Sadamori Kojaku

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Research interests

Science of Science, Network science, biases in data and machine learning

Academic Position

Postdoctral Research Fellow 02/2020–present
School of Informatics, Computing and Engineering
Indiana University, Bloomington, USA

Specially Appointed Professor (Postdoc) 04/2019–01/2020
Research Institute for Economics and
Business Administration, Japan
Kobe University

Research Associate (Postdoc) 04/2016–03/2019
Department of Engineering Mathematics
University of Bristol, UK.
(Core Research for Evolutional Science and Technology, JST)

Education

Hokkaido University, Japan 09/2015
PhD in Computer Science
Thesis supervisor: Prof. Mineichi Kudo.

Hokkaido University, Japan 03/2012
Master in System Engineering
Thesis supervisor: Prof. Hajime Igarashi.

Hokkaido University, Japan 03/2010
BA in System Engineering
Thesis supervisor: Prof. Hajime Igarashi.

Honors

Best Contribution on Financial Networks Award [1/58 presenters]. 2017
NetSci-X

Dean Award 2015
Graduate School of Information Science and Technology, Hokkaido Univ

Best Student Award 2013
The World Congress on Engineering

Publications

Sadamori Kojaku, Giacomo Livan, and Naoki Masuda.
Detecting citation cartels in journal networks.
Preprint arXiv, 2020

Sadamori Kojaku, Laurent Hébert-Dufresne, Enys Mones, Sune Lehmann, Yong-Yeol Ahn.
The effectiveness of backward contact tracing in networks.
Nature Physics, 1745-2481, 2021

Sadamori Kojaku and Naoki Masuda.
Constructing networks by filtering correlation matrices: A null model approach.
Proceedings of the Royal Society A, 475, 2231, 2019

Sadamori Kojaku, Mengqiao Xu, Haoxiang Xia, and Naoki Masuda.
Multiscale core-periphery structure in a global liner shipping network.
Scientific Reports, 9, 404, 2019

Sadamori Kojaku, Giulio Cimini, Guido Caldarelli, and Naoki Masuda.
Structural changes in the interbank market across the financial crisis from multiple core-periphery analysis.
Journal of Network Theory in Finance, 4, 33-51, 2018

Naoki Masuda, Sadamori Kojaku, and Yukie Sano.
A configuration model for correlation matrices.
Physical Review E, 98, 012312, 2018

Sadamori Kojaku and Naoki Masuda.
A generalised significance test for individual communities in networks.
Scientific Reports, 8, 7351 (2018)

Sadamori Kojaku and Naoki Masuda.
Core-periphery structure requires something else in the network.
New Journal of Physics, 20, 043012, 2018

Sadamori Kojaku and Naoki Masuda.
Finding multiple core-periphery pairs in networks.
Physical Review E, 96, 052313, 2017

Sadamori Kojaku, Ichigaku Takigawa, Mineichi Kudo, and Hideyuki Imai.
Dense core model for cohesive subgraph discovery. Social Networks.
Social Networks, 44, 143-152, 2016

Oral Presentation

Sadamori Kojaku, Attila Varga, Xiaoran Yan, Filipi N. Silva, Staša Milojević, Alessandro Flammini, and Yong-Yeol Ahn. The landscape of the COVID-19 research: A neural embedding approach. Netsci. Rome, Italy, 17-25 September (2020).

Sadamori Kojaku, Giacomo Livan, and Naoki Masuda. Detecting citaion cartels in journal networks. Netsci. Rome, Italy, 17-25 September (2020)

Sadamori Kojaku ネットワークコアの検出アルゴリズムとその応用. ネットワーク科学セミナー. 統計数理研究所. 8.28-30 (2019)

Sadamori Kojaku and Naoki Masuda. Constructing networks from correlation matrices: An application to economical data. Threshold Networks. Nottingham 22-24 July (2019) [poster]

Sadamori Kojaku, Giulio Cimini, Guido Caldarelli, Naoki Masuda. Structural changes in the interbank market across the financial crisis from multiple core-periphery analysis. Netsci. Vermont, U.S., May 26-31 (2019)

Sadamori Kojaku and Naoki Masuda. A generalised significance test for individual communities in networks. Netsci. Paris, France, June 11–15 (2018)

Xia Cui, Sadamori Kojaku, Naoki Masuda and Danushka Bollegala. Solving feature spareness in text classification using core-periphery decomposition. In Proceedings of the 7th Joint Conference on Lexical and Computational Semantics, 225-264 (ACL, New Orleans, USA, 2018)

Sadamori Kojaku and Naoki Masuda. Core-periphery structure in degree-heterogeneous networks. Netsci-X. Hangzhou, China (2018)

Sadamori Kojaku and Naoki Masuda. Multi-scale organisation of core-periphery structure in networks. 1st Laten American Conference on Complex Networks. Puebla, Mexico September 25-29 (2017) [poster]

Sadamori Kojaku and Naoki Masuda. Core-periphery structure of networks: Consideration for random heterogeneous networks. Netsci. Indianapolis, Indiana, USA (2017) [poster]

Sadamori Kojaku and Naoki Masuda. An extension of modularity for finding multiple core/periphery structure in networks. Netsci-X. Tel Aviv, Israel January 15-18 (2017) [poster]

Sadamori Kojaku and Naoki Masuda. Finding multiple core-periphery structure with random walks. 5th International Workshop on Complex Networks and their Applications. Milan, Italy November 30-December 2 (2016)

Keigo Kimura, Mineichi Kudo, Lu Sun and Sadamori Kojaku. Fast random k-labelsets for large-scale multi-label classification. 23rd International Conference on Pattern Recognition. Cancun, Mexico December 4-8 (2016)

Sadamori Koujaku, Mineichi Kudo, Ichigaku Takigawa and Hideyuki Imai. Community change detection in dynamic networks in noisy environment. 24th International Conference on World Wide Web. Florence, Italy, May 18 - 22 (2015)

Sadamori Koujaku, Mineichi Kudo, Ichigaku Takigawa and Hideyuki Imai. Structual change point detection for social networks. The World Congress on Engineering. London, the United Kingdom, July 3-5 (2013)

Sadamori Koujaku, Kota Watanabe and Hajime Igarashi. Adaptive profit sharing reinforcement learning for dynamic environment. 10th International Conference on Machine Learning and Applications and Workshops. Hawaii, the United States (2011)

Industry experience

IBM Research, Tokyo Yamato, Kanagawa, Japan
Internship Spring 2011
Prediction method, prediction system and program [Patent No: 9087294].

Skills

Programming
Proficient in: Python, C++, MATLAB,
Familiar with: PHP, Java, Ruby, Javascript, Perl.

Languages
Japanese (mother's tongue) and English (fluent)

Other interests

Sailing (Advanced; Started in 1996), Kendo (3rd-Dan; Started in 2006), and tennis (Beginner but I love it!;Started in 2020)