Curriculum Vitae

Mitsunori Ogihara

Sep 1, 2019

CONTACT INFORMATION

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CURRENT ACADEMIC APPOINTMENT

Professor of Computer Science, College of Arts and Sciences
University of Miami

Professor of Electrical and Computer Engineering, College of Engineering
University of Miami

Professor of Music Media and Industry, Frost School of Music
University of Miami

Director of Data Mining, Center for Computational Science
University of Miami

Faculty Member, Interdepartmental PhD Program in Human Genetics and Genomics, Miller School of Medicine, University of Miami

Faculty Member, Center of Cognitive Neuroscience and Aging, Miller School of Medicine, University of Miami

RESEARCH INTERESTS

Data Mining, Bioinformatics, Music Information Retrieval, Computational Complexity Theory

PERSONAL

Born 6/6/63 in Kanagawa, Japan. Married with two daughters. Also known as Mitsunori Ogiwara.

EDUCATION

BS	Mar. 1987, Information Sciences, Tokyo Institute of Technology
MS	Mar. 1989, Information Sciences, Tokyo Institute of Technology Thesis: *A Method for Generating Cryptographically Strong Primes* Adviser: Professor Kojiro Kobayashi
PhD	Feb. 1993, Information Sciences, Tokyo Institute of Technology Thesis: *Studies of Counting Complexity Classes via Sets with Small Density* Adviser: Professor Kojiro Kobayashi

AWARDS

- University of Miami College of Arts and Sciences, Cooper Fellow, 2016 - 2019.
- Emerald Publishing, Most Influential Paper in 2015. "Mining library and university data to understand library use patterns." *Electronic Library,* 33(3):355-372, 2015.
- A. Lall, M. Ogihara, O. Spatscheck, J. Wang, J. Xu, and C. Zhao. "Estimating Origin-destination Flow Entropy", US Patent Number 7,773,538. Awarded Aug. 10, 2010.
- ACM Distinguished Scientist, Elected 2008.
- Q. Li, T. Li, and M. Ogihara. "Music Feature Extraction Using Wavelet Coefficient Histograms", US Patent Number 7,091,409. Awarded Aug. 15, 2006.
- National Science Foundation Faculty Early Career Development Award, 1997.

EXPERIENCE

EMPLOYMENT

1991.4 – 1993.12	Assistant Professor (with tenure) Department of Computer Science University of Electronics & Communications, Tokyo
1994.1 – 1998.6	Assistant Professor Department of Computer Science University of Rochester
1998.7 – 2002.6	Associate Professor (with tenure) Department of Computer Science University of Rochester
1999.7 – 2007.6	Chair Department of Computer Science University of Rochester
2002.7 – 2008.7	Professor Department of Computer Science University of Rochester
2003.8 – 2007.6	Professor Center for Aging & Developmental Biology University of Rochester (secondary appointment)

2007.7 –	Professor Department of Computer Science University of Miami (primary appointment)
2007.7 –	Professor Department of Electrical and Computer Engineering University of Miami (secondary appointment)
2007.7 –	Director of Data Mining Center for Computational Sciences University of Miami
2012.1 – 2016.5	Associate Dean for Digital Library Innovations College of Arts and Sciences University of Miami
2012.7 –	Professor Center of Cognitive Neuroscience and Aging Miller School of Medicine University of Miami (secondary appointment)
2013.1 –	Professor Department of Music Media and Industry Frost School of Music University of Miami (secondary appointment)

VISITING POSITION

1992.1 – 1992.12	Visiting Lecturer/Assistant Professor Department of Computer Science University at Buffalo

PUBLICATION LIST

Books

1. M. Ogihara. **Fundamentals of Java Programming.** ISBN 978-3-319-89490-4. Springer International, NY, August, 2018.
2. M. Ogihara. **Hierarchies in Complexity Theory** (in Japanese). Kyoritsu Shuppan Co., November, 2006, ISBN 4-320-12172-4. Japanese title: 複雑さの階層.
3. L. Hemaspaandra and M. Ogihara. **The Complexity Theory Companion.** Springer-Verlag, Berlin, 2001.

Edited Books and Volumes

4. M. Ogihara and J. Tarui. **Special Issue on Theory and Applications of Models of Computation - 8th Annual Conference, TAMC 2011.** *Theoretical Computer Science* **505**(1), 2013.
5. T. Li, M. Ogihara, and G. Tzanetakis. **Music Data Mining.** CRC Press, 2011. ISBN: 978-1-4398-3552-4.
6. M. Ogihara and J. Tarui. **Theory and Applications of Models of Computation - 8th Annual Conference, TAMC 2011**. Springer-Verlag Lecture Notes in Computer Science #6628, 2011.

7. M. Arif Wani, M. M. Kantardzic, T. Li, Y. Liu, L. A. Kurgan, J. Ye, M. Ogihara, S. Sagiroglu, X. Chen, L. E. Peterson, and K. Hafeez. *Sixth International Conference on Machine Learning and Applications, ICMLA 2007.* IEEE Computer Society, 2008.
8. M. Ogihara and A. Condon. **Special Issue on the Seventh International Meeting on DNA Based Computers.** *Theory of Computing Systems* **35**(5), 2002.

Publications in Refereed Journals

9. A. Kawachi, M. Ogihara, and K. Uchizawa. **Generalized predecessor existence problems for boolean finite dynamical systems.** *Theoretical Computer Science* **762**: 25-40, 2019.
10. K. B. Martin, Z. Hammal, G. Ren, J. F. Cohn, J. Cassell, M. Ogihara, J. C. Britton, A. Gutierrez, and D. S. Messinger. **Objective measurement of head movement differences in children with and without autism spectrum disorder.** *Molecular Autism* **9**(14), 2018.
11. M. Ogihara and K. Uchizawa. **Computational complexity studies of synchronous Boolean finite dynamical systems on directed graphs.** *Information and Computation* **256**(C):226–236, 2017.
12. D. Wang, M. Ogihara, C. Gallo, J. Villamar, J. D. Smith, W. Vermeer, G. Cruden, and C. H. Brown. **Automatic classification of communication logs into implementation stages via text analysis.** *Implementation Science* **11**(1):119–132, 2016.
13. S. Britton, J. Renaud, D. Wang, and M. Ogihara. **Mining library and university data to understand library use patterns.** *Electronic Library* **33**(3):355–372, 2015.
14. C. Gallo, H. Pantin, J. Villamar, G. Prado, M. Tapia, M. Ogihara, G. Cruden, and C. H. Brown. **Blending qualitative and computational linguistics methods for fidelity assessment: experience with the *Familias Unidas* preventive intervention.** *Administration and Policy in Mental Health and Mental Health Services Research* **42**(5):574–585, 2015.
15. C. Hendricks Brown, D. Mohr, C. Gomez Gallo, C. Mader, L. Palinkas, G. Wingood, G. Prado, S. G. Kellam, H. Pantin, J. Poduska, R. Gibbons, J. McManus, M. Ogihara, T. Valente, F. Wulczyn, S. Czaja, G. Sutcliffe, J. Villamar, and C. Jacobs. **A computational future for preventing HIV in minority communities: how advanced technology can improve implementation of effective programs** *Journal of Acquired Immune Deficiency Syndromes* **63**(S):72–84.
16. V. F. López Batista, F. de la Prieta, M. Ogihara, and D. Wang. **A model for multi-label classification and ranking of learning objects**. *Expert Systems with Applications* **39**(10):8878–8884, 2012.
17. C. H. Brown, S. G. Kellam, S. Kaupert, B. O. Muthén, W. Wang, L. K. Muthén, P. Chamberlain, C. L. PoVey, R. Cady, T. W. Valente, M. Ogihara, G. J. Prado, H. M. Pantin, C. G. Gallo, J. Szapocznik, S. J. Czaja, and J. W. McManus. **Partnerships for the design, conduct, and analysis of effectiveness, and implementation research: experiences of the prevention science and methodology group.** *Administration and Policy in Mental Health* **39**(4):301–316, 2012.
18. J. Li, B. Shao, T. Li, and M. Ogihara. **Hierarchical co-clustering: a new way to organize the music data**. *IEEE Transactions on Multimedia* **14**(2): 471–481, 2012.

19. T. Li, M. Ogihara, and S. Ma. **On combining multiple clusterings**. *Applied Intelligence* **33**(2):207–219, 2010.

20. R. Loos and M. Ogihara. **Time and space complexity for splicing systems**. *Theory of Computing Systems* **47**(2):301–316, 2010.

21. P. Faliszewski and M. Ogihara. **On the autoreducibility of functions**. *Theory of Computing Systems* **46**(2):222–245, 2010.

22. M. W. Halterman, M. Gill, C. DeJesus, M. Ogihara, N. F. Schor, and H. J. Federoff. **The endoplasmic reticulum stress response factor CHOP-10 protects against hypoxia-induced neuronal death** *Journal of Biological Chemistry* **285**(28):21329–21340, 2010

23. A. H. Qureshi, V. Chaoji, D. Maiguel, M. H. Faridi, C. .J. Barth, S. M. Salem, M. Singhal, D. Stoub, B. Krastins, M. Ogihara, M. J. Zaki, and V. Gupta. **Proteomic and phospho-proteomic profile of human platelets in basal, resting state: insights into Integrin signaling**, *PLoS ONE* **4**(10):e7627, 2009.

24. T. Li, M. Ogihara, B. Shao, and D. Wang. **Music recommendation based on acoustic features and user access patterns**. *IEEE Transactions on Audio, Speech and Language Processing* **17**(8):1602–1611, 2009.

25. T. Li, M. Ogihara, W. Peng, B. Shao, and S. Zhu. **Music clustering with features from different information sources**. *IEEE Transactions on Multimedia* **11**(3):477–485, 2009.

26. T. Li, S. Zhu, and M. Ogihara. **Text categorization via generalized discriminant analysis**. *Information Processing and Management* **44**(5):1684–1697, 2008.

27. T. Li, S. Zhu, and M. Ogihara. **Hierarchical document classification using automatically generated hierarchy.** *Journal of Intelligent Information Systems* **29**(2):211–230, 2007.

28. R. Loos and M. Ogihara. **Complexity theory for splicing systems**. *Theoretical Computer Science* **386**(1–2):132–150, 2007.

29. C. Glasser, M. Ogihara, A. Pavan, A. Selman, and L. Zhang. **Autoreducibility, mitoticity, and immunity**. *Journal of Computer and System Sciences* **73**(5):735–754, 2007.

30. T. Li, S. Zhu, and M. Ogihara. **Using discriminant analysis for multi-class classification: an experimental investigation**. *Knowledge and Information Systems* **10**(4):453–472, 2006.

31. L. Hemaspaandra, M. Ogihara, M. J. Zaki, and M. Zimand. **The complexity of finding top-Toda-equivalence-class members**. *Theory of Computing Systems* **39**(5):669–684, 2006.

32. T. Li and M. Ogihara. **Toward intelligent music information retrieval.** *IEEE Transactions on Multimedia* **8**(3):564–574, 2006.

33. A. Beygelzimer and M. Ogihara. **The enumerability of P collapses P to NC**. *Theoretical Computer Science* **345**(2–3): 248–259, 2005.

34. J. Cai, V. Chakaravarthy, L. Hemaspaandra, and M. Ogihara. **Competing provers yield improved Karp–Lipton collapse results.** *Information and Computation* **198**(1):1–23, 2005.

35. T. Li and M. Ogihara. **Semisupervised learning from different information sources.** *Knowledge and Information Systems* **7**(3): 289–309 (2005).

36. M. Ogihara and T. Tantau. **On the reducibility of sets inside NP to sets with low information content**. *Journal of Computer and System Sciences* **69**(4):499–524, 2004.

37. T. Li, C. Zhang, and M. Ogihara. **A comparative study of feature selection and multiclass classification methods for tissue classification based on gene expression**. *Bioinformatics* **20**(15):2421–2428, 2004.

38. T. Li, S. Zhu, and M. Ogihara. **Algorithms for clustering high dimensional and distributed data**. *Intelligent Data Analysis* **7**(4):305–326, 2003.

39. T. Li, M. Ogihara, and S. Zhu. **Association-based similarity testing and its applications**. *Intelligent Data Analysis* **7**(3):209–232, 2003.

40. M. Liśkiewicz, M. Ogihara, and S. Toda. **The complexity of counting self-avoiding walks in subgraphs of two-dimensional grids and hypercubes**. *Theoretical Computer Science* **304**(1–3):129–156, 2003.

41. A. Beygelzimer and M. Ogihara. **The (non)enumerability of the determinant and the rank**. *Theory of Computing Systems* **36**(4):359–374, 2003.

42. R. J. Lipton, M. Ogihara, and Y. Zalcstein. **A note on square rooting of time functions of Turing machines.** *Theory of Computing Systems* **36**(3):295–299, 2003.

43. R. Bijlani, Y. Cheng, A. Brooks, D. Pearce, and M. Ogihara. **A biologically relevant classification approach to microarray data analysis: Independently Consistent Expression Discriminator (ICED)**. *Bioinformatics* **19**(1):69–80, 2003.

44. L. Hemaspaandra, M. Ogihara, and G. Wechsung. **Reducing the number of solutions of NP**. *Journal of Computer and System Sciences* **64**(2):311–328, 2001.

45. S. Parthasarathy, M. J. Zaki, M. Ogihara, and W. Li. **Parallel data mining for association rules on shared-memory systems**. *Knowledge and Information Systems* **3**(1):1–29, 2001.

46. N. Lesh, M. J. Zaki, and M. Ogihara. **PlanMine: predicting plan failures using sequence mining**. *Artificial Intelligence Review* **14**(6):421—445, 2001.

47. J. Goldsmith, M. Ogihara, and J. Rothe. **Tally NP sets and easy census functions**. *Information and Computation* **158**(1):29–52, 2000.

48. N. Lesh, M. J. Zaki, and M. Ogihara. **Scalable feature mining for sequential data**. *IEEE Transactions on Intelligent Systems and Their Applications* **15**(2):48–56, 2000.

49. E. Allender, R. Beals, and M. Ogihara. **The complexity of matrix rank and feasible systems of linear equations**. *Computational Complexity* **8**(2):99–126, 1999.

50. M. Ogihara and A. Ray. **Simulating Boolean circuits on a DNA computer**. *Algorithmica* **25**(2–3):239–250, 1999.

51. I. Macarie and M. Ogihara. **Properties of probabilistic pushdown automata**. *Theoretical Computer Science* **207**(1):117–130, 1998.

52. M. Ogihara. **The PL hierarchy collapses**. *SIAM Journal on Computing* **27**(5):1430–1437, 1998.

53. M. J. Zaki, S. Parthasarathy, M. Ogihara, and W. Li. **Parallel algorithms for discovery of association rules**. *Data Mining and Knowledge Discovery* **1**(4):343–373, 1998.

54. M. Ogihara and A. Ray. **Parallel evaluation of boolean circuits by primer extension**. *Romanian Journal of Information Science and Technology* **1**:343–352, 1998.

55. L. Hemaspaandra and M. Ogihara. **Universally serializable computation**. *Journal of Computer and System Sciences* **55**(3):547–560, 1997.

56. S. Fenner, S. Homer, M. Ogihara, and A. Selman. **Using oracles that compute values**. *SIAM Journal on Computing* **26**(4):1043–1065, 1997.

57. M. Ogihara, T. Thierauf, S. Toda, and O. Watanabe. **On closure properties of #P in the context of PF∘#P**. *Journal of Computer and System Sciences* **53**(2):171–179, 1996.

58. E. Hemaspaandra, A. Naik, M. Ogihara, and A. Selman. **P-selective sets, and reducing search to decision vs. self-reducibility**. *Journal of Computer and System Sciences* **53**(2):194–209, 1996.

59. E. Allender and M. Ogihara. **Relationships among PL, #L, and the determinant**. *RAIRO – Informatique Théorique et Application* **30**(1):1–21, 1996.

60. L. Hemaspaandra, A. Naik, M. Ogihara, and A. Selman. **Computing solutions uniquely collapses the polynomial hierarchy**. *SIAM Journal on Computing* **25**(4):597–608, 1996.

61. M. Ogihara. **Functions computable with limited access to NP**. *Information Processing Letters* **58**(1):35–38, 1996.

62. M. Ogihara. **Sparse hard sets for P yield space-efficient algorithms**. *Chicago Journal of Theoretical Computer Science* **Volume-1996**:article 2, 1996.

63. L. Hemaspaandra, A. Hoene, and M. Ogihara. **Reducibility classes of P-selective sets**. *Theoretical Computer Science* **155**(2):439–446, 1996. Erratum: **234**(1–2):323, 2000.

64. L. Hemaspaandra, A. Hoene, A. Naik, M. Ogihara, A. Selman, T. Thierauf, and J. Wang. **Nondeterministically selective sets**. *International Journal on Foundation of Computer Science* **6**(4):403–416, 1995.

65. M. Ogihara. **Polynomial-time membership comparable sets**. *SIAM Journal on Computing* **24**(5):1168–1181, 1995.

66. M. Ogihara. **Equivalence of $\mathbf{NC^k}$ and $\mathbf{AC^{k-1}}$ closures of NP and other classes**. *Information and Computation* **120**(1):56–59, 1995.

67. M. Ogihara. **On helping by parity-like languages**. *Information Processing Letters* **54**(1):41–43, 1995.

68. M. Ogihara. **On serializable languages**. *International Journal of Foundations of Computer Science* **5**(3/4):303–318, 1994.

69. L. Hemachandra, M. Ogihara, and S. Toda. **Space-efficient recognition of sparse self-reducible languages**. *Computational Complexity* **4**:262–296, 1994.

70. M. Ogiwara. **Generalized theorems on the relationships among reducibility notions to certain complexity classes**. *Mathematical Systems Theory* **27**(3):189–200, 1994.

71. M. Ogiwara and L. Hemachandra. **A complexity theory for feasible closure properties**. *Journal of Computer and System Sciences* **46**(2):295–325, 1993.

72. M. Ogiwara and A. Lozano. **Sparse hard sets for counting classes**. *Theoretical Computer Science* **112**(2):255–276, 1993.

73. R. Beigel, R. Chang, and M. Ogiwara. **A relationship between difference hierarchies and relativized hierarchies,** *Mathematical Systems Theory* **26**(3):293–310, 1993.

74. M. Ogiwara. **A characterization of $\mathbf{P^{C=P}}$**. *The Transactions of the Institute of Electronics, Information and Communication Engineers* **E75-D**:44–49, 1992.

75. E. Allender, L. Hemachandra, M. Ogiwara, and O. Watanabe. **Relating equivalence and reducibility to sparse sets**. *SIAM Journal on Computing* **21**(3):551–539, 1992.

76. S. Toda and M. Ogiwara. **Counting classes are at least as hard as the polynomial-time hierarchy**. *SIAM Journal on Computing* **21**(2):316–328, 1992.

77. M. Ogiwara and O. Watanabe. **On polynomial time bounded truth-table reducibility of NP sets to sparse sets**. *SIAM Journal on Computing* **20**(3):471–483, 1991.

78. M. Ogiwara. **A method for generating cryptographically strong primes**. *The Transactions of the Institute of Electronics, Information and Communication Engineers* **E73**:985–994, 1990.

79. M. Ogiwara. **On the paddability of the quadratic residuosity problem**. *The Transactions of the Institute of Electronics, Information and Communication Engineers* **E73**:207–211, 1990.

Book Chapters

80. J. I. Lanswerk, C. Hendricks Brown, P. Chamberlain, L. Palinkas, M. Ogihara, S. Czaja, J. D. Goldhaber-Fiebert, J. A. Rolls Reutz, and S. Mccue Horwitz. **Design and Analysis in Dissemination and Implementation Research.** In *Dissemination and Implementation Research in Health: Translating Science to Practice*, Second Edition, pages 201–227. Oxford University Press, 2018.

81. M. Ogihara and Y. Kim. **Mood and emotional classification.** In T. Li, M. Ogihara, and G. Tzanetakis, eds., *Music Data Mining*, pages 135–168. Chapman&Hall, 2011.

82. T. Li, S. Ma, and M. Ogihara. **Wavelet methods in data mining.** In O. Maimon and L. Rokach, eds., *The Data Mining and Knowledge Discovery Handbook 2010*, pages 553–571. Springer-Verlag, 2010.

83. B. Absolu, T. Li, and M. Ogihara. **Analysis of chord progression data.** In Z. W. Raz and A. J. Wieczorkowska, eds., *Advances in Music Information Retrieval*, pages 165–184. Springer-Verlag, 2009.

84. T. Li, M. Ogihara, B. Shao, and D. Wang. **Machine Learning Approaches for Music Information Retrieval**. In M. J. Er and Y. Zhou, eds., *Machine Learning*, pages 259–279. InTech Education and Publishing, 2009.

85. M. Ogihara. **Molecular Computation.** In Z.. Ésik, C. Martín-Vide, and V. Mitrana, eds., *Recent Advances in Formal Languages and Applications,* pages 255–268. Springer-Verlag, 2006.

86. T. Li, S. Ma, and M. Ogihara. **Wavelet methods in data mining.** In O. Maimon and L. Rokach, eds., *The Data Mining and Knowledge Discovery Handbook: A Complete Guide for Practitioners and Researchers*, pages 603–626. Springer-Verlag, 2005.

87. M. J. Zaki, N. Lesh, and M. Ogihara. **Predicting failures in event sequences.** In R. Grossman, C. Kamath, P. Kegelmeyer, V. Kumar, and R. R. Namburu, eds., *Data Mining for Scientific and Engineering Applications*, pages 515–539. Kluwer Academic Publishers, 2001.

88. S. Parthasarathy, M. J. Zaki, M. Ogihara, and S. Dwarkadas. **Sequence mining in dynamic and interactive environments**. In W. Abramowicz and J. Zurada, eds., *Knowledge Discovery for Business Information Systems*, pages 377–396. Kluwer Academic Publishers, 2001.

89. S. Parthasarathy, S. Dwarkadas, and M. Ogihara. **Active mining in a distributed setting**. In M. J. Zaki and C. Ho, eds., *Large-Scale Parallel Data-Mining*, pages 65–82. Springer-Verlag Lecture Notes in Computer Science #1759, 2000.

90. M. Ogihara and A. Ray. **DNA parallel computation by "counting"**. In H. Rubin and D. H. Wood, eds., *DNA Based Computers III*, pages 255–264. DIMACS Series in Discrete Mathematics and Theoretical Computer Science #48. The American Mathematics Society Press,1999.

91. M. Ogihara. **Computational Complexity Theory**. In J. G. Webster, ed., *Wiley Encyclopedia on Electrical and Electronics Engineering* volume 3, pages 618–628. John Wiley and Sons., Inc., 1999.

92. M. Ogihara and A. Ray. **Circuit evaluation: thoughts on a killer application in DNA computing**. In G. Păun, ed., *Computing with Bio-Molecules: Theory and Experiments*, pages 111–126. Springer-Verlag, 1998.

93. M. Ogihara and A. Ray. **The minimum DNA computation and its computational power**. In C. S. Calude, J. Casti, and M. J. Dinneen, eds., *Unconventional Models of Computation*, pages 309–322. Springer-Verlag, 1998.

94. J. Cai and M. Ogihara. **Sparse hard sets**. In L. A. Hemaspaandra and A. L. Selman, eds., *Complexity Theory Retrospective II*, pages 53–80. Springer-Verlag,1997.

95. D. van Melkebeek and M. Ogihara. **Sparse hard sets for P**. In D. Du and K. Ko, eds., *Advances in Complexity and Algorithms*, pages 191–208. Kluwer Academic Publishers, 1997.

96. V. Arvind, Y. Han, L. Hemachandra, J. J. Köbler, A. Lozano, M. Mundhenk, M. Ogiwara, U. Schöning, R. Silvestri, and T. Thierauf. **Reductions to sets of low information content**. In K. Ambos-Spies, S. Homer, and U. U. Schöning, eds., *Complexity Theory*, pages 1–46. Cambridge University Press, 1993.

97. L. Hemachandra and M. Ogiwara. **Is #P Closed Under Subtraction**? In G. Rozenberg and A. Salomaa, eds., *Current Trends in Theoretical Computer Science: Essays and Tutorials*, pages 523–536. World Scientific Press, 1993.

Publications in Peer-Reviewed Selective Conferences

98. S. Allés-Torrent and M. Ogihara. **Open data as the essentials of teaching and textual research**. Proceedings of the Eighth Conference Japanese Association for Digital Humanities "Leveraging Open Data" and Book of Abstracts of the Eighteenth Annual TEI Conference and Members' Meeting "TEI as a Global Language", pages 146-147 (2018).

99. M. Ogihara, G. Ren, D. Galarraga, and T. Tavares. **The semantic shapes of popular music lyrics: graph-based representation, analysis, and interpretation of popular music lyrics in semantic natural language embedding space.** In *Proceedings of the Seventeenth IEEE International Conference on Machine Learning Applications (ICMLA'18)*, pages 1249-1254. IEEE Computer Society, 2018.

100. G. Ren and M. Ogihara. **Student retention pattern prediction employing linguistic features extracted from admission application essays.** In *Proceedings of the Sixteenth IEEE International Conference on Machine Learning Applications (ICMLA'17)*, pages 532–539. IEEE Computer Society, 2017.

101. N. Vedula, W. Sun, H. Lee, H. Gupta, M. Ogihara, J. Johnson, G. Ren, and S. Parthasarathy. **Multimodal content analysis for effective advertisements on YouTube**. In *Proceedings of the Seventeenth IEEE International Conference on Data Mining (ICDM'17)*, pages 1123–1128. IEEE Computer Society, 2017.

102. A. Kawachi, M. Ogihara, and K. Uchizawa. **Generalized predecessor existence problems for boolean finite dynamical systems.** In *Proceedings of the Forty-second Symposium on Mathematical Foundations of Computer Science (MFCS'17)*, pages 8:1–8:13. Leibniz International Proceedings in Informatics, 2017.

103. S. Geng, G. Ren, and M. Ogihara. **Transforming musical signals through a genre classifying convolutional neural network**. In *Proceedings of the IJCNN First Workshop on Deep Learning and Music*, pages 48–55, 2017.

104. G. Ren, J. Johnson, H. Lee, and M. Ogihara. **Sequential pattern based temporal contour representations for content-based multimedia timeline analysis.** In *Proceedings of the Fifteenth IEEE International Conference on Machine Learning Applications (ICMLA'16)*, pages 657–664. IEEE Computer Society, 2016.

105. S. Geng, G. Ren, and M. Ogihara. A hierarchical sonification framework based on convolutional neural network modeling of musical genre. In *Proceedings of the One Hundred Forty-first Audio Engineering Society Convention*, pages 259–274. AES, 2016.

106. M. Sordo, M. Ogihara, and S. Wuchty. **Analysis of the evolution of research groups and topics in the ISMIR Conference.** In *Proceedings of the Sixteenth International Society for Music Information Retrieval Conference (ISMIR'15)*, pages 204–210, 2015.

107. M. Ogihara and K. Uchizawa. **Computational complexity studies of synchronous Boolean finite dynamical systems.** In *Proceedings of the Twelfth International Conference on Theory and Mathematics of Computation (TAMC'15)*, pages 87–98. Springer-Verlag Lecture Notes in Computer Science #9076, 2015.

108. D. Wang and M. Ogihara. **Finding trendy products from pins.** In *Proceedings of the Ninth IEEE International Conference on Semantic Computing (ICSC'14)*, pages 428–431. IEEE Computer Society, 2014.

109. Y. Hu, D. Wang, and M. Ogihara. **Evaluation of feature importance for favorite song detection.** In *Proceedings of the Fourteenth International Society for Music Information Retrieval Conference (ISMIR'13)*, pages 323–328, 2013.

110. L. Manzor, K. Rimkus, and M. Ogihara. **Cuban Theater Digital Archive: a multimodal platform for theater documentation and research**. In *Proceedings of the Second International Conference on Information Technologies for Performing Arts, Media Access, and Entertainment (ECLAP'13)*, pages 138–150. Springer-Verlag Lecture Notes in Computer Science #7990, 2013.

111. D. Wang, G. G. Zhao, Y. Hu, N. F. Johnson, B. E. Kinser, and M. Ogihara. **Analyzing the Carlyle Letters Online**. In *Proceedings of the Digital Humanities Congress 2012*. Studies in the Digital Humanities. Sheffield: HRI Online Publications, 2014.

112. Y. Hu and M. Ogihara. **Identifying accuracy of social tags using clustering representations of song lyrics.** In *Proceedings of the Twelfth IEEE Conference on Machine Learning and Applications (ICMLA'12)*, pages 582–585. IEEE Computer Society, 2012.

113. D. Wang, M. Ogihara, E. Zeng, and T. Li. **Combing gene expression profiles and protein-protein interactions for identifying functional modules**. In *Proceedings of the Twelfth IEEE Conference on Machine Learning and Applications (ICMLA'12)*, pages 114–119. IEEE Computer Society, 2012.

114. D. Wang, T. Li, and M. Ogihara. **Generating pictorial storylines via minimum-weight connected dominating set approximation in multi-view graphs.** In *Proceedings of the Twenty-sixth American Association for Artificial Intelligence (AAAI'12)*, pages 684–689. AAAI, 2012.

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235. A. Lall, V. Sekar, M. Ogihara, J. Xu, and H. Zhang, **Data streaming algorithms for estimating entropy of network traffic.** Technical Report URCS-TR-886, Department of Computer Science, University of Rochester, November, 2005.

236. P. Faliszewski and M. Ogihara, **Separating the notions of self- and autoreducibility.** Technical Report URCS-TR-874, Department of Computer Science, University of Rochester, August, 2005.

237. C. Ding, C. Zhang, X. Shen, and M. Ogihara, **Gated memory control for memory monitoring, lead detection and garbage collection.** Technical Report URCS-TR-860, Department of Computer Science, University of Rochester, March, 2005.

238. C. Zhang, Y. Zhong, M. Ogihara, and C. Ding. **A hierarchical model of data locality.** Technical Report URCS-TR-857, Department of Computer Science, University of Rochester, February, 2005.

239. C. Glasser, M. Ogihara, A. Pavan, A. L. Selman, and L. Zhang, **Autoreducibility, mitoticity, and Immunity.** Technical Report 2004-22, Department of Computer Science and Engineering, State University of New York at Buffalo, December, 2004. Also, available as ECCC Technical Report TR05-011, January, 2005.

240. C. Zhang, Y. Zhong, C. Ding, and M. Ogihara, **Finding reference affinity groups in trace using sampling methods.** Technical Report URCS-TR-842, Department of Computer Science, University of Rochester, July, 2004.

241. L. Hemaspaandra, M. Ogihara, M. Zaki, and M. Zimand, **The complexity of finding top-Toda-equivalence-class members**. Technical Report URCS-TR-808, Department of Computer Science, University of Rochester, August, 2003.

242. M. Ogihara and T. Tantau. **On the reducibility of sets inside NP to sets with low information content**. Technical Report URCS-TR-782, Department of Computer Science, University of Rochester, May, 2002.

243. R. Lipton, M. Ogihara, and Z. Zalcstein. **A note on square rooting time functions of Turing machines.** Georgia Institute of Technology, College of Computing Technical Report GIT-CC-02-04.

244. M. Ogihara and Z. Zalcstein. **Testing simultaneous similarity of matrices and related problems for matrix semigroups**. Georgia Institute of Technology, College of Computing Technical Report GIT-CC-02-01.

245. A. Beygelzimer and M. Ogihara. **On the enumerability of the determinant and the rank**. Technical Report URCS-TR-777, Department of Computer Science, University of Rochester, January, 2002.

246. J. Cai, V. Chakaravarthy, L. Hemaspaandra, and M. Ogihara. **Some Karp–Lipton-type theorems based on S_2^p.** Technical Report URCS-TR-759, Department of Computer Science, University of Rochester, September, 2001; revised November 2002.

247. M. Ogihara and S. Toda. **Complexity of Computing the Number of Self-Avoiding Walks in Two-Dimensional Grid Graphs and in Hypercube Graphs**. Technical Report 01-061. Electronic Colloquium on Computational Complexity, 2001.

248. L. A. Hemaspaandra, M. Ogihara, and G. Wechsung. **Reducing the number of solutions of NP**. Technical Report TR-727. Department of Computer Science, University of Rochester, January 2000.

249. J. Goldsmith, M. Ogihara, and J. Rothe. **Tally NP sets and easy census functions**. Technical Report TR-684. Department of Computer Science, University of Rochester, March 1998.

250. M. Ogihara and A. Ray. **The minimum DNA model and its computational power**. Technical Report TR-672. Department of Computer Science, University of Rochester, December 1997.

251. G. Istrate and M. Ogihara. **The phase transition in random horn satisfiability**. Technical Report TR-669. Department of Computer Science, University of Rochester, December 1997.

252. M. Ogihara and A. Ray. **DNA-based parallel computation by "counting"**. Technical Report TR-660. Department of Computer Science, University of Rochester, June 1997.

253. M. Zaki, S. Parthasarathy, M. Ogihara, and W. Li. **New algorithms for fast discovery of association rules**. Technical Report TR-651. Department of Computer Science, University of Rochester, June 1997.

254. D. Melkebeek and M. Ogihara. **Sparse hard sets for P**. Technical Report 96-40, DIMACS, September 1996.

255. M. Ogihara and A. Ray. **Simulating Boolean circuits on a DNA computer**. Technical Report TR-631. Department of Computer Science, University of Rochester, August 1996.

256. M. Ogihara. **Breadth first search 3SAT algorithms for DNA computers**. Technical Report TR-629. Department of Computer Science, University of Rochester, July 1996.

257. M. Zaki, M. Ogihara, S. Parthasarathy, and W. Li. **Parallel data mining for association rules on shared-memory multiprocessors**. Technical Report TR-618. Department of Computer Science, University of Rochester, May 1996.

258. M. Zaki, S. Parthasarathy, W. Li, and M. Ogihara. **Evaluation of sampling for data mining of association rules**. Technical Report TR-617. Department of Computer Science, University of Rochester, May 1996.

259. E. Allender, R. Beals, and M. Ogihara. **The complexity of matrix rank and feasible systems of linear equations**. Technical Report 96-024. Electronic Colloquium on Computational Complexity, 1996.

260. J. Cai and M. Ogihara. **Sparse sets versus complexity classes**. Technical Report 95-41. Department of Computer Science. State University of New York at Buffalo, September 1995.

261. M. Ogihara. **The PL hierarchy collapses**. Technical Report TR-587. Technical Report 96-013. Electronic Colloquium on Computational Complexity, 1996

262. M. Ogihara. **Functions computable with limited access to NP**. Technical Report TR-583. Department of Computer Science, University of Rochester, April 1995.

263. M. Ogihara. **Sparse hard sets for P yield space-efficient algorithms**. Technical Report TR-569. Technical Report 96-014. Electronic Colloquium on Computational Complexity, 1996.

264. I. Macarie and M. Ogihara. **Properties of probabilistic pushdown automata**. Technical Report TR-554. Department of Computer Science, University of Rochester, December 1994.

265. M. Ogihara. **On helping by parity-like languages**, Technical Report TR-553, Department of Computer Science. University of Rochester, December 1994.

266. M. Ogihara. **Polynomial-time membership comparable sets**. Technical Report TR-552, Department of Computer Science. University of Rochester, December 1994.

267. L. Hemaspaandra, A. Hoene, and M. Ogihara. **Reducibility Classes of P-selective Sets**. Technical Report TR-524. Department of Computer Science. University of Rochester, July 1994.

268. L. Hemaspaandra and M. Ogihara. **Universally serializable computation**. Technical Report TR-520. Department of Computer Science, University of Rochester, June 1994.

269. M. Ogihara. **On serializable languages**. Technical Report TR-519. Department of Computer Science, University of Rochester, June 1994.

270. J. Cai, R. Lipton, L. L. Longpré, M. Ogihara, K. Regan, and D. Sivakumar. **Communication complexity of key agreement on limited ranges**, Technical Report 94-22. Department of Computer Science, State University of New York at Buffalo, May 1994.

271. L. Li, M. Ogihara, and K. Regan. **On information from #P functions**. Technical Report 94-20. Department of Computer Science, State University of New York at Buffalo, May 1994.

272. L. Hemaspaandra, A. Naik, M. Ogiwara, and A. Selman. **Computing solutions uniquely collapses the polynomial hierarchy**. Technical Report 96-027. Electronic Colloquium on Computational Complexity, 1996.

273. L. Hemaspaandra, A. Hoene, A. Naik, M. Ogiwara, A. Selman, T. Thierauf, and J. Wang. **Selectivity: reductions, nondeterminism, and function classes**. Technical Report TR-469. Department of Computer Science, University of Rochester, August 1993.

274. E. Hemaspaandra, A. Naik, M. Ogiwara, and A. Selman. **P-selective sets, and reducing search to decision vs. self-reducibility**. Technical Report 93-28. Department of Computer Science, State University of New York at Buffalo, July 1993.

275. E. Allender and M. Ogiwara. **Relationships among PL, #L, and the determinant**. Technical Report 93-43. DIMACS, July 1993.

276. M. Ogiwara. $\boldsymbol{NC^k(NP) = AC^{k-1}(NP)}$**.** Technical Report CSIM 93-06. Department of Computer Science, University of Electro-Communications, July 1993.

277. S. Fenner, S. Homer, M. Ogiwara, and A. Selman. **On using oracles that compute values**. Technical Report 93-05. Department of Computer Science, State University of New York at Buffalo, February 1993.

278. M. Ogiwara, T. Thierauf, S. Toda, and O. Watanabe. **On closure properties of #P in the context of PF∘#P**. Technical Report 92TR-0022. Department of Computer Science. Tokyo Institute of Technology, December 1992.

279. V. Arvind, Y. Han, L. Hemachandra, J. Köbler, A. Lozano, M. Mundhenk, M. Ogiwara, U. Schöning, R. Silvestri, and T. Thierauf. **Reductions to sets of low information content**. Technical Report 91-08. Fakultät für Informatik. Universität Ulm, December 1991. Also, Technical Report 417, Department of Computer Science. University of Rochester, May 1992.

280. M. Ogiwara. **Generalized theorems on relationships among reducibility notions to certain complexity classes**. Technical Report CSIM 91-06. Department of Computer Science and Information Mathematics, University of Electro-Communications, May 1991.

281. M. Ogiwara. **Characterizing low levels of the polynomial-time hierarchy relative to $\mathbf{C_{=}P}$ via metric Turing machines**. Research Report C101. Department of Information Sciences, Tokyo Institute of Technology, February 1991.

282. R. Beigel, R. Chang, and M. Ogiwara. **A relationship between difference hierarchies**. Technical Report TR 91-1184. Department of Computer Science, Cornell University, January, 1991.

283. E. Allender, L. Hemachandra, M. Ogiwara, and O. Watanabe. **Relating equivalence and reducibility to sparse sets**. Technical Report 358. Department of Computer Science. University of Rochester, October 1990.

284. M. Ogiwara and L. Hemachandra. **A complexity theory for closure properties**. Research Report C99. Department of Information Sciences, Tokyo Institute of Technology, October 1990.

285. M. Ogiwara and A. Lozano. **On one word-decreasing self-reducible sets**. Research Report C98. Department of Information Sciences, Tokyo Institute of Technology, October 1990.

286. S. Toda and M. Ogiwara. **Counting classes are at least as hard as the polynomial-time hierarchy**. Technical Report CSIM 90-09. Department of Computer Science and Information Mathematics, University of Electro-Communications, July 1990.

287. L. Hemachandra, M. Ogiwara, and S. Toda. **Space-efficient recognition of sparse self-reducible languages**. Technical Report 347. Department of Computer Science, University of Rochester, May 1990.

288. M. Ogiwara and O. Watanabe. **On polynomial bounded truth-table reducibility of NP sets to sparse sets**. Research Report C95. Department of Information Sciences, Tokyo Institute of Technology, October 1989.

289. M. Ogiwara. **Paddable sets in number theory**. Research Report C94. Department of Information Sciences, Tokyo Institute of Technology, June 1989.

290. M. Ogiwara. **A method for generating cryptographically strong primes**. Research Report C93. Department of Information Sciences, Tokyo Institute of Technology, April 1989.

GRANT SUPPORT

- "Exploring the limits of multimedia analysis" The São Paulo Research Foundation (FAPESP), 2017/50016-1 $15,278. PI. 2017 – 2019.
- "Collaborative Research: Group Dynamics and Success in Science and Research" $185,000. National Science Foundation, coPI. 2017 – 2019.
- "Lucretius Pilot Project" $49,000. Andrew W. Mellon Foundation, 11300126. PI. 2013 – 2013.
- "Building Capacity to Preserve Digital Documentation of Theater" $260,000. Andrew W. Mellon Foundation, C1200432. PI. 2012 – 2014.
- "Center for Prevention Methods for Drug Abuse and Sex Risk Behavior" $5,584,118. National Institute of Health/National Institute of Drug Abuse 1P30DA027828-01A1. Investigator. 2011 – 2016.
- "An Integrative Approach to Exploration of Dynamic Protein-protein Interaction Networks in Human Platelets" $250,000. National Science Foundations CCF-0958490. PI. 2009 – 2011.
- "Bioassay Ontology and Software Tools to Integrate and Analyze Diverse Data Sets" $1,510,123. National Institute of Health 1-RC2-HG005668-01. Investigator. 2009 – 2011.
- "Gustatory Sensory Coding" $32,967. University of Miami, coPI, 2009 — 2010.
- "Intelligent Document Analysis Tools," $62,600. NYSTAR/Xerox, PI, 2004 — 2007.
- "A Twin-Framework to Analyze, Model and Design Robust, Complex Networks Using Biological and Computational Principles," $2,040,361. National Science Foundation EIA-0205061, Collaborator (PI: Animesh Ray, Keck Graduate Institute), 2002 — 2006.
- "Rochester Nathan Shock Center for Aging," $1,702,573, National Insitute of Health P30-AG18254, Investigator (PI: Howard J. Federoff, Center for Aging and Developmental Biology, U. Rochester), 2000 — 2005.
- "Integrated Undergraduate Computational Biology Program," $162,538, National Science Foundation DUE-9980943, PI, 2000 — 2003.

- "Research and Education in Intelligent, Multisense Interfaces," $432,865, Department of Education GAANN Grant, coPI (PI: Randal Nelson, Department of Computer Science, University of Rochester), 2000 — 2003.
- "Methods for Analysis of Gene Function in Neural Networks," $826,719, National Insitute of Health, NIA RO1-AG18231, Investigator (PI: Howard J. Federoff, Center for Aging and Developmental Biology, U. of Rochester), 2000 — 2003.
- "Single Cell Molecular Studies of Loss of Synapse-Related Messages in AD," Amount: $999,991. Alzheimer's Foundation, PIO-1999-1519, Collaborator (PI: Paul Coleman, Center for Aging and Developmental Biology, U. Rochester). 1999 — 2001.
- "Foundations of DNA Computing," $200,000. National Science Foundation CAREER Award, CCR-9701911, PI, 1997 — 2001.
- "Complexity Theory for Strategic Goals," $56,648, National Science Foundation, INT-9726742, coPI (PI: Kenneth W. Regan, Department of Computer Science, State University of New York at Buffalo). 1998 — 2001.
- "A Laboratory for Intelligent Multi-Sense Interfaces," $110,000, National Science Foundation, coPI (PI: Randal Nelson, Department of Computer Science, U. Rochester), 1999 — 2000.
- Funding Agency & Grant No.: The Japan Society for the Promotion of Science (JSPS) Japan-U.S. Cooperative Research Program Grant, JSPS-ENGR207, Co-investigator (PI: Osamu Watanabe, Tokyo Institute of Technology). 1992 — 1994.
- International Information Science Foundation (Japan), Travel Grant, no. 9012219, 1990.

EDITORIAL POSITIONS

- *International Journal of Foundations of Computer Science*, Editor (2004–)
- *Theory of Computing Systems*, Editor (2001–)
- *Open Computer Science Journal*, Editor (2010–)

PROFESSIONAL ORGANIZTIONS

- *ACM* (Association for Computing Machinery)
- *AAAS* (American Association for Advancement of Science)
- *IEEE* (Institution of Electrical and Electronics Engineering)
- *SMPC* (Society for Music Perception and Cognition)

OTHER PROFESSIONAL ACTIVITIES

CONFERENCE PRESENTATION

1. The Eighth Conference Japanese Association for Digital Humanities (JADH'18), Tokyo, Japan

2. The Seventeenth International Conference on Machine Learning and Applications (ICMLA'17), Cancun, Mexico
3. The Sixteenth International Conference on Machine Learning and Applications (ICMLA'16), Los Angeles, CA
4. International Society for Music Information Retrieval Conference (ISMIR'10), Utrecht, The Netherlands
5. International Society for Music Information Retrieval Conference (ISMIR'09), Kobe, Japan
6. International Symposium on Music Information Retrieval (ISMIR'08), Philadelphia, PA
7. International Symposium on Music Information Retrieval (ISMIR'07), Vienna, Austria
8. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'05), Philadelphia, PA
9. ACM International Conference on Multimedia (MM'04), New York, NY
10. International Conference on Machine Learning (ICML'04), Banff, Canada
11. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'04), Montreal, Canada
12. Twenty-sixth Annual International ACM Conference on Research and Development in Information Retrieval (SIGIR'03), Toronto, Canada
13. Eighteenth Annual ACM Symposium on Applied Computing (SAC'03), Melbourne, FA
14. Twentieth Annual Symposium on Theoretical Aspects of Computer Science (STACS'03), Berlin, Germany
15. Unconventional Models of Computation (UMC'02), Kobe, Japan (invited talk)
16. Mathematical Foundations of Computer Science (MFCS'01), Marienske Lazne, Czech Republic
17. Genetic and Evolutionary Computation, Orlando (GECCO'99), FL
18. Congress on Evolutionary Computation, Washington (CEC'99), DC (invited talk)
19. Third Genetic Programming (GP'98), Madison, WI
20. Third DIMACS Workshop on DNA-Based Computers (DNA-3), Pennsylvania, PA
21. Twenty-Eighth Annual Symposium on Theory of Computing (STOC'96), Philadelphia, Pennsylvania
22. Thirty-Sixth Annual Conference on Foundations of Computer Science (FOCS'95), Milwaukee, Wisconsin
23. Eleventh Annual Symposium on Theoretical Aspects of Computer Science (STACS'94), Caen, France
24. Fifth IEEE Conference on Structure in Complexity Theory (STRUCTURES'90), Barcelona, Spain.
25. Twenty-Second Annual Symposium on Theory of Computing (STOC'90), Baltimore, Maryland

Invited Seminars & Keynote/Plenary Talks

1. *The Complexity of the Predecessor and Garden-of-Eden Problems of Synchronous Boolean Finite Dynamical Systems.* ELC Center, Tokyo Institute of Technology, January 14, 2017
2. *Exploring Digital Humanities.* Ohio State University - Columbus, October 19, 2016
3. *Topic Modeling for Analyzing Document Collections.* University of Maryland - Baltimore County, May 16, 2016
4. *Computational Analysis of Biological, Social, and Medical Data.* SIAM Data Mining 2016 Workshop on Medical and Healthcare Data, Keynote May 7, 2016

5. *Computational Complexity of Synchronous Boolean Finite Dynamical Systems.* ELC Center, Tokyo Institute of Technology, October 13, 2015
6. *Computer Science for Non-science Projects.* Department of Computer Science, Yamagata University, Yonezawa, Japan, October 7, 2015
7. *Computer Science for Non-science Projects.* ELC Center, Tokyo Institute of Technology, January 25, 2015
8. *Data Mining – Applications and Future.* School of Sciences, Tokyo Institute of Technology, January 23, 2015
9. *Supporting Digital Scholarship.* Coalition of Networked Information (CNI), Spring 2014, St. Louis, MO, April 1, 2014
10. *Jump-starting Digital Humanities.* Indiana University - Purdue University - Indianapolis, Indianapolis, IN, March 8, 2014
11. *Jump-starting Digital Humanities.* University of Kentucky, Lexington, KY, March 7, 2014
12. *Biological Data Mining.* ACM Research in Applied Computing Symposium, Keynote, Miami, FL, November 3, 2011
13. *Algorithmic Analysis of Network Traffic Data.* NEC, Japan, May 26, 2011
14. *Computational Analysis of Music Data.* Plenary Talk, The Sixth International Conference on Computer Science and Education, Hefei, China, August 21, 2010
15. *Nonnegative Least Squares for High-throughput Biological Data Analysis.* Beijing University, Beijing, China, August 21, 2010
16. *Algorithmic Analysis of Network Traffic Data.* University of Maryland at Baltimore County, May 1, 2009.
17. *Computational Analysis of Music Data.* University of Rochester, December 1, 2008.
18. *Entropy Estimation of Network Traffic Flow Data.* Tokyo Institute of Technology, November 14, 2008.
19. *Algorithmic Analysis of Network Traffic.* 2008 Kyoto Prize Workshop. November 12, 2008.
20. *Entropy Estimation of Network Traffic Flow Data.* Florida International University. November 30, 2007.
21. *Estimating Entropy of Network Traffic Flow Data.* Michigan State University, East Lansing, Michigan. April 26, 2007.
22. *Data Mining for Exploring Databases.* Georgetown University, Georgetown, Washington DC. March 22, 2007.
23. *Data Mining for Exploring Databases.* February 22, 2007. University of Miami, Coral Gables, Florida.
24. *Estimating Entropy of Network Flow Data.* Toyota Technological Institute, Chicago, Illinois. January 19, 2006.
25. *Molecular Computation: Theory and Experiments.* Department of Mathematical Linguistics, Rovira i Virgili University, Tarragona, Spain. October 3–6, 2005 (four-day lecture).
26. *Daubechies Wavelet Coefficient Histograms for Music Information Retrieval.* Department of Computer Science, Heinrich-Heine University of Düsseldorf, Düsseldorf, Germany. July 25, 2005.
27. *Machine Learning Approaches to Music Information Retrieval.* Department of Computer Science and Engineering, State University of New York, Buffalo, New York. October 21, 2004.
28. *Molecular computation: theory and experiments.* Department of Mathematical Linguistics, Rovira i Virgili University, Tarragona, Spain. November 8–12, 2004.
29. *Semi-supervised Learning from Heterogeneous Data.* IBM T. J. Watson Research Center, Harthorn, New York. February 26, 2004.

30. *Data Mining for Studying Large Databases.* Xerox, Webster, New York. February 12, 2004.
31. *Machine Learning Approaches to Music Information Retrieval.* Department of Computer Science, University of Texas, Dallas, Texas. October 17, 2003.
32. *Enumerative Approximations of the Rank and the Determinant.* Universitätzu Lübeck, Lübeck, Germany. March 3, 2003.
33. *The Minimum DNA Computation on a Sequence of Probe Arrays.* Invited Talk. *The Third International Conference on Unconventional Models of Computation.* Kobe, Japan. October 16, 2002.
34. *Tissue Sample Classification Based on Gene Expression.* Invited Talk. *Frontiers of Theoretical Computer Science* Nihon University, Tokyo, Japan. September 27, 2002.
35. *A Biologically Relevant Classification Approach to Microarray Data Analysis.* Keck Graduate Institute, Claremont, California. June 14, 2002
36. *A Biologically Relevant Classification Approach to Microarray Data Analysis.* Georgia Institute of Technology, Atlanta, Georgia. April 4, 2002
37. *A Biologically Relevant Classification Approach to Microarray Data Analysis.* NEC Research Institute, Princeton, New Jersey. January 11, 2002
38. *Computational Approaches to Microarray Data Analysis.* Rochester Nathan Shock Center Workshop, University of Rochester, Rochster, New York. October 20, 2001
39. *Complexity of Computing the Number of Self-Avoiding Walks in Two-Dimensional Grid Graphs and in Hypercube Graphs.* College of Computing, Georgia Institute of Technology, Atlanta, Georgia. August 16, 2001
40. *Self-Avoiding Random Walks.* Department of Computer Science, McGill University, Montreal, Canada. April 20, 2001
41. *DNA-Based Parallel Circuit Evaluation.* Department of Computer Science University of Chicago, Chicago, Illinois. December 13, 2000
42. *DNA-Based Parallel Logic-Gate Simulation.* Presented at On the Frontier of Science: Leading Young Investigators and the National Science Foundation, Columbia University, New York, New York. December 8, 2000
43. *Reducing the Number of Solutions of NP Functions.* Department of Information Science and Applied Mathematics, Tokyo Institute of Technology, Tokyo, Japan. June 23, 2000
44. *Foundations of Data Mining.* Department of Computer Science, Universitat Politechnica de Catalunya, Barcelona, Spain. November 12, 1999
45. *DNA-Based Parallel Computation by "Counting".* Department of Computer Science, Universitat Politechnica de Catalunya, Barcelona, Spain. November 9, 1999
46. *DNA-Based Massively Parallel Simulation of Boolean Circuits.* National Science Foundation, Arlington, Virginia. October 1, 1999
47. *Relating the Minimum DNA Computation Model and the Boolean circuit Model.* Department of Computer Science, Tokyo University, Tokyo, Japan. July 29, 1999
48. *Massively Parallel Computation with DNA.* National Institute for Standards and Technology, Gaithersburg, Maryland. June 25, 1999.
49. *Massively Parallel Computation with DNA.* ACM Rochester Chapter, Rochester, New York. March 18, 1999.
50. *Boolean Circuit Evaluation by Liquid-Phase DNA Chemistry.* Department of Computer Science, University of Western Ontario, London, Ontario, Canada, February 12, 1999.
51. *On the Power of Minimum DNA Computation Model.* Department of Computer Science, University of Wisconsin, Madison, Wisconsin. July 27, 1998.
52. *DNA-Based Methods for Circuit Evaluation.* Cold Spring Harbor Laboratory, March 25, 1998.

53. *DNA-Based Circuit Evaluation.* McMaster University, Hamilton, Canada, March 12, 1998.
54. *Sparse Hard Sets for P.* Department of Computer Science, University of Minnesota, St. Paul, Minnesota. April 12, 1997.
55. *Simulating Circuits on DNA* Complexity Theory Seminar, IBM Yamato Laboratory, Tokyo, Japan. December 13, 1996.
56. *Recent Progress on Sparse Hard Sets.* Oberwolfach Mathematical Institute, Oberwolfachwalke, Germany. November 13, 1996,
57. *Sparse Hard Sets.* Colloquium, Department of Computer Science, Universität Ulm, Germany. November 8, 1996.
58. *The PL Hierarchy Collapses.* The American Mathematical Society Meeting at Greensboro, A Special Session on Computational Complexity, Greensboro, North Carolina. November 22, 1995.
59. *The PL Hierarchy Collapses.* Colloquium, Department of Computer Science, University of Chicago, Chicago, Illinois. November 10, 1995.
60. *How hard is counting*? Department of Computer Science, University of Rochester, Rochester, New York. November 23, 1992.
61. *On oracles that compute values.* Colloquium, Department of Computer Science, Boston University, Boston, Massachusetts. October 23, 1992.
62. *On oracles that compute values.* Department of Computer Science, State University of New York, Buffalo, New York. October 8, 1992.
63. *On oracles that compute values.* Department of Computer Science, Rutgers University, New Brunswick, New Jersey. August 26, 1992.
64. *On p-closeness of polynomial-time hard sets.* Department of Computer Science, University of Chicago, Chicago, Illinois. April 1, 1992.
65. *On one word-decreasing self-reducible sets.* Department of Computer Science, University of Rochester, Rochester, New York. February, 1991.
66. *On one word-decreasing self-reducible sets.* Department of Computer Science, State University of New York, Buffalo, New York. February, 1991.
67. *On the power of exact counting.* Department of Computer Science, University of Rochester. Rochester, New York. May, 1990.
68. *On polynomial-time bounded-truth-table reducibility of NP sets to sparse sets.* Department of Mathematics, University of California, Santa Barbara, California. May, 1990.

CONFERENCE AND PROGRAM COMMITTEES

1. *The tenth International Conference on Knowledge Discovery and Information Retrieval (KDIR), 2018*, Program Committee Member.
2. *The Second International Workshop on Parallel and Distributed Data Mining (WPDM 2018)*, part of The Eighteenth International Conference on Computational Science and Its Applications (ICCSA 2018). Program Committee Member.
3. *The Eleventh International Conference on Combinatorial Optimization and Applications (COCOA), 2017*, Program Committee Member.
4. *The Sixteenth International Conference on Machine Learning and Applications (ICMLA), 2017* Program Committee Member
5. *The Ninth International Conference on Knowledge Discovery and Information Retrieval (KDIR), 2017*, Program Committee Member.
6. *The Eleventh International Conference on Language and Automata Theory and Applications (LATA), 2017*, Program Committee Member.
7. *The Fourth International Conference on New Music Concepts (ICNMC), 2017*, Program Committee Member.

8. *The Fourteenth Annual Conference on Theory of Applications of Models of Computation (TAMC), 2017*, Program Committee Member.
9. *The eighth International Conference on Knowledge Discovery and Information Retrieval (KDIR), 2016*, Program Committee Member.
10. *The Seventeenth International Conference on Web Information Systems (WISE), 2016*, Program Committee Member.
11. *The Tenth International Conference on Combinatorial Optimization and Applications (COCOA), 2016*, Program Committee Member.
12. *The Fifteenth International Conference on Machine Learning and Applications (ICMLA), 2016* Program Committee Member
13. *The Seventeenth International Society for Music Information Retrieval Conference (ISMIR), 2016* Review Committee Member
14. *The Thirteenth Annual Conference on Theory of Applications of Models of Computation (TAMC), 2016*, Program Committee Member.
15. *The Sixteenth SIAM International Conference on Data Mining (SDM), 2016.* Dissertation Forum Chair.
16. *The Tenth International Conference on Language and Automata Theory and Applications (LATA), 2016.* Program Committee Member.
17. *The Sixteenth International Society for Music Information Retrieval Conference (ISMIR), 2015* Review Committee Member
18. *The Sixteenth International Conference on Web Information Systems (WISE), 2015* Tutorial co-Chair
19. *The Forteenth International Conference on Machine Learning and Applications (ICMLA), 2015* Program Committee Member
20. *The Ninth International Conference on Combinatorial Optimization and Applications (COCOA), 2015*, Program Committee Member.
21. *The Twenty-first Annual International Computing and Combinatorics Conference (COCOON), 2015*, Program Committee Member.
22. *The First International Conference on New Music Concepts (ICNMC), 2015*, Technical Committee Member
23. *The Twelfth Annual Conference on Theory of Applications of Models of Computation (TAMC), 2015*, Program Committee Member.
24. *The Eighth International Conference on Combinatorial Optimization and Applications (COCOA), 2014*, Program Committee Member.
25. *The Fourteenth International Conference on Bioinformatics and Bioengineering (BIBE), 2014*, Program Committee Member.
26. *The Thirteenth International Conference on Machine Learning and Applications (ICMLA), 2014*, Program Committee Member.
27. *The Twenty-sixth IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2014*, Program Committee Member.
28. *The Sixth International Conference on Knowledge Discovery and Information Retrieval (KDIR), 2014*, Program Committee Member.
29. *The Twentieth Annual International Computing and Combinatorics Conference (COCOON), 2014*, Program Committee Member.
30. *The Fourth International Workshop on Advances in Business ICT (ABICT), 2014* Program Committee Member.
31. *International Conference on Business Information Systems (BIS), 2014*, Program Committee Member.
32. *The Fifteenth International Society for Music Information Retrieval Conference (ISMIR), 2014* Reivew Committee Member

33. *The Twenty-fifth IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2013*, Program Committee Member.
34. *The Twelfth International Conference on Machine Learning and Applications (ICMLA), 2013*, Program Committee Member.
35. *The 22nd ACM International Conference on Information and Knowledge Management (CIKM). 2013*, Program Committee Member.
36. *International Conference on Business Information Systems (BIS), 2013*, Program Committee Member.
37. *The Fifth International Conference on Knowledge Discovery and Information Retrieval (KDIR), 2013*, Program Committee Member.
38. *The Nineteenth Annual International Computing and Combinatorics Conference (COCOON), 2013*, Program Committee Member.
39. *The Twenty-ninth IEEE International Conference on Data Engineering (ICDE), 2013*, Program Committee Member.
40. *The Twenty-fourth IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2012*, Program Committee Member.
41. *The Eleventh International Conference on Machine Learning and Applications (ICMLA), 2012*, Program Committee Member.
42. *International Society for Music Information Retrieval Conference (ISMIR), 2012*, Review Committee Member.
43. *International Conference on Knowledge Discovery and Information Retrieval (KDIR), 2012*, Program Committee Member.
44. *The Fifth International Conference on Business Process and Services Computing (BPSC), 2012*, Program Committee Member.
45. *The 21st ACM International Conference on Information and Knowledge Management (CIKM). 2012*, Program Committee Member
46. *The Sixth International Conference on Combinatorial Optimization and Applications (COCOA), 2012*, Program Committee Member.
47. *The Fourth International Workshop on Advances in Music Information Research (AdMIRe), 2012*. Program Committee Member.
48. *The Sixth International Conference on Language and Automata Theory and Applications (LATA), 2012*. Program Committee Member.
49. *The Ninth Annual Conference on Theory of Applciations of Models of Computation (TAMC), 2012*, Program Committee Member.
50. *The 23rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2011)*, Program Committee Member.
51. *International Conference on Machine Learning and Applications (ICMLA), 2011*, Senior Program Committee Member.
52. *The Fifth International Conference on Combinatorial Optimization and Applications (COCOA), 2011*, Program Committee Member.
53. *International Conference on Knowledge Discovery and Information Retrieval (KDIR), 2011*, Program Committee Member.
54. *International Symposium on Algorithms and Computation (ISAAC), 2011*, Program Committee Member.
55. *International Conference on Business Information Systems (BIS), 2011*, Program Committee Member.
56. *The Fourth International Conference on Business Process and Services Computing (BPSC), 2011*, Program Committee Member.
57. *The International Society for Music Information Retrieval Conferencd (ISMIR), 2011*, General Chair.

58. *The Seventeenth Annual International Computing and Combinatorics Conference (COCOON), 2011*, Program Committee Member.
59. *The Eighth Annual Conference on Theory of Applciations of Models of Computation (TAMC), 2011*, Program Chair.
60. *The Fourth International Conference on Combinatorial Optimization and Applications (COCOA), 2010*, Program Committee Member.
61. *The Third International Conference on Business Process and Services Computing (BPSC), 2010*, Program Committee Member.
62. *The Seventh Annual Conference on Theory of Applciations of Models of Computation (TAMC), 2010*, Program Committee Member.
63. *International Conference on Business Information Systems (BIS), 2010*, Program Committee Member.
64. *Pacific Symposium on Knowledge Discovery and Data Mining (PAKDD), 2010*, Program Committee Member.
65. *International Conference on Machine Learning and Applications (ICMLA), 2010*, Program Committee Member.
66. *Fifth International Conference on Stochastic Algorithms: Foundations and Applications (SAGA), 2009*, Program Committee Member.
67. *International Conference on Machine Learning and Applications (ICMLA), 2009*, Program Committee Member.
68. *SIGKDD International Conference on Knwledge Discovery and Data Mining (SIGKDD), 2009*, Program Committee Member.
69. *International Symposium on Algorithms and Computation (ISAAC), 2009*, Program Committee Member.
70. *Pacific Symposium on Knowledge Discovery and Data Mining (PAKDD), 2009*, Program Committee Member.
71. *International Conference on Business Process and Computation (BPSC), 2009*, Program Committee Member.
72. *International Conference on Business Information Systems (BIS), 2009*, Program Committee Member.
73. *International Conference on Machine Learning and Applications (ICMLA), 2008*, Program Committee Member.
74. *International Symposium on Methodologies for Intelligent Systems (ISMIS), 2008*, Program Committee Member.
75. *International Conference on Business Process and Computation (BPSC), 2008*, Program Committee Member.
76. *The Fourteenth International Meeting on DNA Computing (DNA), 2008*, Program Committee Member.
77. *SIAM Data Mining (SDM), 2008*, Technical Program Committee Member.
78. *The 2nd International Conference on Language and Automata Theory and Applications (LATA), 2008.* Program Committee Member.
79. *International Conference on Business Information Systems (BIS), 2008*, Program Committee Member.
80. *The 2007 International Conference on Machine Learning and Applications (ICMLA), 2007*, Program Committee Member, Special Session Chair.
81. *International Conference on Language and Automata Theory and Applications (LATA), 2007.* Program Committee Member.
82. *International Conference on Business Information Systems (BIS), 2007*, Program Committee Member.
83. *The SIGKDD Workshop on Temporal Data Mining (TDM), 2006*, Program Committee Member.

84. *International Conference on Business Information Systems (BIS), 2006*, Program Committee Member.
85. *The 2006 International Conference on Machine Learning and Applications (ICMLA), 2006*, Publicity Chair.
86. *International Conference on Business Information Systems (BIS), 2005*, Program Committee Member.
87. *The Fifth SIGKDD Workshop on Biological Data Mining (BIOKDD), 2005*, Program Committee Member.
88. *International Conference on Foundations of Computing Theory (FCT), 2005*, Program Committee Member.
89. *International Conference on Business Information Systems (BIS), 2004*, Program Committee Member.
90. *International Conference on Business Information Systems (BIS), 2003*, Program Committee Member.
91. *National Academy of Engineering Frontiers of Engineering (FOE), 2003*, Organizing Committee Member.
92. *International Conference on Business Information Systems (BIS), 2002*, Program Committee Member.
93. *Third International Conference on Unconventional Model of Computation (UMC), 2002*, Program Committee Member.
94. *First International Congress on Autonomous Intelligent Systems (ICAIS), 2002*, Program Committee Member.
95. *International Conference on Business Information Systems (BIS), 2001*, Program Committee Member.
96. *International Symposium on Algorithms and Computation (ISAAC), 2001*, Program Committee Member.
97. *Genetic and Evolutionary Computation Conference (GECCO), 2001*, Technical Program Committee Member.
98. *Genetic and Evolutionary Computation Conference (GECCO), 2000*, Technical Program Committee Member.
99. *Symposium on Theoretical Aspects of Computer Science (STACS), 2000*, Program Committee Member.
100. *Genetic and Evolutionary Computation Conference (GECCO), 1999*, Technical Program Committee Member.
101. *International Symposium on Algorithms and Computation (ISAAC), 1996*, Program Committee Member.
102. *IEEE Conference on Computational Complexity (COMPLEXITY), 1996.* Program Committee Member.

JOURNAL REFEREE

1. *ACM Transactions on Computing Theory*
2. *Algorithmica*
3. *Annals of Pure and Applied Logic*
4. *Applied Sciences*
5. *Bioinformatics*
6. *BioSystems*
7. *BMC Bioinformatics*
8. *BMC Genomics*
9. *Bulletin of Mathematical Biology*

10. *Chicago Journal of Theoretical Computer Science*
11. *Computational Complexity*
12. *Computational Statistics and Data Analysis*
13. *Computer Journal, The*
14. *Data Mining and Knowledge Discovery*
15. *Decision Support Systems*
16. *Discrete Applied Mathematics*
17. *Frontier Journals*
18. *IEEE Transactions on Audio, Speech, and Language Processing*
19. *IEEE Transactions on Knowledge and Data Engineering*
20. *IEEE Transactions on Multimedia*
21. *IEEE Transactions on Nanobioscience*
22. *IEEE Transactions on Neural Networks*
23. *IEEE Transactions on Systems, Man and Cybernetics*
24. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*
25. *Information and Computation*
26. *International Journal on Multimedia Information Retrieval*
27. *Information Processing Letters*
28. *Information Sciences*
29. *Journal of Biomedical Informatics*
30. *Journal of Biomedicine and Biotechnology*
31. *Journal of Chemical Information and Computer Science*
32. *Journal of Combinatorial Optimization*
33. *Journal of Computer Science and Technology*
34. *Journal of Computer and System Sciences*
35. *Journal of Intelligent Information Systems*
36. *Journal of Machine Learning Research*
37. *Mathematical Systems Theory*
38. *Measurement Science Research*
39. *Medical & Biological Engineering & Computing*
40. *Nature*
41. *Nature Biotechnology*
42. *New Generation Computing*
43. *PLoS One*
44. *Random Structures and Algorithms*
45. *SIAM Journal on Computing*
46. *Theoretical Computer Science*
47. *Theory of Computing Systems*
48. *Transactions of the Institute of Electronics, Information and Communication Engineers, Japan*
49. *World Wide Web Journal*

BOOK PROPOSAL REVIEW

- *Addison-Wesley*
- *Chapman-Hall*
- *Kluwer Academic Publishers*
- *Cambridge University Press*

- *John Wiley & Sons*
- *McGraw-Hill*
- *Prentice-Hall*

GRANT PROPOSAL REVIEW

Ad hoc reviewer/panelist for Austrian Research Foundation, European Science Foundation, National Institute of Health, National Science Foundation, and Research Grants Council of Hong Kong.

COURSES TAUGHT

AT UNIVERSITY OF ROCHESTER

CSC101	Computer Science Without Programming, '04F, '05F, '06F
CSC120Q	Introduction to Computational Molecular Biology, '00S (co-taught with John Huelsenbeck; cross-listed as BIO120Q)
CSC200	Information Technology & Society, '14Summer-II
CSC264	Computational Molecular Biology, '00F (co-taught with John Huelsenbeck; cross-listed as BIO264)
CSC280	Computer Models and Limitations, '95F, '99F
CSC282	Design and Analysis of Efficient Algorithms, '97S–'99S, '02F, '03F
CSC284/484	Parallel Algorithms, '96F, '97F, '98F, '99F
CSC286/486	Computational Complexity, '94S, '95S
CSC287/487	Randomized, Parallel, and Other Modes of Computation, '01F
CSC290	Biomolecular Supercomputing, '97S, '99S (co-taught with Animesh Ray; cross-listed as BIO264 in '99S)
CSC574	Seminar in Theory of Computation, '94F

AT UNIVERSITY OF MIAMI

CSC118	Information Technology & Society, '15Sum., '16S, '16Sum., '17S
CSC120	Computer Programming I, '14F, '15F, '16S, '16F, '17F, '18F
CSC220	Computer Programming II, '08F, '09S, '09F, '10F
CSC427/527	Theory of Computation, '08S, '10S, '11S, '18S, '19S
FNS190	Freshmen Seminar: iListen/uListen, '11F, '12F, '13F, '18F

POSTGRADUATE ADVISING

- Youlong Yang (2006.9–2007.8), Erliang Zeng (2008.8–2009.6), Qiong Cheng (2010.1–2011.3), Masashi Inoue (2010.8–2011.1), Dingding Wang (2011.3–2014.7), Mohamed Sordo (2015.1–2016.1), Gang Ren (2016.5–present)

GRADUATE ADVISING

- **Ph.D. Students** Alina Beygelzimer (PhD: 2003), Yin-He Cheng (PhD: 2004), Yajie Hu (PhD: 2014), Gabriel Istrate (PhD: 1999), Ashwin Lall (PhD: 2009), Tao Li (PhD: 2004), Srinivasan Parthasarathy (PhD: 1999), Mohammed Javeed Zaki (PhD: 1998), Chengliang Zhang (PhD: 2007).

- **Ph.D. Thesis Committee** Piotr Faliszewski (PhD: 2008), Shan He (PhD: 2007), Christopher Homan (PhD: 2003), Matthew Hyatt (PhD: 2011), Daniel Kinnamon (PhD: 2013), Bohdan Khomtchouk (PhD: 2017), Ioan Macarie (PhD: 1996), Renee Miller (PhD: 2005), Jonathan Shaw (PhD: 2006), Mayur Thakur (PhD: 2004), Rahul Tripathi (PhD: 2005), Zuohua Zhang (PhD: 2003), Ming Zhong (PhD: 2007), Shenghuo Zhu (PhD: 2003), Marius Zimand (PhD: 1997).

UNDERGRADUATE ADVISING

UNDERGRADUATE INDEPENDENT RESEARCH SUPERVISION

(In chronological order) Thomas Holtz (Spring '96), Nandini Sankar (Summer '97), Sapna Chandiramani (Spring '98), Brandeis Hill (Spring '99), Tarun Arora (Fall '99 Spring '00), Shekhar Sahgal (Fall '99 Spring '00), Nick Rutar and Ben Van Durme (Fall '00), Louis Deaett (Fall '01), Jennifer Rogers (Spring '02), Rahul Bijlani (Summer and Fall '00), David Orlando (Fall '02 Spring '03), Kristaps Johnson (Fall '02 Spring '03), Seema Bhopale (Fall '02 Spring '03), Umang Beri (Spring '03), Jonathan Cheng (Fall '03), Tom Weingarten (Fall '04 Spring '05), David Lu (Fall '05 Spring '06), Geoff Dawson (Spring '06), Darrius Serrant (Summer '10, Spring '11), Eric Fields (Fall '12, Spring '13), Isabella Douzoglou (Spring '13), Matthew Ross (Spring '14), Sean Meadows (Spring '14), Randall Naar (Spring '15), Andrew Shields (Fall '16), Marcelo Galvan (Fall '16), Siqing Yang (Fall '16), Haorui Chen (Fall '17), Dilnoza Bobokalonova (Fall '17), Zhuo Liu (Fall '17), Jerry Bonnell (Fall '17, Spring'18)

UNDERGRADUATE THESIS SUPERVISION

- Tom Weingarten. Monte Carlo Lattice Simulations of Biochemical Reaction Mechanisms. University of Rochester, 2004.
- David Lu. Automatic Music Transcription Using Genetic Algorithms and Electronic Synthesis. University of Rochester, 2005. Joint supervision with Christopher Brown.

MASTER THESIS SUPERVISION

- Rahul Chawla. Filtering Social Tags for Songs Based using Lyrics and Clustering Methods. University of Miami, 2011.

UNIVERSITY COMMITTEE AND ADMINISTRATIVE RESPONSIBILITIES

1998–2000	U. Rochester, Elected Faculty Council Member
1999–2007	U. Rochester, Computer Science Chair
2001–2007	U. Rochester, Faculty Senator
2005–2007	U. Rochester, Faculty Senate Executive Committee Member
2006–2007	U. Rochester, Secretary to the Senate
2006–2007	U. Rochester, Tenure & Privilege Committee Member
2009–2010	U. Miami, CAS Dean Search Committee
2010–2011	U. Miami, Graduate Council Member
2011–2016	U. Miami, Research Council Member
2012–	U. Miami, Academic Computing Advisory Committee Member
2012–2014	U. Miami, Task Force on Online Education, co-Chair
2015–2016	U. Miami, A&S Science Building Committee Member
2015–	U. Miami, University Curriculum Committee Member
2016–	U. Miami, Faculty Senator
2016–	U. Miami, Graduate Council Member, ex-officio
2018	U. Miami, Computer Science, Faculty Search Committee Chair