

Naoki Masuda

Contact Information

Naoki Masuda
Email: naokimas@buffalo.edu
Website: www.naokimasuda.net

Professional Positions

- 08/19/2019– Associate Professor
Department of Mathematics, University at Buffalo, State University of New York, USA
- 08/19/2019– Core Faculty in the Computational Data Sciences and Engineering Program,
University at Buffalo, USA
- 08/01/2019– Associate Professor
08/18/2019 Department of Engineering Mathematics, University of Bristol, UK
- 03/2014–07/2019 Senior Lecturer
Department of Engineering Mathematics, University of Bristol, UK
- 09/2008–02/2014 Associate Professor
Department of Mathematical Informatics, University of Tokyo
- 10/2006–08/2008 Lecturer
Department of Mathematical Informatics, University of Tokyo
- 04/2004–09/2006 Special Postdoctoral Fellow
Amari Research Unit, RIKEN Brain Science Institute, Japan
- 04/2003–03/2004 Research Fellow (PD)
Japan Society for the Promotion of Science,
at Yokohama National University, Japan
- 10/2002–03/2003 Research Fellow (PD)
Japan Society for the Promotion of Science, at University of Tokyo, Japan
- 04/2000–09/2002 Research Fellow (DC1)
Japan Society for the Promotion of Science, at University of Tokyo, Japan
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- 04/2020–03/2021 Associate Professor (non-tenured)
Faculty of Science and Engineering, Waseda University, Japan
- 11/2018–08/2019 Turing Fellow
Alan Turing Institute, UK
(terminated because of NM's move to the USA)
- 04/2018–03/2021 Visiting Professor
Dalian University of Technology, China
- 10/2008–03/2012 Researcher (part-time appointment)
Japan Science and Technology Agency, Basic Research Programs PRESTO, Japan
- 07/2004–03/2006 Group Leader (part-time appointment)
Japan Science and Technology Agency,
ERATO Aihara Complexity Modelling Project, Japan

Academic Qualifications

- 09/2002 Ph.D. in Engineering, University of Tokyo, Japan
 (Department of Mathematical Engineering and Information Physics)
 Thesis title: “Duality of Information Coding in Pulse-coupled Neural Networks”
 Thesis supervisor: Prof. Kazuyuki Aihara
- 03/2000 M.Sc. in Engineering, University of Tokyo, Japan
 (Department of Mathematical Engineering and Information Physics)
 Thesis title: “Cryptosystems with Discretized Chaotic Maps”
 Thesis supervisor: Prof. Kazuyuki Aihara
- 03/1998 B.Sc. in Engineering, University of Tokyo, Japan
 (Department of Mathematical Engineering and Information Physics)
- 2000–2001 Academic Year Abroad
 Department of Physics, University of California, San Diego, USA

Citation Statistics

[Google Scholar Citations profile](#)

Number of citations: 5950 (Google Scholar Citations)

h-index: 43 (Google Scholar Citations)

Grants

11/2020–11/2021

Sumitomo Foundation

Subject: Analysis of epidemic process models using higher-order random walks on networks

Amount: JPY 1,400,000 (to my group)

Role: PI (CoI: Gouhei Tanaka, University of Tokyo)

07/2020–06/2021

Nakatani Foundation

Subject: Engineering curfew strategies based on contact network analysis

Amount: \$18,497.97 (= JPY 2,000,000) (to my group)

Role: PI (CoI: Dane Taylor, University at Buffalo; Naoya Fujiwara, Tohoku University)

05/2020–08/2021

JP Morgan Chase Faculty Research Awards

Subject: Detecting fraudulent transactions in online marketplaces using temporal network motifs

Amount: \$150,000

Role: CoPI (partner CoPI: A. Erdem Sariyüce, University at Buffalo)

04/2020–07/2020

SUNY Research Seed Grant Program

Subject: Optimizing curfew schedules to suppress COVID-19 spreading

Amount: \$5,500 (\$2,750 to my group)

Role: PI (Other member of the Team: Dane Taylor, University at Buffalo)

02/2020–08/2023

AFOSR European Office

Subject: Inferring dynamics of discrete states in time-varying networks.

Amount: \$144,402 (Subcontracted from University of Bristol, which is NM’s previous institution. NM

secured \$160,709 while he was in Bristol, which has been split between Buffalo and Bristol.)

Role: PI (no CoPI/CoI)

02/2019–09/2019

GW4 Accelerator Fund

Subject: Recurrence analysis for the characterisation and classification of epileptic patients

Amount: £34,928 (£32,721 to my group)

Role: PI (CoI: Lorenzo Livi, University of Exeter; Jiaxiang Zhang, Cardiff University; Tiago de Paula Peixoto, University of Bath)

11/2018–08/2019

Alan Turing Institute

Subject: Revealing citation cartels in network data

Amount: £35,139

Role: PI (no CoPI/CoI)

09/2018–02/2019

Mercari Inc (a company in Japan)

Subject: Detection of problematic transactions in online marketplaces of Mercari

Amount: £20,371 (company's contribution)

Role: PI (no CoPI/CoI)

05/2018–11/2018

EPSRC, BRIM (Building Resilience into Risk Management) Feasibility Fund

Subject: Network resilience theory for water distribution systems

Amount: £10,200

Role: PI (CoI: Fanlin Meng, University of Exeter)

03/2018–02/2020

Cookpad Limited (a company registered in England and Wales)

Subject: Cookpad networks

Amount: £182,278 (company's contribution)

Role: PI (no CoPI/CoI)

03/2018–06/2018

Jean Golding Institute: Seed Corn Funding, University of Bristol

Subject: Immune state networks in wild mice

Amount: £2,600

Role: PI (CoI: Mark Viney, University of Bristol)

02/2018–06/2018

GW4 Data Science Seed Corn Funding

Subject: Recurrence analysis for time-varying networks and its application to brain dynamics

Amount: £5,000

Role: PI (CoI: Lorenzo Livi, University of Exeter; Jiaxiang Zhang, Cardiff University)

12/2017–06/2018

Faculty of Engineering: Research Pump Priming, University of Bristol

Subject: Immune response networks in wild mice

Amount: £5,000

Role: PI (CoI: Mark Viney, University of Bristol)

09/2016–03/2017

EPSRC Institutional Sponsorship

Subject: Phase transitions in neuroimaging data

Amount: £7,234

Role: PI (CoI: Elohim Fonseca dos Reis, University of Campinas, Brazil)

10/2013–03/2019

CREST, Japan Science and Technology Agency

Subject: Theory for analyzing temporal network data as deep knowledge (originally in Japanese. Translation by NM)

Amount: JPY 62,970,700 (to my group), of which £388,411.21 is to the University of Bristol; the rest is to the University of Tokyo

Role: CoI (PI: Kenji Yamanishi, University of Tokyo, Japan)

04/2013–02/2014

Bilateral Joint Research Projects, Japan Society for the Promotion of Science

Subject: TempoNet: theoretical foundations of temporal networks

Amount: JPY 2,500,000 (to my group)

Role: CoPI (partner PI: Renaud Lambiotte, University of Namur, Belgium)

04/2013–03/2014

Research Grants for Japanese Young Scientists (originally in Japanese. Translation by NM), The Nakajima Foundation

Subject: Quantify reputations of agents in networks (originally in Japanese. Translation by NM)

Amount: JPY 1,000,000

Role: PI (no CoPI/CoI)

04/2011–02/2014

Grant-in-Aid for Young Scientists (A), Japan Society for the Promotion of Science

Subject: Computational modeling of games on social networks and analysis of cooperative behavior

Amount: JPY 10,100,000

Role: PI (no CoPI/CoI)

11/2008–03/2013

Grant-in-Aid for Scientific Research on Innovative Areas, Japan Society for the Promotion of Science

Subject: Computational study of locomotion, learning, and memory using stochastic analysis methods

Amount: JPY 29,845,000 (to my group)

Role: PI (CoI: Jun Ohkubo)

10/2008–03/2012

Japan Science and Technology Agency, Basic Research Programs PRESTO, Japan

Subject: Modeling of epidemic dynamics on networks with group structure

Amount: JPY 49,332,600

Role: PI (no CoPI/CoI)

04/2008–03/2011

Grant-in-Aid for Young Scientists (B), Japan Society for the Promotion of Science

Subject: Computational modeling of games on social networks and analysis of cooperative behavior

Amount: JPY 4,030,000

Role: PI (no CoPI/CoI)

04/2008–11/2009

Grant-in-Aid for Scientific Research on Priority Areas “Integrative Brain Research”, Ministry of Education, Culture, Sports, Science and Technology of Japan

Subject: Neurocomputational modelling of cooperative behavior (originally in Japanese. Translation by NM)

Amount: JPY 1,787,269

Role: PI (no CoPI/CoI)

06/2007–03/2009

Trend Micro Incorporated (a company in Japan)

Subject: Exploration of content security on the WWW using network analysis (originally in Japanese. Translation by NM)

Amount: JPY 5,250,000

Role: PI

26/04/2007–26/05/2007

Japan–U.S. Brain Research Cooperative Program, National Institute for Physiological Sciences, Japan (travel grant)

Subject: A computational study of improvement in behavioral performance by attention

Amount: JPY 570,000

Role: Visiting investigator (Host: Center for Neural Science, New York University)

04/2004–09/2006

Special Postdoctoral Researcher, RIKEN Brain Science Institute, Japan (research grant)

Subject: Spatiotemporal information processing by recurrent neural networks with synaptic learning and integrate-and-fire dynamics (originally in Japanese. Translation by NM)

Amount: JPY 3,900,000

Role: Sole recipient

04/2003–03/2004

Research Fellowships for Young Scientists, Japan Society for the Promotion of Science

Subject: Multiplexity of information representation and contributions of complex spiking patterns and synaptic learning to brain functioning (originally in Japanese. Translation by NM)

Amount: JPY 1,200,000

Role: Sole recipient

04/2000–03/2003

Research Fellowships for Young Scientists, Japan Society for the Promotion of Science

Subject: Analysis of finite-state transformations by chaotic mapping and its application to cryptosystems and neural dynamics (originally in Japanese. Translation by NM)

Amount: JPY 3,000,000

Role: Sole recipient

Honors and Awards

IOP (Institute of Physics) Trusted Reviewer status 2020

(awarded to approximately the top 12% of reviewers since 2018)

JSPS (Japan Society for Promotion of Science) Prize 2020

(awarded to 24 researchers under the age of 45 across all fields of the humanities, social sciences, and natural sciences)

Junior Akira Okubo Prize 2019

jointly administered by the Society for Mathematical Biology and the Japanese Society for Mathematical Biology

Outstanding Reviewer Awards 2017

New Journal of Physics, IOP Publishing (awarded to 82 out of 1,507 reviewers)

The Young Scientists' Prize

The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology, Japan, April 2013.

Japanese Society for Mathematical Biology Early Career Award, 2012.

International Neural Network Society Young Investigator Award

The International Neural Network Society, August 15, 2007.

Refereed Journal Papers

163. Lingqi Meng, [Naoki Masuda](#).
Analysis of node2vec random walks on networks.
Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, in press (2020).
162. Shun Kodate, Ryusuke Chiba, Shunya Kimura, [Naoki Masuda](#).
Detecting problematic transactions in a consumer-to-consumer e-commerce network.
Applied Network Science, in press (2020).
161. Elohim Fonseca dos Reis, Aming Li, [Naoki Masuda](#).
Generative models of simultaneously heavy-tailed distributions of inter-event times on nodes and edges.
Physical Review E, in press (2020).
160. Shogo Kajimura, [Naoki Masuda](#), Johnny King Lau, Kou Murayama.
Mindfulness meditation changes the boundary and configuration of the primary functional networks in the brain.
Scientific Reports, in press (2020).
159. Xiu-Xiu Zhan, Ziyu Li, [Naoki Masuda](#), Petter Holme, Huijuan Wang.
Susceptible-infected-spreading-based network embedding in static and temporal networks.
EPJ Data Science, 9, 30 (2020).
158. Mengqiao Xu, Qian Pan, Haoxiang Xia, [Naoki Masuda](#).
Estimating international trade status of countries from global liner shipping networks.
Royal Society Open Science, 7, 200386 (2020).
157. Marinho A. Lopes, Jiaxiang Zhang, Dominik Krzemiński, Khalid Hamandi, Qi Chen, Lorenzo Livi, [Naoki Masuda](#).
Recurrence quantification analysis of dynamic brain networks.
European Journal of Neuroscience, in press (2020).
156. Irene Malvestio, Alessio Cardillo, [Naoki Masuda](#).
Interplay between k -core and community structure in complex networks.
Scientific Reports, 10, 14702 (2020).
155. Genki Ichinose, Daiki Miyagawa, Junji Ito, [Naoki Masuda](#).
Winning by hiding behind others: An analysis of speed skating data.
PLOS ONE, 15, e0237470 (2020).
154. [Naoki Masuda](#), Takayuki Hiraoka.
Waiting-time paradox in 1922.
Northeast Journal of Complex Systems, 2, 1 (2020).
153. Alessio Cardillo, [Naoki Masuda](#).
Critical mass effect in evolutionary games triggered by zealots.
Physical Review Research, 2, 023305 (2020).

152. [Naoki Masuda](#), Petter Holme.
Small inter-event times govern epidemic spreading on networks.
Physical Review Research, 2, 023163 (2020).
151. Takayuki Hiraoka, [Naoki Masuda](#), Aming Li, Hang-Hyun Jo.
Modeling temporal networks with bursty activity patterns of nodes and links.
Physical Review Research, 2, 023073 (2020).
150. Gabriele Valentini, [Naoki Masuda](#), Zachary Shaffer, Jake R. Hanson, Takao Sasaki, Sara Imari Walker, Theodore P. Pavlic, Stephen C. Pratt.
Division of labor promotes the spread of information in colony emigrations by the ant *Temnothorax rugatulus*.
Proceedings of the Royal Society B: Biological Sciences, 287, 20192950 (2020).
149. Makoto Okada, Kenji Yamanishi, [Naoki Masuda](#).
Long-tailed distributions of inter-event times as mixtures of exponential distributions.
Royal Society Open Science, 7, 191643 (2020).
148. [Naoki Masuda](#), Victor M. Preciado, Masaki Ogura.
Analysis of the susceptible-infected-susceptible epidemic dynamics in networks via the non-backtracking matrix.
IMA Journal of Applied Mathematics, 85, 214–230 (2020).
147. Takahiro Ezaki, Elohim Fonseca dos Reis, Takamitsu Watanabe, Michiko Sakaki, [Naoki Masuda](#).
Closer to critical resting-state neural dynamics in individuals with higher fluid intelligence.
Communications Biology, 3, 52 (2020).
146. Dominik Krzemiński, [Naoki Masuda](#), Khalid Hamandi, Krish D. Singh, Bethany Routley, Jiaxiang Zhang.
Energy landscape of resting magnetoencephalography reveals fronto-parietal network impairments in epilepsy.
Network Neuroscience, 4, 374–396 (2020).
145. Sadamori Kojaku, [Naoki Masuda](#).
Constructing networks by filtering correlation matrices: A null model approach.
Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 475, 20190578 (2019).
144. [Naoki Masuda](#), Fanlin Meng.
Dynamical stability of water distribution networks.
Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 475, 20190291 (2019).
143. Masaki Ogura, Victor M. Preciado, [Naoki Masuda](#).
Optimal containment of epidemics over temporal activity-driven networks.
SIAM Journal on Applied Mathematics, 79, 986–1006 (2019).
142. Takamitsu Watanabe, Geraint Rees, [Naoki Masuda](#).
Atypical intrinsic neural timescale in autism.
eLife, 8, e42256 (2019).
141. [Naoki Masuda](#), Petter Holme.
Detecting sequences of system states in temporal networks.
Scientific Reports, 9, 795 (2019).

140. Sadamori Kojaku, Mengqiao Xu, Haoxiang Xia, [Naoki Masuda](#).
Multiscale core-periphery structure in a global liner shipping network.
Scientific Reports, 9, 404 (2019).
139. [Naoki Masuda](#), Sadamori Kojaku, Yukie Sano.
Configuration model for correlation matrices preserving the node strength.
Physical Review E, 98, 012312 (2018).
138. Sadamori Kojaku, Giulio Cimini, Guido Caldarelli, [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).
137. Takuya Sekiguchi, Kohei Tamura, [Naoki Masuda](#).
Population changes in residential clusters in Japan.
PLOS ONE, 13, e0197144 (2018).
136. Sadamori Kojaku, [Naoki Masuda](#).
A generalised significance test for individual communities in networks.
Scientific Reports, 8, 7351 (2018).
135. Sadamori Kojaku, [Naoki Masuda](#).
Core-periphery structure requires something else in the network.
New Journal of Physics, 20, 043012 (2018).
134. Takahiro Ezaki, Michiko Sakaki, Takamitsu Watanabe, [Naoki Masuda](#).
Age-related changes in the ease of dynamical transitions in human brain activity.
Human Brain Mapping, 39, 2673–2688 (2018).
133. [Naoki Masuda](#), Michiko Sakaki, Takahiro Ezaki, Takamitsu Watanabe.
Clustering coefficients for correlation networks.
Frontiers in Neuroinformatics, 12, 7 (2018).
132. Genki Ichinose, [Naoki Masuda](#).
Zero-determinant strategies in finitely repeated games.
Journal of Theoretical Biology, 438, 61–77 (2018).
131. [Naoki Masuda](#), Luis E. C. Rocha.
A Gillespie algorithm for non-Markovian stochastic processes.
SIAM Review, 60, 95–115 (2018).
130. Takahiro Ezaki, [Naoki Masuda](#).
Reinforcement learning account of network reciprocity.
PLOS ONE, 12, e0189220 (2017).
129. Sadamori Kojaku, [Naoki Masuda](#).
Finding multiple core-periphery pairs in networks.
Physical Review E, 96, 052313 (2017).
128. Luis E. C. Rocha, [Naoki Masuda](#), Petter Holme.
Sampling of temporal networks: Methods and biases.
Physical Review E, 96, 052302 (2017).

127. Tomokatsu Onaga, James P. Gleeson, [Naoki Masuda](#).
Concurrency-induced transitions in epidemic dynamics on temporal networks.
Physical Review Letters, 119, 108301 (2017).
126. [Naoki Masuda](#), Mason A. Porter, Renaud Lambiotte.
Random walks and diffusion on networks.
Physics Reports, 716–717, 1–58 (2017).
125. Kohei Tamura, [Naoki Masuda](#).
Effects of the distant population density on spatial patterns of demographic dynamics.
Royal Society Open Science, 4, 170391 (2017).
124. Takahiro Ezaki, Takamitsu Watanabe, Masayuki Ohzeki, [Naoki Masuda](#).
Energy landscape analysis of neuroimaging data.
Philosophical Transactions of the Royal Society A, 375, 20160287 (2017).
123. Thomas A. O’Shea-Wheller, [Naoki Masuda](#), Ana Sendova-Franks, Nigel R. Franks.
Variability in individual assessment behaviour and its implications for collective decision-making.
Proceedings of the Royal Society B: Biological Sciences, 284, 20162237 (2017).
122. Yutaka Horita, Masanori Takezawa, Keigo Inukai, Toshimasa Kita, [Naoki Masuda](#).
Reinforcement learning accounts for moody conditional cooperation behavior: experimental results.
Scientific Reports, 7, 39275 (2017).
121. Teruyoshi Kobayashi, [Naoki Masuda](#).
Fragmenting networks by targeting collective influencers at a mesoscopic level.
Scientific Reports, 6, 37778 (2016).
120. Luis E. C. Rocha, [Naoki Masuda](#).
Individual-based approach to epidemic processes on arbitrary dynamic contact networks.
Scientific Reports, 6, 31456 (2016).
119. Takahiro Ezaki, Yutaka Horita, Masanori Takezawa, [Naoki Masuda](#).
Reinforcement learning explains conditional cooperation and its moody cousin.
PLOS Computational Biology, 12, e1005034 (2016).
118. Leo Speidel, Konstantin Klemm, Víctor M. Eguíluz, [Naoki Masuda](#).
Temporal interactions facilitate endemicity in the susceptible-infected-susceptible epidemic model.
New Journal of Physics, 18, 073013 (2016).
117. Ryosuke Nishi, Taro Takaguchi, Keigo Oka, Takanori Maehara, Masashi Toyoda, Ken-ichi Kawarabayashi, [Naoki Masuda](#).
Reply trees in Twitter: data analysis and branching process models.
Social Network Analysis and Mining, 6, 26 (2016).
116. [Naoki Masuda](#).
Accelerating coordination in temporal networks by engineering the link order.
Scientific Reports, 6, 22105 (2016).
115. Yutaka Horita, Masanori Takezawa, Takuji Kinjo, Yo Nakawake, [Naoki Masuda](#).
Transient nature of cooperation by pay-it-forward reciprocity.
Scientific Reports, 6, 19471 (2016).

114. Jens Malmros, [Naoki Masuda](#), Tom Britton.
Random walks on directed networks: Inference and respondent-driven sampling.
Journal of Official Statistics, 32, 433–459 (2016).
113. Leo Speidel, Taro Takaguchi, [Naoki Masuda](#).
Community detection in directed acyclic graphs.
European Physical Journal B, 88, 203 (2015).
112. Kohei Tamura, [Naoki Masuda](#).
Win-stay lose-shift strategy in formation changes in football.
EPJ Data Science, 4, 9 (2015).
111. Nigel Franks, Jonathan Stuttard, Carolina Doran, Julian Esposito, Maximillian Master, Ana Sendova-Franks, [Naoki Masuda](#), Nicholas Britton.
How ants use quorum sensing to estimate the average quality of a fluctuating resource.
Scientific Reports, 5, 11890 (2015).
110. [Naoki Masuda](#), Thomas A. O’Shea-Wheller, Carolina Doran, Nigel R. Franks.
Computational model of collective nest selection by ants with heterogeneous acceptance thresholds.
Royal Society Open Science, 2, 140533 (2015).
109. [Naoki Masuda](#), Feng Fu.
Evolutionary models of in-group favoritism.
F1000Prime Reports, 7, 27 (2015).
108. [Naoki Masuda](#).
Opinion control in complex networks.
New Journal of Physics, 17, 033031 (2015).
107. Petter Holme, [Naoki Masuda](#).
The basic reproduction number as a predictor for epidemic outbreaks in temporal networks.
PLOS ONE, 10, e0120567 (2015).
106. Víctor M. Eguíluz, [Naoki Masuda](#), Juan Fernández-Gracia.
Bayesian decision making in human collectives with binary choices.
PLOS ONE, 10, e0121332 (2015).
105. Leo Speidel, Renaud Lambiotte, Kazuyuki Aihara, [Naoki Masuda](#).
Steady state and mean recurrence time for random walks on stochastic temporal networks.
Physical Review E, 91, 012806 (2015).
104. Yohei Nakajima, [Naoki Masuda](#).
Evolutionary dynamics in finite populations with zealots.
Journal of Mathematical Biology, 70, 465–484 (2015).
103. Takamitsu Watanabe, [Naoki Masuda](#), Fukuda Megumi, Ryota Kanai, Geraint Rees.
Energy landscape and dynamics of brain activity during human bistable perception.
Nature Communications, 5, 4765 (2014).
102. Hiroyuki Shimoji, Masato S. Abe, Kazuki Tsuji, [Naoki Masuda](#).
Global network structure of dominance hierarchy of ant workers.
Journal of the Royal Society Interface, 11, 20140599 (2014).

101. Ryosuke Nishi, [Naoki Masuda](#).
Dynamics of social balance under temporal interaction.
EPL, 107, 48003 (2014).
100. Yuni Iwamasa, [Naoki Masuda](#).
Networks maximizing the consensus time of voter models.
Physical Review E, 90, 012816 (2014).
99. [Naoki Masuda](#).
Voter model on the two-clique graph.
Physical Review E, 90, 012802 (2014).
98. Takamitsu Watanabe, Shigeyuki Kan, Takahiko Koike, Masaya Misaki, Seiki Konishi, Satoru Miyauchi, Yasushi Miyashita, [Naoki Masuda](#).
Network-dependent modulation of brain activity during sleep.
NeuroImage, 98, 1–10 (2014).
97. Luis E. C. Rocha, [Naoki Masuda](#).
Random walk centrality for temporal networks.
New Journal of Physics, 16, 063023 (2014).
96. Takamitsu Watanabe, Masanori Takezawa, Yo Nakawake, Akira Kunimatsu, Hidenori Yamasue, Mitsuhiro Nakamura, Yasushi Miyashita, [Naoki Masuda](#).
Two distinct neural mechanisms underlying indirect reciprocity.
Proceedings of the National Academy of Sciences of the United States of America, 111, 3990–3995 (2014).
95. [Naoki Masuda](#).
Evolution via imitation among like-minded individuals.
Journal of Theoretical Biology, 349, 100–108 (2014).
94. Koji Oishi, Manuel Cebrian, Andres Abeliuk, [Naoki Masuda](#).
Iterated crowdsourcing dilemma game.
Scientific Reports, 4, 4100 (2014).
93. Takamitsu Watanabe, Satoshi Hirose, Hiroyuki Wada, Yoshio Imai, Toru Machida, Ichiro Shirouzu, Seiki Konishi, Yasushi Miyashita, [Naoki Masuda](#).
Energy landscapes of resting-state brain networks.
Frontiers in Neuroinformatics, 8, 12 (2014).
92. Kodai Saito, [Naoki Masuda](#).
Two types of well followed users in the followership networks of Twitter.
PLOS ONE, 9, e84265 (2014).
91. Shoma Tanabe, [Naoki Masuda](#).
Complex dynamics of a nonlinear voter model with contrarian agents.
Chaos, 23, 043136 (2013).
90. [Naoki Masuda](#), Konstantin Klemm, Víctor M. Eguíluz.
Temporal networks: slowing down diffusion by long lasting interactions.
Physical Review Letters, 111, 188701 (2013).
89. [Naoki Masuda](#).
Voter models with contrarian agents.
Physical Review E, 88, 052803 (2013).

88. Takehisa Hasegawa, Taro Takaguchi, [Naoki Masuda](#).
Observability transitions in correlated networks.
Physical Review E, 88, 042809 (2013).
87. Makoto Hiroi, Masamichi Ohkura, Junichi Nakai, [Naoki Masuda](#), Koichi Hashimoto, Kiichi Inoue, André Fiala, Tetsuya Tabata.
Principal component analysis of odor coding at the level of third order olfactory neurons in *Drosophila*.
Genes to Cells, 18, 1070–1081 (2013).
86. Ryosuke Nishi, [Naoki Masuda](#).
Collective opinion formation model under Bayesian updating and confirmation bias.
Physical Review E, 87, 062123 (2013).
85. Taro Takaguchi, [Naoki Masuda](#), Petter Holme.
Bursty communication patterns facilitate spreading in a threshold-based epidemic dynamics.
PLOS ONE, 8, e68629 (2013).
84. [Naoki Masuda](#), Issei Kurahashi, Hiroko Onari.
Suicide ideation of individuals in online social networks.
PLOS ONE, 8, e62262 (2013).
83. Masayoshi Ito, [Naoki Masuda](#), Kazunori Shinomiya, Keita Endo, Kei Ito.
Systematic analysis of neural projections reveals clonal composition of the *Drosophila* brain.
Current Biology, 23, 644–655 (2013).
82. [Naoki Masuda](#), Petter Holme.
Predicting and controlling infectious disease epidemics using temporal networks.
F1000Prime Reports, 5, 6 (2013).
81. Shun-ichi Amari, Hiroyasu Ando, Taro Toyozumi, [Naoki Masuda](#).
State concentration exponent as a measure of quickness in Kauffman-type networks.
Physical Review E, 87, 022814 (2013).
80. Takamitsu Watanabe, Satoshi Hirose, Hiroyuki Wada, Yoshio Imai, Toru Machida, Ichiro Shirouzu, Seiki Konishi, Yasushi Miyashita, [Naoki Masuda](#).
A pairwise maximum entropy model accurately describes resting-state human brain networks.
Nature Communications, 4, 1370 (2013).
79. Ryo Fujie, Kazuyuki Aihara, [Naoki Masuda](#).
A model of competition among more than two languages.
Journal of Statistical Physics, 151, 289–303 (2013).
78. Shoma Tanabe, Hideyuki Suzuki, [Naoki Masuda](#).
Indirect reciprocity with trinary reputations.
Journal of Theoretical Biology, 317, 338–347 (2013).
77. Mitsuhiro Nakamura, [Naoki Masuda](#).
Groupwise information sharing promotes ingroup favoritism in indirect reciprocity.
BMC Evolutionary Biology, 12, 213 (2012).
76. Shun Motegi, [Naoki Masuda](#).
A network-based dynamical ranking system for competitive sports.
Scientific Reports, 2, 904 (2012).

75. Naoki Masuda.
Evolution of cooperation driven by zealots.
Scientific Reports, 2, 646 (2012).
74. Taro Takaguchi, Nobuo Sato, Kazuo Yano, Naoki Masuda.
Importance of individual events in temporal networks.
New Journal of Physics, 14, 093003 (2012).
73. Naoki Masuda, Mitsuhiro Nakamura.
Coevolution of trustful buyers and cooperative sellers in the trust game.
PLOS ONE, 7(9), e44169 (2012).
72. Naoki Masuda.
Ingroup favoritism and intergroup cooperation under indirect reciprocity based on group reputation.
Journal of Theoretical Biology, 311, 8–18 (2012).
71. Taro Ueno, Naoki Masuda, Shoen Kume, Kazuhiko Kume.
Dopamine modulates the rest period length without perturbation of its power law distribution in *Drosophila melanogaster*.
PLOS ONE, 7(2), e32007 (2012).
70. Hiroshi Kori, Yoji Kawamura, Naoki Masuda.
Structure of cell networks critically determines oscillation regularity.
Journal of Theoretical Biology, 297, 61–72 (2012).
69. Shoma Tanabe, Naoki Masuda.
Evolution of cooperation facilitated by reinforcement learning with adaptive aspiration levels.
Journal of Theoretical Biology, 293, 151–160 (2012).
68. Naoki Masuda.
Clustering in large networks does not promote upstream reciprocity.
PLOS ONE, 6(10), e25190 (2011).
67. Taro Takaguchi, Naoki Masuda.
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Physical Review E, 84, 036115 (2011).
66. Takehisa Hasegawa, Naoki Masuda.
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65. Taro Takaguchi, Mitsuhiro Nakamura, Nobuo Sato, Kazuo Yano, Naoki Masuda.
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64. Mitsuhiro Nakamura, Naoki Masuda.
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62. [Naoki Masuda](#), Mitsuhiro Nakamura.
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61. Takehisa Hasegawa, Norio Konno, [Naoki Masuda](#).
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60. Yuri Ogiso, Kazuhide Tsuneizumi, [Naoki Masuda](#), Makoto Sato, Tetsuya Tabata.
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59. [Naoki Masuda](#), S. Redner.
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58. [Naoki Masuda](#), Hiroshi Kori.
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57. Takamitsu Watanabe, [Naoki Masuda](#).
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56. Jun Ohkubo, Kazushi Yoshida, Yuichi Iino, [Naoki Masuda](#).
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55. [Naoki Masuda](#).
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New Journal of Physics, 12, 093009 (2010).
54. [Naoki Masuda](#), Yoji Kawamura, Hiroshi Kori.
Collective fluctuations in networks of noisy components.
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53. Ralf Tönjes, [Naoki Masuda](#), Hiroshi Kori.
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52. [Naoki Masuda](#), N. Gibert, S. Redner.
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51. Akio Iwagami, [Naoki Masuda](#).
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50. Yusuke Ide, Norio Konno, [Naoki Masuda](#).
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48. [Naoki Masuda](#), Yoji Kawamura, Hiroshi Kori.
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45. [Naoki Masuda](#).
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44. Yuko K. Takahashi, Hiroshi Kori, [Naoki Masuda](#).
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43. [Naoki Masuda](#), Hisashi Ohtsuki.
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42. [Naoki Masuda](#).
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41. [N. Masuda](#), J. S. Kim, B. Kahng.
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40. Taro Ueno, [Naoki Masuda](#).
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39. [Naoki Masuda](#).
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38. [Naoki Masuda](#), Shun-ichi Amari.
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37. Nobuaki Sugimine, [Naoki Masuda](#), Norio Konno, Kazuyuki Aihara.
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36. [Naoki Masuda](#), Brent Doiron.
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35. [Naoki Masuda](#).
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34. [Naoki Masuda](#), Hiroshi Kori.
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33. [Naoki Masuda](#), Masato Okada, Kazuyuki Aihara.
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31. [Naoki Masuda](#), Hisashi Ohtsuki.
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30. Yong-Yeol Ahn, Hawoong Jeong, [Naoki Masuda](#), Jae Dong Noh.
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29. [Naoki Masuda](#), Norio Konno.
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28. Yuichi Katori, [Naoki Masuda](#), Kazuyuki Aihara.
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27. [Naoki Masuda](#), Norio Konno.
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26. Kazumichi Ohtsuka, Norio Konno, [Naoki Masuda](#), Kazuyuki Aihara.
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25. [Naoki Masuda](#), Norio Konno.
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24. [Naoki Masuda](#), Goce Jakimoski, Kazuyuki Aihara, Ljupco Kocarev.
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23. [Naoki Masuda](#).
Simultaneous rate-synchrony codes in populations of spiking neurons.
Neural Computation, 18, 45–59 (2006).
22. [N. Masuda](#), K.-I. Goh, B. Kahng.
Extremal dynamics on complex networks: Analytic solutions.
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21. Norio Konno, [Naoki Masuda](#), Rahul Roy, Anish Sarkar.
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20. [Naoki Masuda](#), Brent Doiron, André Longtin, Kazuyuki Aihara.
Coding of temporally varying signals in networks of spiking neurons with global delayed feedback.
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19. [Naoki Masuda](#), Hiroyoshi Miwa, Norio Konno.
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18. [Naoki Masuda](#), Hiroyoshi Miwa, Norio Konno.
Analysis of scale-free networks based on a threshold graph with intrinsic vertex weights.
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17. [Naoki Masuda](#), Norio Konno.
Subcritical behavior in the alternating supercritical Domany-Kinzel dynamics.
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16. [Naoki Masuda](#), Norio Konno.
Return times of random walk on generalized random graphs.
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15. [Naoki Masuda](#), Kazuyuki Aihara.
Dual coding and effects of global feedback in multilayered neural networks.
Neurocomputing, 58–60, 33–39 (2004).
14. [Naoki Masuda](#), Norio Konno, Kazuyuki Aihara.
Transmission of severe acute respiratory syndrome in dynamical small-world networks.
Physical Review E, 69, 031917 (2004).
13. [Naoki Masuda](#), Kazuyuki Aihara.
Self-organizing dual coding based on spike-time-dependent plasticity.
Neural Computation, 16, 627–663 (2004).
12. [Naoki Masuda](#), Kazuyuki Aihara.
Global and local synchrony of coupled neurons in small-world networks.
Biological Cybernetics, 90, 302–309 (2004).
11. [Naoki Masuda](#), Kazuyuki Aihara.
Spatial prisoner’s dilemma optimally played in small-world networks.
Physics Letters A, 313, 55–61 (2003).
10. [Naoki Masuda](#), Kazuyuki Aihara.
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9. [Naoki Masuda](#), Kazuyuki Aihara.
Ergodicity of spike trains: when does trial averaging make sense?
Neural Computation, 15, 1341–1372 (2003).
8. [Naoki Masuda](#), Kazuyuki Aihara.
Duality of rate coding and temporal spike coding in multilayered feedforward networks.
Neural Computation, 15, 103–125 (2003).
7. [Naoki Masuda](#), Kazuyuki Aihara.
Bridging rate coding and temporal spike coding by effect of noise.
Physical Review Letters, 88, 248101 (2002).
6. [Naoki Masuda](#), Kazuyuki Aihara.
Spatiotemporal spike encoding of a continuous external signal.
Neural Computation, 14, 1599–1628 (2002).
5. [Naoki Masuda](#), Kazuyuki Aihara.
Dynamical characteristics of discretized chaotic permutations.
International Journal of Bifurcation and Chaos, 12, 2087–2103 (2002).
4. [Naoki Masuda](#), Kazuyuki Aihara.
Cryptosystems with discretized chaotic maps.
IEEE Transactions on Circuits and Systems Part I, 49, 28–40 (2002).
3. [Naoki Masuda](#), Kazuyuki Aihara.
Synchronization of pulse-coupled excitable neurons.
Physical Review E, 64, 051906 (2001).
2. Henry D. I. Abarbanel, [Naoki Masuda](#), M. I. Rabinovich, Evren Tumer.
Distribution of mutual information.
Physics Letters A, 281, 368–373 (2001).
1. [Naoki Masuda](#), Yasunori Okabe.
Time series analysis with wavelet coefficients.
Japan Journal of Industrial and Applied Mathematics, 18, 129–158 (2001).

Commentary

1. [Naoki Masuda](#), Francisco C. Santos.
A mathematical look at empathy.
eLife, 8, e47036 (2019).

Books

3. [Naoki Masuda](#), Renaud Lambiotte.
A Guide to Temporal Networks (second edition).
World Scientific, Singapore (2020).
(The first edition was published in 2016.)
2. [Naoki Masuda](#), Kwang-Il Goh, Tao Jia, Junichi Yamanoi, Hiroki Sayama. (Editors)
Proceedings of NetSci-X 2020: Sixth International Winter School and Conference on Network Science.
Springer, Cham, Switzerland (2020).

1. Naoki Masuda, Petter Holme. (Editors)
Temporal Network Epidemiology.
Springer, Singapore (2017).

Book Chapters

4. Tomokatsu Onaga, James P. Gleeson, Naoki Masuda.
The effect of concurrency on epidemic threshold in time-varying networks.
In: Temporal Network Theory, Petter Holme and Jari Saramäki (Eds.), Springer, Cham (2019). pp. 253–267.
3. Naoki Masuda, Petter Holme.
Introduction to temporal network epidemiology.
In: Temporal Network Epidemiology, Naoki Masuda and Petter Holme (Eds.), Springer, Singapore (2017), pp. 1–16.
2. Leo Speidel, Konstantin Klemm, Víctor M. Eguíluz, Naoki Masuda.
Epidemic threshold in temporally-switching networks.
In: Temporal Network Epidemiology, Naoki Masuda and Petter Holme (Eds.), Springer, Singapore (2017), pp. 161–177.
1. Naoki Masuda, Taro Takaguchi, Nobuo Sato, Kazuo Yano.
Self-exciting point process modeling of conversation event sequences.
In: Temporal Networks, P. Holme and J. Saramäki (Eds.), Springer-Verlag, Berlin (2013), pp. 245–264.

Refereed Conference Papers

10. Masaki Ogura, Junpei Tagawa, Naoki Masuda.
Distributed agreement on activity driven networks.
2018 American Control Conference.
Wisconsin Center, Milwaukee, USA, June 27–29, 2018.
[Oral presentation]
9. Xia Cui, Sadamori Kojaku, Naoki Masuda, Danushka Bollegala.
Solving feature sparseness in text classification using core-periphery decomposition.
The Seventh Joint Conference on Lexical and Computational Semantics (*SEM 2018).
New Orleans, USA, June 5–6 (2018).
In: Proceedings, 255–264.
[Oral presentation; 42% acceptance]
8. Naoki Masuda, Konstantin Klemm, Víctor M. Eguíluz.
Slowing down of linear consensus dynamics on temporal networks: some theoretical extensions.
4th IFAC Conference on Analysis and Control of Chaotic Systems.
Tokyo, Japan, August 26–28 (2015).
In: IFAC-PapersOnLine, 48–18, 187–192 (2015).
[Oral presentation]
7. Kodai Saito, Naoki Masuda.
Two types of Twitter users with equally many followers.
The 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2013).

Niagara Falls, Canada, August 25–28 (2013).

In: Proceedings, 1425–1426.

[Poster presentation; 36% acceptance (28% oral + 8% poster)]

6. Naoki Masuda, Tetsuya Fujie, Kazuo Murota.
Application of semidefinite programming to maximize the spectral gap produced by node removal.
4th Workshop on Complex Networks (CompleNet 2013).
Berlin, March 13-15 (2013). In: Complex Networks IV, Studies in Computational Intelligence, 476,
155–163 (2013).
[Poster presentation]
5. Naoki Masuda, Hiroshi Kori.
STDP enhances frequency synchrony in neural networks with a pacemaker.
International Joint Conference on Neural Networks (IJCNN 2007).
Orlando, Florida, USA, August 12–17 (2007).
In: Proceedings of International Joint Conference on Neural Networks, 96–101 (2007).
[Poster presentation]
4. Naoki Masuda, Shun-ichi Amari.
Modeling memory transfer and savings in cerebellar motor learning.
Neural Information Processing Systems (NIPS) 2005.
Vancouver, Canada, December 5–10 (2005).
In: Advances in Neural Information Processing Systems (Eds. Y. Weiss, B. Scholkopf, J. Platt), 18,
859–866 (2006).
[Poster presentation; 25% acceptance]
3. Naoki Masuda, Kazuyuki Aihara.
Collective behavior of pulse-coupled FitzHugh-Nagumo neurons.
The 8th International Conference on Neural Information Processing (ICONIP 2001).
Shanghai, China, November 14–18 (2001).
In: Proceedings of ICONIP2001, Vol. 2, 910–915.
[Oral presentation]
2. Naoki Masuda, Kazuyuki Aihara.
Cryptosystems based on space-discretization of chaotic maps.
The IEEE International Symposium on Circuits and Systems, 2001 (ISCAS 2001).
Sydney, Australia, May 6–9 (2001).
In: Proceedings of ISCAS 2001, III, 321–324 (2001).
[Oral presentation]
1. Naoki Masuda, Kazuyuki Aihara.
Cryptosystem based on a finite-state baker’s map and its security analysis.
1999 International Symposium on Nonlinear Theory and its Applications (NOLTA99).
Hilton Waikoloa Village, Waikoloa, Hawaii, USA, November 28 – December 2 (1999).
In: Proceedings of NOLTA’99, 613–616.
[Oral presentation]

Conference/workshop Invited Presentations (without refereed proceeding papers)

34. Naoki Masuda.
Network analysis on correlation matrices: Alternatives to threshold networks.
International Conference on AI and Data Science: Mathematics and Applications.

- Suwon, Korea, November 4–5, 2019.
[Keynote talk]
33. Naoki Masuda.
Network science: Static and temporal networks.
2019 Big Data Analysis and Complex Science Management Summer School (translation by NM).
Harbin Institute of Technology (Weihai), Weihai, China, July 25–31, 2019.
[Invited lectures]
32. Naoki Masuda.
Network dynamics: Epidemic processes and energy landscape analysis.
2019 Annual Meeting, Society For Mathematical Biology.
Université de Montréal, Montreal, Canada, July 22–26, 2019.
[Plenary speaker]
31. Naoki Masuda. Networks from correlation matrices: An alternative to thresholding. Threshold Networks. University of Nottingham, Nottingham, UK, July 22–24, 2019.
[Invited talk]
30. Naoki Masuda.
Lecture 1: Fundamentals of random walks on networks.
Lecture 2: Applications of random walks on networks.
CCSS School on Computational Social Science.
Kobe University, Japan, June 20–22, 2019.
[Invited lectures]
29. Naoki Masuda.
Contagion processes on temporal networks: Epidemic threshold, commutator, and concurrency.
Centre for Business Network Analysis (CBNA) Summer School in Social Network Analysis 2019.
University of Greenwich, UK, June 10–14, 2019.
[Invited talk]
28. Naoki Masuda.
A configuration model for correlation matrices.
4th Workshop on Statistical Physics for Financial and Economic Networks.
NetSci 2019, University of Vermont, Burlington, VA, USA, May 27–31, 2019
[Invited talk]
27. Naoki Masuda.
Opening Symposium of the Dutch Network Science Society.
TU Delft, Delft, Netherlands, 7 May, 2019.
[10 min pitch talk]
26. Naoki Masuda.
Epidemic processes on dynamically switching networks: Effects of commutator and concurrency.
Young European Probabilists (YEP) XV “Information Diffusion on Random Networks” Workshop.
TU Eindhoven, Eindhoven, Netherlands, March 25–29, 2019.
[Invited talk]
25. Naoki Masuda.
Epidemic processes and random walks on time-varying graphs.
Fundamentals of complex networks: From static towards evolving.
University of Duisburg-Essen, Essen, Germany, March 6–8 (2019).
[Invited mini lecture talks; 4 talks \times 1 hr]

24. [Naoki Masuda](#).
Random walks on networks.
Online Winter School on Spectral Methods for Complex Systems.
Webinar, January 21–30 (2019).
[Video lecture presentation]
23. [Naoki Masuda](#).
Directed acyclic graphs in network science.
International Workshop on Theoretical Perspectives in Network Science.
Seoul National University, Seoul, Korea, December 7–9 (2018).
[Invited talk]
22. [Naoki Masuda](#).
A Gillespie algorithm for simulating interacting non-Markovian point processes.
2nd Symposium on Spatial Networks.
University of Oxford, UK. September 13–14 (2017).
[Invited talk]
21. [Naoki Masuda](#).
Reinforcement learning behaviour by football managers.
Push the Envelope of Statistical Physics: Econo, Social, Bio and Beyond.
POSTECH, Pohang, Korea, December 12–13 (2016).
[Invited talk]
20. [Naoki Masuda](#).
Highly heterogeneous performances across human individuals: quantifications and implications.
Push the Envelope of Statistical Physics: Econo, Social, Bio and Beyond.
POSTECH, Pohang, Korea, December 12–13 (2016).
[Ignite talk]
19. [Naoki Masuda](#).
Network analysis: An overview.
Systems-NET/IDC in Systems Workshop: At the Intersect between Network Science and Systems Engineering.
University of Bristol, Bristol, UK, September 12 (2016).
[Invited talk]
18. Leo Speidel, Konstantin Klemm, Victor M. Eguíluz, [Naoki Masuda](#).
Dynamical switching of networks facilitates endemicity in the susceptible-infected-susceptible epidemic model.
Asia-Pacific Econophysics Conference 2016.
University of Tokyo, Tokyo, August 24–26 (2016).
[Invited talk]
17. [Naoki Masuda](#).
Cooperation under indirect reciprocity: evidence from neuroimaging.
The Third International Workshop on Market Design Technologies for Sustainable Development.
Keio University, Yokohama, Japan, August 21–22 (2015).
[Invited talk]
16. [Naoki Masuda](#).
Opinion control in the voter model on networks.

Satellite Symposium: Information, Self-Organizing Dynamics and Synchronization (ISDOS) on Networks II. NetSci 2015.

Zaragoza, Spain, June 1–5 (2015).

[Invited talk]

15. Naoki Masuda.

Dynamics of opinion formation and cooperation in populations composed of heterogeneous agents. The 3rd Sociophysics Workshop “From Opinion Dynamics to Voting, Conflict and Terrorism”.

CEVIPOF, CNRS, Paris, March 30–31 (2015).

[Invited talk]

14. Naoki Masuda.

Dominance hierarchy of worker ants as directed networks.

NetSci 2014.

Berkeley, CA, USA, June 2–6 (2014).

[Invited talk]

13. Naoki Masuda.

Laplacian dynamics slows down on temporal networks.

Network Frontier Workshop.

Northwestern University, Evanston, IL, USA, Dec. 4–6 (2013).

[Invited talk]

12. Naoki Masuda, Konstantin Klemm, Víctor M. Eguíluz.

Laplacian dynamics on temporal networks.

International Workshop on Phase Transition, Critical Phenomena and Related Topics in Complex Networks.

Hokkaido University, Sapporo, Japan, September 9–11 (2013).

[Invited talk]

11. Naoki Masuda.

Laplacian-driven dynamics on temporal networks.

Workshop: Temporal and Dynamic Networks: From Data to Models. NetSci 2013.

Danish Technical University, Lyngby, Denmark, June 3–7 (2013).

[Invited talk]

10. Naoki Masuda.

Temporal networks: Introduction.

School. NetSci2013.

Danish Technical University, Lyngby, Denmark, June 3–7 (2013).

[Invited lecture]

9. Naoki Masuda.

Quantifying importance of interaction events in temporal networks.

Toward Mathematical Foundations of Complex Network Theory.

Kyoto University, Kyoto, Japan, September 14–16 (2012).

[Invited speaker]

8. Naoki Masuda.

Laplacian-based centrality in directed graphs.

Discrete Geometric Analysis.

Kyoto University, Kyoto, Japan, August 27–31 (2012).

[Invited talk]

7. Naoki Masuda.
Dependence of oscillation regularity on structure of networks.
Anomalous Statistics, Generalized Entropies and Information Geometry.
Nara Women's University, Nara, Japan, March 6–10 (2012).
[Invited talk]
6. Naoki Masuda, Jin Seop Kim, Byungnam Kahng.
Priority queues with scale-free arrivals of incoming tasks.
Applications of Physics in Financial Analysis 7th International Conference (APFA).
Tokyo Institute of Technology, Tokyo, March 1–5 (2009).
[Invited talk]
5. Naoki Masuda.
How to set payoff matrices for evolutionary games on heterogeneous networks?
3rd International Nonlinear Science Conference.
Tokyo, Japan, March 13–15 (2008).
[Invited talk]
4. Naoki Masuda.
Evolutionary game dynamics on networks: cost normalization perspective.
NSC Winter Workshop 2008: Complex Nonlinear Dynamics Ranging from Biology to Engineering.
Hokkaido University, Sapporo, Japan, March 8–9 (2008).
[Invited talk]
3. Naoki Masuda, Norio Konno.
Multi-state interacting particle systems on scale-free networks.
International Symposium on Topological Aspects of Critical Systems and Networks.
Hokkaido University, Sapporo, Japan, February 13-14 (2006).
In: Proceedings of the International Symposium on Topological Aspects of Critical Systems and Networks, 11–17.
[Invited talk]
2. Naoki Masuda.
Multi-state epidemic dynamics on complex networks.
International Workshop on Complex Networks.
Seoul National University, Seoul, Korea, June 23–24 (2005).
[Invited talk]
1. Naoki Masuda, Kazuyuki Aihara.
Dependence of neural ergodicity on noise strength.
International Symposium on Nonlinear Theory and its Applications (NOLTA2004).
Fukuoka, Japan, November 29 – December 3 (2004).
In: Proceedings of NOLTA2004, 35–38.
[Invited talk]

Research Talks in Seminars (invited only)

Waseda University, Japan, July 2020

University of Rochester, US, November 2019

RIKEN Center for Brain Science, Wako, Japan, July 2019.

Department of Public Health and Primary Care, Imperial College London, UK. June 2019.

Faculty of Electrical Engineering, Mathematics and Computer Science Intelligent Systems, TU Delft, Netherlands. May 2019.

Department of Mathematics, Imperial College London, UK. November 2018.

Computer Science, University of Exeter, UK. October 2018.

School of Biological Sciences Research Seminar Series, University of Reading, UK. January 2018.

Centre for Water Systems, University of Exeter, UK. October 2017.

EPSRC Centre for Predictive Modelling in Healthcare, University of Exeter, UK. April 2017.

Department of Computer Science, University of Liverpool, UK. March 2017.

Department of Mathematics, University of Sussex, UK. February 2017.

Complex Systems Seminar, School of Mathematical Sciences, Queen Mary University of London, UK. February 2017.

MACSI seminar, Department of Mathematics and Statistics, University of Limerick, Ireland. January 2017.

Math Colloquium, Dartmouth College, USA. November 2016.

Networks and Collective Behaviour seminar series, University of Bath, UK. February 2016.

Networks Journal Club, Mathematical Institute, University of Oxford, UK. February 2016.

LAND Seminar, School of Mathematics, University of Leeds, UK. June 2015.

Cambridge Networks Network Seminar, University of Cambridge, UK. December 2014.

Centre for Neuroimaging Sciences, King's College London, UK. September 2014.

School of Computing Science, Newcastle University, UK. May 2014.

Department of Energy Science, Sungkyunkwan University, Korea. August 2012.

Conference/workshop Oral Presentations (excluding those listed above)

82. Sadamori Kojaku, Giacomo Livan, Naoki Masuda.
Detecting citation cartels in journal citation networks.
NetSci 2020.
Online (due to COVID-19), September 17–25, 2020.
81. Irene Malvestio, Alessio Cardillo, Naoki Masuda.
Interplay between k -core and community structure in networks.
NetSci 2020.
Online (due to COVID-19), September 17–25, 2020.
80. Kashin Sugishita, Naoki Masuda.
Structural evolution of US airline networks.
NetSci 2020.
Online (due to COVID-19), September 17–25, 2020.
79. Marinho A. Lopes, Jiaxiang Zhang, Dominik Krzemiński, Khalid Hamandi, Qi Chen, Lorenzo Livi, Naoki Masuda.
Recurrence analysis of dynamic functional brain networks.
Third Northeast Regional Conference on Complex Systems.
Online, April 1–3, 2020.

78. Elohim Fonseca dos Reis, Aming Li, [Naoki Masuda](#).
Interacting human dynamics as a mixture of Poisson processes.
Third Northeast Regional Conference on Complex Systems.
Online, April 1–3, 2020.
77. Alessio Cardillo, [Naoki Masuda](#).
Critical mass effect in evolutionary games on networks triggered by zealots.
NetSci-X 2020.
Tokyo, Japan, January 20–23, 2020.
76. Kashin Sugishita, Mason A. Porter, Mariano Beguerisse-Díaz, [Naoki Masuda](#). Opinion dynamics in tie-decay networks.
NetSci-X 2020.
Tokyo, Japan, January 20–23, 2020.
75. Marinho A. Lopes, Jiaxiang Zhang, Dominik Krzemiński, Khalid Hamandi, Lorenzo Livi, [Naoki Masuda](#).
Recurrence analysis of dynamic brain networks: Characterisation of the spatio-temporal dynamics of magnetoencephalographic recordings.
8th International Conference on Complex Networks and their Applications.
Lisbon, Portugal, December 10–12, 2019.
74. J. Miyata, A. Sasamoto, T. Ezaki, [N. Masuda](#), Y. Mori, M. Isobe, T. Aso, T. Murai, H. Takahashi.
Conservative and hasty decision styles are differently associated with static and dynamic functional connectivity in healthy and schizophrenia people.
Society for Neuroscience, Chicago, IL, October 19–23, 2019.
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 9. Naoki Masuda, Norio Konno.
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63. Kashin Sugishita, Mason A. Porter, Mariano Beguerisse-Díaz, Naoki Masuda.
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Signal discrimination performed by population of spiking neurons enhanced by background gamma oscillations.
The Annual Computational Neuroscience Meeting (CNS2008).
Portland, Oregon USA, July 19–24 (2008).
12. Taro Ueno, Naoki Masuda.
Effective intervention and vaccination strategies against nosocomial infection based on network analysis.
13th International Society for Infectious Diseases.
Kuala Lumpur, Malaysia, June 19-22 (2008).
In: International Journal of Infectious Diseases. 12 (Supplement 1), E347–E348 (2008).
11. Naoki Masuda, Shun-ichi Amari.
Modeling memory transfer in cerebellar vestibulo-ocular-reflex learning.
The Annual Computational Neuroscience Meeting (CNS2006).
Edinburgh, UK, July 16-20 (2006).
10. Michael Gutmann, Naoki Masuda, Fusao Kato, Kazuyuki Aihara.
Bursting pacemaker models for the preBotzinger complex.
Japan-Germany Symposium on Computational Neuroscience.
RIKEN Brain Science Institute, Wako, Japan, February 1–4 (2006).
9. Michael Gutmann, Naoki Masuda, Kazuyuki Aihara.
Bifurcations in respiratory neuronal pacemaker models.
International Symposium on Complexity Modelling and its Applications 2005.
University of Tokyo, Tokyo, Japan November 21–23 (2005).

8. Kazumichi Ohtsuka, Norio Konno, Naoki Masuda, Kazuyuki Aihara.
Phase transition and indirect effects of the four-state stochastic model on the square lattice.
European Conference on Mathematical and Theoretical Biology (ECMTB) 2005.
Dresden, Germany, Jul. 18–22 (2005).
In: Proceedings, v.2, p.277.
7. Naoki Masuda, Masato Okada, Kazuyuki Aihara.
Spatial filtering by locally connected neurons.
The Annual Computational Neuroscience Meeting (CNS2005).
Madison, Wisconsin USA, July 17–21 (2005).
6. Kazumichi Ohtsuka, Norio Konno, Naoki Masuda, Kazuyuki Aihara.
Phase transition and coexistence of three-state stochastic models on the two-dimensional lattice space.
5th International Conference on Biological Physics (ICBP 2004).
Gothenburg, Sweden, August 23–27 (2004).
5. Naoki Masuda, Kazuyuki Aihara.
Encoding multiple temporal waveforms by neural population with spike-time-dependent plasticity.
The Annual Computational Neuroscience Meeting (CNS2004).
Baltimore, Maryland, USA, July 17–22 (2004).
4. Naoki Masuda, Hiroyoshi Miwa, Norio Konno.
Emergence of power law in dynamical thresholding network models with intrinsic vertex weights.
International Conference on Statistical Physics (Statphys Kolkata V).
Kolkata, India, June 27 – July 1 (2004).
3. Naoki Masuda, Kazuyuki Aihara.
Dual coding and effects of global feedback in multilayered neural networks.
The Annual Computational Neuroscience Meeting (CNS2003).
Alicante, Spain, July 5–9 (2003).
2. Naoki Masuda, Kazuyuki Aihara.
Dual coding and clustering in feedforward neural networks.
The 2003 Latsis Symposium on Neural Coding and Modeling.
EPFL, Lausanne, Switzerland, February 17–19 (2003).
1. Naoki Masuda, Kazuyuki Aihara.
Population rate coding and synchrony-based temporal coding dually appearing in feedforward neural networks.
7th Tamagawa Dynamic Brain Forum.
Visegrad, Hungary, September 8-11 (2002).
In: Proceedings p.36.

Professional Service

Editorial Work

Regular

10/2020–present Academic Editor, Complexity
 06/2020–present Associate Editor, Frontiers in Physics, Social Physics section
 06/2019–present Editor, Journal of Computational Social Science
 01/2019–present Associate Editor, Journal of Complex Networks
 03/2018–present Editorial Board, Journal of Physics Communications
 05/2014–present Editorial Board, PLOS ONE
 01/2014–present Editorial Board, Scientific Reports
 06/2013–12/2019 Review Editor, Frontiers in Physics, Interdisciplinary Physics section

Ad-hoc

2020 Guest Editor, Japanese Economic Review
 Special Issue: Economics and Complex Networks (co-edited with Teruyoshi Kobayashi)

Organization of Conferences and Workshops

Senior Program Committee Member

The 12th International Conference on Social Informatics
 Pisa, Italy, October 6–9 (2020).

Program Committee Member

NetSci 2020

Rome, Italy (held online due to COVID-19), September 17–25 (2020).

Poster Chair

Tenth International Conference on Complex Systems (ICCS 2020)
 Online, July 27–31 (2020).

Organizer (Coorganized with Tomomi Kito and Yuka Fujiki)

Socioeconomic Networks and Network Science Workshop

Waseda University, Japan (held online due to COVID-19), July 3–4 (2020).

Poster Chair and Program Committee Member

Third Northeast Regional Conference on Complex Systems

University at Buffalo, USA (held online due to COVID-19), April 1–3 (2020).

Program Committee Member

6th Annual International Conference on Computational Social Science (IC2S2 2020)

Cambridge, MA, USA (held online due to COVID-19), July 17–20 (2020).

Program Committee Member

8th Annual SIAM Workshop on Network Science (NS20)

Toronto, Ontario, Canada, July 9–10 (2020).

Program Committee Member

11th International Conference on Complex Networks (CompleNet 2020)

Exeter, UK, March 31 – April 3 (2020).

Program Chair

NetSci-X 2020

Tokyo, Japan, January 20–23 (2020).

Organizer (Coorganized with Guido Caldarelli, Hiroyasu Inoue, and Carolina Mattsson)

NetSci-X Special Workshop on Economic & Financial Networks.

Tokyo, Japan, January 23 (2020).

Program Committee Member

Eighth International Conference on Complex Networks and Their Applications

Lisbon, Portugal, December 10–12 (2019).

Program Committee Member

The 11th International Conference on Social Informatics
Doha, Qatar, November 18–21 (2019).

Program Committee Member

5th Annual International Conference on Computational Social Science (IC2S2 2019)
Amsterdam, the Netherlands, July 17–20 (2019).

Program Committee Member

NetSci 2019
Burlington, VT, USA, May 27–31 (2019).

Program Committee Member

11th International Conference on Complex Networks (CompleNet 2019)
Tarragona, Spain, March 18–21 (2019).

Program Committee Member

Seventh International Conference on Complex Networks and Their Applications
Cambridge, UK, December 11–13 (2018).

Organizer (Coorganized with Nicola Perra and Vincenzo Nicosia)

2nd UK Network Science Workshop
University of Greenwich, London, UK, October 26 (2018).

Program Committee Member

The 10th International Conference on Social Informatics
St. Petersburg, Russia, September 24–27 (2018).

Program Committee Member

Workshop on Social Influence 2018 (SI 2018)
Barcelona, Spain, August 28 (2018).

Program Committee Member

The 4th Annual International Conference on Computational Social Science (IC2S2 2018)
Northwestern University, Evanston, USA, July 12–15 (2018).

Program Committee Member

SIAM Workshop on Network Science 2018 (SIAMNS 2018)
Portland, OR, USA, July 12–13 (2018).

Program Committee Member

Integration of Empirical Data in Network Epidemiology (iodine)
A satellite symposium in NetSci 2018, Paris, France, June 12 (2018).

Senior Program Committee Member

NetSci 2018
Paris, France, June 11–15 (2018).

Organizer

UK Network Science Workshop
University of Bristol, Bristol, UK, May 11 (2018).

Program Committee Member

NetSci-X 2018
Hangzhou, China, January 5–8 (2018).

Program Committee Member

Sixth International Workshop on Complex Networks and their Applications
Lyon, France, November 29 – December 1 (2017).

Organizer
Engineering Applications of Networks Workshop
University of Bristol, Bristol, UK, November 1 (2017).

Program Committee Member
Workshop on Social Influence 2017 (SI 2017)
Sydney, Australia, July 31 (2017).

Program Committee Member
CCS2017 Satellite Meeting Modeling of Disease Contagion Processes 6th Edition
Cancun, Mexico, September 17–22 (2017).

Program Committee Member
The 9th International Conference on Social Informatics
Oxford, UK, September 13–15 (2017).

Program Committee Member
NetSci 2017
Indianapolis, Indiana, USA, June 19–23 (2017).

Program Committee Member
4th European Network Intelligence Conference 2017 (ENIC'17)
Duisburg, Germany, September 11–12 (2017).

Program Committee Member
NetSci-X 2017
Tel-Aviv, Israel, January 15–18 (2017).

Program Committee Member
Fifth International Workshop on Complex Networks and their Applications
Milan, Italy, November 30 – December 2 (2016).

Program Committee Member
Workshop on Social Influence 2016 (SI 2016) San Francisco, USA, August 18 (2016).

Organizer (coorganized with Juyong Park)
Satellite workshop: Competition networks and centrality
NetSci 2016
Seoul, Korea, May 30 (2016).

Organizer (coorganized with Byungnam Kahng and Zengru Di)
Satellite workshop: Network science research in Asia: Fundamentals and applications
NetSci 2016
Seoul, Korea, May 30–31 (2016).

Program Co-chair
NetSci 2016
Seoul, Korea Republic, May 30 – June 3 (2016).

Program Committee Member
NetSci-X 2016
Wroclaw, Poland, January 11–13 (2016).

Program Committee Member
Fourth International Workshop on Complex Networks and their Applications

Bangkok, Thailand, November 23–27 (2015).

Coorganizer

Special Session: Epidemic dynamics: mathematical modeling and data analysis
4th IFAC Conference on Analysis and Control of Chaotic Systems
Tokyo, Japan, August 26–28 (2015).

Program Committee Member

NetSci-X 2015

Rio de Janeiro, Brazil, January 14–16 (2015).

Program Committee Member

Third International Workshop on Complex Networks and their Applications
Marrakesh, Morocco, November 23–27 (2014).

Program Committee Member

Workshop on Social Influence (SI 2014)
Barcelona, Spain, November 10 (2014).

Program Committee Member

Second International Workshop on Complex Networks and their Applications
Kyoto, Japan, December 2–5 (2013).

Program Committee Member

NetSci 2013

Kopenhagen, Denmark, June 3–7 (2013).

Program Committee Member

First Workshop on Rational, Secure and Private Ad-hoc Networks (RASEP'11)
Crete, Greece, October 16–21 (2011).

Program Committee Member

The 9th Asia-Pacific Complex Systems Conference (Complex'09)
Tokyo, Japan, November 4–7 (2009).

Program Committee Member

Special Session: Evolutionary Games on Complex Networks
IEEE Congress on Evolutionary Computation (CEC 2009)
Trondheim, Norway, May 18–21 (2009).

Coorganizer

NSC Winter Workshop 2008: Complex Nonlinear Dynamics ranging from Biology to Engineering
Sapporo, Japan, March 8–10 (2008).

Organizer (Coorganized with Martin Hasler, Kazuyuki Aihara, and Oscar De Feo)

Special Session: Nonlinear Analysis and Modeling of Neural Signal Processing and Coding
International Symposium on Nonlinear Theory and its Applications (NOLTA2004)
Fukuoka, Japan, November 29 – December 3 (2004)

Award Judge

Member of Erdős-Rényi Prize Committee, 2020, Network Science Society.

Young Scientist Award (YSA) in Socio- and Econophysics 2020,
Division of socio-economic physics, German Physical Society.

Japanese Society for Mathematical Biology Early Career Award, 2019. (Head of the committee)

Referee for Grant Applications

Research Foundation Flanders (FWO), Belgium
 Austrian Science Fund (FWF)
 Swiss National Science Foundation
 Engineering and Physical Sciences Research Council (EPSRC), UK
 National Science Centre, Poland
 Fund for Scientific Research-FNRS, Belgium
 Programma per Giovani Ricercatori – Rita Levi Montalcini, Italy
 Japan Society for the Promotion of Science, Japan
 National Science Foundation, USA
 MATH AmSud, cooperation between France and Latin America

Referee for Peer-Reviewed Journals

More than 90 journals including Biology Letters, Nature Communications, Nature Physics, Physical Review Letters, Physical Review X, PLOS Biology, Proceedings of the National Academy of Sciences of the United States of America, Proceedings of the Royal Society B, and SIAM Review.
 For a full list, see www.naokimasuda.net/publ.html.

Membership

10/2012–present Faculty Opinions (former F1000 Faculty) Member

Enterprise Partnership

12/2018–present Technical Advisor, Nodes & Links Ltd.

Evaluator for Promotion and Tenure

A university in Japan
 A university in the US

University Service

University at Buffalo
 2019–: Department of Mathematics Graduate Studies Committee
 2019–: Department of Mathematics Area Committee in Applied Mathematics
 2019–2020: Search Committee, Applied Mathematics
 University of Bristol
 2018/10–2019/08: Year 2 (Undergraduate) Tutor
 2016/10–2019/08: Study Abroad Academic Director
 2014/9–2019/08: Personal Tutor (\approx 20 undergraduate and master course students each year)
 University of Tokyo (all roles are officially in Japanese; translation by NM)

2012: Curriculum Coordinator (Graduate)

2012: Coordinator for Departmental Blochures

2011: Committee Member for the Tenth Anniversary Event of the Graduate School

2008-2011: Curriculum Coordinator (Undergraduate)

2008-2011: Library Committee Member

2007, 2008, 2010, 2012: Organizer, Colloquium on Mathematical Informatics

2007: Minute taker

2007: Coordinator of Factory Tours (Undergraduate)

Teaching

University at Buffalo

Topics in Applied Math: Stochastic Processes on Networks (for graduate students, MTH 563) 3 credit hours
Spring 2020

Introduction to Differential Equations (for undergraduate students, MTH 306W) 4 credit hours
Spring 2020, Spring 2021

Introduction to Numerical Analysis I (for graduate students, MTH 537) 3 credit hours
Fall 2019, Fall 2020

University of Bristol

Numerical Methods in MATLAB (for second year undergraduate, EMAT 20920) 10 CPs
Autumn 2014, Autumn 2015, Autumn 2016, Autumn 2017

Nonlinear Dynamics and Chaos (for third year undergraduate, EMAT 33100) 10 CPs
Autumn 2015, Autumn 2016 (50% of teaching)

Advanced Nonlinear Dynamics and Chaos (for masters, EMATM001) 10 CPs
Autumn 2018 (50% of teaching)

Optimisation Theory and Applications (for third year undergraduate, EMAT 30670) 10 CPs
Autumn 2016 (50% of teaching), Autumn 2017 (50%), Autumn 2018 (100%)

Mathematical and Data Modelling 2 (for second year undergraduate, EMAT 22220) 20 CPs
Autumn 2014, Autumn 2015, Autumn 2016, Autumn 2017, Autumn 2018

Role: supervision and marking of 3–4 group projects of 4 weeks

Mathematical and Data Modelling 3 (for third year undergraduate, EMAT 30005) 30 CPs
2017/18, 2018/19 (25% of teaching)

Role: organisation, supervision, and marking of group projects for a semester with other teaching staff

University of Tokyo

4860-1005: Mathematical Structures in Informatics (for Ph.D. and M.Sc students):
Spring 2013 (in English), Spring 2011, and Spring 2009 (in Japanese). 2 credit hours, 1 semester,
role: sole unit organiser

03-541530: Topology (3rd year undergrad. Originally in Japanese. Translation by NM):
Autumn 2007–2013. 1.5 credit hours, 1 semester, role: sole unit organiser

03-541620 Group Journal Club (4th year undergrad. Originally in Japanese. Translation by NM):
Spring 2007, 2008, 2010, 2011, 2013. 1.5 credit hours (co-taught with another faculty), 1 semester,
role: sole unit organiser

Other

Lecturing (on temporal networks)

“Advanced Complex Networks” in the Master of Physics of Complex Systems.

Programa d’Impuls i Internacionalització per a Estudis de Postgrau.

University of Balearic Islands, Spain, 29 May – 2 June, 2017

Part-time Lecturer

7735: Social Simulations (3rd year undergrad. Originally in Japanese. Translation by NM)

Tokyo Institute of Technology, Japan

Spring 2008–2013. 2 credit hours

Research Advising

Thesis supervision

- 07/2020–present Chanon Thongprayoon, University at Buffalo
(sole supervision by NM)
- 02/2020–present Ruodan Liu, University at Buffalo
(sole supervision by NM)
- 08/2019–present Lingqi Meng, University at Buffalo
(sole supervision by NM)
- 01/2018–present Elohim Fonseca dos Reis, University at Buffalo
(transferred from University of Bristol, 08/2019)
(sole supervision by NM)
- 04/2019–08/2019 Maximilian Kloucek, University of Bristol (2nd/3rd supervisor)
Co-supervised with Paddy Royall
(terminated because of NM’s move to the USA)
- 09/2017–08/2019 Robert Eyre, University of Bristol (2nd supervisor, 20%)
Co-supervised with Filippo Simini
(terminated because of NM’s move to the USA)
- 09/2016–08/2019 Alfie Wearn, University of Bristol (2nd supervisor)
Co-supervised with Elizabeth Coulthard and Risto Kauppinen
- 09/2015–08/2019 Simon Godwin, University of Bristol (2nd supervisor, 50%)
Co-supervised with Lucia Marucci
- 09/2015–11/2018 Christelle Langley, University of Bristol (2nd supervisor, 20%)
Co-supervised with Jade Thai
- 04/2010–03/2013 Taro Takaguchi, University of Tokyo (sole supervision by NM)
- 04/2010–03/2013 Mitsuhiro Nakamura, University of Tokyo (sole supervision by NM)
- 07/2020–05/2021 Mengyuan (Jason) Sun, Senior Thesis (undergraduate), University at Buffalo
(sole supervision by NM)
- 01/2018–08/2019 3 MSc students, University of Bristol (from January to summer)
- 09/2014–05/2019 6 MEng students, University of Bristol (one year project)
- 09/2016–05/2019 1 BEng students, University of Bristol (one year project)
- 04/2007–02/2014 13 M.Sc students, University of Tokyo (two year project)
- 10/2006–02/2013 17 B.Sc students, University of Tokyo (one semester project)

Rotation project supervision:

PhD in Neural Dynamics, University of Bristol

- 01/2019–04/2019 Arthur Spencer (co-supervised with Ela Chakkarapani and Jon Brooks)
- 05/2018–08/2018 Oscar Davy (co-supervised with Jade Thai)
- 01/2018–04/2018 Anne-Lene Sax (co-supervised with Elizabeth Coulthard)
- 01/2016–04/2016 Alfie Wearn (cosupervised with Elizabeth Coulthard and Risto Kauppinen)
- 05/2015–08/2015 Felicity Inkpen (cosupervised with Risto Kauppinen)

Fellowship sponsor:

- 04/2017–03/2019 Dr. Christos Ellinas
“Application of complex networks to project robustness and resilience”
EPSRC Doctoral Prize Fellowship, hosted at University of Bristol

Postdoc supervision

University at Buffalo

08/2020–07/2021 Rupam Acharyya (funded by JP Morgan Chase)
 04/2019–03/2021 Kashin Sugishita (funded by Japan Society for the Promotion of Science;
 transferred from University of Bristol, 08/2019)

University of Bristol

09/2019–02/2020 Irene Malvestio (funded by Cookpad Limited)
 06/2019–01/2020 Marinho Antunes Lopes (funded by GW4, UK)
 07/2018–07/2019 Alessio Cardillo (funded by Cookpad Limited)
 04/2016–03/2019 Sadamori Kojaku (funded by CREST, Japan Science and Technology Agency (JST))
 05/2015–03/2016 Kohei Tamura (funded by CREST, JST)

University of Tokyo

04/2013–02/2014 Takuya Machida (funded by Research Fellowships for Young Scientists (PD)
 Japan Society for the Promotion of Science (JSPS))
 04/2012–10/2012 Ryosuke Nishi (funded by Kakenhi, Japan)
 04/2011–03/2012 Jun Nakabayashi (funded by Kakenhi, Japan)
 04/2011–03/2012 Etsuo Segawa (funded by JST, Presto)
 04/2011–03/2012 Shuhei Furuya (funded by Research Fellowships for Young Scientists (PD), JSPS)
 04/2009–03/2011 Yoshimi Yoshino (funded by Kakenhi, Japan)
 03/2009–03/2011 Takehisa Hasegawa (funded by JST, Presto)

As host researcher (at least 1 month)

University of Bristol

05/2019–08/2019 Bruna Campos Guedes (undergraduate student,
 Polytech Marseille — Aix-Marseille Université, France)
 09/2018–03/2019 Shun Kodate (PhD student, Tohoku University, Japan)
 visit funded by Graduate Program in Data Science, Tohoku University
 03/2018–04/2018 Jorge P. Rodríguez (PhD student, University of Balearic Islands, Spain)
 visit funded by Short Term Scientific Mission (STSM), COST Action: CA15109,
 EU Framework Programme Horizon 2020 on
 European Cooperation for Statistics of Network Data Science
 01/2017–03/2017 Elohim Fonseca dos Reis (PhD student, University of Campinas, Brazil)
 visit funded by EPSRC, UK

University of Tokyo

07/2013–08/2013 Yanru Chen (undergraduate student, Tsinghua University, China)
 visit funded by Tsinghua University
 06/2013–08/2013 Friederike Greb (postdoc, Georg-August-Universität Göttingen, Germany)
 visit funded by Summer Program, Japan Society for the Promotion of Science
 02/2012–03/2012 Paul Expert (postdoc, Imperial College, UK)
 visit funded by Postdoctoral Fellowships for Foreign Researchers (short-term),
 Japan Society for the Promotion of Science
 05/2009–02/2010 Toshihiro Tanizawa (Associate Professor,
 Kochi National College of Technology, Japan)
 visit funded by KOSEN National Institute of Technology, Japan

PhD Examiner

- 05/2019 External PhD examiner, Prateek Verma,
Indian Institute of Science Education and Research (IISER) Kolkata, India
- 01/2019 External PhD examiner, Jeroen van Lidth de Jeude,
IMT School of Advanced Studies, Italy
also serving as member (secretary) of the Graduation Committee for
Jeroen van Lidth de Jeude, Federica Parisi, and Giacomo Rapisardi, 03/2019
- 09/2018 External PhD examiner (president), Jorge P. Rodríguez,
University of Balearic Islands, Spain
- 05/2018 External PhD examiner, Neil Sherborne, University of Sussex
- 12/2017 External PhD examiner, Se-Wook Oh, University of Oxford
- 10/2017 External PhD examiner, Balasundaram Kadirvelu, University of Reading
- 07/2016 Internal PhD examiner, Christopher John McWilliams, University of Bristol
- 04/2016 Internal PhD examiner, Holly Silk, University of Bristol
- 2008–2014 PhD examiner for 20 candidates
University of Tokyo, Department of Mathematical Informatics
NB: By convention, no notion of internal/external examiner
- 2011–2014 PhD examiner for 6 candidates, University of Tokyo (other departments)

Miscellaneous

Languages: Japanese (native), English (fluent), and Spanish (fluent).

Herd member: Saving Endangered Species Int'l Playwriting Prize (winning plays announced 02/2016)

Hobbies: Piano (Beethoven, Chopin etc.), salsa (dance), jogging (half marathon: 1h43m), swimming.

Last updated: October 29, 2020