - Singapore joint Seminar Series in Financial Mathematics/Engineering

*Jointly organized with the CUHK Distinguished Lectures in Quantitative Finance*

## Principal-agent problems in financial markets

**Prof. Jakša Cvitanić**  
**California Institute of Technology**

### Abstract

In this talk, I will present the benchmark continuous-time models for contracting between a principal and an agent. Next, I will talk about the extension of the classical models to the case in which the agent controls not only the drift, but also the volatility vector of the output process. Mathematically, this requires results from the theory of second-order BSDE's. Then, I will show how to apply this methodology to finding the asset pricing equilibrium and optimal contracts in a market with delegated portfolio management.

### About the speaker

Jakša Cvitanić works in the fields of mathematical finance, financial engineering, and financial economics. He received a PhD in Statistics from Columbia University in 1992. He was an Assistant and Associate Professor of Statistics at Columbia University until 1999. From 1999 to 2005 he was a Professor of Mathematics and Economics at the University of Southern California. He is currently Richard N. Merkin Professor of Mathematical Finance at the California Institute of Technology and the president of the Bachelier Finance Society. He received the American Statistical Association Scholastic Excellence Award (1992). He has been or was a co-editor of "Finance and Stochastics" and "Mathematical Finance", and has served on the editorial boards of several other journals. He has co-authored two books, "Introduction to the Economics and Mathematics of Financial Markets" and "Contract Theory in Continuous Time Models", and numerous scientific articles.

### Date

Dec 1, 2022 (Thursday)  
(HK SAR)

### Time

12:00pm – 13:00pm  
(HK SAR)

### Zoom

<https://cuhk.zoom.us/j/99221391061?pwd=KzdSMlZKcHQrc2QzY1FmNHVZT0NKdz09>

### Meeting ID:

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