

Naoki Masuda

Contact Information

Dr. Naoki Masuda
Department of Engineering Mathematics, University of Bristol
Merchant Venturers Building, Woodland Road,
Clifton, Bristol BS8 1UB, United Kingdom
Tel: +41 0117 33 15176
Email: naoki.masuda@bristol.ac.uk
Website: www.naokimasuda.net

Professional Positions

- | | |
|-----------------|--|
| 03/2014–present | Senior Lecturer (tenured)
Department of Engineering Mathematics, University of Bristol, UK |
| 09/2008–02/2014 | Associate Professor (tenured)
Department of Mathematical Informatics, University of Tokyo |
| 10/2006–08/2008 | Lecturer (tenured)
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 |
| 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) |

Citation Statistics

[Google Scholar Citations profile](#)

Number of citations: 4120 (Google Scholar Citations)

h-index: 35 (Google Scholar Citations)

Grants

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

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

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 53,450,000 (to my group)

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

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: Sole PI

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 33,930,000

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

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

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

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

Professional Activities

Referee for Peer-Reviewed Journals

More than 70 journals including *Biology Letters*, *Journal of Neurophysiology*, *Journal of the Royal Society Interface*, *Nature Communications*, *Nature Physics*, *Physical Review Letters*, *Physical Review X*, *PLOS Biology*, *PLOS Computational Biology*, *Proceedings of the Royal Society B*, and *Trends in Neurosciences*. For a full list, see www.naokimasuda.net/publ.html.

Editorial Work

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–present Review Editor for *Frontiers Interdisciplinary Physics*

Referee for Grant Applications

Engineering and Physical Sciences Research Council (EPSRC), UK

National Science Centre, Poland

Fund for Scientific Research-FNRS, Belgium

Japan Society for the Promotion of Science, Japan

National Science Foundation, USA

MATH AmSud, cooperation between France and Latin America

Academic Services

Program Committee Member

Complenet'19

Tarragona, Spain, March 18-21 (2019).

Program Committee Member

Seventh International Conference on Complex Networks and Their Applications

Cambridge, UK, December 11-13 (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).

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).

Organiser

Engineering Applications of Networks Workshop
NetSci 2016
University of Bristol, Bristol, UK, Nov 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).

Organiser (coorganised with Juyong Park)

Satellite workshop: Competition networks and centrality

NetSci 2016

Seoul, Korea, May 30 (2016).

Organiser (coorganised 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).

Coorganiser

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, Hokkaido, March 8-10 (2008).

Coorganizer

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)

Membership

17/10/2012–present F1000 Faculty Member

Teaching

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)

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

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

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 (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

01/2018–present	Elohim Fonseca dos Reis, University of Bristol (1st supervisor, 100%)
09/2017–present	Robert Eyre (2nd supervisor, 20%)
09/2016–present	Alfie Wearn, University of Bristol (2nd supervisor, 50%)
09/2015–present	Simon Godwin, University of Bristol (2nd supervisor, 50%)
09/2015–present	Christelle Van Anterpen, University of Bristol (2nd supervisor, 20%)
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)
09/2014–05/2017	4 MEng students, University of Bristol (one year project)
09/2016–05/2017	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)

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

Univ. of Bristol

04/2016–present	Sadamori Kojaku (funded by CREST, Japan Science and Technology Agency (JST))
05/2015–03/2016	Kohei Tamura (funded by CREST, JST)

Univ. 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

Mr. Jorge P. Rodríguez (University of Balearic Islands, Spain), March 5–April 6, 2018, hosted at University of Bristol

Short Term Scientific Mission (STSM), COST Action: CA15109, EU Framework Programme Horizon 2020, on European Cooperation for Statistics of Network Data Science

Dr. Friederike Greb (Georg-August-Universität Göttingen, Germany), June 11–August 21, 2013, hosted at University of Tokyo

Summer Program, Japan Society for the Promotion of Science

Dr. Paul Expert (Imperial College, UK), February 3–March 2, 2012, hosted at University of Tokyo

Postdoctoral Fellowships for Foreign Researchers (short-term), Japan Society for the Promotion of Science

PhD examiner

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
03/2008–03/2014	PhD examiner for 20 candidates University of Tokyo, Department of Mathematical Informatics NB: By convention, no notion of internal/external examiner
03/2011–03/2014	PhD examiner for 6 candidates, University of Tokyo (other departments)

Honors and Awards

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.

International Neural Network Society Young Investigator Award

The International Neural Network Society, August 15, 2007.

Refereed Journal Papers

1. [Naoki Masuda](#), Sadamori Kojaku, Yukie Sano.
A configuration model for correlation matrices.
Physical Review E, 98, 012312 (2018).
2. 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, in press (2018).
3. Takuya Sekiguchi, Kohei Tamura, [Naoki Masuda](#).
Population changes in residential clusters in Japan.
PLOS ONE, 13, e0197144 (2018).
4. Sadamori Kojaku, [Naoki Masuda](#).
A generalised significance test for individual communities in networks.
Scientific Reports, 8, 7351 (2018).
5. Sadamori Kojaku, [Naoki Masuda](#).
Core-periphery structure requires something else in the network.
New Journal of Physics, 20, 043012 (2018).
6. Takahiro Ezaki, Michiko Sakaki, Takamitsu Watanabe, [Naoki Masuda](#).
Age-related changes in the ease of dynamical transitions in brain activity.
Human Brain Mapping, 39, 2673–2688 (2018).
7. [Naoki Masuda](#), Michiko Sakaki, Takahiro Ezaki, Takamitsu Watanabe.
Clustering coefficients for correlation networks.
Frontiers in Neuroinformatics, 12, 7 (2018).

8. Genki Ichinose, [Naoki Masuda](#).
Zero-determinant strategies in finitely repeated games.
Journal of Theoretical Biology, 438, 61–77 (2018).
9. [Naoki Masuda](#), Luis E. C. Rocha.
A Gillespie algorithm for non-Markovian stochastic processes.
SIAM Review, 60, 95–115 (2018).
10. Takahiro Ezaki, [Naoki Masuda](#).
Reinforcement learning account of network reciprocity.
PLOS ONE, 12, e0189220 (2017).
11. Sadamori Kojaku, [Naoki Masuda](#).
Finding multiple core-periphery pairs in networks.
Physical Review E, 96, 052313 (2017).
12. Luis E. C. Rocha, [Naoki Masuda](#), Petter Holme.
Sampling of temporal networks: Methods and biases.
Physical Review E, 96, 052302 (2017).
13. Tomokatsu Onaga, James P. Gleeson, [Naoki Masuda](#).
Concurrency-induced transitions in epidemic dynamics on temporal networks.
Physical Review Letters, 119, 108301 (2017).
14. [Naoki Masuda](#), Mason A. Porter, Renaud Lambiotte.
Random walks and diffusion on networks.
Physics Reports, 716–717, 1–58 (2017).
15. Kohei Tamura, [Naoki Masuda](#).
Effects of the distant population density on spatial patterns of demographic dynamics.
Royal Society Open Science, 4, 170391 (2017).
16. Takahiro Ezaki, Takamitsu Watanabe, Masayuki Ohzeki, [Naoki Masuda](#).
Energy landscape analysis of neuroimaging data.
Philosophical Transactions of the Royal Society A, 375, 20160287 (2017).
17. 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).
18. 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).
19. Teruyoshi Kobayashi, [Naoki Masuda](#).
Fragmenting networks by targeting collective influencers at a mesoscopic level.
Scientific Reports, 6, 37778 (2016).
20. Luis E. C. Rocha, [Naoki Masuda](#).
Individual-based approach to epidemic processes on arbitrary dynamic contact networks.
Scientific Reports, 6, 31456 (2016).
21. Takahiro Ezaki, Yutaka Horita, Masanori Takezawa, [Naoki Masuda](#).
Reinforcement learning explains conditional cooperation and its moody cousin.
PLOS Computational Biology, 12, e1005034 (2016).

22. 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).
23. 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).
24. [Naoki Masuda](#).
Accelerating coordination in temporal networks by engineering the link order.
Scientific Reports, 6, 22105 (2016).
25. Yutaka Horita, Masanori Takezawa, Takuji Kinjo, Yo Nakawake, [Naoki Masuda](#).
Transient nature of cooperation by pay-it-forward reciprocity.
Scientific Reports, 6, 19471 (2016).
26. Jens Malmros, [Naoki Masuda](#), Tom Britton.
Random walks on directed networks: Inference and respondent-driven sampling.
Journal of Official Statistics, 32, 433–459 (2016).
27. Leo Speidel, Taro Takaguchi, [Naoki Masuda](#).
Community detection in directed acyclic graphs.
European Physical Journal B, 88, 203 (2015).
28. Kohei Tamura, [Naoki Masuda](#).
Win-stay lose-shift strategy in formation changes in football.
EPJ Data Science, 4, 9 (2015).
29. 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).
30. [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).
31. [Naoki Masuda](#), Feng Fu.
Evolutionary models of in-group favoritism.
F1000Prime Reports, 7, 27 (2015).
32. [Naoki Masuda](#).
Opinion control in complex networks.
New Journal of Physics, 17, 033031 (2015).
33. Petter Holme, [Naoki Masuda](#).
The basic reproduction number as a predictor for epidemic outbreaks in temporal networks.
PLOS ONE, 10, e0120567 (2015).
34. Víctor M. Eguíluz, [Naoki Masuda](#), Juan Fernández-Gracia.
Bayesian decision making in human collectives with binary choices.
PLOS ONE, 10, e0121332 (2015).
35. 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).

36. Yohei Nakajima, [Naoki Masuda](#).
Evolutionary dynamics in finite populations with zealots.
Journal of Mathematical Biology, 70, 465–484 (2015).
37. 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).
38. 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).
39. Ryosuke Nishi, [Naoki Masuda](#).
Dynamics of social balance under temporal interaction.
EPL, 107, 48003 (2014).
40. Yuni Iwamasa, [Naoki Masuda](#).
Networks maximizing the consensus time of voter models.
Physical Review E, 90, 012816 (2014).
41. [Naoki Masuda](#).
Voter model on the two-clique graph.
Physical Review E, 90, 012802 (2014).
42. 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).
43. Luis E. C. Rocha, [Naoki Masuda](#).
Random walk centrality for temporal networks.
New Journal of Physics, 16, 063023 (2014).
44. 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).
45. [Naoki Masuda](#).
Evolution via imitation among like-minded individuals.
Journal of Theoretical Biology, 349, 100–108 (2014).
46. Koji Oishi, Manuel Cebrian, Andres Abeliuk, [Naoki Masuda](#).
Iterated crowdsourcing dilemma game.
Scientific Reports, 4, 4100 (2014).
47. 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).
48. Kodai Saito, [Naoki Masuda](#).
Two types of well followed users in the followership networks of Twitter.
PLOS ONE, 9, e84265 (2014).
49. Shoma Tanabe, [Naoki Masuda](#).
Complex dynamics of a nonlinear voter model with contrarian agents.
Chaos, 23, 043136 (2013).

50. [Naoki Masuda](#), Konstantin Klemm, Víctor M. Eguíluz.
Temporal networks: slowing down diffusion by long lasting interactions.
Physical Review Letters, 111, 188701 (2013).
51. [Naoki Masuda](#).
Voter models with contrarian agents.
Physical Review E, 88, 052803 (2013).
52. Takehisa Hasegawa, Taro Takaguchi, [Naoki Masuda](#).
Observability transitions in correlated networks.
Physical Review E, 88, 042809 (2013).
53. 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).
54. Ryosuke Nishi, [Naoki Masuda](#).
A collective opinion formation model under Bayesian updating and confirmation bias.
Physical Review E, 87, 062123 (2013).
55. Taro Takaguchi, [Naoki Masuda](#), Petter Holme.
Bursty communication patterns facilitate spreading in a threshold-based epidemic dynamics.
PLOS ONE, 8, e68629 (2013).
56. [Naoki Masuda](#), Issei Kurahashi, Hiroko Onari.
Suicide ideation of individuals in online social networks.
PLOS ONE, 8, e62262 (2013).
57. 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).
58. [Naoki Masuda](#), Petter Holme.
Predicting and controlling infectious disease epidemics using temporal networks.
F1000Prime Reports, 5, 6 (2013).
59. 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).
60. 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).
61. Ryo Fujie, Kazuyuki Aihara, [Naoki Masuda](#).
A model of competition among more than two languages.
Journal of Statistical Physics, 151, 289–303 (2013).
62. Shoma Tanabe, Hideyuki Suzuki, [Naoki Masuda](#).
Indirect reciprocity with trinary reputations.
Journal of Theoretical Biology, 317, 338–347 (2013).
63. Mitsuhiro Nakamura, [Naoki Masuda](#).
Groupwise information sharing promotes ingroup favoritism in indirect reciprocity.
BMC Evolutionary Biology, 12, 213 (2012).

64. Shun Motegi, [Naoki Masuda](#).
A network-based dynamical ranking system for competitive sports.
Scientific Reports, 2, 904 (2012).
65. [Naoki Masuda](#).
Evolution of cooperation driven by zealots.
Scientific Reports, 2, 646 (2012).
66. Taro Takaguchi, Nobuo Sato, Kazuo Yano, [Naoki Masuda](#).
Importance of individual events in temporal networks.
New Journal of Physics, 14, 093003 (2012).
67. [Naoki Masuda](#), Mitsuhiro Nakamura.
Coevolution of trustful buyers and cooperative sellers in the trust game.
PLOS ONE, 7(9), e44169 (2012).
68. [Naoki Masuda](#).
Ingroup favoritism and intergroup cooperation under indirect reciprocity based on group reputation.
Journal of Theoretical Biology, 311, 8–18 (2012).
69. 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).
71. Shoma Tanabe, [Naoki Masuda](#).
Evolution of cooperation facilitated by reinforcement learning with adaptive aspiration levels.
Journal of Theoretical Biology, 293, 151–160 (2012).
72. [Naoki Masuda](#).
Clustering in large networks does not promote upstream reciprocity.
PLOS ONE, 6(10), e25190 (2011).
73. Taro Takaguchi, [Naoki Masuda](#).
Voter model with non-Poissonian inter-event intervals.
Physical Review E, 84, 036115 (2011).
74. Takehisa Hasegawa, [Naoki Masuda](#).
Robustness of networks against propagating attacks under vaccination strategies.
Journal of Statistical Mechanics, P09014 (2011).
75. Taro Takaguchi, Mitsuhiro Nakamura, Nobuo Sato, Kazuo Yano, [Naoki Masuda](#).
Predictability of conversation partners.
Physical Review X, 1, 011008 (2011).
76. Mitsuhiro Nakamura, [Naoki Masuda](#).
Indirect reciprocity under incomplete observation.
PLOS Computational Biology, 7(7), e1002113 (2011).
77. C. -K. Yun, [N. Masuda](#), B. Kahng.
Diversity and critical behavior in prisoner's dilemma game.
Physical Review E, 83, 057102 (2011).

78. Naoki Masuda, Mitsuhiro Nakamura.
Numerical analysis of a reinforcement learning model with the dynamic aspiration level in the iterated Prisoner's Dilemma.
Journal of Theoretical Biology, 278, 55–62 (2011).
79. Takehisa Hasegawa, Norio Konno, Naoki Masuda.
Numerical study of a three-state host-parasite system on the square lattice.
Physical Review E, 83, 046102 (2011).
80. Yuri Ogiso, Kazuhide Tsuneizumi, Naoki Masuda, Makoto Sato, Tetsuya Tabata.
Robustness of the Dpp morphogen activity gradient depends on negative feedback regulation by the inhibitory Smad, Dad.
Development Growth and Differentiation, 53, 668–678 (2011).
81. Naoki Masuda, S. Redner.
Can partisan voting lead to truth?
Journal of Statistical Mechanics, L02002 (2011).
82. Naoki Masuda, Hiroshi Kori.
Dynamics-based centrality for directed networks.
Physical Review E, 82, 056107 (2010).
83. Takamitsu Watanabe, Naoki Masuda.
Enhancing the spectral gap of networks by node removal.
Physical Review E, 82, 046102 (2010).
84. Jun Ohkubo, Kazushi Yoshida, Yuichi Iino, Naoki Masuda.
Long-tail behavior in locomotion of *Caenorhabditis elegans*.
Journal of Theoretical Biology, 267, 213–222 (2010).
85. Naoki Masuda.
Effects of diffusion rates on epidemic spreads in metapopulation networks.
New Journal of Physics, 12, 093009 (2010).
86. Naoki Masuda, Yoji Kawamura, Hiroshi Kori.
Collective fluctuations in networks of noisy components.
New Journal of Physics, 12, 093007 (2010).
87. Ralf Tönjes, Naoki Masuda, Hiroshi Kori.
Synchronization transition of identical phase oscillators in a directed small-world network.
Chaos, 20, 033108 (2010).
88. Naoki Masuda, N. Gibert, S. Redner.
Heterogeneous voter models.
Physical Review E, 82, 010103(R) (2010).
89. Akio Iwagami, Naoki Masuda.
Upstream reciprocity in heterogeneous networks.
Journal of Theoretical Biology, 265, 297–305 (2010).
90. Yusuke Ide, Norio Konno, Naoki Masuda.
Statistical properties of a generalized threshold network model.
Methodology & Computing in Applied Probability, 12, 361–377 (2010).
91. Naoki Masuda.
Immunization of networks with community structure.
New Journal of Physics, 11, 123018 (2009).

92. [Naoki Masuda](#), Yoji Kawamura, Hiroshi Kori.
Impact of hierarchical modular structure on ranking of individual nodes in directed networks.
New Journal of Physics, 11, 113002 (2009).
93. [Naoki Masuda](#), Yoji Kawamura, Hiroshi Kori.
Analysis of relative influence of nodes in directed networks.
Physical Review E, 80, 046114 (2009).
94. [Naoki Masuda](#), Hisashi Ohtsuki.
A theoretical analysis of temporal difference learning in the iterated Prisoner's Dilemma game.
Bulletin of Mathematical Biology, 71, 1818–1850 (2009).
95. [Naoki Masuda](#).
Selective population rate coding: a possible computational role of gamma oscillations in selective attention.
Neural Computation, 21, 3335–3362 (2009).
96. Yuko K. Takahashi, Hiroshi Kori, [Naoki Masuda](#).
Self-organization of feedforward structure and entrainment in excitatory neural networks with spike-timing-dependent plasticity.
Physical Review E, 79, 051904 (2009).
97. [Naoki Masuda](#), Hisashi Ohtsuki.
Evolutionary dynamics and fixation probabilities in directed networks.
New Journal of Physics, 11, 033012 (2009).
98. [Naoki Masuda](#).
Directionality of contact networks suppresses selection pressure in evolutionary dynamics.
Journal of Theoretical Biology, 258, 323–334 (2009).
99. [N. Masuda](#), J. S. Kim, B. Kahng.
Priority queues with bursty arrivals of incoming tasks.
Physical Review E, 79, 036106 (2009).
100. Taro Ueno, [Naoki Masuda](#).
Controlling nosocomial infection based on structure of hospital social networks.
Journal of Theoretical Biology, 254, 655–666 (2008).
101. [Naoki Masuda](#).
Oscillatory dynamics in evolutionary games are suppressed by heterogeneous adaptation rates of players.
Journal of Theoretical Biology, 251, 181–189 (2008).
102. [Naoki Masuda](#), Shun-ichi Amari.
A computational study of synaptic mechanisms of partial memory transfer in cerebellar vestibulo-ocular-reflex learning.
Journal of Computational Neuroscience, 24, 137–156 (2008).
103. Nobuaki Sugimine, [Naoki Masuda](#), Norio Konno, Kazuyuki Aihara.
On global and local critical points of extended contact process on homogeneous trees.
Mathematical Biosciences, 213, 13–17 (2008).
104. [Naoki Masuda](#), Brent Doiron.
Gamma oscillations of spiking neural populations enhance signal discrimination.
PLOS Computational Biology, 3(11), e236, 2348–2355 (2007).
105. [Naoki Masuda](#).
Participation costs dismiss the advantage of heterogeneous networks in evolution of cooperation.
Proceedings of the Royal Society B: Biological Sciences, 274, 1815–1821 (2007).

106. Naoki Masuda, Hiroshi Kori.
Formation of feedforward networks and frequency synchrony by spike-timing-dependent plasticity.
Journal of Computational Neuroscience, 22, 327–345 (2007).
107. Naoki Masuda, Masato Okada, Kazuyuki Aihara.
Filtering of spatial bias and noise inputs by spatially structured neural networks.
Neural Computation, 19, 1854–1870 (2007).
108. Naoki Masuda, Kazuyuki Aihara.
Dual coding hypotheses for neural information representation.
Mathematical Biosciences, 207, 312–321 (2007).
109. Naoki Masuda, Hisashi Ohtsuki.
Tag-based indirect reciprocity by incomplete social information.
Proceedings of the Royal Society B: Biological Sciences, 274, 689–695 (2007).
110. Yong-Yeol Ahn, Hawoong Jeong, Naoki Masuda, Jae Dong Noh.
Epidemic dynamics of two species of interacting particles on scale-free networks.
Physical Review E, 74, 066113 (2006).
111. Naoki Masuda, Norio Konno.
Networks with dispersed degrees save stable coexistence of species in cyclic competition.
Physical Review E, 74, 066102 (2006).
112. Yuichi Katori, Naoki Masuda, Kazuyuki Aihara.
Dynamic switching of optimal neural codes in networks with gap junctions.
Neural Networks, 19, 1463–1466 (2006).
113. Naoki Masuda, Norio Konno.
Multi-state epidemic processes on complex networks.
Journal of Theoretical Biology, 243, 64–75 (2006).
114. Kazumichi Ohtsuka, Norio Konno, Naoki Masuda, Kazuyuki Aihara.
Phase diagrams and correlation inequalities of a three-state stochastic epidemic model on the square lattice.
International Journal of Bifurcation and Chaos, 16, 3687–3693 (2006).
115. Naoki Masuda, Norio Konno.
VIP-club phenomenon: emergence of elites and masterminds in social networks.
Social Networks, 28, 297–309 (2006).
116. Naoki Masuda, Goce Jakimoski, Kazuyuki Aihara, Ljupco Kocarev.
Chaotic block ciphers: from theory to practical algorithms.
IEEE Transactions on Circuits and Systems Part I, 53, 1341–1352 (2006).
117. Naoki Masuda.
Simultaneous rate-synchrony codes in populations of spiking neurons.
Neural Computation, 18, 45–59 (2006).
118. N. Masuda, K.-I. Goh, B. Kahng.
Extremal dynamics on complex networks: Analytic solutions.
Physical Review E, 72, 066106 (2005).
119. Norio Konno, Naoki Masuda, Rahul Roy, Anish Sarkar.
Rigorous results on the threshold network model.
Journal of Physics A: Mathematical and General, 38, 6277–6291 (2005).

120. Naoki Masuda, Brent Doiron, André Longtin, Kazuyuki Aihara.
Coding of temporally varying signals in networks of spiking neurons with global delayed feedback.
Neural Computation, 17, 2139–2175 (2005).
121. Naoki Masuda, Hiroyoshi Miwa, Norio Konno.
Geographical threshold graphs with small-world and scale-free properties.
Physical Review E, 71, 036108 (2005).
122. Naoki Masuda, Hiroyoshi Miwa, Norio Konno.
Analysis of scale-free networks based on a threshold graph with intrinsic vertex weights.
Physical Review E, 70, 036124 (2004).
123. Naoki Masuda, Norio Konno.
Subcritical behavior in the alternating supercritical Domany-Kinzel dynamics.
European Physical Journal B, 40, 313–319 (2004).
124. Naoki Masuda, Norio Konno.
Return times of random walk on generalized random graphs.
Physical Review E, 69, 066113 (2004).
125. Naoki Masuda, Kazuyuki Aihara.
Dual coding and effects of global feedback in multilayered neural networks.
Neurocomputing, 58–60, 33–39 (2004).
126. Naoki Masuda, Norio Konno, Kazuyuki Aihara.
Transmission of severe acute respiratory syndrome in dynamical small-world networks.
Physical Review E, 69, 031917 (2004).
127. Naoki Masuda, Kazuyuki Aihara.
Self-organizing dual coding based on spike-time-dependent plasticity.
Neural Computation, 16, 627–663 (2004).
128. Naoki Masuda, Kazuyuki Aihara.
Global and local synchrony of coupled neurons in small-world networks.
Biological Cybernetics, 90, 302–309 (2004).
129. Naoki Masuda, Kazuyuki Aihara.
Spatial prisoner’s dilemma optimally played in small-world networks.
Physics Letters A, 313, 55–61 (2003).
130. Naoki Masuda, Kazuyuki Aihara.
Filtered interspike interval encoding by class II neurons.
Physics Letters A, 311, 485–490 (2003).
131. Naoki Masuda, Kazuyuki Aihara.
Ergodicity of spike trains: when does trial averaging make sense?
Neural Computation, 15, 1341–1372 (2003).
132. Naoki Masuda, Kazuyuki Aihara.
Duality of rate coding and temporal spike coding in multilayered feedforward networks.
Neural Computation, 15, 103–125 (2003).
133. Naoki Masuda, Kazuyuki Aihara.
Bridging rate coding and temporal spike coding by effect of noise.
Physical Review Letters, 88, 248101 (2002).
134. Naoki Masuda, Kazuyuki Aihara.
Spatiotemporal spike encoding of a continuous external signal.
Neural Computation, 14, 1599–1628 (2002).

135. Naoki Masuda, Kazuyuki Aihara.
Dynamical characteristics of discretized chaotic permutations.
International Journal of Bifurcation and Chaos, 12, 2087–2103 (2002).
136. Naoki Masuda, Kazuyuki Aihara.
Cryptosystems with discretized chaotic maps.
IEEE Transactions on Circuits and Systems Part I, 49, 28–40 (2002).
137. Naoki Masuda, Kazuyuki Aihara.
Synchronization of pulse-coupled excitable neurons.
Physical Review E, 64, 051906 (2001).
138. Henry D. I. Abarbanel, Naoki Masuda, M. I. Rabinovich, Evren Tumer.
Distribution of mutual information.
Physics Letters A, 281, 368–373 (2001).
139. Naoki Masuda, Yasunori Okabe.
Time series analysis with wavelet coefficients.
Japan Journal of Industrial and Applied Mathematics, 18, 129–158 (2001).

Books

1. Naoki Masuda, Petter Holme. (Editors)
Temporal Network Epidemiology.
Springer (2017).
2. Naoki Masuda, Renaud Lambiotte.
A Guide to Temporal Networks.
World Scientific, Singapore (2016).

Book Chapters

1. 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.
3. 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

1. 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]

2. 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]
3. 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]
4. 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)]
5. Naoki Masuda, Tetsuya Fujie, Kazuo Murota.
Semidefinite programming for maximizing the spectral gap.
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]
6. 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]
7. 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]
8. 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]
9. 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]

10. 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]

Research Talks in Seminars (invited and in English only)

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.

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: September 5, 2018