

# Finance Research Seminar

## “Directional Changes: a new way to look at market dynamics”

Edward Tsang (University of Essex)

Wednesday, January 22<sup>nd</sup>, 2014 at 2.00 p.m.

IESEG School of Management, 3 rue de la Digue (room B252)

*Paris campus: video conference room R20*

### Abstract:

This talk explains a new concept called Directional Changes and how it helps to study financial markets.

When history is recorded, one does not report the situation at the end of each day, each month or each year. One records significant events. Yet most researchers record market price movements with snapshots; for example, daily closing prices are used. Richard Olsen proposed an event-based approach to summarize price movements, based on a concept called Directional Changes. A directional change is defined by a threshold that the observer cares about, e.g. 5%. An  $r\%$  directional change is basically a price change of  $r\%$  from the last peak or bottom price. For any given threshold, the observer will summarize price movements by linking up the extreme points between directional changes.

This new concept provides traders with new perspectives to the market, as demonstrated by Olsen Ltd in foreign exchange trading. It also enables researchers to discover new regularities in markets.

### Biography: E. Tsang

Edward Tsang holds a first degree in Finance and a MSc and PhD degree in Computer Science. He is the Director of Centre for Computational Finance and Economic Agents (CCFEA), an interdisciplinary research centre which he co-founded in October 2002. He has international reputation in artificial intelligence. He is well known for his research in constraint satisfaction (a branch of combinatorial optimisation for decision support and scheduling) and computational finance and economics. His book on constraint satisfaction is the most cited literature on the subject. He founded the Technical Committee in Computation Finance and Economics in IEEE's Computational Intelligence Society in 2004. Edward Tsang's research is highly industry-relevant. He has given consultation to GEC Marconi, British Telecom, Honda Europe, Causeway, Old Mutual Asset Managers, Allianz RAS and other organizations.