Suguru Ueda

Updated on July 4, 2020

Personal Information

Gender	Male
Date of Birth	May 16, 1987
Nationality	Japan

Employment

2016–current	**Assistant Professor**, *Saga University*, Japan.
2015–2016	**Postdoctoral Research Fellow**, *Kyushu University*, Japan.
2014–2015	**Research Fellow**, *National Institute of Informatics*, Japan.
2011–2014	**JSPS Research Fellow (DC1 - PD)**, *Kyushu University*, Japan.

Education

2011–2013	**Doctoral Program**, *Department of Informatics*, Graduate School of Information Science and Electrical Engineering, Kyushu University, Japan.
2009–2011	**Master's Program**, *Department of Informatics*, Graduate School of Information Science and Electrical Engineering, Kyushu University, Japan.
2006–2009	**Bachelor's program**, *Department of Electrical Engineering and Computer Science*, School of Engineering, Kyushu University, Japan.

Doctoral Dissertation

Title	*Computational Coalition Formation: Compact Representation and Constrained Matching*
Degree	Doctor of Information Science
Supervisor	Professor Makoto Yokoo (Kyushu University, Japan)
Defence	May 16, 2013

Skills

Language	Japanese (native), English (fluent)
Programming	Java, Python, C, LaTeX
Others	Microsoft Office, IBM Ilog CPLEX

Research Interests

Field	Artificial Intelligence
AI Sub-field	Game Theory, Mechanism Design, Matching Theory, Social Choice Theory, Computational Coalition Formation, Distributed Constraint Optimization Problem, Multi-agent System

Honors and Awards

2017	**IEEE Computer Society Japan Chapter JAWS Young Researcher Award**, *JAWS 2017*.
2017	**Annual Contribution Award**, *Japan Society for Fuzzy Theory and Intelligent Informatics Kyushu Chapter*.
2016	**JAWS Best Paper Award**, *JAWS 2016*.
2013	**FIT Best Paper Award**, *FIT 2013*.
2011	**iJAWS Best Paper Award**, *iJAWS 2011*.
2011	**IEEE Computer Society Japan Chapter JAWS Young Researcher Award**, *JAWS 2011*.
2011	**JAWS Best Paper Award**, *JAWS 2011*.
2010	**JAWS Student Encouragement Award**, *JAWS 2010*.
2009	**JAWS Student Encouragement Award**, *JAWS 2009*.

Funds/Projects

2018–2019	**Algorithm for Automatically Proposing Sightseeing Tours: Research and Development of AI Tour**, *Adaptable and Seamless Technology Transfer Program (A-STEP)*, PI: Suguru Ueda, JST.
2015–2016	**Development of Resilient Coalition Formation Algorithms in Dynamic Environments**, *JSPS Grant-in-Aid for Young Scientists (B)*, PI: Suguru Ueda, JSPS.
2014–2015	**Establishing Theory of Resource Allocation Mechanism Design for Sustainable Development**, *JSPS Grant-in-Aid for Scientific Research (S)*, PI: Makoto Yokoo, JSPS.
2011–2014	**Reconstruction of Cooerative Game Theory by Simultaneous Solving of Coalition Formation/Optimization/Payment**, *JSPS Grant-in-Aid for JSPS Fellows*, PI: Suguru Ueda, JSPS.

Professional Services

Organizer	The Third/Fourth International Workshop on Market Design Technologies for Sustainable Development (Co-Organizer; August 2015, August 2016)
PC member	AAAI-2020, IJCAI-PRICAI 2020, ICA 19, JAWS2019, AAMAS 2019, IJCAI2019, IJCAI-ECAI 2018, AAAI 2018 (auxiliary reviewer), ICA 2017, JAWS 2017, ICA 2016, JAWS 2016, JAWS 2015, AAAI 2014 (auxiliary reviewer), JAWS 2014
Journal Review	Journal of Artificial Intelligence Research, Artificial Intelligence Review, Autonomous Agents and Multi-Agent Systems, Algorithmica, IEICE TRANSACTIONS on Information and Systems

Publications

[1] Daniel Fragiadakis, Atsushi Iwasaki, Peter Troyan, Suguru Ueda, and Makoto Yokoo. Strategyproof matching with minimum quotas. *ACM Trans. Economics and Comput.*, 4(1):6:1–6:40, 2015.

[2] Masahiro Goto, Naoyuki Hashimoto, Atsushi Iwasaki, Yujiro Kawasaki, Suguru Ueda, Yosuke Yasuda, and Makoto Yokoo. Strategy-proof matching with regional minimum quotas. In Ana L. C. Bazzan, Michael N. Huhns, Alessio Lomuscio, and Paul Scerri, editors, *International conference on Autonomous Agents and Multi-Agent Systems, AAMAS '14, Paris, France, May 5-9, 2014*, pages 1225–1232. IFAAMAS/ACM, 2014.

[3] Naoto Hamada, Chia-Ling Hsu, Ryoji Kurata, Takamasa Suzuki, Suguru Ueda, and Makoto Yokoo. Strategy-proof school choice mechanisms with minimum quotas and initial endowments. *Artif. Intell.*, 249:47–71, 2017.

[4] Naoto Hamada, Ryoji Kurata, Suguru Ueda, Takamasa Suzuki, and Makoto Yokoo. Strategyproof matching with minimum quotas and initial endowments: (extended abstract). In Catholijn M. Jonker, Stacy Marsella, John Thangarajah, and Karl Tuyls, editors, *Proceedings of the 2016 International Conference on Autonomous Agents & Multiagent Systems, Singapore, May 9-13, 2016*, pages 1349–1350. ACM, 2016.

[5] Katsutoshi Hirayama, Kenta Hanada, Suguru Ueda, Makoto Yokoo, and Atsushi Iwasaki. Computing a payoff division in the least core for mc-nets coalitional games. In Hoa Khanh Dam, Jeremy V. Pitt, Yang Xu, Guido Governatori, and Takayuki Ito, editors, *PRIMA 2014: Principles and Practice of Multi-Agent Systems - 17th International Conference, Gold Coast, QLD, Australia, December 1-5, 2014. Proceedings*, volume 8861 of *Lecture Notes in Computer Science*, pages 319–332. Springer, 2014.

[6] Ryo Ichimura, Takato Hasegawa, Suguru Ueda, Atsushi Iwasaki, and Makoto Yokoo. Extension of mc-net-based coalition structure generation: handling negative rules and externalities. In Liz Sonenberg, Peter Stone, Kagan Tumer, and Pinar Yolum, editors, *10th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2011), Taipei, Taiwan, May 2-6, 2011, Volume 1-3*, pages 1173–1174. IFAAMAS, 2011.

[7] Atsushi Iwasaki, Suguru Ueda, Naoyuki Hashimoto, and Makoto Yokoo. Finding core for coalition structure utilizing dual solution. *Artif. Intell.*, 222:49–66, 2015.

[8] Atsushi Iwasaki, Suguru Ueda, and Makoto Yokoo. Finding the core for coalition structure utilizing dual solution. In *2013 IEEE/WIC/ACM International Conferences on Intelligent Agent Technology, IAT 2013, 17-20 November 2013, Atlanta, Georgia, USA*, pages 114–121. IEEE Computer Society, 2013.

[9] Ryoji Kurata, Naoto Hamada, Chia-Ling Hsu, Takamasa Suzuki, Suguru Ueda, and Makoto Yokoo. Pareto efficient strategy-proof school choice mechanism with minimum quotas and initial endowments. In Catholijn M. Jonker, Stacy Marsella, John Thangarajah, and Karl Tuyls, editors, *Proceedings of the 2016 International*

Conference on Autonomous Agents & Multiagent Systems, Singapore, May 9-13, 2016, pages 59–67. ACM, 2016.

[10] Xiaojuan Liao, Miyuki Koshimura, Kazuki Nomoto, Suguru Ueda, Yuko Sakurai, and Makoto Yokoo. Improved WPM encoding for coalition structure generation under mc-nets. *Constraints An Int. J.*, 24(1):25–55, 2019.

[11] Yuko Sakurai, Suguru Ueda, Atsushi Iwasaki, Shin-ichi Minato, and Makoto Yokoo. A compact representation scheme of coalitional games based on multi-terminal zero-suppressed binary decision diagrams. In David Kinny, Jane Yung-jen Hsu, Guido Governatori, and Aditya K. Ghose, editors, *Agents in Principle, Agents in Practice - 14th International Conference, PRIMA 2011, Wollongong, Australia, November 16-18, 2011. Proceedings*, volume 7047 of *Lecture Notes in Computer Science*, pages 4–18. Springer, 2011.

[12] Konatsu Tagawa and Suguru Ueda. Distributed constraint satisfaction among android devices. In Sakae Yamamoto and Hirohiko Mori, editors, *Human Interface and the Management of Information. Information in Intelligent Systems - Thematic Area, HIMI 2019, Held as Part of the 21st HCI International Conference, HCII 2019, Orlando, FL, USA, July 26-31, 2019, Proceedings, Part II*, volume 11570 of *Lecture Notes in Computer Science*, pages 301–310. Springer, 2019.

[13] Suguru Ueda. Envy based fairness in hedonic games. In Hernán E. Aguirre and Keiki Takadama, editors, *Proceedings of the Genetic and Evolutionary Computation Conference Companion, GECCO 2018, Kyoto, Japan, July 15-19, 2018*, pages 1852–1853. ACM, 2018.

[14] Suguru Ueda, Daniel Fragiadakis, Atsushi Iwasaki, Peter Troyan, and Makoto Yokoo. Strategy-proof mechanisms for two-sided matching with minimum and maximum quotas. In Wiebe van der Hoek, Lin Padgham, Vincent Conitzer, and Michael Winikoff, editors, *International Conference on Autonomous Agents and Multiagent Systems, AAMAS 2012, Valencia, Spain, June 4-8, 2012 (3 Volumes)*, pages 1327–1328. IFAAMAS, 2012.

[15] Suguru Ueda, Takato Hasegawa, Naoyuki Hashimoto, Naoki Ohta, Atsushi Iwasaki, and Makoto Yokoo. Handling negative value rules in mc-net-based coalition structure generation. In Wiebe van der Hoek, Lin Padgham, Vincent Conitzer, and Michael Winikoff, editors, *International Conference on Autonomous Agents and Multiagent Systems, AAMAS 2012, Valencia, Spain, June 4-8, 2012 (3 Volumes)*, pages 795–804. IFAAMAS, 2012.

[16] Suguru Ueda, Atsushi Iwasaki, Vincent Conitzer, Naoki Ohta, Yuko Sakurai, and Makoto Yokoo. Coalition structure generation in cooperative games with compact representations. *Auton. Agents Multi Agent Syst.*, 32(4):503–533, 2018.

[17] Suguru Ueda, Atsushi Iwasaki, Makoto Yokoo, Marius-Calin Silaghi, Katsutoshi Hirayama, and Toshihiro Matsui. Coalition structure generation based on distributed constraint optimization. In Maria Fox and David Poole, editors, *Proceedings of the Twenty-Fourth AAAI Conference on Artificial Intelligence, AAAI 2010, Atlanta, Georgia, USA, July 11-15, 2010*. AAAI Press, 2010.

[18] Suguru Ueda, Makoto Kitaki, Atsushi Iwasaki, and Makoto Yokoo. Concise characteristic function representations in coalitional games based on agent types. In Liz Sonenberg, Peter Stone, Kagan Tumer, and Pinar Yolum, editors, *10th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2011), Taipei, Taiwan, May 2-6, 2011, Volume 1-3*, pages 1271–1272. IFAAMAS, 2011.

[19] Suguru Ueda, Makoto Kitaki, Atsushi Iwasaki, and Makoto Yokoo. Concise characteristic function representations in coalitional games based on agent types. In Toby Walsh, editor, *IJCAI 2011, Proceedings of the 22nd International Joint Conference on Artificial Intelligence, Barcelona, Catalonia, Spain, July 16-22, 2011*, pages 393–399. IJCAI/AAAI, 2011.

[20] Aolong Zha, Kazuki Nomoto, Suguru Ueda, Miyuki Koshimura, Yuko Sakurai, and Makoto Yokoo. Coalition structure generation for partition function games utilizing a concise graphical representation. In Bo An, Ana L. C. Bazzan, João Leite, Serena Villata, and Leendert W. N. van der Torre, editors, *PRIMA 2017: Principles and Practice of Multi-Agent Systems - 20th International Conference, Nice, France, October 30 - November 3, 2017, Proceedings*, volume 10621 of *Lecture Notes in Computer Science*, pages 143–159. Springer, 2017.