

超ロバスト計算原理プロジェクト 平成 14 年度業績一覧

目次

- 1. 研究発表
 - 1-1. 國際誌掲載論文
 - 1-2. 国内誌掲載論文
 - 1-3. 国際会議発表
 - 1-4. 国内会議発表
 - 1-5. 招待講演
- 2. 受賞
- 3. 特許
- 4. 書籍
- 5. 論文誌エディター
- 6. 論文特集号のゲストエディター
- 7. 会議の主催
- 8. プログラム委員
- 9. その他

1. 研究発表

1-1. 國際誌掲載論文

- [1] Akimichi Takemura, Minimum Unsafe and Maximum Safe Sets of Variables for Disclosure Risk Assessment of Individual Records in a Microdata Set, *Journal of the Japan Statistical Society*, 32, 1, 107–117, 2002.
- [2] Akimichi Takemura, Local Recoding and Record Swapping by Maximum Weight Matching for Disclosure Control of Microdata Sets, *Journal of Official Statistics*, 18, 2, 275–289, 2002.
- [3] Akimichi Takemura, Satoshi Kuriki, On the Equivalence of the Tube and Euler Characteristic Methods for the Distribution of the Maximum of Gaussian Fields over Piecewise Smooth Domains, *Annals of Applied Probability*, 12, 2, 768–796, 2002, 0.881.
- [4] Arata, K., Satoru Iwata, Makino, K., and Fujishige, S., Locating Sources to Meet Flow Demands in Undirected Networks, *Journal of Algorithms*, 42, 54–68, 2002, 0.488.
- [5] Ayumu Nagai, Hiroshi Imai, Proof for the Equivalence Between Some Best-First Algorithms and Depth-First Algorithms for AND/OR Trees, *IEICE Transactions on Information and Systems*, E85-D, 10, 1645–1653, 2002.
- [6] Daniel Fogaras, Kokichi Sugihara, Topology-oriented Construction of Line Arrangements, *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences* E85-A, 5, 930–937, 2002, 0.346.
- [7] Fleischer, L., Satoru Iwata, and McCormick, S. T., A Faster Capacity Scaling Algorithm for Minimum Cost Submodular Flow, *Mathematical Programming*, 92, 119–139, 2002, 1.12.
- [8] Fumiyasu Komaki, Bayesian Predictive Distribution with Right Invariant Priors, *Calcutta Statistical Association Bulletin*, 52, 171–179, 2002.
- [9] Heng Fan, Gregory Weihs, Keiji Matsumoto, Hiroshi Imai, Cloning of Symmetric-Level Photonic States in Physical Systems, *Physical Review A*, 66, 024307, 2002.
- [10] Heng Fan, Keiji Matsumoto, Xian-Bin Wang, Hiroshi Imai, Phase-Covariant Quantum Cloning, *Journal of Physics A: Mathematical and General*, 35, 7415–7423, 2002.
- [11] Hiro-o Saito, Shiro Matuura, Tomomi Matsui, A Linear Relaxation for Hub Network Design Problems, *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, E85-A, 1000–1005, 2002.
- [12] Hiroshi Imai, Tomonari Masada, Fumihiko Takeuchi, Keiko Imai, Enumerating Triangulations in General Dimensions, *International Journal of Computational Geometry and Applications*, 12, 6, 455–480, 2002.
- [13] Hisamoto Hiyoshi, Kokichi Sugihara, Improving Continuity of Voronoi-based Interpolation over Delaunay Spheres, *Computational Geometry: Theory and Applications*, 22, 167–183, 2002, 0.59.
- [14] John Anthony Rose, Russell Jerry Deaton, Masami Hagiya, Akira Suyama, An Equilibrium Analysis of the Efficiency of an Autonomous Molecular Computer, *Physical Review E*, 65, 2-1, 021910, 1–13, 2002.
- [15] John Anthony Rose, Russell Jerry Deaton, Masami Hagiya, Akira Suyama, A DNA-based in vitro Genetic Program, *Journal of Biological Physics*, 28, 493–498, 2002.
- [16] Jumpei Niwa, Keiji Matsumoto, Hiroshi Imai, General-Purpose Parallel Simulator for Quantum Computing, *Physical Review A*, 66, 062317, 2002.
- [17] Kei Kobayashi, Kokichi Sugihara, Crystal Voronoi Diagram and Its Applications, *Future Generation Computer Systems*, 18, 681–692, 2002, 0.
- [18] Koji Tsumura, Kitamura, M., Structural Analysis of Robust Control Systems, *IEEE Transactions on Automatic Control*, 47, 1, 125–132, 2002.
- [19] Kokichi Sugihara, Laguerre Voronoi Diagram on the Sphere, *Journal for Geometry and Graphics*, 6, 1, 69–81, 2002.
- [20] Masami Hagiya, John Anthony Rose, Ken Komiya, Kensaku Sakamoto, Complexity analysis of the SAT engine:

- DNA algorithms as probabilistic algorithms, *Theoretical Computer Science*, 287, 59–71, 2002.
- [21] Masashi Kiyomi, Tomomi Matsui, Integer Programming Based Algorithms for Peg Solitaire Problems, *Lecture Notes in Computer Science*, 2063, 229–240, 2002.
- [22] Mitugu Iwamoto, Hirosuke Yamamoto, The Optimal n-out-of-n Visual Secret Sharing Scheme for Gray-scale Images, *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, E85.A, 10, 2238–2247, 2002, 0.346.
- [23] Ryuhei Miyashiro, Tomomi Matsui, Notes on Equitable Round-Robin Tournaments, *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, E85-A, 5, 1006–1010, 2002, 0.336.
- [24] Satoko Moriguchi, Kazuo Murota, Akiyoshi Shioura, Scaling Algorithms for M-convex Function Minimization, *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, E85-A, 5, 922–929, 2002, 0.346.
- [25] Satoru Fujishige, Satoru Iwata, A Descent Method for Submodular Function Minimization, *Mathematical Programming*, 92, 387–390, 2002, 1.12.
- [26] Satoru Iwata, On Matroid Intersection Adjacency, *Discrete Mathematics*, 242, 277–281, 2002, 0.31.
- [27] Satoru Iwata, A Fully Combinatorial Algorithm for Submodular Function Minimization, *Journal of Combinatorial Theory, Series B*, 84, 203–212, 2002, 0.514.
- [28] Satoshi Kuriki, Akimichi Takemura, Application of Tube Formula to Distributional Problems in Multiway Layouts, *Applied Stochastic Models in Business and Industry*, 18, 245–257, 2002, 0.228.
- [29] Shu Yamada, Tomomi Matsui, Optimality of Mixed Level Supersaturated Designs, *Journal of Statistical Planning and Inference*, 104, 459–469, 2002.
- [30] Takehiko Horita, Hiromichi Suetani, Singularities in the Fluctuation of On-Off Intermittency, *Physical Review E*, 65, 056217, 1–12, 2002, 2.397.
- [31] Takeshi Kanda, Kokichi Sugihara, Comparison of Various Trees for Nearest-point Search with/without the Voronoi diagram, *Information Processing Letters*, 84, 1, 17–22, 2002, 0.288.
- [32] Tomohiro Yamasaki, Hirotada Kobayashi, Yuuki Tokunaga, Hiroshi Imai, One-Way Probabilistic Reversible and Quantum One-Counter Automata, *Theoretical Computer Science*, 289, 2, 963–976, 2002.
- [33] Toru Asai, Shinji Hara, Some Conditions Which Make the Constantly Scaled H^∞ Control Synthesis Problems Convex, *International Journal of Robust and Nonlinear Control*, 12, 21–39, 2002.
- [34] Yasunori Okabe, Masaya Matsuura, Maciej Klimek, On a Method for Detecting Certain Signs of Stock Market Crashes by Non-Linear Stationarity Tests, *International Journal of Pure and Applied Mathematics*, 3, 4, 443–484, 2002.
- [35] Yuji Shinohara, Takashi Kanamaru, Hideyuki Suzuki, Takehiko Horita, Kazuyuki Aihara, Array-Enhanced Coherence Resonance and Forced Dynamics in Coupled FitzHugh-Nagumo Neurons with Noise, *Physical Review E*, 65, 051906, 1–7, 2002, 2.397.

1–2. 国内誌掲載論文

- [1] Isao Sasano, Zhenjiang Hu, Masato Takeichi, Mizuhito Ogawa, Derivation of Linear Algorithm for Mining Optimized Gain Association Rules, *コンピュータソフトウェア*, 19, 4, 39–44, 2002.
- [2] Supachai Vorapojpisut, 原辰次, 切替えと状態ジャンプを持つハイブリッドシステムに対する Well-Posedness 解析, *システム制御情報学会論文誌*, 15, 5, 223–231, 2002.
- [3] 伊藤隆, 田中哲朗, 胡 振江, 武市 正人, しりとりゲームの数理的解析, *情報処理学会論文誌*, 43, 10, 3012–3020, 2002.
- [4] 岡部靖憲, 時系列解析における揺動散逸原理と実験数学, *日本評論社*, 362, 2002, Tokyo, Japan.
- [5] 岡部靖憲, 確率・統計, 応用数学基礎講座 6, 朝倉書店, 273, 2002, Tokyo, Japan.
- [6] 岡部靖憲, 数理工学への誘い, 第 12 章 時系列解析と揺動散逸原理 担当, 東京大学工学部計数工学科数理情報工学コース編, 日本評論社, 175, 2002, Tokyo, Japan.
- [7] 茅野貢, 津村幸治, 制御を考慮したモデル推定・選択問題における数値実験と考察, *計測自動制御学会論文集*, 38, 6, 537–542, 2002.
- [8] 岩谷靖, 石川将人, 原辰次, 相補性システム表現を持つフィードバック制御系—well-posedness 解析と非ホノロミック系の切替制御, *システム制御情報学会論文誌*, 15, 5, 238–245, 2002.
- [9] 今井浩, 量子情報処理パラダイム: 1 量子計算の基礎, オペレーションズ・リサーチ, 47, 4, 251–256, 2002, 解説.
- [10] 今井浩, 量子情報処理パラダイム: 5 量子計算と最適化, オペレーションズ・リサーチ, 47, 8, 2002, 解説.
- [11] 今井浩, 松本啓史, 富田章久, 量子情報処理による新ムーアの法則--- 量子ビット並列による高速化 ---, *情報処理*, 43, 11, 1204–1209, 2002, 解説.
- [12] 坂井秀行, 杉原厚吉, 図形の中心軸の安定した生成法, *電子情報通信学会論文誌*, J85-D-II, 11, 1637–1644, 2002.
- [13] 山本博資, データ圧縮における最新アルゴリズム[1] 一無ひずみデータ圧縮アルゴリズムの変遷一, *電子情報通信学会誌*, 86, 2, 120–126, 2003, 2002, 解説論文.

- [14] 森山園子, 単体的複体の shellability 判定, 東北大学大学院情報科学研究科学術振興ワークショップ「離散システムとアルゴリズム」, 28, 2002.
- [15] 森山園子, \$h\\$-assignment から見た単体的複体の shelling 集合とその解析, 最適化の数理とアルゴリズム, 京都大学数理解析研究所講究録, 1297, 24–27, 2002.
- [16] 西郷浩, 美添泰人, 竹村彰通, 坂巻敏夫, 複数の項目をもつ標本調査のための最適配分, 日本統計学会誌, 32, 3, 303–314, 2002.
- [17] 長井歩, 今井浩, df-pn アルゴリズムの詰将棋を解くプログラムへの応用, 情報処理学会論文誌, 43, 6, 1769–1777, 2002, 情報処理学会論文授賞.
- [18] 堀田武彦, 数理工学への誘い, 第 6 章 カオスとコイン投げ 担当, 東京大学工学部計数工学科数理情報工学コース編, 日本評論社, 175, 2002, Tokyo, Japan.
- [19] 斎藤豊, 石川将人, 原辰次, 関卓史, 相補性システム表現に基づく跳躍システムの制御, システム制御情報学会論文誌, 15, 5, 270–277, 2002.

1–3. 国際会議発表

- [1] Akira Nishida, Yoshio Oyanagi, SSI: Development of Simulation Software Infrastructure, Eleventh SIAM Conference on Parallel Processing for Scientific Computing, 2003, 2002, San Francisco, USA, 2003/2/25, 2003/2/27, 口頭発表のみ.
- [2] Fumiyasu Komaki, Information Geometry of Statistical Prediction, Information Geometry and its Applications, 2002, Pescara, Italy, 2002/7/1, 2002/7/5, 口頭発表のみ.
- [3] Fumiyasu Komaki, Noninformative Priors for Bayesian Prediction, Proceedings of East Asian Symptoisum on Statistics, 137–146, 2002, Seoul, Korea, 2002/12/2, 2002/12/4, 口頭発表のみ.
- [4] Haiyan Zhao, Zhenjiang Hu, Masato Takeichi, A Compositional Framework for Mining Longest Ranges, 5th International Conference on Discovery Science (DS 2002), Lecture Notes in Computer Science, Springer Verlag, 2534, 406–413, 2002/11/24, 2002/11/26.
- [5] Hideyuki Suzuki, Kazuyuki Aihara, Shunji Ito, Complex Behavior of a Simple Partial Discharge Model, Proceedings of the Eighth International Symposium on Artificial Life and Robotics (AROB 8th '03), 577–580, 2003, 2002, Beppu, Oita, Japan, 2003/1/24, 2003/1/26.
- [6] Hiroaki Tanaka, Kazuyuki Aihara, Dimensional Analysis of the Hodgkin–Huxley Equations with Noise, Proceedings of the Eighth International Symposium on Artificial Life and Robotics (AROB 8th '03), 581–584, 2003, 2002, Beppu, Oita, Japan, 2003/1/24, 2003/1/26.
- [7] Hirokazu Anai, Shinji Hara, A Parameter Space Approach for Fixed-Order Robust Controller Synthesis by Symbolic Computation, IFAC World Congress, 2002, Barcelona Spain, 2002/7/21, 2002/7/26.
- [8] Hiroshi Kawaharada, Kokichi Sugihara, Mesh Data Compression Based on Star-shape Decomposition, ISM Symposium on Statistics, Combinatorics and Geometry, 8, 2003, 2002, Tokyo, Japan, 2003/3/20, 2003/3/22.
- [9] Jie Chen, Shinji Hara, Gang Chen, Best Tracking and Regulation Performance under Control Effort Constraint: Two-Parameter Controller Case, IFAC World Congress, 2002, Barcelona Spain, 2002/7/21, 2002/7/26.
- [10] Jie Chen, Shinji Hara, Li Qiu, Rick Middleton, Best Achievable Tracking Performance in Sampled-Data Control Systems, Proceedings of IEEE Conference on Decision and Control 2002, 3889–3894, 2002, Las Vegas USA, 2002/12/10, 2002/12/13.
- [11] Joon-Kyung Seong, Myung-Soo Kim, Kokichi Sugihara, The Minkowski Sum of Two Simple Surfaces Generated by Slope-monotone Closed Curves, Geometric Modeling and Processing—Theory and Applications, 33–42, 2002, Wako, Japan, 2002/7/10, 2002/7/12.
- [12] Jumpei Niwa, Keiji Matsumoto, Hiroshi Imai, General-Purpose Parallel Simulator for Quantum Computing, Proceedings of the 3rd International Conference on Unconventional Models of Computation (UMC'02), Lecture Notes in Computer Science, 2509, 230–251, 2002, Kobe, 2002/10/15, 2002/10/19.
- [13] Kazuo Murota, Introduction to Discrete Convex Analysis, The Second Japanese–Sino Optimization Meeting (JSOM 2002), 2002, 京都, 2002/9/25, 2002/9/27, 口頭発表のみ.
- [14] Kei Kobayashi, Fumiyasu Komaki, A Bayesian Feature Selection for Kernel Machines, Proceedings of East Asian Symptoisum on Statistics, 109–122, 2002, Seoul, Korea, 2002/12/2, 2002/12/4, 口頭発表のみ.
- [15] Kohei Murotani, Kokichi Sugihara, G¹ Surface Interpolation Using Gregory Patches over Irregular Meshes, NICOGRAPIH International 2002, 97–102, 2002, Tokyo, Japan, 2002/5/30.
- [16] Kohei Murotani, Kokichi Sugihara, G¹ Surface Interpolation for Irregularly Located Data, Geometric Modeling and Processing—Theory and Applications, 187–196, 2002, Wako, Japan, 2002/7/10, 2002/7/12.
- [17] Kohei Murotani, Kokichi Sugihara, Watermarking 3D Polygonal Meshes Using the Singular Spectrum Analysis, ISM Symposium on Statistics, Combinatorics and Geometry, 7, 2003, 2002, Tokyo, Japan, 2003/3/20, 2003/3/22.
- [18] Koichi Takahashi, Masami Hagiya, Searching for Mutual Exclusion Algorithms Using BDDs Progress in Discovery Science, (Setsuo Arikawa and Ayumi Shinohara Eds.), Lecture Notes in Artificial Intelligence, 2281, 1–18, 2002.

- [19] Koji Fukuda and Kazuyuki Aihara, Effectr of Threshold in Symbolic Dynamics of Chaotic Neuron Model, Proceedings of International Symposium on Nonlinear Theory and its Applications (NOLTA), 367–370, 2002, Xi'an, China, 2002/10/7, 2002/10/11.
- [20] Kokichi Sugihara, Invertible Minkowski Sum of Polygons, 10th International Conference on Discrete Geometry for Computer Imagery (Lecture Notes in Computer Science, 2301, Springer), 350–359, 2002, Bordeaux, France, 2002/4/3, 2002/4/5.
- [21] Kokichi Sugihara, Hyperfigures and Their Interpretations, 11th International Workshop on Theoretical Foundations of Computer Vision (Lecture Notes in Computer Science, 2616, Springer), 231–246, 2002, Dagstahl, Germany, 2002/4/7, 2002/4/12.
- [22] Lluís Ros, Kokichi Sugihara, Federico Thomas, Shape Representation Using Trihedral Mesh Projections, 10th International Conference on Discrete Geometry for Computer Imagery (Lecture Notes in Computer Science, 2301, Springer), 209–219, 2002, Bordeaux, France, 2002/4/3, 2002/4/5.
- [23] Masato Ishikawa, Shinji Hara, Switched Feedback Control for First-Order Symmetric Affine Systems via Time-State Control Form, Proceedings of American Control Conference 2002, 2516–2521, 2002, Anchorage USA, 2002/5/8, 2002/5/10.
- [24] Mitsuhiro Arimura, Hirosuke Yamamoto, Redundancy of the MTF Scheme for Stationary Ergodic Sources, Proceedings of 2002 IEEE International Symposium on Information Theory (IEEE ISIT 2002), 289, 2002, Lausanne, Switzerland, 2002/6/30, 2002/7/5.
- [25] Mitsuhiro Yamamoto, Jean-Marie Cottin, Masami Hagiya, Decidability of Safety Properties of Timed Multiset Rewriting, FTRTFT'02, Formal Techniques in Real-Time and Fault Tolerant Systems, 7th International Symposium, FTRTFT 2002, Co-sponsored by IFIP WG 2.2 Proceedings, Lecture Notes in Computer Science, Springer, 2469, 165–183, 2002, September.
- [26] Ryuhei Miyashiro, Hideya Iwasaki, Tomomi Matsui, Characterizing Feasible Pattern Sets with a Minimum Number of Breaks, The 5th International Conference on the Practice and Theory of Automated Timetabling (PATAT 2002), 311–313, 2002, Gent, Belgium, 2002/8/21, 2002/8/23.
- [27] Ryuhei Miyashiro, Tomomi Matsui, A Home–Away Table Feasibility Problem, The 2nd Japanese–Sino Optimization Meeting (JSOM 2002), 40, 2002, Kyoto, Japan, 2002/9/25, 2002/9/27.
- [28] Satoko Moriguchi, Kazuo Murota, Algorithms for Submodular Flows with an M-convex Function, The 3rd Hungarian–Japanese Symposium on Discrete Mathematics and Its Applications, 2003, 2002, 東京, 2003/1/21, 2003/1/24, 口頭発表のみ.
- [29] Satoru Iwata, A Faster Scaling Algorithm for Minimizing Submodular Functions The 9th International Conference on Integer Programming and Combinatorial Optimization (IPCO), 1–8, 2002/5/27, 2002/5/29.
- [30] Shinji Hara, Takayuki Kurata, Loop Shaping Procedure for Sampled-Data Servo Controller Synthesis, Proceedings of IEEE Conference on Decision and Control 2002, 2925–2926, 2002, Las Vegas USA, 2002/12/10, 2002/12/13.
- [31] Shinji Hara, Tetsuya Iwasaki, Fumihiro Shimizu, Finite Frequency Characterization of Easily Controllable Mechanical Systems under Control Effort Constraint, IFAC World Congress, 2002, Barcelona Spain, 2002/7/21, 2002/7/26.
- [32] Sonoko Moriyama, Ayumu Nagai and Hiroshi Imai, Fast and Space Efficient Algorithms For Deciding Shellability of Simplicial Complexes of Large Size Using h-assignmentsc, Proceedings of the 1st International Congress of Mathematical Software (ICMS 2002), A. M. Cohen, X.-S. Gao and N. Takayama, eds., World Scientific, 82–92, 2002, Beijing, China, 2002/8/17, 2002/8/19.
- [33] Takeshi Kanda and Kokichi Sugihara, Scale of Likeness to the Voronoi Diagram, ISM Symposium on Statistics and Discrete Geometry, 10, 2002, Tokyo, Japan, 2002/3/25, 2002/3/26.
- [34] Tomohiro Ogawa, On Quantum Hypothesis Testing and Large Deviation Principle 2003, 2002, Sendai, Japan, 2003/1/14, 2003/1/15, 口頭発表のみ.
- [35] Tomohiro Ogawa, Hiroshi Nagaoka, A New Proof of the Channel Coding Theorem via Hypothesis Testing in Quantum Information Theory, Proceedings of 2002 IEEE International Symposium on Information Theory (IEEE ISIT 2002), 73, 2002, Lausanne, Switzerland, 2002/6/30, 2002/7/5.
- [36] Tomohiro Yamasaki, Hirotada Kobayashi, Hiroshi Imai, Quantum versus Deterministic Counter Automata, Proceedings of the 8th Annual International Computing and Combinatorics Conference (COCOON 2002), Lecture Notes in Computer Science, 2387, 584–594, 2002, Singapore, 2002/8/15, 2002/8/17.
- [37] Tomohiro Yamasaki, Hirotada Kobayashi, Hiroshi Imai, Analysis of Absorbing Times of Quantum Walks, Proceedings of the 3rd International Conference on Unconventional Models of Computation (UMC'02), Lecture Notes in Computer Science, 2509, 315–329, 2002, Kobe, 2002/10/15, 2002/10/19.
- [38] Tomonari Sei, Fumiyasu Komaki, Geometrical Properties of Estimators for Small Diffusions, Proceedings of East Asian Sympoism on Statistics, 193–200, 2002, Seoul, Korea, 2002/12/2, 2002/12/4, 口頭発表のみ.
- [39] Wei-Ngan Chin, Zhenjiang Hu, Towards a Modular Program Derivation via Fusion and Tupling, The First ACM SIGPLAN Conference on Generators and Components (GCSE/SAIG 2002), Affiliated with (PLI 2002), Lecture Notes in Computer Science, Springer Verlag, 2487, 140–155, 2002/10/6, 2002/10/8.

- [40] Yasuaki Oishi, Hidenori Kimura, Model–Set Identification Based on Learning–Theoretic Inequalities, Proceedings of the 15th IFAC World Congress on Automatic Control, 2002, Barcelona, Spain, 2002/7/21, 2002/7/26.
- [41] Yoshihiro Morishita, Kazuyuki Aihara, Origins of Stochasticity in Gene Expression and Control of the Fluctuation, Proceedings of the Eighth International Symposium on Artificial Life and Robotics (AROB 8th '03), 593–596, 2003, 2002, Beppu, Oita, Japan, 2003/1/24, 2003/1/26.
- [42] Yuko Matsunaga, Hirosuke Yamamoto, A Coding Theorem for Lossy Data Compression by LDPC Codes, Proceedings of 2002 IEEE International Symposium on Information Theory (IEEE ISIT 2002), 461, 2002, Lausanne, Switzerland, 2002/6/30, 2002/7/5.
- [43] Zhenjiang Hu, Hideya Iwasaki, Masato Takeichi, An Accumulative Parallel Skeleton for All, 11th European Symposium on Programming (ESOP 2002), Lecture Notes in Computer Science, Springer Verlag, 2305, 83–97, 2002/4/8, 2002/4/10.
- [44] Zhijie Wang, Kazuyuki Aihara, Human-like Decision Making in an Autoassociative Neural Network with Dynamic Synapses, Proceedings of the Eighth International Symposium on Artificial Life and Robotics (AROB 8th '03), 589–592, 2003, 2002, Beppu, Oita, Japan, 2003/1/24, 2003/1/26.

1–4. 国内会議発表

- [1] 石井邦憲, 山本博資, ポトムアップアルゴリズムに基づく逐次MPM符号, 第25回情報理論とその応用シンポジウム (SITA2002)予稿集, 147–150, 2002, 伊香保, 群馬, 2002/12/10, 2002/12/13.
- [2] 岩本貢, 山本博資, 一般アクセス構造に対する非理想的ランプ秘密分散法, 第25回情報理論とその応用シンポジウム (SITA2002)予稿集, 227–230, 2002, 伊香保, 群馬, 2002/12/10, 2002/12/13.
- [3] 川原田寛, 杉原厚吉, 細分割曲面のフィッティングによるメッシュデータの圧縮, 情報処理学会 グラフィックスとCAD研究会, 2002, 豊橋市, 愛知県, 2002/8/8, 2002/8/9.
- [4] 小林景, 駒木文保, 情報量規準を用いたSupport Vector Machine のパラメータ及びkernel選択, 応用統計学会第24回シンポジウム, 15–20, 2002, 京都市, 京都府, 2002/5/25, 2002/5/25, 口頭発表のみ.
- [5] 小林景, 駒木文保, 多値判別の統計的学習理論, 2002年度統計関連学会連合大会, 1–2, 2002, 日野市, 東京都, 2002/9/7, 2002/9/10, 口頭発表のみ.
- [6] 小林景, 駒木文保, Bayes統計モデルとしてのSupport Vector Machine, 2002年度統計関連学会連合大会, 3–4, 2002, 日野市, 東京都, 2002/9/7, 2002/9/10, 口頭発表のみ.
- [7] 小林景, 駒木文保, 新しい多値判別 Support Vector Machine と統計的学習理論, 日本神経回路学会第12回全国大会, 77, 2002, 鳥取市, 鳥取県, 2002/9/19, 2002/9/21, 口頭発表のみ.
- [8] 駒木文保, 2次元ウェイシャートモデルの幾何とベイズ予測, 2002年度統計関連学会連合大会, 336–337, 2002, 日野市, 東京都, 2002/9/7, 2002/9/10, 口頭発表のみ.
- [9] 坂井秀行, 山本博資, 木構造を用いたグループ鍵更新方式に対する性能解析, 電子情報通信学会技術報告, IT2002-61, ISEC2002-119, 79–84, 2003, 2002, 日立, 茨城, 2003/3/18, 2003/3/19.
- [10] 清智也, 駒木文保, 微小拡散モデルにおける推定量の幾何学的性質, 2002年度統計関連学会連合大会, 128–129, 2002, 日野市, 東京都, 2002/9/7, 2002/9/10, 口頭発表のみ.
- [11] 丹下吉雄, 津村幸治, 時変制御器の構造と制御性能, 計測自動制御学会第31回制御理論シンポジウム, 305–308, 2002/10/28, 2002/10/30, 計測自動制御学会第31回制御理論シンポジウム資料.
- [12] 西田晃, 額田彰, 小柳義夫, コモディティ分散共有メモリIBM x440の性能評価, Performance Evaluation of Commodity Distributed Shared Memory IBM x440, 情報処理学会第93回ハイパフォーマンスコンピューティング研究会(HOKKE2003), 2003-HPC, 93, 31–36, 2003, 2002, 札幌市, 北海道, 2003/3/10, 2003/3/12.
- [13] 番信宏, 山本博資, 幾何分布およびラプラス分布のための算術符号化アルゴリズム, 第25回情報理論とその応用シンポジウム (SITA2002)予稿集, 143–146, 2002, 伊香保, 群馬, 2002/12/10, 2002/12/13.
- [14] 伏木忠義, 駒木文保, 合原一幸, Parametric bootstrapを用いた予測, 2002年度統計関連学会連合大会, 455–456, 2002, 日野市, 東京都, 2002/9/7, 2002/9/10, 口頭発表のみ.
- [15] 山村聰, 山本博資, SNR推定値を用いたターボ符号ARQ方式, 電子情報通信学会技術報告, IT2002-75, 161–166, 2003, 2002, 日立, 茨城, 2003/3/18, 2003/3/19.
- [16] 額田彰, 西田晃, 小柳義夫, 分散共有メモリを用いた並列FFTとその最適化, Parallel Implementation of FFT Algorithm on Distributed Shared Memory Architecture and its Optimization., 2003年ハイパフォーマンスコンピューティングと計算科学シンポジウム(HPCS2003), 63–70, 2003, 2002, 江東区, 東京都, 2003/1/20, 2003/1/21.
- [17] 森山園子, \$h\$-assignmentを用いた逆探索による単体的複体のshellability判定, 2002年度応用数学合同研究集会 55–56, 2002, 龍谷大学.
- [18] 森山園子, 単体的複体のshellability判定, 東北大学大学院情報科学研究科学術振興ワークショップ「離散システムとアルゴリズム」, 28, 2002, 仙台.
- [19] 森山園子, h-assignmentを用いた逆探索による単体的複体のshellability判定, 2002年度応用数学合同研究集会 55–56, 2002, 草津.
- [20] 森山園子, h-assignmentから見た単体的複体のshelling集合とその解析, 京都大学「アルゴリズム・計算量・

- 数理計画・OR・etc.」合同研究会(KIDS), 2002, 京都.
- [21] 藤井昭宏, 西田晃, 小柳義夫, 領域分割による並列 AMG アルゴリズム, Parallel AMG Algorithm by Domain Decomposition., 2003 年ハイパフォーマンスコンピューティングと計算科学シンポジウム(HPCS2003), 83–90, 2003, 2002, 江東区, 東京都, 2003/1/20, 2003/1/21.
- [22] 八森正泰, 森山園子, 単体的複体のシェラビリティーの多面体的記述, 2002 年度応用数学合同研究集会 53–54, 2002, 龍谷大学.
- [23] 八森正泰, 森山園子, 単体的複体のシェラビリティーの多面体的記述, 2002 年度応用数学合同研究集会 53–54, 2002, 草津.

1-5. 招待講演

- [1] 合原一幸, 複雑系と生命システム, 『複雑系マネジメント』シンポジウム—コンピュータで結ばれた建築生産集団における自律的な管理組織の形成—, 2003, 2002, 早稲田大学・総合学術情報センター国際会議場, 2003/3/10, 招待講演, 口頭発表のみ.
- [2] Yasunori Okabe, Masaya Matsuura, On a Non-Linear Filtering Problem for Multi-Dimensional Stochastic Processes, The Fourth Hakata Symposium on Theories and Statistical Methods for Chaos and Non-linear Time Series Analysis 2002, Hakata, Fukuoka, 2002/10/22.
- [3] 小柳義夫, 情報科学から見た物理学, 国際高等研究所研究会, 2003, 2002, 京都市, 京都府, 2003/3/1, 2003/3/1.
- [4] 小柳義夫, これからの HPC, 統計数理研究所講演, 2003, 2002, 港区, 東京都, 2003/3/13, 2003/3/13.
- [5] Zhenjiang Hu, Optimization of Skeletal Parallel Programs, 3rd International Workshop on Constructive Methods for Parallel Programming (CMPP 2002) 2002, 2003/7/10.
- [6] Zhenjiang Hu, Tomonari Takahashi, Hideya Iwasaki, Masato Takeichi, Segmented Diffusion Theorem (paper), 2002 IEEE International Conference on Systems, Man and Cybernetics (SMC 02) IEEE Press 2002, 2003/10/6, 2003/10/9.
- [7] Kokichi Sugihara, Akira Fujimura, Tetsushi Nishida, Evaluation of Sport Teamwork Based on Voronoi Diagrams, ISM Symposium on Statistics, Combinatorics and Geometry, p.10, 2003, 2002, Tokyo, Japan, 2003/3/20, 2003/3/22.
- [8] Akimichi Takemura, Evaluation of Per-record Identification Risk by Additive Modeling of Interaction for Contingency Table Cell Probabilities, IASS Proceedings – SEOUL 2001, International Association of Survey Statisticians, The International Statistical Institute 220–235, 2002, Seoul, Korea, 2001/8/22, 2001/8/29.
- [9] Akimichi Takemura, Satoshi Kuriki, Equivalence of the Tube and Euler Characteristic Methods for Gaussian Fields over Piecewise Smooth Domains, The 4th International Symposium on Probability and its Applications, 2002, Banff, Canada, 2002/7/31, 2002/8/2 口頭発表のみ.
- [10] 原辰次, 制御工学の目指すもの 2002, 長岡市 新潟県, 2002/6/14, 2002/6/14, 長岡技術科学大学技術開発教育研究振興会講演会
- [11] 原辰次, 制御対象/制御器の統合化設計 2002, 東広島市 広島県, 2002/11/15, 2002/11/15, 日本機械学会第 87 回講習会
- [12] 原辰次, 制御しやすい制御対象の特徴付け:H2 制御性能限界の解析解 2002, 名古屋市 愛知県, 2002/11/18, 2002/11/18, 第 5 回制御理論ワーキングセミナー
- [13] 原辰次, 制御理論の目指すところ 2003, 2002, 総社市 岡山県, 2003/3/20, 2003/3/20, 岡山県立大学講演
- [14] Masaya Matsuura, Yasunori Okabe, The Theory of KM2O-Langevin Equations and its Application to Time Series Analysis for Low-Frequency Earthquakes, The Fourth Hakata Symposium on Theories and Statistical Methods for Chaos and Non-Linear Time Series Analysis 2002, Hakata, Fukuoka, 2002/10/22.
- [15] 森山園子, h-assignment から見た単体的複体の shelling 集合とその解析, 最適化の数理とアルゴリズム, 京都大学数理解析研究所講究録, 1297, 24–27, 2002, 京都.

2. 受賞

- [1] 合原一幸: AROB(Artificial Life and Robotics)Academic Achievement Award を生命情報システムのモデリングに関する研究の貢献に対して 2003 年 1 月に受賞(2002)
- [2] 岩田覚: 日本 IBM 科学賞 「離散最適化における劣モジュラ関数最小化アルゴリズムの開発」2002 年 11 月 25 日(2002)
- [3] 原辰次: システム制御情報学会論文賞: 森耕平・原辰次、「二次最小化問題の超複素数への非凸緩和一性質とそれに基づく探索アルゴリズム」平成 14 年 5 月(2002)
- [4] 原辰次: 船井情報科学振興賞: 小島政和・原辰次他 6 名、「数理計画(最適化)問題に対する主双対内点法に対する業績」平成 15 年 3 月(2002)
- [5] 原辰次: 計測自動制御学会フェロー: 原辰次、「制御理論に関し多くの研究成果を挙げその発展に寄与すると

- ともに理解などを通して学会の発展に貢献」平成 15 年 8 月
- [6] 長井歩, 今井浩:df-pn アルゴリズムの詰将棋を解くプログラムへの応用情報処理学会論文賞, 2003. 情報処理学会論文誌, Vol. 43, No. 6, pp. 1769–1777(2002)
- [7] 横山哲朗:日本ソフトウェア科学会 平成 15 年度高橋奨励賞

3. 特許

なし

4. 書籍

- [1] Kiyohiro Ikeda, Kazuo Murota, Imperfect Bifurcation in Structures and Materials --- Engineering Use of Group-Theoretic Bifurcation Theory, Applied Mathematical Sciences 149, Springer-Verlag, 411, 2002, New York, U.S.A.
- [2] Kokichi Sugihara, Chapter 18 Voronoi Diagrams, Handbook of Computer Aided Geometric Design (North-Holland), 429–450, 2002.

5. 論文誌エディター

- [1] 合原一幸:Neural Networks, 2002~2003, Editor
- [2] 合原一幸:Neural Processing Letters, 2002~2003, Editor
- [3] 合原一幸:International Journal of Chaos Theory and Applications, 2002~2003, Editor
- [4] 合原一幸:Neural Computing & Applications, 2002~2003, Regional Editor
- [5] 合原一幸:Artificial Life and Robotics, 2002~2003, Editor
- [6] 合原一幸:Journal of Nonlinear Science, 2002~2003, Editor
- [7] 合原一幸:Chaos & Complexity Letters, 2002~2003, Editor
- [8] 岩田覚:Operations Research Letters, 2001--2005, Associate Editor.
- [9] 今井浩:Parallel Processing Letters, 1991--Current, Editor
- [10] 今井浩:Computational Geometry: Theory and Applications, 1990--Current, Associate Editor
- [11] 今井浩:International Journal of Computational Geometry and Applications, 1993--Current, Associate Editor
- [12] 今井浩:Journal of Combinatorial Optimization, 2000-current, Editor
- [13] 小柳義夫:平成元年1月～、Editorial Board of International Journal of Supercomputer Applications (Sage Publications) 編集委員
- [14] 小柳義夫:平成元年～Editor of Parallel Computing (North Holland, Pub. Co.)、平成4年4月～平成8年3月 Asian Regional Editor 平成13年4月～Advisory Board 編集諮問委員
- [15] 小柳義夫:平成5年11月～平成16年3月 Specialist Editorial Board of Computer Physics Communications (North Holland, Pub. Co)編集委員
- [16] 駒木文保:Journal of Japan Statistical Association 2000 年 10 月～2004 年 9 月 編集委員
- [17] 須田礼仁:情報処理学会ハイパフォーマンスコンピューティングシステム (HPS) およびコンピューティングシステム (ACS) 編集委員 2002.1 ～ 現在(須田礼仁)(注:2002 年の途中で論文誌の名前が HPS から ACS に変わったものです。)
- [18] 杉原厚吉:Pattern Recognition, 1990--現在, Editorial Board Member
- [19] 杉原厚吉:Computer-Aided Design, 1999--現在, Editorial Board Member
- [20] 竹村彰通:Journal of Korean Statistical Society, 2002- Associate Editor
- [21] 萩谷昌己:Natural Computing, Kluwer Academic Publishers. 2002-, editor
- [22] 杉原厚吉:Japan Journal of Industrial and Applied Mathematics (JJIAM), 1995--現在, Area Editor

6. 論文誌特集号のゲストエディター

- [1] 杉原厚吉:International Journal of Computational Geometry & Applications Special Issue: Selected Papers from the Second International Workshop on Computational Geometry and Applications, Amsterdam, Vol.13, No.4, April 2002.

7. 会議の主催

- [1] 今井浩:ERATO Quantum Information Science Workshop 2002 University of Tokyo, Conference Chair September 5–9, 2002
- [2] 胡振江:Asian Symposium on Programming Languages and Systems, Shanghai, November 29 – December 1, 2002. プログラム委員長(胡振江)

- [3] 胡振江:6th International Symposium on Functional and Logic Programming, Aizu, Japan, September 15–17, 2002. プログラム委員長
- [4] 萩谷昌己:Eighth International Meeting on DNA Based Computers, Hokkaido University, Japan, June 10–13, 2002
- [5] 萩谷昌己:Eighth International Meeting on DNA Based Computers, Hokkaido University, Japan, June 10–13, 2002 (PC Chair). プログラム委員長
- [6] 室田一雄;応用離散数学シンポジウム＝ロバスト最適化に向けて Symposium on Applied Discrete Mathematics: Towards Robust Optimization 2003 年 1 月 21 日～24 日、東京大学

8. プログラム委員

- [1] 今井浩:ERATO Quantum Information Science Workshop 2002 University of Tokyo, Program Committee Chair, September 5–9, 2002
- [2] 小柳義夫:International Parallel and Distributed Processing Symposium meeting in 2002 in Fort Lauderdale (USA) on Monday, April 15, 2002 – Friday, April 19, 2002. プログラム委員
- [3] 篠一彦:第一回ディベンダブルソフトウェアワークショップ、東京大学, 東京, 2003 年 2 月 23 日 – 24 日. プログラム委員
- [4] 胡振江:6th International Symposium on Functional and Logic Programming, Aizu, Japan, September 15–17, 2002. プログラム委員
- [5] 胡振江:6th International Conference on Mathematics of Program Construction, Dagstuhl, Germany, June 8–10, 2002. プログラム委員
- [6] 胡振江:ACM SIGPLAN Workshop on Algorithmic of advanced Programming Pittsburgh, USA, October 7, 2002. プログラム委員
- [7] 杉原厚吉:Geometric Modeling and Processing 2002 (GMP2002), Tokyo, July 10–12, 2002, プログラム委員
- [8] 杉原厚吉:Second International Conference on Computational Science, Amsterdam, April, 21–24, 2002, 運営委員
- [9] 杉原厚吉:Japan Conference on Discrete and Computational Geometry 2002, Tokai University, Yoyogi Campus, Tokyo, November 22–24, 2002, 組織委員
- [10] 須田礼仁:情報処理学会 2003 年 ハイパフォーマンスコンピューティングと計算科学シンポジウム HPCS 2003、日本科学未来館、2003 年 1 月 20 日～21 日、プログラム副委員長
- [11] 萩谷昌己:ASIAN Symposium on Partial Evaluation and Semantics-Based Program Manipulation, ACM SIGPLAN ASIA-PEPM '02, Aizu, Japan, September 12–14, 2002. プログラム委員
- [12] 萩谷昌己:15th IEEE Computer Security Foundations Workshop, Keltic Lodge, Cape Breton, Nova Scotia, Canada, June 24–26, 2002. プログラム委員

9. その他

- ・岩本貢:学振のPD採用、電気通信大学大学院の助手(韓・長岡 研究室)に採用(指導教官:山本博資)
- ・田中健一郎:学振のDC1採用決定(指導教官:室田一雄)
- ・森田賢治:学振のDC2 に採用(指導教官:合原一幸)