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## Naohiro Matsumura

Graduate School of Economics, Osaka University  
1-7 Machikaneyama, Toyonaka, Osaka, 560-0043 Japan

email: [matumura@econ.osaka-u.ac.jp](mailto:matumura@econ.osaka-u.ac.jp)

url: <http://mtmr.jp>

Born: March 8, 1975—Osaka, Japan

Nationality: Japanese

### Current Position

*Professor*, Graduate School of Economics, Osaka University

### Areas of Specialization

shikakeology, human behavior, influence, behavioral economics

### Academic Appointments

2017-present	Professor, Osaka University
2007-2017	Associate Professor, Osaka University
2012-2013	Visiting Scholar, Stanford University
2004-2007	Assistant Professor, Osaka University
2004	Visiting Scholar, University of Illinois at Urbana-Champaign
2003-2004	Postdoctoral Research Fellow, The University of Tokyo

### Education

2003	PhD in Engineering, The University of Tokyo
2000	MSc in Engineering, Osaka University
1998	BSc in Engineering, Osaka University

### Grants, Honors & Awards

2014-2016	Co-Principal Investigator, "Mechanism to Encourage Consumer Engagement Behavior", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Scientific Research (C), 4,550,000 JPY (approximately 45,009 USD as of July 11, 2014)
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- 2014-2016 Principal Investigator, "Program for Creating Future Wisdom, Osaka University", 770,000 JPY (approximately 6,581 USD as of November 27, 2014)
- 2014 Principal Investigator, "Osaka University Research Abroad Program", 1,000,000 JPY (approximately 8,519 USD as of November 27, 2014)
- 2013-2015 Co-Principal Investigator, "From Basic Research to Social Implementation: Evolutionary Understanding of Information Diffusion Process on Social Media and Risk Perception", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Scientific Research (A), 33,020,000 JPY (approximately 326,634 USD as of July 11, 2014)
- 2013-2015 Co-Principal Investigator, "Information Diffusion Process and Social Influence on Social Media", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Scientific Research (B), 12,200,000 JPY (approximately 122,000 USD as of April 23, 2013)
- 2013-2015 Co-Principal Investigator, "Study on Modeling and Support of Emergent Creative Activity on the Internet", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Scientific Research (A), 35,620,000 JPY (approximately 352,353 USD as of July 11, 2014)
- 2012-2014 Principal Investigator, "Influence Diffusion in the Real World", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Scientific Research (C), 5,590,000 JPY (approximately 62,000 USD as of January 20, 2013)
- 2012-2014 Co-Principal Investigator, "Empirical Research on Open Innovation: Products, Markets, Industries, and Management Points of View", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Scientific Research (A), 11,960,000 JPY (approximately 133,000 USD as of January 20, 2013)
- 2009-2011 Principal Investigator, "Influence Diffusion on the Internet", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Young Scientists (B), 3,380,000 JPY (approximately 37,500 USD as of January 20, 2013)
- 2007-2009 Co-Principal Investigator, "Study for Medical Risk Management using Mobile Equipment at Health Care Facility", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Scientific Research (A), 41,600,000 JPY (approximately 461,000 USD as of January 20, 2013)
- 2006-2007 Principal Investigator, "Communication Environment Design for Sparking Inspiration", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Young Scientists (B), 3,600,000 JPY (approximately 39,900 USD as of January 20, 2013)
- 2006-2008 Co-Principal Investigator, "Studies for Strategic Environmental Management -Supply Chain Management Approach-", Japanese Society for the Promotion of Science (JSPS) Grant-in-Aid for Scientific Research (A), 28,340,000 JPY (approximately 314,000 USD as of January 20, 2013)
- 2006 100 Papers Selection, Annual Report of Osaka University 2005-2006.
- 2005-2006 Principal Creator, "Idea-Sparking Discussion System", Information Technology Promotion Agency of Japan (IPA) grant on explorative software development (Mito Project), 4,000,000 JPY (approximately 44,400 USD as of January 20, 2013)
- 2005 Author Award, Japan Society for Fuzzy Theory and Intelligent Informatics

## Publications & talks

### Journal Articles (International)

- 2016 Naohiro Matsumura, Asako Miura, Masashi Komori, and Kai Hiraishi (2016) Media Mediate Sentiments: Exploratory Analysis of Tweets Posted Before, During, and After the Great East Japan Earthquake, *International Journal of Knowledge Society Research (IJKSR)*, Vol. 7, No. 2, pp. 57–71.
- 2015 Naohiro Matsumura, Renate Fruchter, Larry Leifer (2015) Shikakeology: Designing Triggers for Behavior Change, *AI & Society*, Springer Verlag, Volume 30, Issue 4, pp. 419–429.
- 2015 Shoko Yamane, Naohiro Matsumura: The Effect of a Ticking Clock on Task Performance, *AI & Society*, Springer Verlag, Volume 30, Issue 4, pp. 443–449.
- 2007 Naohiro Matsumura, Yoshihiro Sasaki (2007) Human Influence Network for Understanding Leadership Behavior, *International Journal of Knowledge-Based and Intelligent Engineering Systems*, Vol. 11, No. 5, pp. 291–300.
- 2007 Naohiro Matsumura, Yoshihiro Sasaki (2007) Multi-data Mining for Understanding Leadership Behavior, *Data Science Journal*, Vol. 6, S61–S69.
- 2007 Naohiro Matsumura, David E. Goldberg, Xavier Llorà (2007) Communication Gap Management for Fertile Community, *Soft Computing*, Springer Verlag, Vol. 11, No. 8, pp. 791–798.
- 2006 Xavier Llorà, David E. Goldberg, Yukio Ohsawa, Naohiro Matsumura, Yuichi Washida, Horoshi Tamura, Masataka Yoshikawa, Michael Welge, Loretta Auvil, Duanne Sears Smith, Kei Ohnishi, and Chen-Ju Chao (2006) Innovation and Creativity support via Chance Discovery, Genetic Algorithms, and Data Mining, *New Mathematics and Natural Computation*, Vol. 2, No. 1, pp. 85–100.
- 2005 Naohiro Matsumura, Yukio Ohsawa and Mitsuru Ishizuka (2005) Combination Retrieval for Creating Knowledge from Sparse Document Collections, *Knowledge-Based Systems*, Volume 18, Issue 7, pp. 327–333.
- 2005 Renate Fruchter, Yukio Ohsawa, Naohiro Matsumura (2005) Knowledge Reuse through Chance Discovery from an Enterprise Design-Build Enterprise Data Store, *New Mathematics and Natural Computation*, Vol. 1, No. 3, pp. 393–406.
- 2005 Naohiro Matsumura, Asako Miura, Yasufumi Shibana, Yukio Ohsawa, and Toyoaki Nishida (2005) The Dynamism of 2channel, *AI & Society*, Vol. 19, No. 1, pp. 84–92, Springer Verlag.
- 2003 Naoaki Okazaki, Yutaka Matsuo, Naohiro Matsumura, Mitsuru Ishizuka (2003) Sentence Extraction by Spreading Activation with Refined Similarity Measure, *IEICE Tran. on Information and Systems*, Vol E86-D, No. 9, pp. 1686–1694.
- 2002 Naohiro Matsumura, Yukio Ohsawa and Mitsuru Ishizuka (2002) PAI: Automatic Indexing for Extracting Asserted Keywords from a Document, *New Generation Computing*, Vol. 21, No. 1, pp. 37–47.
- 2002 Naohiro Matsumura, Yutaka Matsuo, Yukio Ohsawa and Mitsuru Ishizuka (2002) Discovering Emerging Topics from WWW, *Journal of Contingencies and Crisis Management*, Vol. 10, No. 2, pp. 73–81.

### Journal Articles (In Japanese)

- 2017 Hikaru Yamamoto, Naohiro Matsumura (2017) Measuring the Value of Customer Engagement, *Marketing Journal*, Vol. 36, No. 4, pp. 2–20 (In Japanese)

- 2016 Asako Miura, Fujio Toriumi, Masashi Komori, Naohiro Matsumura, Kai Hiraishi: Relationship between emotion and diffusion of disaster information on social media: Case study on 2011 Tohoku Earthquake, *Japanese Society for Artificial Intelligence*, Vol. 31, No. 1, pp. 1-9. (In Japanese)
- 2015 Asako Miura, Masashi Komori, Naohiro Matsumura, Kazutoshi Maeda (2015) Expression of negative emotional response on the Great East Japan Earthquake: Analysis on big data of social media, *Japanese Psychological Research*, Vol.86, No.2, pp.102-111. (In Japanese)
- 2014 Masashi Komori, Kazutoshi Maeda, Asako Miura, Naohiro Matsumura (2014) Relation between Rumor-Spreading Behavior in Microblogging and Characteristics of Personal Networks, Vol.16, No.4, pp.277-284. (In Japanese)
- 2013 Naohiro Matsumura (2013) Field Mining Games as Learning Perspectives, *KEIO SFC Journal*, Vol. 12, No. 2., pp. 47-59. (In Japanese)
- 2011 Takafumi Kasubuchi, Naohiro Matsumura (2011) The Relationship between Words Included in the Requests by Service Recipients and the Realization Rate, *Journal of the Japan Society for Management Information*, Vol. 19 No. 4, pp. 1-9. (In Japanese)
- 2011 Seiki Matsuda, Shunsuke Tohma, Naohiro Matsumura (2011) Effect of Soundscape on Consciousness Reformation, *Journal of Human Interface Society*, Vol. 13, No. 1, pp. 99-107. (In Japanese)
- 2011 Takashi Maekawa, Naohiro Matsumura (2011) Analysis of Contents and Writing Styles in Communication Notebooks, *Journal of Human Interface Society*, Vol. 13, No. 1, pp. 67-72. (In Japanese)
- 2011 Naohiro Matsumura, Hikaru Yamamoto (2011) Finding Influencers and Consumer Insights in the Blogosphere, *Marketing Journal*, Vol. 30, No. 3, pp. 82-94. (In Japanese)
- 2010 Naohiro Matsumura, Ayumi Ichihashi (2010) Study on Resident-led Communication via "Graffiti Map", *Journal of Japan Society for Fuzzy Theory and Intelligent Informatics*, Vol. 22, No. 6, pp. 733-743. (In Japanese)
- 2008 Asako Miura, Naohiro Matsumura, Satoshi Kitayama (2008) Study on Authors' Intentions and Contents in Blogs, *The Japanese Journal of Psychology*, Vol. 78, No. 5, pp. 446-452. (In Japanese)
- 2008 Naohiro Matsumura, Yoshihiro Sasaki (2008) Analysis of Alternative Leadership Behavior in Nonprofit Organization, *Journal of Information Processing Society of Japan*, Vol. 49, No. 8, pp. 2783-2790. (In Japanese)
- 2007 Naohiro Matsumura, Daisuke Kawahara, Masashi Okamoto, Sadao Kurohashi, Toyoaki Nishida (2007) Extraction of Questions Behind Messages, *Japanese Society for Artificial Intelligence*, Vol. 22, No. 1, pp. 93-102. (In Japanese)
- 2006 Yoshihiro Sasaki, Naohiro Matsumura (2006) Discovery of Leadership Behaviors in NPO, *Journal of Japan Society for Fuzzy Theory and Intelligent Informatics*, Vol. 18, No. 2, pp. 233-239. (In Japanese)
- 2006 Ikki Ohmukai, Yutaka Matsuo, Naohiro Matsumura, Hideaki Takeda (2006) Building Community Web Platform, *Japanese Society for Artificial Intelligence*, Vol. 21, No. 3, pp. 251-256. (In Japanese)
- 2004 Naohiro Matsumura, Asako Miura, Yasuhumi Shibana, Yukio Ohsawa, Mitsuru Ishizuka (2004) The Dynamism of 2channel, *Journal of Information Processing Society of Japan*, Vol. 45, No. 3, pp. 1053-1061. (In Japanese)
- 2003 Naohiro Matsumura, Yu Kato, Yukio Ohsawa, Mitsuru Ishizuka (2005) Visualization of Dis-

- cussion Structure for Discovering and Understanding Discussion Points, *Japanese Society for Fuzzy Theory and Intelligent Informatics*, Vol. 15, No. 5, pp. 554-564. (In Japanese)
- 2003 Naohiro Matsumura, Yukio Ohsawa, Mitsuru Ishizuka (2003) Profiling Participants in Online-Community Based on Influence Diffusion Model, *Japanese Society for Artificial Intelligence*, Vol. 18, No. 4, pp. 165-172. (In Japanese)
- 2002 Naohiro Matsumura, Yukio Ohsawa, Mitsuru Ishizuka (2002) Automatic Indexing Based on Term Activity, *Japanese Society for Artificial Intelligence*, Vol. 17, No. 4, pp. 398-406. (In Japanese)
- 2002 Naohiro Matsumura, Yukio Ohsawa, Mitsuru Ishizuka (2002) Influence Diffusion Model in Text-Based Communication, *Japanese Society for Artificial Intelligence*, Vol. 17, No. 3, pp. 259-267. (In Japanese)
- 1999 Naohiro Matsumura, Yukio Ohsawa, Mitsuru Ishizuka (1999) Search System for Satisfying User's Interest by Assembling Documents, *Japanese Society for Artificial Intelligence*, Vol. 14, No. 6, pp. 1177-1185. (In Japanese)

### **Invited Journal Articles (In Japanese)**

- 2013 Naohiro Matsumura (2013) Introduction to Shikakeology – Shikakeology of the People, by the People, for the People –, *Japanese Society for Artificial Intelligence*, Vol.28, No.5 , pp. 584-589. (In Japanese)
- 2012 Naohiro Matsumura (2012) Shikakeology as leveraging Inconvenience, *The Society of Instrument and Control Engineers*, Vol.51. No.8, pp. 710-715. (In Japanese)
- 2011 Naohiro Matsumura (2011) Influential Medium: Designs for Awareness - Case Studies of Influential Medium in Participatory Workshop, *Japanese Society for Artificial Intelligence*, Vol.26, No.5 , pp. 425-431. (In Japanese)
- 2008 Naohiro Matsumura (2008) Applications and Lessons of Textual Data on Marketing, *Japan Industrial Management Association*, Vol. 18, No. 1., pp. 32-37. (In Japanese)
- 2008 Naohiro Matsumura (2008) Field Mining as a Methodology for Rediscovering Attractive Features in a Field, *The Institute of Electronics, Information and Communication Engineers*, Vol. 91, pp. 237-241. (In Japanese)
- 2007 Yutaka Matsuo, Naohiro Matsumura (2007) Web Computing, *Japanese Society for Artificial Intelligence*, Vol. 22, No. 4, pp. 548–556. (In Japanese)
- 2003 Naohiro Matsumura (2003) Chance Discovery from Online Communities, *Japanese Society for Artificial Intelligence*, Vol. 18, No. 3, pp. 195-300. (In Japanese)
- 2002 Yukio Ohsawa, Yutaka Matsuo, Naohiro Matsumura (2002) Chance Discoveries from Natural and Social Data, *The Institute of Systems, Control and Information Engineers*, Vol. 46, No. 4, pp. 203-208. (In Japanese)

### **Book Chapters (International)**

- 2008 Naohiro Matsumura, Yoshihiro Sasaki (2008) Multi-Data Mining for Understanding Leadership Behavior, *Communications and Discoveries from Multidisciplinary Data, Studies in Computational Intelligence* (eds. Shuichi Iwata, Yukio Ohsawa, Shusaku Tsumoto, Ning Zhong, Yong Shi, and Lorenzo Magnani), Vol. 123, pp. 81-94, Springer Verlag.
- 2008 Naohiro Matsumura (2008) Communication Gap Management Towards Fertile Community,

- Grammar of Technology Development* (eds. Hiroe Tsubaki, Ken Nishina, and Shu Yamada), pp. 61-70, Springer Verlag.
- 2008 Naohiro Matsumura (2008) Chapter 20. Analysis of Interaction Mechanism in Online Communities, *Engineering Approaches to Conversational Informatics* (ed. Toyoaki Nishida), John Wiley & Sons.
- 2006 Naohiro Matsumura (2006) Modeling Influence Diffusion in Human Society, *Chance Discoveries in Real World Decision Making* (eds. Yukio Ohsawa and Shusaku Tsumoto), pp. 137-154, Springer Verlag.
- 2006 Naohiro Matsumura, Yoshihiro Sasaki (2006) Leader Qualification in Managing Nonprofit Organization, *New Frontiers in Artificial Intelligence* (eds. Takashi Washio, Akito Sakurai, Katsuto Nakajima, Hideaki Takeda, Satoshi Tojo, and Makoto Yokoo), LNAI 4012, pp 411-419, Springer-Verlag.
- 2006 Yukio Ohsawa, Naohiro Matsumura, Naoaki Okazaki, Akio Saiura, and Hajime Fujie (2006) Mining Scenarios for Hepatitis B and C, *Multidisciplinary Approaches to Theory in Medicine* (eds. Ray Paton and Laura McNamara), pp. 209–231, Elsevier.
- 2005 Naohiro Matsumura, Yukio Ohsawa, Mitsuru Ishizuka (2005) PAI: Assertion Extraction from Context-Transition in a Document, *Readings in Chance Discovery* (eds. Akinori Abe and Yukio Ohsawa), pp. 261-267, Advanced Knowledge International.
- 2005 Naohiro Matsumura and Yukio Ohsawa (2005) The Dynamism of Ni-channel, *Readings in Chance Discovery* (eds. Akinori Abe and Yukio Ohsawa), pp. 101-107, Advanced Knowledge International.
- 2003 Naohiro Matsumura and Yukio Ohsawa (2003) Chance Discovery from the WWW, *Chance Discovery* (eds. Yukio Ohsawa and Peter McBurney), pp. 325-338, Springer Verlag.
- 2003 Naohiro Matsumura (2003) Topic Diffusion in a Community, *Chance Discovery* (eds. Yukio Ohsawa and Peter McBurney), pp. 84-97, Springer Verlag.
- 2001 Naohiro Matsumura, Yukio Ohsawa, Mitsuru Ishizuka (2001) Future Directions of Communities on the Web, *New Frontiers in Artificial Intelligence* (eds. Takao Terano, Toyoaki Nishida, Akira Namatame, Syrusaku Tsumoto, Yukio Ohsawa, and Takashi Washio), LNAI 2253, pp. 435-443, Springer Verlag.

### **Books (In Japanese)**

- 2017 Naohiro Matsumura (2017) *Shikake to Influence People*, PHP Institute, Inc. ISBN: 978-4569838182 (In Japanese)
- 2016 Naohiro Matsumura (2016) *Shikakeology: A Techniques for Producing Ideas for Behavior Change*, Toyo Keizai Inc. ISBN: 978-4492233733 (In Japanese)
- 2014 Naohiro Matsumura, Asako Miura (2014) *Text Mining for Art and Social Science (A New Edition)*, Seishinshobou. (In Japanese)
- 2009 Naohiro Matsumura, Asako Miura (2009) *Text Mining for Art and Social Science*, Seishinshobou. (In Japanese)
- 2009 Toyoaki Nishida, Yasuyuki Sumi, Naohiro Matsumura (2009) *Social Intelligence Design*, Ohmsha. (In Japanese)

### Book Chapters (In Japanese)

- 2017 Naohiro Matsumura (2017) Shikakeology, *Encyclopedia of Artificial Intelligence*, Kyoritsu Shuppan Co., Ltd. (In Japanese)
- 2014 Naohiro Matsumura (2014) Internet Ecological Consideration on the Donut Hole Lecture, *How To Eat All But The Donut Hole*, Osaka University Press. (In Japanese)
- 2012 Naohiro Matsumura (2012) Collecting and Analyzing Text Data, *Corpus and Text Mining* (eds. Mingzhe Jin and Motohiro Ishida), Kyoritsu Shuppan Co., Ltd. (In Japanese)
- 2010 Naohiro Matsumura (2010) Data Mining, Text Mining, Web Mining, *Robot Information Handbook* (eds. Hotoshi Matsubara, Itsuki Noda, Masahiko Inami, Fumitoshi Matsuno, and Koichi Osuga), Nanoopt Media. (In Japanese)
- 2004 Naohiro Matsumura (2004) Why is 2channel so vigorous?, *2channel Official Guidebook* (ed. 2channel), pp. 25-30, Core Magazine. (In Japanese)
- 2003 Naohiro Matsumura (2003) Priming Activation Algorithm - Text Mining with Contextual Changes -, *Information Technology for Chance Discovery* (ed. Yukio Ohsawa), pp. 154-164, Tokyo Denki University Press. (In Japanese)
- 2003 Naohiro Matsumura (2003) Growing Online Community, *Information Technology for Chance Discovery* (ed. Yukio Ohsawa), pp. 197-209, Tokyo Denki University Press. (In Japanese)

### Conference Articles (International)

- 2016 Sachina Itaya, Midori Takahashi, Yuka Miyatake, Masato Yagura, Naohiro Matsumura (2016) Shikakeological Approaches for Promotional Flyers Distribution, *Poster Proceedings of the Eighth International Conference on Collaboration Technologies* (CollabTech 2016), pp. 13-16 (Sep 16, 2016)
- 2016 Masaaki Taberi, Naohiro Matsumura (2016) Whispering Approach to Stop Texting While Walking -Talkative Smartphone-, *Poster Proceedings of the Eighth International Conference on Collaboration Technologies* (CollabTech 2016), pp. 9-12 (Sep 16, 2016)
- 2016 Naohiro Matsumura, Hikaru Yamamoto (2016) Examining the social values of loyal customers, *INFORMS Marketing Science Conference*, Shanghai (June 16-17, 2016)
- 2016 Naohiro Matsumura, Asako Miura, Masashi Komori, Kai Hiraishi (2016) Media and Sentiments in the Great East Japan Earthquake Related Tweets – Social Media as “Meta Media” – , *Proc. 2016 IEEE Tenth International Conference on Semantic Computing*, pp. 465-470, Laguna Hills, CA, USA. (2016.2.3-5)
- 2015 Naohiro Matsumura, Hideaki Takeda (2015) Shikake Data Market for Collaborative Shikake Creation, *MoDAT2015 in conjunction with IEEE ICDM 2015*, Atlantic City, NJ, USA. (Nov 14, 2015)
- 2015 Hikaru Yamamoto, Naohiro Matsumura (2015) Measuring the Value of Customer Engagement in Mobile Social Networking Services, *INFORMS Marketing Science*, Baltimore, USA. (Jun 18-20, 2015)
- 2015 Naohiro Matsumura (2015) Shikakeological Approach for Health Enhancement, *AAAI Press Technical Report SS-15-01*, 34-36. (March 2015)
- 2014 Hikaru Yamamoto, Naohiro Matsumura (2014) The Popularity of Online Contents, *2014 Global Marketing Conference*, pp. 1059-1071. (July 16, 2014)
- 2013 Naohiro Matsumura, Larry Leifer (2013) Preliminary Considerations on Shikake Design Process, *2013 Conference on Technologies and Applications of Artificial Intelligence* (TAAI2013), pp. 324-328. (Dec 6, 2013)

- 2013 Asako Miura, Masashi Komori, Naohiro Matsumura (2013) The Emotional Timeline After the Great East Japan Earthquake, *121st Annual Convention, American Psychological Association (APA)* (July 31 - Aug 4, 2013)
- 2013 Naohiro Matsumura (2013) Shikake as an Embodied Trigger for Behavior Change, *AAAI Press Technical Report SS-13-06*, pp. 62-67. (Mar 25, 2013)
- 2013 Naohiro Matsumura, Renate Fruchter (2013) Shikake Trigger Categories, *AAAI Press Technical Report SS-13-06*, pp. 68-74. (Mar 25, 2013)
- 2013 Shunichiro Oka, Shoko Yamane, Naohiro Matsumura (2013) Boiled Pumpkin as a Nudge: Evidence from a University Cafeteria, *AAAI Press Technical Report SS-13-06*, pp. 74-78. (Mar 25, 2013)
- 2013 Shoko Yamane, Naohiro Matsumura (2013) The Clock Ticking Changes Our Performance, *AAAI Press Technical Report SS-13-06*, pp. 113-118. (Mar 25, 2013)
- 2012 Shoko Yamane, Naohiro Matsumura: The Clock Effect on the Task Performance, *The 6th International Conference on Soft Computing and Intelligent Systems, and the 13th International Symposium on Advanced Intelligent Systems*, (SCIS-ISIS2012), pp. 695-700 (2012.11)
- 2012 Masashi Komori, Naohiro Matsumura, Asako Miura, Chika Nagaoka (2012) Relationships between periodic behaviors in micro-blogging and the users' baseline mood, *13th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD)*, pp. 405-410 (2012.8)
- 2012 Hikaru Yamamoto, Naohiro Matsumura (2012) The Effect of Earned and Paid Media on Customer Acquisition, *2012 Global Marketing Conference*, pp. 1034-1052 (2012.7)
- 2011 Hikaru Yamamoto, Naohiro Matsumura (2011) The Effect of Relational Context on Personal Influence, *Workshop on Social Behavioral Analysis and Behavioral Change (SBABC2011), The Third IEEE International Conference on Social Computing (SocialCom2011)*, pp. 1480-1485 (2011.10)
- 2011 Hikaru Yamamoto, Naohiro Matsumura (2011) Marketing Ecosystem: The Dynamics of Twitter, TV Advertising, and Customer Acquisition, *Social Mobile Web (SMW'11)*, pp. 45-52 (2011.7)
- 2010 Hikaru Yamamoto, Naohiro Matsumura (2010) Measuring the Value of Customer in Mobile Social Networking Services, *The 2010 INFORMS Marketing Science Conference* (2010.6)
- 2010 Naohiro Matsumura, Hikaru Yamamoto (2010) Monetary Value of Customer Networks in Mobile Social Networking Services, *International AAAI Conference on Weblogs and Social Media (ICWSM2010)*, pp. 287-290 (2010.5)
- 2009 Hikaru Yamamoto, Naohiro Matsumura (2009) The Power of Grassroots Influentials, *The 2009 IEEE International Conference on Social Computing (SocialCom 2009)*, pp. 456-462 (2009.8)
- 2009 Hikaru Yamamoto, Naohiro Matsumura (2009) Optimal Heterophily for Word-of-Mouth Diffusion, *International AAAI Conference on Weblogs and Social Media (ICWSM-09)*, pp. 350-353 (2009.5)
- 2008 Renate Fruchter, Shubashri Swaminathan, Naohiro Matsumura, Yukio Ohsawa (2008) *Interaction Dynamics in AEC Global Teamwork, The 12th International Conference on Computing in Civil and Building Engineering & 2008 International Conference on Information Technology in Construction (ICCCBE-XII & INCITE 2008)* (2008.10)
- 2008 Naohiro Matsumura, Hikaru Yamamoto, Daisuke Tomozawa (2008) Finding Influencers and Consumer Insights in the Blogosphere, *International Conference on Weblogs and Social Media (ICWSM-08)*, pp. 76-83 (2008.3)



- 2007 Renate Fruchter, Shubashri Swaminathan, Naohiro Matsumura, Yukio Ohsawa (2007) Influence Leaders in Global Teamwork, *Social Intelligence Design* (SID2007), pp. 179-189 (2007.7)
- 2007 Naohiro Matsumura, Toshio Shimizu, Masahiko Yachida (2007) Capturing Entrainment-based Interpersonal Communication Using Omni-directional Camera, *Social Intelligence Design* (SID2007), pp. 217-226 (2007.6)
- 2007 Naohiro Matsumura (2007) Field Mining: Reconstructing Relations between Human, Objects, and Environment, *First International Symposium on Universal Communication*, pp. 153-156 (2007.6)
- 2007 Daisuke Kobayashi, Naohiro Matsumura (2007) Automatic Gender Estimation of Bloggers' Gender, *International Conference on Weblogs and Social Media* (ICWSM), pp. 279-280 (2007.3)
- 2006 Naohiro Matsumura, Yoshihiro Sasaki (2006) Understanding Leadership Behavior in Human Influence Network, *2006 IEEE /WIC/ACM International Conference on Web Intelligence* (WI 2006), pp. 95-102 (2006.12)
- 2006 Naohiro Matsumura, Yoshihiro Sasaki (2006) Multi-Data Mining for Understanding Leadership Behavior, *CODATA2006 Discovery Workshop on Interdisciplinary Communication for Risk Management with Multi-Data Mining* (2006.10)
- 2006 Naohiro Matsumura, Yoshihiro Sasaki (2006) Reliable Leadership Behaviors in Online Communication, *IEEE Conference on Systems, Man, and Cybernetics*, pp. 1735-1740 (2006.10)
- 2006 Katsutoshi Yada, Naohiro Matsumura (2006) Knowledge discovery from the structure of persuasive communication, *IEEE Conference on Systems, Man, and Cybernetics*, pp. 1741-1746 (2006.10)
- 2006 Katsutoshi Yada, Naohiro Matsumura, Daigo Naito, Kosuke Ohno, Hiroshi Tamura, Kohei Yamamoto (2006) Does WEB Log Data Reveal Consumer Behavior by Integrating Data Mining Techniques, *Academy of Marketing Science Annual Conference* (2006.5)
- 2005 Daigo Naito, Kohei Yamamoto, Katsutoshi Yada, Naohiro Matsumura, Kosuke Ohno, Hiroshi Tamura (2005) Does WEB Log Data Reveal Consumer Behavior?, *ECML/PKDD Discovery Challenge 2005*, pp. 43-54 (2005.10)
- 2005 Naohiro Matsumura, Yoshihiro Sasaki (2005) Leader Qualification in Managing Nonprofit Organization, *International Workshop on Conversational Informatics*, pp. 63-68 (2005.6)
- 2005 Yukio Ohsawa, Naohiro Matsumura, Naoaki Okazaki (2005) Understanding Scenarios of Individual Patients of Hepatitis in Double Helical Process Involving KeyGraph and DSV, *The Fourth IEEE International Workshop on Soft Computing as Transdisciplinary Science and Technology* (WSTST'05), pp. 456-469 (2005.5)
- 2005 Naohiro Matsumura, David E. Goldberg, Xavier Llorà (2005) Communication Gaps in Social Networks, *The Fourth IEEE International Workshop on Soft Computing as Transdisciplinary Science and Technology* (WSTST'05), pp. 543-552 (2005.5)
- 2005 Naohiro Matsumura, David E. Goldberg, Xavier Llorà (2005) Mining Directed Social Network from Message Board, *The 14th International World Wide Web Conference* (WWW2005), Poster, pp. 1092-1093 (2005.5)
- 2005 Naohiro Matsumura, David E. Goldberg, Xavier Llorà (2005) Mining Social Networks in Message Boards, *AISB 2005 Symposium on Conversational Informatics for Supporting Social Intelligence & Interaction*, pp. 18-26 (2005.4)
- 2005 Yukio Ohsawa, Naohiro Matsumura, Koichi Takahashi (2005) Resonance without Response: The Way of Topic Growth in Communication, *Social Intelligence Design* (SID2005) (2005.3)
- 2005 Naohiro Matsumura (2005) Collaborative Communication Strategies in Online Commu-

- nity, *Social Intelligence Design (SID2005)* (2005.3)
- 2005 Naohiro Matsumura (2005) Community Management for Fertile Community, *International Workshop on The Grammar of Technology Development - Accelerating New Technology Development by Statistical Thinking* - (2005.1)
- 2004 Xavier Llorà, Naohiro Matsumura, David E. Goldberg, Yukio Ohsawa, Kei Ohnishi, and Antonio Gonzales (2004) Discovering Chance Scenarios using Small-World KeyGraph and Evolutionary Computation, *The First International Workshop on Chance Discovery*, ECAI2004 (2004.8)
- 2004 Renate Fruchter, Yukio Ohsawa, Naohiro Matsumura (2004) Knowledge Reuse through Chance Discovery from an Enterprise Design-Build Enterprise Data Store, *The First European Workshop on Chance Discovery*, ECAI2004 (2004.8)
- 2004 Koichi Takahashi, Yukio Ohsawa, Naohiro Matsumura (2004) Emergence of Product Value from On-line Communications, *The 8th Int. Conference on Knowledge-Based Intelligent Information & Engineering Systems & Allied Technologies (KES)* (2004.9)
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## Teaching

Data Mining (Fall 2005-2006, Spring 2007-2011, Fall 2013, Spring 2014-2016), Text Mining (Spring 2005-2006, Fall 2007-2011, Fall 2013-2016), Research Seminar (2006-2011, 2013-2016), Information Literacy (Spring 2006, Spring 2008, Spring 2010, Spring 2014), Management System (Spring 2005, Spring 2007).

## Professional Activities

### Journal Editors

- 2014 Guest Editor, AI & Society Special Issue on Shikakeology (2014)
- 2010-2013 Council member, Japanese Society for Artificial Intelligence (JSAI)
- 2006-present IEEE-SMC technical committee, Information Systems for Design and Marketing
- 2010-2011 Editorial board member, Journal of Information Processing Society of Japan (IPSJ)
- 2006-2009 Editorial board member, Japanese Society for Artificial Intelligence (JSAI)

### Conference Organizers, Chairs & Committees

- 2017 Publicity Committee, The 2017 IEEE International Conference on Semantic Computing (ICSC2017) (2017)
- 2016 Program Committee, The 21th International Conference on Technologies and Applications of Artificial Intelligence (TAAI 2016)
- 2013 Organizer, Shikakeology: Designing Triggers for Behavior Change, AAAI 2013 Spring Symposium Series
- 2012 Co-chair, Organized Session on Influential Medium, The 6th International Conference on Soft Computing and Intelligent Systems, and the 13th International Symposium on Advanced Intelligent Systems (SCIS-ISIS2012)
- 2010 Program committee, Social Intelligence Design (SID2010)
- 2009 Program committee, Int'l AAAI Conference on Weblogs and Social Media (ICWSM2009)
- 2009 Program committee, Social Intelligence Design (SID2009)
- 2008 Program committee, Int'l AAAI Conference on Weblogs and Social Media (ICWSM2008)
- 2007 Program committee, Social Intelligence Design (SID2007)
- 2006 Co-chair, Social Intelligence Design 2006 (SID2006)
- 2005 Program committee, The International Workshop on Conversational Informatics (2005)
- 2004 Program committee, The 2004 IEEE/WIC/ACM International Conference on Web Intelligence (WI2004)