

Asia-Pacific Econophysics Conference 2015 (13-15 Jul 2015, Singapore)

Time	Monday, 13 Jul 2015	Tuesday, 14 Jul 2015	Wednesday, 15 Jul 2015
0830-0900	Registration	Registration	
0900-0930	Opening Address (SPMS LT3) CHEONG Siew Ann <i>Nanyang Technological University</i>		
0930-1100	Invited Session 1 (SPMS LT3) Inequality <i>Chair: Darrell TAY</i> Bikas CHAKRABARTI <i>Saha Institute of Nuclear Physics, INDIA</i> Victor YAKOVENKO <i>University of Maryland, USA</i>	Invited Session 3 (SPMS LT3) Innovation <i>Chair: CHEONG Siew Ann</i> J. Sylvan KATZ <i>University of Sussex, UK/University of Saskatchewan, CANADA</i> Luciano PIETRONERO <i>Sapienza University of Rome, ITALY</i>	Invited Session 5 (SPMS LT3) Economics of Ageing <i>Chair: TEH Boon Kin</i> CHEN Shu-Heng <i>National Chengchi University, TAIWAN</i> OH Gabjin <i>Chosun University, KOREA</i>
1100-1130	Coffee Break		
1130-1300	Contributed Session 1 (SPMS LT3) Inequality <i>Chair: Bikas CHAKRABARTI</i> Contributed Session 2 (SPMS LT4) Game Theory & Individual Choice <i>Chair: CHEN Shu-Heng</i> Contributed Session 3 (MAS ECR2) Agent-Based Models I <i>Chair: Victor YAKOVENKO</i>	Contributed Session 6 (SPMS LT3) Stock Market Dynamics II <i>Chair: LI Sai-Ping</i> Contributed Session 7 (SPMS LT4) Agent-Based Models II <i>Chair: Darrell TAY</i> Contributed Session 8 (MAS ECR2) Innovation & Optimisation <i>Chair: Luciano PIETRONERO</i>	Invited Session 6 (SPMS LT3) Economics of Ageing <i>Chair: FENG Ling</i> LI Sai-Ping <i>Academia Sinica, TAIWAN</i> Anis LARBI <i>Singapore Immunology Network, SINGAPORE</i>
1300-1400	Lunch Break		Closing Address (SPMS LT3) CHEONG Siew Ann <i>Nanyang Technological University</i>

Asia-Pacific Econophysics Conference 2015 (13-15 Jul 2015, Singapore)

Time	Monday, 13 Jul 2015	Tuesday, 14 Jul 2015
1400-1530	<p>Invited Session 2 (SPMS LT3) Inequality <i>Chair: HUANG Weihong</i></p> <p>LI Shi <i>Beijing Normal University</i></p> <p>Aki-Hiro SATO <i>Kyoto University</i></p>	<p>Invited Session 4 (SPMS LT3) Innovation <i>Chair: James TAN</i></p> <p>AHN Sangjin <i>Korea Institute of Science and Technology Evaluation and Planning, KOREA</i></p> <p>Akira NAMATAME <i>National Defense Academy, JAPAN</i></p>
1530-1600	Coffee Break	
1600-1730	<p>Contributed Session 4 (SPMS LT3) Stock Market Dynamics I <i>Chair: SU Haibing</i></p> <p>Contributed Session 5 (SPMS LT4) Stock Market Crashes <i>Chair: Aki-Hiro SATO</i></p>	<p>Contributed Session 9 (SPMS LT3) Financial Networks & Sociophysics <i>Chair: Akira NAMATAME</i></p> <p>Contributed Session 10 (SPMS LT4) Housing Markets <i>Chair: OH Gabjin</i></p> <p>Contributed Session 11 (MAS ECR2) Stock Market Dynamics III <i>Chair: TEH Boon Kin</i></p>
1830-2200	<p>Conference Banquet (Asia-Pacific Breweries)</p>	

Asia-Pacific Econophysics Conference 2015 (13-15 Jul 2015, Singapore)

Contributed Session 1 (MON, 13 Jul 2015, 1130-1300, SPMS LT3)

Inequality

Chair: Bikas CHAKRABARTI

1130-1200

Division of labor, skill complementarity, and heterophily in socioeconomic networks

Wen-Jie Xie,^{1,2,3} Ming-Xia Li,^{2,3} Zhi-Qiang Jiang,^{1,2} Qun-Zhao Tan,⁴ Boris Podobnik,^{5,6,7,8} Wei-Xing Zhou,^{1,2,3} H. Eugene Stanley⁵

¹ *Department of Finance, East China University of Science and Technology, Shanghai 200237, CHINA*

² *Research Center for Econophysics, East China University of Science and Technology, Shanghai 200237, CHINA*

³ *Department of Mathematics, East China University of Science and Technology, Shanghai 200237, CHINA*

⁴ *Shanda Games Ltd., 690 Bibo Road, Shanghai 201203, CHINA*

⁵ *Department of Physics and Center for Polymer Studies, Boston University, MA, USA*

⁶ *Zagreb School of Economics and Management, 10000 Zagreb, CROATIA*

⁷ *Faculty of Civil Engineering, University of Rijeka, 51000 Rijeka, CROATIA*

⁸ *Faculty of Economics, University of Ljubljana, 1000 Ljubljana, SLOVENIA*

1200-1230

Social insurance, income and subjective well-being of rural migrants in China – Application of unconditional quantile regression

Fang Zheng

Division of Economics, School of Humanities and Social Sciences, Nanyang Technological University, SINGAPORE

Contributed Session 2 (MON, 13 Jul 2015, 1130-1300, SPMS LT4)

Game Theory and Individual Choice

Chair: CHEN Shu-Heng

1130-1200

Directional learning in multi-player ultimatum game theory and experiment

Wanting Xiong, Han Fu, Yougui Wang

School of Systems Science, Beijing Normal University, Beijing 100875, CHINA

1200-1230

Motivational dynamics in the search for fairness

Riyang Phang, George Christopoulos

Nanyang Business School, Nanyang Technological University, SINGAPORE

1230-1300

Saving behavior and velocity of money circulation

Yongbin Shi, Yougui Wang

School of Systems Science, Beijing Normal University, Beijing 100875, CHINA

Asia-Pacific Econophysics Conference 2015 (13-15 Jul 2015, Singapore)

Contributed Session 3 (MON, 13 Jul 2015, 1130-1300, MAS Executive Classroom 2)

Agent-Based Models I

Chair: Victor Yakovenko

1130-1200

The study of Mike-Farmer order-driven model

Huai-Long Shi, Gao-Feng Gu, Wei-Xing Zhou

School of Business and Research Center for Econophysics, East China University of Science and Technology, Shanghai 200237, CHINA

1200-1230

Local network effect and competition model

Xiaoyun Xing, Yougui Wang

School of Systems Science, Beijing Normal University, Beijing 100875, CHINA

1230-1300

Price spikes and regime shifts in a toy model of the day-ahead electricity market

Xue Gong,¹ Siew Ann Cheong^{1,2}

¹ *Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, SINGAPORE*

² *Complexity Institute, Nanyang Technological University, SINGAPORE*

Contributed Session 4 (MON, 13 Jul 2015, 1600-1730, SPMS LT3)

Stock Market Dynamics I

Chair: SU Haibin

1600-1630

How volatilities nonlocal in time affect the price dynamics in complex financial systems

Lei Tan,^{1,2} Bo Zheng,^{1,2} Jun-Jie Chen,^{1,2} Xiong-Fei Jiang¹

¹ *Department of Physics, Zhejiang University, Hangzhou 310027, CHINA*

² *Collaborative Innovation Center of Advanced Microstructures, Nanjing University, Nanjing 210093, CHINA*

1630-1700

Forecasting the evolution of financial time series using filtration methods

Elena Istigecheva, Ayana Aspembitova

Simulation and Systems Analysis Department, Tomsk State University of Control Systems and Radioelectronics, RUSSIA

1700-1730

Stability and hierarchy of quasi-stationary states: financial markets as an example

Yuriy Stepanov,¹ Philip Rinn,² Thomas Guhr,¹ Joachim Peinke,² Rudi Schäfer¹

¹ *Faculty of Physics, University of Duisburg-Essen, Duisburg, GERMANY*

² *Institute of Physics and ForWind, Carl-von-Ossietzky University Oldenburg, GERMANY*

Asia-Pacific Econophysics Conference 2015 (13-15 Jul 2015, Singapore)

Contributed Session 5 (MON, 13 Jul 2015, 1600-1730, SPMS LT4)

Stock Market Crashes

Chair: Aki-Hiro Sato

1600-1630

SOG signature of Lehman Brothers Crisis in SGX

Boon Kin Teh,^{1,2} Siew Ann Cheong^{1,2}

¹ *Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, SINGAPORE*

² *Complexity Institute, Nanyang Technological University, SINGAPORE*

1630-1700

Endogenous fundamental, financial bubbles and stock cycles

Weihong Huang, Yu Zhang

Division of Economics, School of Humanities and Social Sciences, Nanyang Technological University, SINGAPORE

1700-1730

Self-organized financial instability

Wanting Xiong, Xuewei Cao, Yougui Wang

School of Systems Science, Beijing Normal University, Beijing 100875, CHINA

Contributed Session 6 (TUE, 14 Jul 2015, 1130-1300, SPMS LT3)

Stock Market Dynamics II

Chair: LI Sai-Ping

1130-1200

Intrinsic multi-scale dynamic behaviors of complex financial systems

Fangyan Ouyang,^{1,2} Bo Zheng,^{1,2} Xiongfei Jiang¹

¹ *Department of Physics, Zhejiang University, Hangzhou 310027, CHINA*

² *Collaborative Innovation Center of Advanced Microstructures, Nanjing University, Nanjing 210093, CHINA*

1200-1230

Stability and Hierarchy of quasi-stationary systems: finance as an example

Yuriy Stepanov,¹ Philip Rinn,² Joachim Peinke,² Tomas Guhr¹ and Rudi Schäfer¹

¹ *Faculty of Physics, University of Duisburg-Essen, Duisburg, GERMANY*

² *Institute of Physics and ForWind, Carl-von-Ossietzky University Oldenburg, GERMANY*

1230-1300

Portfolio selection in Korean stock market using complex network method

Gabjin Oh, Seok-won Ahn

Division of Business Administration, Chosun University, Gwangju 501-759, South Korea

Contributed Session 7 (TUE, 14 Jul 2015, 1130-1300, SPMS LT4)

Agent-Based Models II

Chair: Darrell TAY

1130-1200

Generative pairwise interaction model for the U.S. stock market

Stanislav S. Borysov^{1,*}, Yasser Roudi^{2,3}, Alexander V. Balatsky^{2,4}

¹ *Singapore-MIT Alliance for Research and Technology, SINGAPORE*

² *The Kavli Institute for Systems Neuroscience, NTNU, 7030 Trondheim, NORWAY*

³ *Nordita, Center for Quantum Materials, KTH Royal Institute of Technology and Stockholm University, Roslagstullsbacken 23, SE-106 91 Stockholm, SWEDEN*

⁴ *Institute for Materials Science, Los Alamos National Laboratory, Los Alamos, NM 87545, USA*

1200-1230

Agent-based model with multi-level herding for complex financial systems

Jun-Jie Chen^{1,2}, Lei Tan^{1,2} and Bo Zheng^{1,2}

¹ *Department of Physics, Zhejiang University, Hangzhou 310027, CHINA*

² *Collaborative Innovation Center of Advanced Microstructures, Nanjing University, Nanjing 210093, CHINA*

1230-1300

Using agent-based models to test the stability of equilibrium models

Harbir Lamba

Department of Mathematical Sciences, George Mason University, USA

Contributed Session 8 (TUE, 14 Jul 2015, 1130-1300, MAS Executive Classroom 2)

Innovation & Optimisation

Chair: Luciano PIETRONERO

1130-1200

Complexity Analysis of Research Activity: A Case of Public Research Institutes in Korea

Woo-Sung Jung, Hyeonchae Yang

POSTECH, KOREA

1200-1230

Self-'optimising' intelligent bus system

Wei Liang Quek, Lock Yue Chew, Zhuo Zhao

Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, SINGAPORE

Contributed Session 9 (TUE, 14 Jul 2015, 1600-1730, SPMS LT3)

Financial Networks & Sociophysics

Chair: Akira NAMATAME

1600-1630

Systemic risk and hierarchical transitions of financial network topology

Ashadun Nobi,^{1,2} Jae Woo Lee^{1,*}

¹ *Department of Physics, Inha University, Incheon 402-751, KOREA*

² *Department of Computer Science and Telecommunication Engineering, Noakhali Science and Technology University, Sonapur Noakhali-3802, BANGLADESH*

1630-1700

Systemic risk in banking system

Kyubin Yim,¹ Ayoung Park,² Gabjin Oh,² Seunghwan Kim¹

¹ *Nonlinear and Complex System Laboratory, Department of Physics, POSTECH, Pohang 790-784, KOREA*

² *Division of Business Administration, Chosun University, Gwangju 501-759, KOREA*

1700-1730

Competing for attention in social media under information overload conditions

Ling Feng,¹ Yanqing Liu,² Baowen Li,³ H. Eugene Stanley,⁴ Shlomo Havlin,⁵ and Lidia Braunstein⁶

¹ *Institute of High Performance Computing, SINGAPORE*

² *School of Mathematics, Southwest Jiaotong University, CHINA*

³ *Department of Physics and Centre for Computational Science and Engineering, National University of Singapore, SINGAPORE*

⁴ *Center for Polymer Studies and Department of Physics, Boston University, USA*

⁵ *Department of Physics, Bar-Ilan University, ISRAEL*

⁶ *Instituto de Investigaciones Físicas de Mar del Plata (IFIMAR), Universidad Nacional de Mar del Plata-CONICET, ARGENTINA*

Contributed Session 10 (TUE, 14 Jul 2015, 1600-1730, SPMS LT4)

Housing Markets

Chair: OH Gabjin

1600-1630

Critical slowing down in the US housing market

James Peng Lung Tan^{1,3} and Siew Ann Cheong^{2,3}

¹ *Interdisciplinary Graduate School, Nanyang Technological University, SINGAPORE*

² *Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, SINGAPORE*

³ *Complexity Institute, Nanyang Technological University, SINGAPORE*

1630-1700

Spatial and temporal dynamics in housing markets

Darrell Tay,^{1,2} Chou Chung-I,³ Cheong Siew Ann,^{1,2} Li Sai Ping⁴

¹ *Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, SINGAPORE*

² *Complexity Institute, Nanyang Technological University, SINGAPORE*

³ *Chinese Cultural University, TAIWAN*

⁴ *Institute of Physics, Academia Sinica, TAIWAN*

1700-1730

Housing bubbles in a toy model of the housing market

Yaxin Liu,¹ Siew Ann Cheong^{2,3}

¹ *Division of Mathematical Sciences, School of Physical and Mathematical Sciences, Nanyang Technological University, SINGAPORE*

² *Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, SINGAPORE*

³ *Complexity Institute, Nanyang Technological University, SINGAPORE*