



# Program (at a glance)

Tuesday, August 23 4pm–7pm Registration ([Sanjo conference hall](#))

5pm–7pm Welcome reception ([Sanjo conference hall](#))

Wednesday, August 24		Thursday, August 25		Friday, August 26	
9:00–9:20	Opening	9:00–9:30	Luciano Pietronero	9:00–9:30	Masashi Sugiyama
9:20–9:50	Shlomo Havlin	9:30–10:00	Kazuo Yano	9:30–10:00	Henrik Jensen
9:50–10:20	H. Eugene Stanley	10:00–10:30	Siew Ann Cheong	10:00–10:30	Naoki Masuda
10:20–10:40	Coffee break	10:30–11:00	Coffee break	10:30–10:50	Coffee break
10:40–11:10	Woo-Sung Jung	11:00–12:30	Parallel session3	10:50–11:20	Hawoong Jeong
11:10–11:40	Daqing Li	12:30–13:45	Lunch	11:20–11:50	Wei-Xing Zhou
11:40–12:10	Takayuki Ito	13:45–15:00	Parallel session4	11:50–12:20	Didier Sornette
12:10–13:30	Lunch	15:00–15:30	Coffee break	12:20–12:50	Closing
13:30–14:00	Nobuyasu Ito	15:30–16:00	Katsuhiro Nishinari		
14:00–14:30	Takatoshi Ito	16:00–16:30	Rafal Weron		
14:30–15:00	Chin-Kun Hu	16:30–17:00	Erika Legara		
15:00–15:30	Coffee break	17:00–17:20	Coffee break		
15:30–16:30	Parallel session1	17:20–17:50	Beom-Jun Kim		
16:30–16:50	Coffee break	17:50–18:20	Cécile Appert		
16:50–17:50	Parallel session2	19:00–	Banquet		
18:00–19:30	Poster session				

 : Koshiba hall  
 : Sanjo hall

## Wednesday, August 24

**Session 1** Place: [Koshiba hall](#) Chair: Misako Takayasu

9:00 – 9:20 Misako Takayasu and Shlomo Havlin

Opening

9:20 – 9:50 Shlomo Havlin (Invited)

[Cascading failures and recovery in interacting networks](#)

9:50 – 10:20 H. Eugene Stanley (Invited)

[Novel Statistical Physics Approaches to Understanding Economic Fluctuations](#)

10:20 – 10:40 Coffee break

**Session 2 Place: Koshiba hall Chair: Shintaro Mori**

10:40 – 11:10 Woo-Sung Jung (Invited)

[Bibliometric analysis and complex systems](#)

11:10 – 11:40 Daqing Li (Invited)

(TBA)

11:40 – 12:10 Takayuki Ito (Invited)

[Innovating Large-scale Discussion and Consensus Support Systems based on Agent Technologies](#)

12:10 – 13:30 Lunch

**Session 3 Place: Koshiba hall Chair: Kota Watanabe**

13:30 – 14:00 Nobuyasu Ito (Invited)

Social simulations on the Post-K computer

14:00 – 14:30 Takatoshi Ito (Invited)

[Will Human Forex Dealers become Extinct?](#)

14:30 – 15:00 Chin-Kun Hu (Invited)

[Indicator prior to financial collapses](#)

**15:00 Group Photo**

15:00 – 15:30 Coffee break

**Session 4-A Place: [Sanjo hall](#) (Room A) Chair: Wei-Xing Zhou**

15:30 – 15:45 Abhijit Chakraborty, Soumya Easwaran and Sitabhra Sinha

[An inverse square law for exchange rate fluctuations ? Probability-distance based analysis relates deviation from universality with macroeconomic indicators](#)

15:45 – 16:00 Huai-Long Shi, Zhi-Qiang Jiang, and Wei-Xing Zhou

[Time-dependent momentum and contrarian effects in the Chinese stock market](#)

16:00 – 16:15 Ladislav Kristoufek

[Detrending methods for fractional cointegration](#)

16:15 – 16:30 Cancelled

**Session 4-B Place: Sanjo hall (Room B) Chair: Naoki Masuda**

15:30 – 15:45 Michael M. Danziger, Stefano Boccaletti and Shlomo Havlin

[Interdependent and competitive synchronization in networks of networks](#)

15:45 – 16:00 Hirokazu Kawamoto, Hideki Takayasu and Misako Takayasu

[Extinction of Links and Resulting Percolation in a Japanese Business Relation Network](#)

16:00 – 16:15 Chandrashekar Kuyyamudi, Anindya S. Chakrabarti and Sitabhra Sinha

[Loss of structural balance in the cross-correlation networks of financial market signals the onset of major crisis](#)

16:15 – 16:30 Katsuhide Takahashi, Yuh Kobayashi, Yohei Kondo, Hideki Takayasu and Misako Takayasu

[Bipartite Networks of Universities and Companies: Recruiting New Graduates](#)

16:30 – 16:50 Coffee break

**Session 5-A Place: Sanjo hall (Room A) Chair: Erika Fille Tupas Legara**

16:50 – 17:05 Shota Nagumo, Takashi Shimada, Naoki Yoshioka and Nobuyasu Ito

[Trading share competition between artificial stock markets with different tick sizes](#)

17:05 – 17:20 Ye Sun and Yu Chen

[A detailed study on the phase diagram of a toy model for macroeconomic systems](#)

17:20 – 17:35 Bin Li, K. Y. Michael Wong, Amos H. M. Chan, Tsz Yan So, Hermann Heimonen and David Saad

[Sharp Rises in Commodity Prices](#)

17:35 – 17:50 Takayuki Hiraoka, Takashi Shimada and Nobuyasu Ito

[Collective dynamics of repulsive self-propelled particles](#)

**Session 5-B Place: Sanjo kaikan (Room B) Chair: Woo-Sung Jung**

16:50 – 17:05 Koutarou Tamura, Hideki Takayasu and Misako Takayasu

[Estimation of sales-change caused by structural change of an interfirm trading network and its verification](#)

17:05 – 17:20 Atushi Ishikawa, Shouji Fujimoto, Takayuki Mizuno and Tsutomu Watanabe

[Decay rate of firm activities and non-Gibrat's law](#)

17:20 – 17:35 Marcin Makowski, Edward W. Piotrowski and Jan Sladkowski

[Anti-Parrondo paradox on data transfer](#)

17:35 – 17:50 Ruiyun Liu and Yu Chen

[Analysis of the emergence of log-periodic-power-law in a stock market with a spin model on the network](#)

**Session 6 Place: Sanjo hall**

18:00 – 19:30 Poster Session

Thursday, August 25

**Session 7 Place: Koshiba hall Chair: Kenta Yamada**

9:00 – 9:30 Luciano Pietronero (Invited)

[New Metrics for Economic Complexity: Measuring the Intangible Growth Potential of Countries](#)

9:30 – 10:00 Kazuo Yano (Invited)

[General-Purpose Artificial Intelligence: Revolutionizing the Productivity, Happiness and Economy](#)

10:00 – 10:30 Siew Ann Cheong (Invited)

[Regime Shift in the US Housing Market](#)

10:30 – 11:00 Coffee break

**Session 8-A Place: Sanjo hall (Room A) Chair: Daichi Yanagisawa**

11:00 – 11:15 Maurits Kaptein, Robin van Emden and Davide Iannuzzi

[Lock-in amplifiers and human behavior: opening the toolbox of experimental physics to the social sciences](#)

11:15 – 11:30 Xin Zhang and Dingding Han

[Users Participation and Social Influence during Information Spreading on Twitter](#)

11:30 – 11:45 Akira Ishii, Yasuko Kawahata and Ujo. Goto

[Model of market share affected by social media reputation](#)

11:45 – 12:00 Kazue Kudo and Kanako Mizuno

[Spread of infectious diseases with and without a latent period](#)

12:00 – 12:15 Shuhei Miyano, Koji Oishi, Takashi Shimada, Nobuyasu Ito and Kimmo Kaski

[Group Formation through Indirect Reciprocity in Random Sparse Network](#)

12:15 – 12:30 Katarzyna Sznajd-Weron

[The diamond model of social response within an agent-based approach](#)

**Session 8-B Place: Sanjo hall (Room B) Chair: Rafal Weron**

11:00 – 11:15 Jun-ichi Maskawa, Koji Kuroda, Joshin Murai

[Collective behavior in market participants with different time horizons](#)

11:15 – 11:30 A. Raul Hernandez-Montoya, Hector Coronel-Brizio and Daniel Jimenez-Alvarez

[A statistical analysis of returns of elementary trends time series of financial indices: Probability distribution, Symmetry and Correlations](#)

11:30 – 11:45 Yan-Jun Wang , Chen-Ping Zhu, and H. E. Stanley

[Scaling of Cosine Correlations of Flight-delays in connected airports in American Aviation Networks](#)

11:45 – 12:00 Boon Kin Teh and Siew Ann Cheong

[Mesosopic Dynamics of Financial Markets](#)

12:00 – 12:15 Mieko Tanaka-Yamawaki

[Statistical Property of Prices in the Arrowhead Market -Levy's Stable Distribution Or Else?](#)

12:15 – 12:30 Takumi Sueshige, Kiyoshi Kanazawa, Hideki Takayasu and Misako Takayasu

[Statistical Property for the Limit Order of Foreign Exchange Market](#)

12:30 – 13:45 Lunch

**Session 9-A Place: Sanjo hall (Room A) Chair: Siew Ann Cheong**

13:45 – 14:00 Kohei Tamura and Naoki Masuda

[Effects of spatial interaction on migration flows](#)

14:00 – 14:15 Chung-I Chou and Choon-Lin Ho

[Models of Consensus Formation based on Quantum Walk](#)

14:15 – 14:30 Kiyoshi Kanazawa, Takumi Sueshige, Hideki Takayasu and Misako Takayasu

[Kinetic description of the foreign exchange markets](#)

14:30 – 14:45 Marcin Makowski, Edward W. Piotrowski and Jan Sladkowski

[Quantum games on networks](#)

14:45 – 15:00 Koji Oishi

[Phylogenetic network of armed groups in civil war](#)

**Session 9-B Place: Sanjo hall (Room B) Chair: Takeshi Sakaki**

13:45 – 14:00 Hayato Goto, Hideki Takayasu and Misako Takayasu

[Chain-reaction bankruptcies on Multilayered complex networks](#)

14:00 – 14:15 Marcin Makowski, Edward W. Piotrowski and Jan Sladkowski

[Paradoxical consequences of the inhomogenities in Bayes' rule](#)

14:15 – 14:30 Yohei Sakamoto and Irena Vodenska

[Cascading Failure Model and New Perspective on 1990s Japanese Banking Crisis](#)

14:30 – 14:45 Darrell Jiajie Tay, Chung-I Chou, Sai-Ping Li and Siew Ann Cheong

[Housing Price Distribution and Housing Bubble](#)

14:45 – 15:00 Teruyoshi Kobayashi and Naoki Masuda

[A community-based collective influence algorithm for immunizing networks](#)

**15:00 Deadline of Vote for Poster Award**

15:00 – 15:30 Coffee break

**Session 10 Place:Koshiba hall Chair: Cécile Appert-Rolland**

15:30 – 16:00 Katsuhiro Nishinari (Invited)

[A Smart Solution for Traffic problems - slower-is-faster strategy and metastable states -](#)

16:00 – 16:30 Rafal Weron (Invited)

[New trends in energy market forecasting](#)

16:30 – 17:00 Erika Fille Tupas Legara (Invited)

[Data-Driven Urban Systems Modeling towards a Smart City](#)

17:00 – 17:20 Coffee break

**Session 11 Place:Koshiba hall Chair: Katsuhiro Nishinari**

17:20 – 17:50 Beom-Jun Kim (Invited)

[Bipedalism and human body-mass index](#)

17:50 – 18:20 Cécile Appert-Rolland (Invited)

[Transport in physical space: the example of pedestrians](#)

**19:00 – Banquet Place Yushima Tenmangu**

**19:00-19:20 Traditional Japanese Music Concert**

Friday, August 26

**Session 12 Place:Koshiba hall Chair: Takashi Shimada**

9:00 – 9:30 Masashi Sugiyama (Invited)

[Machine Learning from Weak Supervision](#)

9:30 – 10:00 Henrik Jeldtoft Jensen (Invited)

[Dynamics of Transformation from Segregation to Mixed Wealth Cities](#)

10:00 – 10:30 Naoki Masuda (Invited)

[Dynamical switching of networks facilitates endemicity in the susceptible-infected-susceptible epidemic model](#)

10:30 – 10:50 Coffee break

**Session 13 Place:Koshiba hall Chair: Hideki Takayasu**

10:50 – 11:20 Hawoong Jeong (Invited)

[Interdisciplinary applications of network dynamics: From microscopic to Macroscopic](#)

11:20 – 11:50 Wei-Xing Zhou (Invited)

[Joint multifractal analysis based on the partition function approach: Analytical analysis, numerical simulation and empirical application](#)

11:50 – 12:20 Didier Sornette (Invited)

[Growth:](#)

[1\) Aristotle vs. Ringelmann \( \$1+1>2.5\$ \): cooperative projects and productivity;](#)

[2\) multi-scale business cycles;](#)

[3\) Social bubbles as engines of discovery](#)

12:20 – 12:40 Misako Takayasu and Kenta Yamada

Poster award, Closing

## List of Poster Presentation

P-01 Kei Katahira and Yu Chen

[Modelling Market Dynamics with a "Market Game"](#)

P-02 Yushi Yoshimura and Kenta Yamada

[Delayed Majority Game with Heterogeneous Learning Speeds for Financial Markets](#)

P-03 Tetsuya Takashi

[A Large-Scale Simulation of Ising Financial Market](#)

P-04 Arthur M. Y. R. Sousa, Hideki Takayasu and Misako Takayasu

[Analysis of the up-down dynamics of the foreign exchange market using statistical symmetries](#)

P-05 Kazuaki Nakayama and Shintaro Mori

[Collective behavior of social learning agents in restless multi-armed bandit](#)

P-06 Xiangyi Meng, Jian-Wei Zhang and Hong Guo

[A quantum Brownian motion model for stock markets](#)

P-07 Hirofumi Yamashita, Hideki Takayasu and Misako Takayasu

[Price and Volume Dynamics in the Stock Market](#)

P-08 Yuta Murakami, Hideki Takayasu and Misako Takayasu

[Growth Model of Japanese Inter-firm Trading Network with Money Transport](#)

P-09 Yuh Kobayashi, Hideki Takayasu and Misako Takayasu

[Tracking Firm State Variables through Long Time-Series Data of Japanese Firms](#)

P-10 Ayoung Park, Jie Deng, Hyun Son, Solbi Lee and Gabjin Oh

[Analysis of connected structure among individual companies](#)

**P-11 Emiko Takagi, Kenta Yamada, Hideki Takayasu and Misako Takayasu**

[Extraction of Abnormal Values of Word Frequencies in the Blogosphere and Influence on Stock Price](#)

**P-12 Tomoya Hamano, Kiyoshi Kanazawa, Hideki Takayasu and Misako Takayasu**

[Dealer model with finite assets in foreign exchange market](#)

**P-13 Hideto Kamei, Hideki Takayasu, Yoshiyuki Kabashima, Hirokazu Kawamoto, Hayato Goto, Yuta Murakami and Misako Takayasu**

[The effect of trade network structure on bankruptcy](#)

**P-14 Le Anh Quang, Ashadun Nobi, Jung Nam, Tae Ho Lee and Jae Woo Lee**

[Hierarchical Organization of World Commodities Flow Network](#)

**P-15 Jean-Francois Boilard, Hideki Takayasu, Kiyoshi Kanazawa and Misako Takayasu**

[Annihilation Rate of Limit Orders in Foreign Exchange Market](#)

**P-16 Daichi Yanagisawa and Shingo Ichiki**

[Hurst exponent in a simple order-book model with the asymmetric simple exclusion process](#)

**P-17 Kenji Hara, Hideki Takayasu and Misako Takayasu**

[Detail observation of interaction among foreign exchange markets based on order-book data](#)

**P-18 Takahiro Ezaki, Yutaka Horita, Masanori Takezawa and Naoki Masuda**

[Reinforcement Learning Explains Conditional Cooperation in Repeated Social Dilemma Games](#)

**P-19 Yasuko Kawahata and Takaaki Ohnishi**

[Study of Quantitative Indicators for Urban Renewal by Utilizing Cultural Policy in Depopulated Areas](#)

**P-20 Hisashi Arakaki, Akira Ishii<sup>1</sup> and Yasuko Kawahata**

[Difference and similarity between Twitter posting and access of web application coupled with television program](#)

**P-21 Shintaro Mori, Masato Hisakado and Kazuaki Nakayama**

[Efficient aggregation of collective intelligence in information cascade voting system](#)

**P-22 Poongjin Cho, Sondo Kim, Sungyoon Choi and Woojin Chang**

[Forecasting the maximum and minimum daily stock price using various prediction methods](#)

**P-23 Çağlar Tuncay**

[Market Laws](#)

**P-24 Dunbiao Niu, Xin Yuan, Minhui Du, H. Eugene Stanley and Yanqing Hu**

[Percolation of networks with directed dependency links](#)

**P-25 Yuki Yabuuchi and Kazue Kudo**

[Traveling Salesman Problems with Constraints](#)

**P-26 Taro Takaguchi and Yuichi Yoshida**

[A pattern-match based method for extracting modules in directed networks](#)

**P-27 Masaru Nagura, Katsuhiro Nishinari**



[Effect on the scale invariance of the network exerted by the constraint of the latency](#)

**P-28 Ken Yamamoto**

[Lognormal behavior of the size distributions of animation characters](#)

**P-29 Fumiaki Sano, Masato Hisakado and Shintaro Mori**

[Voter Model for General Election in Japan](#)

**P-30 Jinattaporn Khumsri and Akihiro Fujihara**

[Finding hidden location patterns of two competitive supermarkets in Thailand](#)

**P-31 Wen-Wei Lee, Wei-Chun Hung, Yi-Chin Chou, Yung-Chou Hsu and Chung-I Chou**

[Using a Simple Model to Simulate the Consensus Formation](#)

**P-32 Yoshie Otsuka and Kazue Kudo**

[Detection of overlapping communities in a friendship network](#)

**P-33 Shao-Hsuan Hsiao, Hao Ke, Po-Yu Chien, Wei Dai and Chung-I Chou**

[Simple Field Experiments for Consensus Formation on Campus](#)

**P-34 Yohei Kondo, Hideki Takayasu and Misako Takayasu**

[Structure of Japanese Inter-firm Multiplex Networks](#)

**P-35 Kazuya Inagaki, Yusuke Hara and Masao Kuwahara**

[An Empirical Analysis on the Structure of Facility Accumulations by Comparison of 8 Cities](#)

**P-36 Masato S. Abe and Shin-ichiro Nakayama**

[Identifying causal relationship in partially deterministic systems from time-series data](#)

**P-37 Yosuke Kawasaki, Yusuke Hara and Masao Kuwahara**

[Construction of real-time traffic state estimation method of a two-dimensional network by data assimilation](#)

**P-38 James Irish, Minjae Kim and Seung Ki Baek**

[Empirical study of Fisher's principle in the Census 2000 of Korea](#)