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Personal Information

Date of Birth: January 1, 1951

Marital Status: Married

Nationality: Japanese

Education

Ph.D., Electrical Engineering, Kyoto University, 1980.

M.E., Electrical Engineering, Kyoto University, 1975.

B.E., Electrical Engineering, Kyoto University, 1980.

Employment

Professor, School of Informatics, Kyoto University, 1997–present.

Professor, Department of Information Science, Kyushu University, 1992–1997.

Associate Professor, Department of Information Science, Kyushu University, 1990–1992.

Visiting Associate Professor, Computer Science Division, UC Berkeley, 1983-1984.

Associate Professor, School of Science, Kyoto Sangyo (Industrial) University, 1982–1990.

Assistant Professor, School of Science, Kyoto Sangyo (Industrial) University, 1978–1982.

Invited Talks, Lectures and Short Courses

Keynote Speech

8th IEEE Symposium on Parallel Architectures, Algorithms, and Networks, (ISPAN 2005), December 7-9. 2005, Las Vegas, Nevada, USA.

10th Scandinavian Workshop on Algorithm Theory (SWAT 2006), Riga, Latvia, July 6-8, 2006.

17th International Symposium on Algorithms and Computation (ISAAC 2006), Kolkata, India, December 18-20, 2006.

11th International Conference on Theory and Applications of Satisfiability Testing (SAT 2008), May 12 - 15 2008, Guangzhou, P. R. China.

6th Workshop on Algorithms and Computation (WALCOM 2012). February 15-17, 2012, Dhaka, Bangladesh.

16th International Conference on Developments in Language Theory (DLT 2012), August 14-17, 2012, Taipei, Taiwan.

Seminar Talks

MIT, Yale University, University of Toronto, McGill University, Brown University, IBM Watson Research, University of Maryland, Indiana University, University of California (Berkeley), University of Washington, University of Paris, University of Tuebingen, MPI (Saarbrucken), Lund University, University of Leicester, University of Jena, ETH and more

Major Invited Talks

Dagstuhl-Seminar (1998, 1999, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2012), FoCM 2008, Spring School at Zhejiang University (2005), EQIS(2001, 2003), MS+S2004, 2nd Japanese-Hungarian Symposium on Discrete Mathematics and Its Applications (Budapest, 2001), Workshop on Meta-Arithmetic and Computation (Sendai, 1997), DIMACS Workshop on Satisfiability Problem: Theory and Application(1996), JSPP'93 (1993).

Professional Activities

Academic Organizations and Conferences

Organizing Committee Chair: 23rd ACM-SIAM Symposium on Discrete Algorithms (SODA 2012), Kyoto, Japan, 2012.

Founder and Chair of Executive Board: Asian Association for Algorithms and Computation (AAAC), 2007-.

Council Member: European Association for Theoretical Computer Science (EATCS), 2002-2006.

Steering Committee Member: European Symposium on Algorithms (ESA), 2003-2007.

Organizing Committee co-Chair:

Dagstuhl Seminar 08431 on Moderately Exponential Time Algorithms, 2008.

MATCH-UP: Matching Under Preferences -Algorithms and Complexity- (Satellite workshop of ICALP 2008).

Asian Conference on Quantum Information Science (AQIS 2007)

14th International Symposium on Algorithms and Computation (ISAAC 2003).

1997 Japan-Korea Joint Workshop on Algorithms and Computation, 1997.

Program Committee Chair or co-Chair: QIT 2012, AAAC (2009-2011), ISAAC 1992.

Program Committee: SWAT2000, ISAAC2000, FCT2001, ISAAC2001, ESA2002, IFIP-TCS2002, ICALP2003, CIAC'03, CIAA'03, ICALP2006, TAMC2007, WG2007, MFCS2007, STACS2008, ICALP2009, ISAAC2009, COCOON2009, SAT2009, ICALP2010, SAT2010, WG2010, CIAC2010, COCOON2012, CSR2012, ISAAC2012, MFCS2012, SAT2012, TAMC2012, ICALP2013 and more.

Editorial Board:

Algorithmica, 2012-.

ACM Transactions on Computation Theory, 2007-.

MDPI Algorithms (Editor-in-Chief), 2008-

International Journal of Foundations of Computer Science, 2005-.

Information Processing Letters, 1998-2010.

Parallel Computing, 1998-2005.

Journal on Satisfiability, Boolean Modeling and Computation, 2005-.

Encyclopedia of Algorithms (Springer), 2005-2008.

Book Series, Theoretical Computer Science (World Scientific), 2008-.

Research Grants

Major Projects

Chair: New Horizons in Computing (NHC), Ministry of Education, Science, Sports and Culture of Japan (Monbusho), 2004-2008.

Group-Leader: Quantum Computation and Information, ERATO (Exploratory Research for Advanced Technology, Japan Science and Technology), 2000-2005

KAKENHI, Ministry of Education, Japan

Research on algorithms enhancing spatial information augmentation (Principal Investigator, 2010-2012, 42,470,000 JPY).

Design and analysis of algorithms enhancing information augmentation (Principal Investigator, 2007-2009, 33,410,000 JPY).

Research on engineering-based performance guarantee of discrete algorithms (Principal Investigator, 2004-2006, 11,100,000 JPY).

Research on engineering-based performance augmentation of discrete algorithms (Principal Investigator, 2001-2003, 12,100,000 JPY).

Developments of high-speed routing algorithms based on randomization and adaptation (Principal Investigator, 1998-2001, 10,900,000 JPY).

High-speed search of feasible and approximated solutions for real-world problems (Principal Investigator, 1998-2000, 6,500,000 JPY).

Solving Real-World Combinatorial Problems using High-Speed SAT-Algorithms (Principal Investigator, 1997-1999, 6,200,000 JPY)

Research and Development of Advanced Database Systems for Integration of Media and User Environments (Principal Investigator, 1996-1998, 12,000,000 JPY).

Fast and Mass Generation of Random Benchmark Circuits That Are Not Too Artificial (Principal Investigator, 1996-1998, 4,000,000 JPY).

Studies on How to Generate Random Benchmark-Test Instances (Principal Investigator, 1995-1997, 3,600,000 JPY).

Honors

Honorary Doctorate from University of Latvia, 2008.

Member, Science Council of Japan, 2005.

Research Topics

Stable Matchings: Most well-known research group together with the one at University of Glasgow. Algorithms and complexity of most general version of the stable marriage problems with incomplete lists and ties, including the first approximation bound less than 2.0.

Boolean Satisfiability: Long history for improving the upper bound for the complexity of 3SAT, one of the most important and popular NP-complete problems. Two time (currently, too) world records.

Circuit Complexity: Obtaining lower bounds for the number of logic gates for Boolean circuits has been popular in the sense that it is one of the direct approach for proving P$\neq$NP. The $5n$ lower bound for general circuits given by us in 2002 is still world best.

Online Algorithms: Wide variety of results, including auction algorithms, online knapsack problems, online randomized k-server problems and average-case analysis of several online problems.

Quantum Computation: First introduction of design theory for quantum circuits. Series of results on quantum query complexity including the one for the counterfeit coin problems.

Approximation Algorithms : For seveal graph problems other than for the above stable matching problems.

Parallel and Distributed Algorithms : PRAM algorithms and mesh routing algorithms.

Major Publications

H. Fujiwara, K. Iwama, Y. Sekiguchi: Average-case competitive analyses for one-way trading. J. Comb. Optim. 21(1): 83-107 (2011)

W. Bein, K. Iwama, J. Kawahara, L. Larmore, J. Oravec: A randomized algorithm for two servers in cross polytope spaces. Theor. Comput. Sci. 412(7): 563-572 (2011)

K. Iwama, S. Miyazaki, H. Yanagisawa: A 25/17-Approximation Algorithm for the Stable Marriage Problem with One-Sided Ties. ESA (2) 2010: 135-146

K. Iwama, K. Seto, T. Takai, S. Tamaki: Improved Randomized Algorithms for 3-SAT. ISAAC (1) 2010: 73-84

K. Iwama, H. Nishimura, R. Raymond, J. Teruyama: Quantum Counterfeit Coin Problems. ISAAC (1) 2010: 85-96

K. Iwama, S. Miyazaki, H. Yanagisawa: Approximation algorithms for the sex-equal stable marriage problem. ACM Transactions on Algorithms 7(1): 2 (2010)

David Manlove, Robert W. Irving, Kazuo Iwama: Guest Editorial: Special Issue on Matching Under Preferences. Algorithmica 58(1): 1-4 (2010)

K. Iwama, Guochuan Zhang: Online knapsack with resource augmentation. Inf. Process. Lett. 110(22): 1016-1020 (2010)

K. Iwama, K. Seto, S. Tamaki: The complexity of the Hajos calculus for planar graphs. Theor. Comput. Sci. 411(7-9): 1182-1191 (2010)

K. Iwama, H. Morizumi, J. Tarui: Negation-Limited Complexity of Parity and Inverters. Algorithmica 54(2): 256-267 (2009)

K. Hamada, K. Iwama, S. Miyazaki: An improved approximation lower bound for finding almost stable maximum matchings. Inf. Process. Lett. 109(18): 1036-1040 (2009)

K. Iwama, E. Miyano, H. Ono: Drawing Borders Efficiently. Theory Comput. Syst. 44(2): 230-244 (2009)

Xin Han, K. Iwama, Guochuan Zhang: Online Removable Square Packing. Theory Comput. Syst. 43(1): 38-55 (2008)

K. Iwama, H. Morizumi, J. Tarui: Reductions for monotone Boolean circuits. Theor. Comput. Sci. 408(2-3): 208-212 (2008)

H. Fujiwara, K. Iwama, K. Yonezawa: Online chasing problems for regular polygons. Inf. Process. Lett. 108(3): 155-159 (2008)

K. Iwama, S. Miyazaki, N Yamauchi: A (2-c(1/sqrt(N)))-Approximation Algorithm for the Stable Marriage Problem. Algorithmica 51(3): 342-356 (2008)

A. Ambainis, K. Iwama, M. Nakanishi, H. Nishimura, Rudy Raymond, Seiichiro Tani, Shigeru Yamashita: Quantum Query Complexity of Boolean Functions with Small On-Sets. ISAAC 2008: 907-918

H. Fujiwara, K. Iwama, Y. Sekiguchi: Average-Case Competitive Analyses for One-Way Trading. COCOON 2008: 41-51

Bein, W., Iwama K., Kawahara, J., "Randomized Competitive Analysis for Two-Server Problems," Proc ESA 2008, 2008.

Iwama K., Nishimura, Paterson, M., H., Raymond, R., and Yamashita S., "Polynomial-Time Construction of Linear Network Coding," Proc ICALP 2008, 2008.

Iwama, K., "SAT, UNSAT and Coloring," SAT 2008 Invited talk, 2008.

Iwama, K., Lingas, A., Okita M., "Max-Stretch Reduction for Tree Spanners," Algorithmica 50(2), 223-235, 2008.

Xin Han, Iwama, K., Klein, R., Lingas, A., "Approximating the Maximum Independent Set and Minimum Vertex Coloring on Box Graphs," AAIM 2007, 337-345, 2007.

Xin Han, Iwama, K., Deshi Ye, Guochuan Zhang, "Strip Packing vs. Bin Packing," AAIM 2007, 358-367, 2007.

Iwama, K., Guochuan Zhang, "Optimal Resource Augmentations for Online Knapsack," APPROX-RANDOM 2007, 180-188, 2007.

Iwama, K., Nakashima T., "An Improved Exact Algorithm for Cubic Graph TSP," COCOON 2007, 108-117, 2007.

Xiaotie Deng, Iwama, K., Qi Qi, Aries Wei Sun, Tasaka, T., "Properties of Symmetric Incentive Compatible Auctions," COCOON 2007, 264-273., 2007.

Iwama, K., Miyano, E., and Ono H., "Drawing Borders Efficiently," FUN 2007, 213-226, 2007.

Iwama K., Nishimura, H., Raymond, R., and Yamashita S., "Unbounded-Error One-Way Classical and Quantum Communication Complexity," ICALP 2007, 110-121, 2007.

Iwama K., Nishimura, H., Raymond, R., and Yamashita S., "Unbounded-Error Classical and Quantum Communication Complexity," ISAAC 2007, 100-111, 2007.

Iwama K., Miyazaki S., and Yanagisawa, H., "Approximation Algorithms for the Sex-Equal Stable Marriage Problem," WADS 2007, 201-213, 2007.

Bein, W., Iwama, K., Kawahara, J., Larmore, A., Oravec, J., "A Randomized Algorithm for Two Servers in Cross Polytope Spaces," WAOA 2007, 246-259, 2007.

Ambainis A., Iwama K., Kawachi A., Raymond R., and Yamashita, S. "Improved algorithms for quantum identification of Boolean oracles," Theor. Comput. Sci. 378(1), 41-53,, 2007.

Iwama, K., and Tamaki, S., "Exploiting partial knowledge of satisfying assignments," Discrete Applied Mathematics 155(12), 1596-1603, 2007.

Halldorsson, M., Iwama K., Miyazaki S., and Yanagisawa, H., "Improved approximation results for the stable marriage problem," ACM Transactions on Algorithms 3(3), 2007.

Hayashi, M., Iwama K., Nishimura, H., Raymond, R., and Yamashita S., "Quantum Network Coding," Proc. STACS 2007, 610-621, 2007.

Bansal N., Han X., Iwama K., Sviridenko M. and Zhang G. "Harmonic Algorithm for 3-Dimensional Strip Packing Problem," Proc. SODA 2007, 1197-1206, 2007.

Iwama K., Miyazaki S., and Yamauchi N. "A 1.875–Approximation Algorithm for the Stable Marriage Problem," Proc. SODA 2007, 288-297, 2007.

Iwama K., "Stable Matching Problems," (Invited Talk) Proc ISAAC 2006, p. 1, 2006.

Iwama K., Morizumi H. and Tarui J. "Negation-Limited Complexity of Parity, Inverters, and Sorted Parity," Proc ISAAC 2006 (to appear), 2006.

Horiyama T., Iwama K. and Kawahara J. "Finite-State Online Algorithms and Their Automated Competitive Analysis," Proc ISAAC 2006 (to appear), 2006.

Iwama K., and Morizumi H., "Reductions for Monotone Boolean Circuits," Proc MFCS 2006, pp. 540-548, 2006.

M Hayashi, K Iwama, H Nishimura, R Raymond and S Yamashita, "(4,1)-Quantum random access coding does not exist? one qubit is not enough to recover one of four bits," New J. Phys. 8 129, 2006.

M. Hayashi, K. Iwama, H. Nishimura, R. Raymond, S. Yamashita, "(4,1)-Quantum random access coding does not exist," Proceedings of IEEE International Symposium on Information Theory (ISIT 2006), pp. 446-450, 2006.

Adcock M., Cleve R., Iwama K., Raymond R., Yamashita S. "Quantum lower bounds for the Goldreich-Levin problem," Inf. Process. Lett. 97(5): 208-211 (2006).

Iwama K., "Classic and Quantum Network Coding" (invited talk) Proc. SWAT 2006, 3-4, 2006.

Ambainis A., Iwama K., Kawachi A., Raymond R., and Yamashita, S. "Improved Algorithms for Quantum Identification of Boolean Oracles," Proc. SWAT 2006, pp. 280-291, 2006.

Iwama K., joint work with Hayashi, M., Nishimura, H., Raymond, R., and Yamashita S., "Quantum Network Coding," QIP 2006, Paris, Jan. 2006.

Iwama K., Miyazaki S. and Yamauchi N. "A $(2 - c1/\sqrt{N})$–Approximation Algorithm for the Stable Marriage Problem," Proc. ISAAC 2005, 902-914, 2005.

Han X., Iwama K., and Zhang G. "Online Removable Square Packing," Proc. WAOA 2005, 216-229, 2005.

Ito H., Iwama K. and Osumi T. "Linear-Time Enumeration of Isolated Cliques," Proc. ESA 2005, 119-130, 2005.

Iwama K., Bein W., Larmore L. and Noga J. "The Delayed k-Server Problem," Proc. FCT 2005, pp. 281-292, 2005.

Iwama K., Lingas A. and Okita M. "Max-Stretch Reduction for Tree Spanners," Proc. WADS 2005, pp. 122-133, 2005.

Fujiwara, H. and Iwama K. "Average-Case Competitive Analyses for Ski-Rental Problems," Algorithmica 42(1): 95-107 (2005).

Imamura, T. and Iwama, K. "Approximating Vertex Cover on Dense Graphs," Proc. SODA 2005, pp. 582-589, 2005.

M. Halldorsson, K. Iwama, S. Miyazaki, and H. Yanagisawa, "Randomized approximation of the stable marriage problem," Theor. Comput. Sci. 325(3): 439-465 (2004).

Iwama, K. and Kawachi, A. "Approximated Two Choices in Randomized Load Balancing," Proc. ISAAC 2004, pp. 545-557, 2004.

Imamura, T., Iwama, K. and Tsukiji, T. "Approximated vertex cover for graphs with perfect matching," Proc. COCOON 2004, 132-142, 2004.

Fujiwara, T., Iwama, K. and Iwamoto, C. "Partially effective randomization in simulations between ARBITRARY and COMMON PRAMs," J. Parallel Distrib. Comput. 64(3), 319-326, 2004.

Iwama, K. and Yonezawa, K. "The orthogonal CNN problem," Inf. Process. Lett. 90(3), 115-120, 2004.

Iwama, K., Miyazaki, S. and Okamoto, K. "A (2-c(log N/N))-Approximation Algorithm for the Stable Marriage Problem," Proc. SWAT 2004, 349-361, 2004.

Iwama, K. "Worst-case upper bounds for kSAT," EATCS Bulletin, No. 82, 61-71, 2004.

Iwama, K. "Automated competitive analysis of online algorithms," Workshop on On-Line Algorithms (OLA 2004), 2004.

Ambainis, A., Iwama, K. Kawachi, A., Masuda, H., Putra, R., Yamashita, S. "Quantum Identification of Boolean Oracles," Proc. STACS 2004, 105-116, 2004.

Iwama, K. and Tamaki, S., "Improved Upper Bounds for 3-SAT," Proc. SODA 2004, 2004.

K. Iwama, and M. Okita, "Compact Routing for Flat Networks," Proc. DISC 2003, pp.196–210, Oct. 2003.

M. Halldorsson, R. Irving, K. Iwama, D. Manlove, S. Miyazaki, Y. Morita, and S. Scott, "Approximability Results for Stable Marriage Problems with Ties," Theoretical Computer Science, vol.306, 1-3, pp.266–277, Sep. 2003.

M. Halldorsson, K. Iwama, S. Miyazaki, and H. Yanagisawa, "Improved Approximation of the Stable Marriage

Problem," Proc. ESA 2003, LNCS 2832, pp.266–277, Sep. 2003.

M. Halldorsson, K. Iwama, S. Miyazaki, and H. Yanagisawa, "Randomized Approximation of the Stable Marriage Problem," Proc. COCOON 2003, LNCS 2697, pp.339–350, Jul. 2003.

A. Kawachi, K. Iwama, and S. Yamashita, "Quantum Sampling for Balanced Allocations," Proc. COCOON 2003, LNCS 2697, pp.304–318, Jul. 2003.

H. Ito, K. Iwama, Y. Okabe, and T. Yoshihiro, "Polynomial time computable backup tables for shortest path routing," Proc. SIROCCO 2003, pp.163–177, 2003.

K. Amano, K. Iwama, A. Maruoka, K. Matsuo, and A. Matsuura, "Inclusion-exclusion for k-CNF formulas," Information Processing Letters 87, pp. 111-117, 2003.

Fujiwara, H. and Iwama, K., "Average-Case Competitive Analyses for Ski-Rental Problems," Proc. ISAAC2002, pp. 476-488, 2002.

Iwama, K. and Morizumi. H., "An Explicit Lower Bound of $5n - o(n)$ for Boolean Circuits," Proc. MFCS2002 pp. 353-364 (2002).

Ito, H., Iwama, K., Okabe, Y., and Yoshihiro T., "Avoiding Routing Loops on the Internet," Proc. SIROCCO2002, pp. 197-210 (2002).

Iwama, K. and Okita, M., "Compact Routing for Average-Case Networks (brief presentation)," Proc. ACM PODC2002 pp. 255 (2002).

Iwama, K. and Taketomi, S., "Removable On-Line Knapsack Problems," Proc. ICALP2002, pp. 293-303 (2002).

Iwama, K. and Yamashita, S.,"Transformation Rules for Designing CNOT-based Quantum Circuits,"Proc. 39th ACM/IEEE DAC, pp. 419-424 (2002).

Halldorsson, M., Iwama, K., Miyazaki, S. and Morita, Y., "Inapproximability Results on Stable Marriage Problems,"Proc. LATIN2002, pp. 554-568, 2002.

Halldorsson, M., Iwama, K., Miyazaki, S. and Taketomi S.,"Online Independent Sets," Theoretical Computer Science, pp. 953-962 (2002).

Asahiro, Y., Hassin, R. and Iwama, K., "Complexity of Finding Dense Subgraphs," Discrete Applied Mathematics 121, pp. 15-26, 2002.

Iwama, K. and Miyano, E., "An O(square root of N) Oblivious Routing Algorithm for 2-D Meshes of Constant Queue-Size," J. Algorithms 41, 262-279, 2001.

Iwama, K. and Tamaki, S. "Exploiting Partial Knowledge of Satisfying Assignments," Proc. WAE01 (LNCS2141), pp. 118-128, 2001.

Iwama, K., Okabe, Y. and Takase, T. "Separating Oblivious and Non-Oblivious BPs," Proc. COCOON01 (LNCS2108), pp. 28-38, 2001.

Manlove, D., Irving, R., Iwama, K., Miyazaki, S., and Morita, Y., "Hard Variants of Stable Marriage," Theoretical Computer Science, 276, pp. 261-279, 2002.

Iwama, K. and Miyano, E., "A Lower Bound for Elementary Oblivious Routing on Three-Dimensional Meshes," J. Algorithms 39, 145-161, 2001.

Asano, T., Halldorsson, M., Iwama, K. and Matsuda, T., "Approximation Algorithms for the Maximum Power Consumption Problem on Combinatorial Circuits," Proc. ISAAC2000, 204-215, (2000).

Iwama, K., Kawai, D., Miyazaki, S., Okabe, Y. and Umemoto, J. "Parallelizing Local Search for CNF Satisfiability Using Vectorization and PVM" Proc. Workshop on Algorithm Engineering (WAE 2000), 123-134, 2000.

Iwama, K., Matsuura, A. and Paterson M., "A Family of NFA's which Need $2^n - \alpha$ Deterministic States," Proc. MFCS 2000, pp. 436-445 (2000).

Halldorsson, M., Iwama, K., Miyazaki, S. and Taketomi S., "Online Independent Sets," Proc. COCOON 2000, pp. 202-209 (2000).

Iwama, K., and Miyano, E., "A (2.954 + e)n Oblivious Routing Algorithm on 2D Meshes," Proc. ACM SPAA 2000, pp. 186-195 (2000).

Iwama, K., and Kawachi, A. "Brief Announcement: Compact Routing with Stretch Factor of Less Than Three," Proc. ACM PODC 2000, p. 337 (2000).

Asahiro, Y., Iwama, K., Tamaki, H., and Tokuyama T. "Greedily Finding a Dense Subgraph" J. Algorithms, 34, pp. 203-221 (2000) .

Iwama, K., Kambayashi, Y., and Takaki, K. "Tight Bounds on the Number of States of DFA's That Are Equivalent to n-State NFA's" Theoretical Computer Science 237, pp. 485-494 (2000).

Iwama, K., Miyano, E., Tajima, S., and Tamaki, H. "Efficient randomized routing algorithms on the two-dimensional mesh of buses" Theoretical Computer Science 261, 227-239, 2001.

Iwama, K., and Miyano, E. "Oblivious Routing Algorithms on the Mesh of Buses" J. Parallel and Distributed Computing, 60, pp. 137-149, (2000).

Iwama, K., and Miyazaki, S. "Tree-Like Resolution Is Superpolynomially Slower Than DAG-Like Resolution for the Pigeonhole Principle" Proc. ISAAC'99, (Lecture Notes in Computer Science 1741), pp. 133-142, (1999).

Iwama, K., and Yonezawa, K., "Using Generalized Forecasts for Online Currency Conversion," Proc. CO-COON'99, pp. 409-421, 1999.

Iwama, K., and Miyano, E., "Multipacket routing on 2-D meshes and its applications to fault-tolerant routing," Proc. ESA'99, pp. 53-64, 1999.

Iwama, K., Miyazaki, S., Manlove, D., and Morita, Y., "Stable Marriage with Incomplete Lists and Ties," Proc. ICALP'99, pp. 443-452, 1999.

Amano, M., and Iwama, K., "Undecidability on Quantum Finite Automata," Proc. STOC'99, pp. 368-375, 1999.

Iwama, K., and Miyano, E., "An $O(\sqrt{N})$ Oblivious Routing Algorithms for 2-D Meshes of Constant Queue-Size," Proc. SODA'99, pp. 466-475, 1999.

Iwama, K., Nozoe, M., and Yajima, S. "Optimizing OBDDs Is Still Intractable for Monotone Functions" Proc. MFCS'98 (LNCS 1450), pp. 625-635, 1998.

Iwama, K., and Iwamoto, C., "Improved Time and Space Hierarchies of One-Tape Off-Line TMs" Proc. MFCS'98 (LNCS 1450), pp. 580-588, 1998.

Iwama, K., Kambayashi, Y. and Miyano, E., "New Bounds for Oblivious Mesh Routing" Proc. ESA'98 (LNCS 1461) pp. 295-306, 1998.

Iwama, K., Miyano, E., Tajima, S. and Tamaki, H., "Efficient Randomized Routing Algorithms on the Two-Dimensional Mesh of Buses", Proc. COCOON'98 (LNCS 1449), pp. 229-240 (1998).

Iwama, K., and Miyano, E., "Better approximations of non-Hamiltonian graphs," Discrete Applied Mathematics 81, pp. 239-261 (1998).

Iwama, K., and Iwamoto, C., "A canonical form of vector machines," Information and Computation 141, pp. 37-65 (1998).

Iwama, K.," Complexity of Finding Short Resolution Proofs" Proc. 22nd Symposium on Mathematical Foundation of Computer Sceince (MFCS'97), LNCS 1295, pp 309 – 318 (1997).

Iwama, K. and Miyano, E., "Three-dimensional mashes are less powerful than two-dimesional ones in oblivious routing" Proc. Fifth Europian Symposium on Algorithms (ESA'97), LNCS1284, pp 284–295 (1997).

Cha, B., Iwama, K., Kambayashi, Y., and Miyazaki, S. "Local search algorithms for partial MAXSAT" Proc. AAAI'97, pp 263 – 268 (1997).

Iwama, K., Iwamoto, C., and Ohsawa, T. "A faster parallel algorithm for k-connectivity" Inform. Process. Lett. 61, pp. 265-269 (1997).

Iwama, K. and Miyano, E., "Oblivious Routing Algorithms on the Mesh of Buses" Proc. International Parallel

Processing Symposium (IPPS'97)pp. 721-727, Apr. 1997.

Iwama, K., Hino, K., Kurokawa, H., Sawada, S., "Random benchmark circuits with controlled attributes," Proc. European Design & Test Conference and Exhibition (ED&TC'97) pp. 90-97, Mar. 1997.

Asahiro, Y., Iwama, K. Tamaki, H. and Tokuyama, T. "Greedily finding a dense subgraph," Proc. Fifth Scandinavian Workshop on Algorithm Theory (SWAT96), pp. 136–148, Reykjavik, July 1996.

Cha, B., Iwama, K. "Adding new clauses for faster local search," Proc. 13th National Conference on Artificial Intelligence (AAAI'96), pp. 332-337, Aug 1996.

Iwama, K. and Iwamoto, C. "Parallel complexity hierarchies based on PRAMs and DLOGTIME-uniform circuits" Proc. 11th IEEE Conference on Computational Complexity (Complexity 96), pp. 24–32, May 1996.

Asahiro, Y. and Iwama, K. "Finding dense subgraphs" Proc. 6th International Symposium on Algorithms and Computation (ISAAC), (LNCS 1004), pp. 102–111, Cairns, Dec. 1995.

Iwama, K. and Iwamoto, C. "α-Connectivity: A gradually non-parallel graph problem" J. Algorithms, 20, 3, pp 526–544, May 1996.

Iwama, K. and Miyazaki, S. "Approximation of coNP sets by NP-complete sets" Proc. International Computing and Combinatorics Conference (COCOON'95) (Lecture Notes in Computer Science), pp. 11–20, Xi'an, August 1995.

Iwama, K., Miyano, E., Kambayashi, Y., "Routing problems on the mesh of buses" J. Algorithms 20, 3, pp. 613–631, May 1996.

Cha, B., Iwama, K. "Performance test of local search algorithms using new types of random CNF formulas" Proc. International Joint Conference on Artificial Intelligence (IJCAI-95), Montreal, pp.304–310, Aug 1995.

Iwama, K., Miyano, E. "Intractability of Read-Once Resolution" Proc. 10th IEEE Structure in Complexity Theory Conference, pp. 29-36, Mineapolis, Jun 1995.

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