

津田 宏治 (Koji Tsuda)

論文一覧

書籍

1. B. Schoelkopf, K. Tsuda, and J.P. Vert, editors. *Kernel Methods in Computational Biology*. MIT Press, 2004.
2. 麻生 英樹, 津田 宏治, 村田 昇: パターン認識と学習の統計学—新しい概念と手法. 岩波書店, 2003.

査読つき論文

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査読つき国際会議論文

重要な国際会議は(***)で示しています。ここでは [Computer Science Conference Ranking](#) において、Top-tier に分類されているものを重要と定義しています。

1. Y. Kawahara, K. Nagano, K. Tsuda and J. Bilmes: Submodularity Cuts and Applications, *Advances in Neural Information Processing Systems 22*, 2010, to appear. (***)
2. E. Georgii, K. Tsuda and B. Schoelkopf: Multi-Way Set Enumeration in Real-Valued Tensors, *Proceedings of the KDD 2009 Workshop on Data Mining using Matrices and Tensors (DMMT09)*, pages 32-41, 2009
3. S. Chiappa, H. Saigo and K. Tsuda: A Bayesian Approach to Graph Regression with Relevant Subgraph Selection. In *Proceedings of 2009 SIAM International Conference on Data Mining (SDM)*, pages 295-304, 2009.
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8. H. Saigo and K. Tsuda. Iterative Subgraph Mining for Principal Component Analysis. In *Proceedings of the 8th IEEE International Conference on Data Mining (ICDM2008)*, pages 1007-1012, 2008 (***)
9. H. Saigo, N. Kraemer, and K. Tsuda. Partial least squares regression for graph mining. In *Proceedings of the 14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD2008)*, pages 578-586, 2008. (***)
10. K. Tsuda and K. Kurihara. Graph mining with variational Dirichlet process mixture models. In *2008 SIAM Conference on Data Mining*, pages 432-442, 2008.
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14. S. Nowozin, K. Tsuda, T. Uno, T. Kudo, and G. Bakir. Weighted substructure mining for image

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解説記事

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特許

- 特開 2007 - 226700. RNA 配列情報処理装置、浜田道昭、津田宏治、金大真、浅井潔

学会活動

国際会議等委員

Area Chair

1. Neural Information Processing Systems (NIPS), 2005-2006
2. Asian Conference on Machine Learning (ACML), 2009

Program committee member

1. International Conference on Machine Learning (2007,2009)
2. International Conference on Genome Informatics (2004,2005,2007,2008,2009)
3. IEEE International Conference on Bioinformatics and BioEngineering (2009)
4. International Conference on Artificial Intelligence and Statistics (2009)
5. International Symposium on Intelligent Data Analysis (2009)
6. International Workshop on Structural and Syntactic Pattern Recognition (2006,2008)
7. International Workshop on Machine Learning in Systems Biology (2007,2008)
8. International Workshop on Algorithms for Large-Scale Information Processing (2008)
9. International Workshop on Mining and Learning with Graphs (2008,2009)
10. 情報論的学習理論ワークショップ (2002,2005)

ワークショップ開催委員 (Organizer)

1. 2008 年 12 月: NIPS Workshop Structured Input-Structured Output, Whistler, Canada

2. 2007年12月: NIPS Workshop on Machine Learning in Computational Biology, Whistler, Canada
3. 2007年8月: Learning and Mining with Graphs 2007, Florence, Italy
4. 2006年12月: NIPS Workshop on New Problems and Methods in Computational Biology, Whistler, Canada
5. 2005年12月: NIPS Workshop on Computational Biology and the Analysis of Heterogeneous Data, Whistler, Canada
6. 2005年11月: Session Organizer, 情報論的学習理論ワークショップ (IBIS2005), 東京
7. 2004年12月: NIPS Workshop on New Problems and Methods in Computational Biology, Whistler, Canada
8. 2003年12月: NIPS workshop "New Problems and Methods in Bioinformatics", Whistler, Canada
9. 2003年4月: Workshop "Kernels Methods in Computational Biology", Berlin, Germany

雑誌編集者

1. Associate Editor, *Neurocomputing*, 2007
2. Guest co-editor, *Journal of Machine Learning Research*, Special Issue "Mining and Learning with Graphs and Relations", 2008
3. Guest co-editor, *BMC Bioinformatics*, Supplement Issue "NIPS workshop on problems and methods in computational biology", 7, Suppl. 1, 2006
4. Guest co-editor, *BMC Bioinformatics*, Supplement Issue "NIPS workshop on problems and methods in computational biology", 8, Suppl. 10, 2007
5. Guest co-editor, *Annals of the Institute of Statistical Mathematics*, "The NTOC special section", Vol 55, No 2, June 2003.

査読

Bioinformatics, PLoS Computational Biology, Molecular Systems Biology, BMC Bioinformatics, Journal of Chemical Information and Modeling, Journal of Machine Learning Research, Neural Computation, International Journal of Computer Vision, IEEE Transaction on PAMI, IEEE Transaction on Neural Networks, Pattern Recognition Letters, Pattern Recognitionなど

所属学会

電子情報通信学会、情報処理学会、ISCB (International Society of Computational Biology)

受賞

1. 2006年8月: Best Paper Award in Mining and Learning with Graphs Workshop (MLG 2006), Berlin, Germany, with H. Saigo and T. Kadowaki,
2. 2002年12月: Best Paper Award in 13th International Conference on Genome Informatics(GIW 2002), Tokyo, Japan, with T. Kin and K. Asai.

競争的研究資金

代表

1. 科学研究費補助金 若手研究 A 21680025 「In-silico 創薬のための機械学習を用いた生理活性配座予測」, 1530 万円, H21 年 4 月-H25 年 3 月
2. EU Network of Excellence PASCAL, “Funding for Mining and Learning with Graphs Workshop 2007”, 8500 Euro, 平成 19 年 8 月

分担

1. 独立行政法人科学技術振興機構 バイオインフォマティクス推進センター, 創造的な生物・情報知識融合型の研究開発, 「生命科学上の非構造化データの統合マイニング」, 6100 万円, H19 年 10 月 - H22 年 9 月, 研究代表者: 馬見塚 拓

招待講演

学会、研究会

1. H13 年 10 月: 信学会 NC 研究会, 「Fisher Kernel とその周辺」
2. H14 年 9 月: 第 5 回情報理論的学習理論ワークショップ(IBIS2002), 「カーネル設計の技術」、富士吉田市
3. H14 年 12 月: NIPS*02 workshop on unreal data: principles of modeling nonvectorial data, “Marginalized kernels for biological sequences”, Whistler, Canada
4. H15 年 7 月: Workshop Machine Learning and Computational Biology, “Kernel matrix completion: theory and applications to biological data”, Laval, France
5. H16 年 12 月: NIPS*04 workshop learning with structured outputs, “Information geometry of diffusion kernels”, Whistler, Canada
6. H17 年 3 月: Workshop on Ensemble Methods 2005, “Matrix Exponential Updates for On-line learning and Bregman projection”, Tuebingen, Germany
7. H17 年 3 月: International Symposium on the Art of Statistical Science, “Learning kernels from biological networks by maximizing entropy”, 統計数理研究所
8. H17 年 8 月: DIMACS Workshop on Machine Learning Approaches for Understanding Gene Regulation, “Selective integration of multiple biological data for supervised inference of protein and gene networks”, Rutgers University
9. H17 年 12 月: Japanese-American Frontiers of Science (JAFoS), “Statistical Analysis of Structured Data in Computational Biology”, 神奈川県葉山町
10. H18 年 6 月: 3rd International Symposium on Networks in Bioinformatics, “Selective integration of multiple biological data for supervised network inference”, Amsterdam, Netherlands
11. H18 年 9 月: Probabilistic modeling and machine learning in structural and systems biology, “Graph mining applications to machine learning problems”, Tuusula, Finland
12. H18 年 9 月: International Workshop on Data Mining and Statistical Science, “Graph Mining applications to machine learning problems”, 札幌
13. H18 年 10 月: 13th International Conference on Neural Information Processing (ICONIP), “Kernel methods for structured data in computational biology (Tutorial)”, Hong Kong, China
14. H20 年 2 月: 4th Workshop on Ensemble Methods, “Substructure Boosting Methods for Graphs, Sequences and Itemsets”, Berlin, Germany
15. H20 年 9 月: International Workshop on Statistical-Mechanical Informatics 2008 (IW-SMI 2008), “Machine Learning with Quantum Relative Entropy”, 仙台
16. H20 年 9 月: 3rd International Workshop on Data Mining and Statistical Science, “New Directions in Statistical Graph Mining”, 東工大
17. H21 年 9 月: 2009 年度統計関連学会連合大会, 「タンパク質相互作用ネットワークからの密

結合モジュールの全列挙」, 京都

18. H21年9月: International Workshop on Statistical-Mechanical Informatics 2009 (IW-SMI 2009),
“Dense Module Enumeration in Biological Networks”, 京都

セミナー

UC Berkeley, UC Santa Cruz, Columbia University, University of Washington, University of Minnesota, Max Planck Institute for Informatics, Max Planck Institute of Psychiatry, Max Planck Institute for Molecular Genetics, TU Berlin, Fraunhofer FIRST, Mines Paritech, Genopole (France), Australian National University, Hong Kong University of Science and Technology, 東京大学、京都大学、九州大学、東京工業大学、奈良先端科学技術大学院大学、統計数理研究所、IBM Research(東京) など

補足

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