

"The Role of Emotion in Financial Markets"

(in English)

Presenter: Mr. WANG Dong (PhD Student)

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Venue: WYL314, Dorothy Y. L. Wong Building

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Abstract:

This dissertation considers the influence of emotions relevant to the volatilities of financial markets from the perspectives of neurological framework for decision-making process and user behaviors in social networks. Using Big Data and a state-of-the-art machine learning algorithm in the field of sentiment analysis, this thesis suggests a new approach to infer emotional state of users in social networks, particularly Twitter and Sina Microblog. This approach will be more appropriate than the traditional one dimensional polarity classification in sentiment analysis tasks, by capturing two dimensional sentiment components, namely the valence and the arousal.

This thesis will analyze the performance of these emotional factors as features in artificial neural networks for the purpose to simulate human decision-making process in financial markets, precisely as price determinants to detect Bitcoin exchange rate movement. This thesis will further discuss several other financial assets with the similar methodology.

The major contribution of this work will be providing an explanation of the short-run market fluctuations when the efficient market hypothesis and the rationality assumption failure. In addition. This work will provide a theoretical framework for the connection between sentiment analysis in social networks and the financial market performance. Moreover, benefits from voluminous and multilingual textual data in social networks, this work will provide relatively robust findings.

ALL ARE WELCOME

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