# Naoyuki Kamiyama

## Curriculum Vitæ

## Position

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|---|---|---|---|
| Jul. 2019 | – | | Professor, Kyushu University<br>Institute of Mathematics for Industry |
| Oct. 2011 | – | Jun. 2019 | Associate Professor, Kyushu University<br>Institute of Mathematics for Industry |
| Apr. 2009 | – | Sep. 2011 | Assistant Professor, Chuo University<br>Faculty of Science and Engineering<br>Department of Information and System Engineering |

Concurrent position

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|---|---|---|---|
| Oct. 2014 | – | Mar. 2021 | PRESTO Researcher, JST, PRESTO |
| Apr. 2007 | – | Mar. 2009 | Research Fellow of the Japan Society for the Promotion Science |

## Education

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|---|---|
| Mar. 2009 | Doctor of Engineering, Kyoto University<br>Graduate School of Engineering<br>Department of Architecture and Architectural Engineering |
| Mar. 2006 | Master of Engineering, Kyoto University<br>Graduate School of Engineering<br>Department of Architecture and Architectural Engineering |
| Mar. 2004 | Bachelor of Engineering, Kyoto University<br>Faculty of Engineering<br>Undergraduate School of Architecture |

## Peer-Reviewed Journal Papers

60. Naoyuki Kamiyama
**A Note on Robust Subsets of Transversal Matroids**
*Journal of the Operations Research Society of Japan*, accepted.

59. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, Yuta Nozaki, Yoshio Okamoto, and Kenta Ozeki
**On Reachable Assignments under Dichotomous Preferences**
*Theoretical Computer Science*, vol.979, pp.114196 (2023).

58. Naoyuki Kamiyama
**On Optimization Problems in Acyclic Hypergraphs**
*Information Processing Letters*, vol.182, pp.106390 (2023).

57. Masataka Shirahashi and Naoyuki Kamiyama
**Kernelization Algorithms for a Generalization of the Component Order Connectivity Problem**
*Journal of the Operations Research Society of Japan*, vol.66, no.2, pp.112–129 (2023).

56. Naoyuki Kamiyama
**Pareto Efficient Matchings with Pairwise Preferences**
*Theoretical Computer Science*, vol.948, pp.113707 (2023).

55. Takehiro Ito, Yuni Iwamasa, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, Shunichi Maezawa, Yuta Nozaki, Yoshio Okamoto, and Kenta Ozeki
**Monotone Edge Flips to an Orientation of Maximum Edge-Connectivity à la Nash-Williams**,
*ACM Transactions on Algorithms*, vol.19, no.1, pp.6:1–6:22 (2023).

54. Naoyuki Kamiyama
**A Matroid Generalization of the Super-Stable Matching Problem**
*SIAM Journal on Discrete Mathematics*, vol.36, no.2, pp.1467–1482 (2022).

53. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Shortest Reconfiguration of Perfect Matchings via Alternating Cycles**
*SIAM Journal on Discrete Mathematics*, vol.36, no.2, pp.1102–1123 (2022).

52. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**A Parameterized View to the Robust Recoverable Base Problem of Matroids under Structural Uncertainty**
*Operations Research Letters*, vol.50, pp.370–375 (2022).

51. Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Submodular Reassignment Problem for Reallocating Agents to Tasks with Synergy Effects**
*Discrete Optimization*, vol.44, pp.100631 (2022).

50. Naoyuki Kamiyama
**The Envy-Free Matching Problem with Pairwise Preferences**
*Information Processing Letters*, vol.172, pp.106158 (2021).

49. Naoyuki Kamiyama
**Envy-Free Matchings with One-Sided Preferences and Matroid Constraints**
*Operations Research Letters*, vol.49, no.5, pp.790–794 (2021).

48. Naoyuki Kamiyama, Pasin Manurangsi, and Warut Suksompong
**On the Complexity of Fair House Allocation**
*Operations Research Letters*, vol.49, no.4, pp.572–577 (2021).

47. Takehiro Ito, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Algorithms for Gerrymandering Over Graphs**
*Theoretical Computer Science*, vol.868, no.8, pp.30–45 (2021).

46. Naonori Kakimura, Naoyuki Kamiyama, and Kenjiro Takazawa
**The $b$-Branching Problem in Digraphs**
*Discrete Applied Mathematics*, vol.283, pp.565–576 (2020).

45. Naoyuki Kamiyama
**The Distance-Constrained Matroid Median Problem**
*Algorithmica*, vol.82, no.7, pp.2087–2106 (2020).

44. Naoyuki Kamiyama
**Popular Matchings with Two-Sided Preference Lists and Matroid Constraints**
*Theoretical Computer Science*, vol.809, pp.265–276 (2020).

43. Naoyuki Kamiyama
**Lexicographically Optimal Earliest Arrival Flows**
*Networks*, vol.75, no.1, pp.18–33 (2020).

42. Naoyuki Kamiyama
**Discrete Newton Methods for the Evacuation Problem**
*Theoretical Computer Science*, vol.795, pp.510–519 (2019).

41. Akifumi Kira, Naoyuki Kamiyama, Hirokazu Anai, Hiroaki Iwashita, and Kotaro Ohori
**On Dynamic Patrolling Security Games**
*Journal of the Operations Research Society of Japan*, vol.62, no.4, pp.152–168 (2019).

40. Chien-Chung Huang, Naonori Kakimura, and Naoyuki Kamiyama
**Exact and Approximation Algorithms for Weighted Matroid Intersection**
*Mathematical Programming, Series A*, vol.177, no.1-2, pp.85–112 (2019).

39. Naoyuki Kamiyama
**A Note on Balanced Flows in Equality Networks**
*Information Processing Letters*, vol.145, pp.74–76 (2019).

38. Susumu Kawanaka and Naoyuki Kamiyama
**An Improved Algorithm for Testing Substitutability of Weak Preferences**

*Mathematical Social Sciences*, vol.99, pp.1–4 (2019).

37. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Reconfiguration of Maximum-Weight $b$-Matchings in a Graph**
*Journal of Combinatorial Optimization*, vol.37, no.2, pp.454–464 (2019).

36. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Minimum-Cost $b$-Edge Dominating Sets on Trees**
*Algorithmica*, vol.81, no.1, pp.343–366 (2019).

35. Naoyuki Kamiyama
**Pareto Stable Matchings under One-Sided Matroid Constraints**
*SIAM Journal on Discrete Mathematics*, vol.33, no.3, pp.1431–1451 (2019).

34. Yosuke Hanawa, Yuya Higashikawa, Naoyuki Kamiyama, Naoki Katoh, and Atsushi Takizawa
**The Mixed Evacuation Problem**
*Journal of Combinatorial Optimization*, vol.36, no.10, pp.1299–1314 (2018).

33. Naoyuki Kamiyama
**A Note on Submodular Function Minimization with Covering Type Linear Constraints**
*Algorithmica*, vol.80, no.10, pp.2957–2971 (2018).

32. Naoyuki Kamiyama
**A Characterization of Weighted Popular Matchings under Matroid Constraints**
*Journal of the Operations Research Society of Japan*, vol.61, no.1, pp.2–17 (2018).

31. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Efficient Stabilization of Cooperative Matching Games**
*Theoretical Computer Science*, vol.677, pp.9–82 (2017).

30. Naoyuki Kamiyama
**Strategic Issues in College Admissions with Score-Limits**
*Operations Research Letters*, vol.45, pp.105–108 (2017).

29. Naoyuki Kamiyama
**A Note on the Submodular Vertex Cover Problem with Submodular Penalties**
*Theoretical Computer Science*, vol.659, pp.95–97 (2017).

28. Naoyuki Kamiyama
**Popular Matchings with Ties and Matroid Constraints**
*SIAM Journal on Discrete Mathematics*, vol.31, no.3, pp.1801–1819 (2017).

27. Naoyuki Kamiyama
**The Popular Matching and Condensation Problems under Matroid Constraints**
*Journal of Combinatorial Optimization*, vol.32, no.4, pp.1305–1326 (2016).

26. Satoru Iwata, Naoyuki Kamiyama, Naoki Katoh, Shuji Kijima, and Yoshio Okamoto
**Extended Formulations for Sparsity Matroids**
*Mathematical Programming, Series A*, vol.158, no.1, pp.565–574 (2016).

25. Keita Nakamura and Naoyuki Kamiyama
**Many-to-Many Stable Matchings with Ties in Trees**
*Journal of the Operations Research Society of Japan*, vol.59, no.3, pp.225–240 (2016).

24. Tamás Fleiner and Naoyuki Kamiyama
**A Matroid Approach to Stable Matchings with Lower Quotas**
*Mathematics of Operations Research*, vol.41, no.2, pp.734–744 (2016).

23. Naoyuki Kamiyama and Yasushi Kawase
**On Packing Arborescences in Temporal Networks**
*Information Processing Letters*, vol.115, pp.321–325 (2015).

22. Naoyuki Kamiyama
**The Nucleolus of Arborescence Games in Directed Acyclic Graphs**
*Operations Research Letters*, vol.43, pp.89–92 (2015).

21. Naoyuki Kamiyama and Naoki Katoh

**The Universally Quickest Transshipment Problem in a Certain Class of Dynamic Networks with Uniform Path-Lengths**
*Discrete Applied Mathematics*, vol.178, pp.89–100 (2014).

20. Yuya Higashikawa, Naoyuki Kamiyama, Naoki Katoh, and Yuki Kobayashi
**An Inductive Construction of Minimally Rigid Body-Hinge Simple Graphs**
*Theoretical Computer Science*, vol.556, pp.2–12 (2014).

19. Naoyuki Kamiyama
**A New Approach to the Pareto Stable Matching Problem**
*Mathematics of Operations Research*, vol.39, no.3, pp.851–862 (2014).

18. Naoyuki Kamiyama
**Arborescence Problems Theorems and Algorithms**
*Interdisciplinary Information Sciences*, vol.20, no.1, pp.51–70 (2014).

17. Yusuke Matsumoto, Naoyuki Kamiyama, and Keiko Imai
**On Total Unimodularity of Edge-Edge Adjacency Matrices**
*Algorithmica*, vol.67, no.2, pp.277–292 (2013).

16. Naoyuki Kamiyama
**A Note on the Serial Dictatorship with Project Closures**
*Operations Research Letters*, vol.41, pp.559–561 (2013).

15. Naoyuki Kamiyama
**Matroid Intersection with Priority Constraints**
*Journal of the Operations Research Society of Japan*, vol.56, no.1, pp.15–25 (2013).

14. András Frank, Satoru Fujishige, Naoyuki Kamiyama, and Naoki Katoh
**Independent Arborescences in Directed Graphs**
*Discrete Mathematics*, vol.313, no.4, pp.453–459 (2013).

13. Naoyuki Kamiyama
**A Note on the Quasi-Additive Bound for Boolean Functions**
*Journal of Math-for-Industry*, vol.4-B, pp.119-122 (2012).

12. Naoyuki Kamiyama
**Robustness of Minimum Cost Arborescences**
*Japan Journal of Industrial and Applied Mathematics*, vol.29, no.3, pp.485–497 (2012).

11. Satoru Fujishige and Naoyuki Kamiyama
**The Root Location Problem for Arc-Disjoint Arborescences**
*Discrete Applied Mathematics*, vol.160, no.13–14, pp.1964–1970 (2012).

10. Yuichiro Yasui, Katsuki Fujisawa, Kazushige Goto, Naoyuki Kamiyama, and Mizuyo Takamatsu
**NETAL High-performance Implementation of Network Analysis Library Considering Computer Memory Hierarchy**
*Journal of the Operations Research Society of Japan*, vol.54, no.4, pp.259–280 (2011).

9. Yusuke Matsumoto, Naoyuki Kamiyama, and Keiko Imai
**An Approximation Algorithm Dependent on Edge-Coloring Number for Minimum Maximal Matching Problem**
*Information Processing Letters*, vol.111, no.10, pp.465–468 (2011).

8. Yutaka Iwaikawa, Naoyuki Kamiyama, and Tomomi Matsui
**Improved Approximation Algorithms for Firefighter Problem on Trees**
*IEICE Transaction on Information and Systems*, vol.E94-D, no.2, pp.196–199 (2011).

7. Naoyuki Kamiyama and Naoki Katoh
**Covering Directed Graphs by In-Trees**
*Journal of Combinatorial Optimization*, vol.21, no.1, pp.2–18 (2011).

6. Kristóf Bérczi, Satoru Fujishige, and Naoyuki Kamiyama
**A Linear-Time Algorithm to Find a Pair of Arc-Disjoint Spanning In-Arborescence and Out-Arborescence in a Directed Acyclic Graph**
*Information Processing Letters*, vol.109, no.23–24, pp.1227–1231 (2009).

5. Naoyuki Kamiyama, Naoki Katoh, and Atsushi Takizawa
**An Efficient Algorithm for the Evacuation Problem in a Certain Class of Networks with Uniform Path-Lengths**
*Discrete Applied Mathematics*, vol.157, no.17, pp.3665–3677 (2009).

4. Naoyuki Kamiyama, Naoki Katoh, and Atsushi Takizawa
**Arc-Disjoint In-Trees in Directed Graphs**
*Combinatorica*, vol.29, no.2, pp.197–214 (2009).

3. Naoyuki Kamiyama, Yuuki Kiyonari, Eiji Miyano, Shuichi Miyazaki, and Katsuhisa Yamanaka
**Computational Complexity of University Interview Timetabling**
*IEICE Transaction on Information and Systems*, vol.E92-D, no.2, pp.130–140 (2009).

2. Takenao Taji, Shin-ichi Tanigawa, Naoyuki Kamiyama, Naoki Katoh, and Atsushi Takizawa
**Finding an Optimal Location of Line Facility using Evolutionary Algorithm and Integer Program**
*Journal of Computational Science and Technology*, vol.2, no.3, pp.362–370 (2008).

1. Naoyuki Kamiyama, Naoki Katoh, and Atsushi Takizawa
**An Efficient Algorithm for Evacuation Problem in Dynamic Network Flows with Uniform Arc Capacity**
*IEICE Transaction on Information and Systems*, vol.E89-D, no.8, pp.2372–2379 (2006).

## Peer-Reviewed Conference Papers

(Especially, in SODA, AAMAS, AAAI, LNCS, LIPIcs, CRPIT, and CCIS)

38. Takasugu Shigenobu and Naoyuki Kamiyama
**On Connectedness of Solutions to Integer Linear Systems**
Proceedings of the 16$^{th}$ Annual International Conference on Combinatorial Optimization and Applications (COCOA), accepted.

37. Takehiro Ito, Yuni Iwamasa, Naoyuki Kamiyama, Yasuaki Kobayashi, Yusuke Kobayashi, Shun-ichi Maezawa, and Akira Suzuki
**Reconfiguration of Time-Respecting Arborescences**
Proceedings of the 18$^{th}$ Algorithms and Data Structures Symposium (WADS), LNCS 14079, pp.521–532 (2023).

36. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Algorithmic Theory of Qubit Routing**
Proceedings of the 18$^{th}$ Algorithms and Data Structures Symposium (WADS), LNCS 14079, pp.533–546 (2023).

35. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, Shun-ichi Maezawa, Yuta Nozaki, and Yoshio Okamoto
**Hardness of Finding Combinatorial Shortest Paths on Graph Associahedra**
Proceedings of the 50$^{th}$ EATCS International Colloquium on Automata, Languages and Programming (ICALP), LIPIcs 261, pp.82:1–82:17 (2023).

34. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, Yuta Nozaki, Yoshio Okamoto, and Kenta Ozeki
**On Reachable Assignments under Dichotomous Preferences**
Proceedings of the 24$^{th}$ International Conference on Principles and Practice of Multi-Agent Systems (PRIMA), LNCS 13753, pp.650–658 (2022).

33. Takehiro Ito, Yuni Iwamasa, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, Yuta Nozaki, Yoshio Okamoto, and Kenta Ozeki
**Reforming an Envy-Free Matching**
Proceedings of the 36$^{th}$ AAAI Conference on Artificial Intelligence (AAAI), pp.5084–5091 (2022).

32. Hiroaki Yamada, Masataka Shirahashi, Naoyuki Kamiyama, and Yumeka Nakajima
**MAS Network: Surrogate Neural Network for Multi-Agent Simulation**
Proceedings of the 22$^{nd}$ International Workshop on Multi-Agent-Based Simulation (MABS), LNCS

13128, pp.113–124 (2022).

31. Takehiro Ito, Yuni Iwamasa, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, Shunichi Maezawa, Yuta Nozaki, Yoshio Okamoto, and Kenta Ozeki
**Monotone Edge Flips to an Orientation of Maximum Edge-Connectivity à la Nash-Williams**
Proceedings of the 2022 Annual ACM/SIAM Symposium on Discrete Algorithms (SODA), pp.1342–1355 (2022).

30. Hiroaki Yamada and Naoyuki Kamiyama
**Optimal Control of Pedestrian Flows by Congestion Forecasts Satisfying User Equilibrium Conditions**
Proceedings of the 23rd International Conference on Principles and Practice of Multi-Agent Systems (PRIMA), LNCS 12568, pp.299–314 (2021).

29. Naoyuki Kamiyama
**On Stable Matchings with Pairwise Preferences and Matroid Constraints**
Proceedings of the 19th International Conference on Autonomous Agents and Multiagent Systems (AAMAS), pp.584–592 (2020).

28. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Shortest Reconfiguration of Perfect Matchings via Alternating Cycles**
Proceedings of the 27th Annual European Symposium on Algorithms (ESA), LIPIcs 144, pp.61:1–61:15 (2019).

27. Takehiro Ito, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Algorithms for Gerrymandering Over Graphs**
Proceedings of the 18th International Conference on Autonomous Agents and Multiagent Systems (AAMAS), pp.1413–1421 (2019).

26. Naoyuki Kamiyama
**Many-to-Many Stable Matchings with Ties, Master Preference Lists, and Matroid Constraints**
Proceedings of the 18th International Conference on Autonomous Agents and Multiagent Systems (AAMAS), pp.583–591 (2019).

25. Takashi Ishizuka and Naoyuki Kamiyama
**On the Complexity of Stable Fractional Hypergraph Matching**
Proceedings of the 29th International Symposium on Algorithms and Computation (ISAAC), LIPIcs 123, pp.11:1–11:12 (2018).

24. Naonori Kakimura, Naoyuki Kamiyama, and Kenjiro Takazawa
**The $b$-Branching Problem in Digraphs**
Proceedings of the 43rd International Symposium on Mathematical Foundations of Computer Science (MFCS), LIPIcs 117, pp.121–1215 (2018).

23. Naoyuki Kamiyama
**Submodular Function Minimization with Submodular Set Covering Constraints and Precedence Constraints**
Proceedings of the 15th Workshop on Approximation and Online Algorithms (WAOA), LNCS 10787, pp.90–101 (2018).

22. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, Yoshio Okamoto, and Taichi Shiitada
**Tight Approximability of the Server Allocation Problem for Real-Time Applications**
Proceedings of the 3rd International Workshop on Algorithmic Aspects of Cloud Computing (Algocloud), LNCS 10739, pp.41–55 (2018).

21. Hiroaki Yamada, Kotaro Ohori, Tadashige Iwao, Akifumi Kira, Naoyuki Kamiyama, Hiroaki Yoshida, and Hirokazu Anai
**Modeling and Managing Airport Passenger Flow under Uncertainty: A Case of Fukuoka Airport in Japan**
Proceedings of the 9th International Conference on Social Informatics (SocInfo), LNCS 10540, pp.419–430 (2017).

20. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Reconfiguration of Maximum-Weight $b$-Matchings in a Graph**

Proceedings of the 23rd Annual International Computing and Combinatorics Conference (COCOON), LNCS 10392, pp.287–296 (2017).

19. Yosuke Hanawa, Yuya Higashikawa, Naoyuki Kamiyama, Naoki Katoh, and Atsushi Takizawa
**The Mixed Evacuation Problem**
Proceedings of the 10th Annual International Conference on Combinatorial Optimization and Applications (COCOA), LNCS 10043, pp.18–32 (2016).

18. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Efficient Stabilization of Cooperative Matching Games**
Proceedings of the 15th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS), pp.41–49 (2016).

17. Chien-Chung Huang, Naonori Kakimura, and Naoyuki Kamiyama
**Exact and Approximation Algorithms for Weighted Matroid Intersection**
Proceedings of the 27th Annual ACM/SIAM Symposium on Discrete Algorithms (SODA), pp.430–444 (2016).

16. Naoyuki Kamiyama
**Stable Matchings with Ties, Master Preference Lists, and Matroid Constraints**
Proceedings of the 8th International Symposium on Algorithmic Game Theory (SAGT), LNCS 9347, pp.3–14 (2015).

15. Takehiro Ito, Naonori Kakimura, Naoyuki Kamiyama, Yusuke Kobayashi, and Yoshio Okamoto
**Minimum-Cost $b$-Edge Dominating Sets on Trees**
Proceedings of the 25th International Symposium on Algorithms and Computation (ISAAC), LNCS 8889, pp.195–207 (2014).

14. Naoyuki Kamiyama
**The Popular Matching and Condensation Problems under Matroid Constraints**
Proceedings of the 8th Annual International Conference on Combinatorial Optimization and Applications (COCOA), LNCS 8881, pp.713–728 (2014).

13. Yuya Higashikawa, Naoyuki Kamiyama, Naoki Katoh, and Yuki Kobayashi
**An Inductive Construction of Minimally Rigid Body-Hinge Simple Graphs**
Proceedings of the 7th Annual International Conference on Combinatorial Optimization and Applications (COCOA), LNCS 8287, pp.165–177 (2013).

12. Tamás Fleiner and Naoyuki Kamiyama
**A Matroid Approach to Stable Matchings with Lower Quotas**
Proceedings of the 23rd Annual ACM/SIAM Symposium on Discrete Algorithms (SODA), pp.135–142 (2012).

11. Naoyuki Kamiyama
**Robustness of Minimum Cost Arborescences**
Proceedings of the 22nd International Symposium on Algorithms and Computation (ISAAC), LNCS 7074, pp.130–139 (2011).

10. Yusuke Matsumoto, Naoyuki Kamiyama, and Keiko Imai
**On Totally Unimodularity of Edge-Edge Adjacency Matrices**
Proceedings of the 17th Annual International Computing and Combinatorics Conference (COCOON), LNCS 6842, pp.354–365 (2011).

9. Naoyuki Kamiyama
**Submodular Function Minimization under a Submodular Set Covering Constraint**
Proceedings of the 8th Annual Conference on Theory and Applications of Models of Computation (TAMC), LNCS 6648, pp.133–141 (2011).

8. Naoyuki Kamiyama and Tomomi Matsui
**Approximation Algorithms for Data Association Problem Arising from Multitarget Tracking**
Proceedings of the 17th Computing the Australasian Theory Symposium (CATS), CRPIT 119, pp.137–144 (2011).

7. Naoyuki Kamiyama
**The Prize-Collecting Edge Dominating Set Problem in Trees**

Proceedings of the 35th International Symposium on Mathematical Foundations of Computer Science (MFCS), LNCS 6281, pp.465–476 (2010).

6. Naoyuki Kamiyama and Naoki Katoh
**A Polynomial-Time Algorithm for the Universally Quickest Transshipment Problem in a Certain Class of Dynamic Networks with Uniform Path-Lengths**
Proceedings of the 20th International Symposium on Algorithms and Computation (ISAAC), LNCS 5878, pp.802–811 (2009).

5. Naoyuki Kamiyama and Naoki Katoh
**The Minimum Weight In-Tree Cover Problem**
Proceedings of the 2nd International Conference on Modelling, Computation and Optimization in Information Systems and Management Sciences (MCO), CCIS 14, pp.155–164 (2008).

4. Naoyuki Kamiyama and Naoki Katoh
**Covering Directed Graphs by In-Trees**
Proceedings of the 14th Annual International Computing and Combinatorics Conference (COCOON), LNCS 5092, pp.444–457 (2008).

3. Naoyuki Kamiyama, Naoki Katoh, and Atsushi Takizawa
**Arc-Disjoint In-Trees in Directed Graphs**
Proceedings of the 19th Annual ACM/SIAM Symposium on Discrete Algorithms (SODA), pp.518–526 (2008).

2. Naoyuki Kamiyama, Naoki Katoh, and Atsushi Takizawa
**An Efficient Algorithm for the Evacuation Problem in a Certain Class of a Network with Uniform Path-Lengths**
Proceedings of the 3rd International Conference on Algorithmic Aspect in Information and Management (AAIM), LNCS 4508, pp.178–190 (2007).

1. Naoyuki Kamiyama, Naoki Katoh, and Atsushi Takizawa
**An Efficient Algorithm for Evacuation Problems in Dynamic Network Flows with Uniform Arc Capacity**
Proceedings of the 2nd International Conference on Algorithmic Aspect in Information and Management (AAIM), LNCS 4041, pp.231–242 (2006).

## Scientific Service

### Journal Editor

International Journal of Mathematics for Industry, subject editor (ongoing)

### Program Committee of Peer-Reviewed Conferences

8th International Symposium on Combinatorial Optimization (ISCO), 2024
38th AAAI Conference on Artificial Intelligence (AAAI), 2024
32nd International Joint Conference on Artificial Intelligence (IJCAI), 2023
13th International Conference on Algorithms and Complexity (CIAC), 2023
37th AAAI Conference on Artificial Intelligence (AAAI), 2023
7th International Symposium on Combinatorial Optimization (ISCO), 2022
36th AAAI Conference on Artificial Intelligence (AAAI), 2022
35th AAAI Conference on Artificial Intelligence (AAAI), 2021
31st International Symposium on Algorithms and Computation (ISAAC), 2020
14th International Frontiers of Algorithmics Workshop (FAW), 2020
6th International Symposium on Combinatorial Optimization (ISCO), 2020
34th AAAI Conference on Artificial Intelligence (AAAI), 2020
5th International Symposium on Combinatorial Optimization (ISCO), 2017
28th International Symposium on Algorithms and Computation (ISAAC), 2017
4th International Symposium on Combinatorial Optimization (ISCO), 2016

**Organizing Committee of Peer-Reviewed Conferences**

32nd International Symposium on Algorithms and Computation (ISAAC), chair, 2021

**Journal Referee**

ACM Transactions on Algorithms, Algorithmica, Artificial Intelligence, Autonomous Agents and Multi-Agent Systems Combinatorica, Discrete Applied Mathematics, Discrete Mathematics, Discrete Optimization, EURO Journal on Computational Optimization, European Journal of Combinatorics Games and Economic Behavior, Graphs and Combinatorics, IEICE Transactions, Information Processing Letters, International Journal of Mathematics for Industry, Japan Journal of Industrial and Applied Mathematics, Journal of Combinatorial Optimization, Journal of the Operations Research Society of Japan, Journal of Mathematical Economics, Mathematical Programming, Mathematics of Operations Research, Networks, Optimization Methods and Software, Optimization Letters, Pacific Journal of Optimization, RAIRO – Operations Research, RIMS Kokyuroku Bessatsu, SIAM Journal on Discrete Mathematics, SIAM Journal on Optimization, The International Journal of Foundation of Computer Science, and Theoretical Computer Science.

**Conference Referee**

AAAI Conference on Artificial Intelligence (AAAI), Annual International Conference on Combinatorial Optimization and Applications (COCOA), Annual International Computing and Combinatorics Conference (COCOON), Annual European Symposium on Algorithms (ESA), International Conference on Approximation Algorithms for Combinatorial Optimization Problems (APPROX), International Frontiers of Algorithmics Workshop (FAW), International Symposium on Fundamentals of Computation Theory (FCT), Annual Symposium on Foundations of Computer Science (FOCS), IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS), International Colloquium on Automata, Languages, and Programming (ICALP), International Conference on Integer Programming and Combinatorial Optimization (IPCO), International Conference on Autonomous Agents and MultiAgent Systems (AAMAS), International Conference on Algorithms and Complexity (CIAC), International Joint Conference on Artificial Intelligence (IJCAI) International Symposium on Algorithms and Computation (ISAAC), International Symposium on Algorithmic Game Theory (SAGT), International Symposium on Combinatorial Optimization (ISCO) International Symposium on Scheduling (ISS), International Conference on Language and Automata Theory and Applications (LATA), Latin American Theoretical Informatics Symposium (LATIN), International Symposium on Mathematical Foundations of Computer Science (MFCS), International Conference on Principles of Distributed Systems (OPODIS), Annual ACM/SIAM Symposium on Discrete Algorithms (SODA), Symposium on Theoretical Aspects of Computer Science (STACS), Algorithms and Data Structures Symposium (WADS), Workshop on Algorithms and Computation (WALCOM), and International Workshop on Graph-Theoretic Concepts in Computer Science (WG).

## Ph.D. Students

Takashi Ishizuka (Kyushu University, 2022)