

Curriculum Vita
Mitsunori Ogihara
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CONTACT INFORMATION

DEPARTMENT OF COMPUTER SCIENCE
UNIVERSITY OF MIAMI
1365 MEMORIAL DRIVE
CORAL GABLES, FL 33146-4245, U.S.A.
PHONE: +1-305-284-2308
FAX: +1-305-284-2264
email: ogihara@cs.miami.edu

CURRENT ACADEMIC APPOINTMENT

PROFESSOR OF COMPUTER SCIENCE AND OF ELECTRICAL AND COMPUTER ENGINEERING
DIRECTOR OF DATA MINING, CENTER FOR COMPUTATIONAL SCIENCE

RESEARCH INTERESTS

DATA MINING, BIOINFORMATICS, MUSIC DATA MINING, 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

- 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), Dept. of Computer Science, University of Electronics & Communications, Tokyo
1994.1 – 1998.6	Assistant Professor, Dept. of Computer Science University of Rochester
1998.7 – 2002.6	Associate Professor (with tenure), Dept. of Computer Science University of Rochester
1999.7 – 2007.6	Chair, Dept. of Computer Science University of Rochester
2002.7 – 2008.7	Professor, Dept. of Computer Science University of Rochester
2003.8 – 2007.6	Professor, Ctr. for Aging & Developmental Biology, University of Rochester
2007.7 –	Professor, Dept. of Computer Science University of Miami
2007.7 –	Professor, Dept. of Electrical and Computer Engineering University of Miami
2007.7 –	Director of Data Mining, Ctr. for Computational Sciences, University of Miami

VISITING POSITION

1992.1 – 1992.12	Visiting Lecturer/Assistant Professor, Dept. of Computer Science, State U. of New York — Buffalo
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PUBLICATION LIST

BOOKS

1. 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.
2. L. HEMASPAANDRA and M. OGIHARA. **The Complexity Theory Companion**. Springer-Verlag, Berlin, 2001.

EDITED BOOKS AND VOLUMES

3. T. LI, M. OGIHARA, and G. TZANETAKIS. **Music Data Mining**. CRC Press, 2011. ISBN: 978-1-4398-3552-4.
4. M. OGIHARA and J. TARUI. **Theory and Applications of Models of Computation - 8th Annual Conference, TAMC 2011**. Springer-Verlag Lecture Notes in Computer Science, Vol. 6628, 2011.
5. 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.

PUBLICATIONS IN REFEREED JOURNALS

6. 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.
7. C. HENDRICKS BROWN, SHEPPARD G. KELLAM, SHEILA KAUPERT, BENGT O. MUTHÉN, WEI WANG, LINDA K. MUTHEÉN, PATRICIA CHAMBERLAIN, CRAIG L. POVEY, RICK CADY, THOMAS W. VALENTE, M. OGIHARA, GUILLERMO J. PRADO, HILDA M. PANTIN, CARLOS G. GALLO, JOSÉ SZAPOCZNIK, SARA J. CZAJA, and JOHN 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*, in press.
8. 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.
9. T. LI, M. OGIHARA, and S. MA. **On combining multiple clusterings**. *Applied Intelligence*, **33**(2):207-219, 2010.
10. R. LOOS and M. OGIHARA. **Time and space complexity for splicing systems**. *Theory of Computing Systems*, **47**(2):301-316, 2010.
11. P. FALISZEWSKI and M. OGIHARA. **On the autoreducibility of functions**. *Theory of Computing Systems*, **46**(2):222-245, 2010.
12. 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*, 4:37627, 2009.
13. 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
14. 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.
15. T. LI, S. ZHU, and M. OGIHARA. **Text categorization via generalized discriminant analysis**. *Information Processing and Management* **44**(5):1684-1697, 2008.
16. T. LI, S. ZHU, and M. OGIHARA. **Hierarchical document classification using automatically generated hierarchy**. *Journal of Intelligent Information Systems*, **29**(2):211-230, 2007.
17. R. LOOS and M. OGIHARA. **Complexity theory for splicing systems**. *Theoretical Computer Science*, **386**(1-2):132-150, 2007.

18. 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.
19. 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.
20. L. HEMASPAANDRA, M. OGIHARA, M. ZAKI, and M. ZIMAND. **The complexity of finding top-Toda-equivalence-class members.** *Theory of Computing Systems*, 39(5):669–684, 2006.
21. T. LI and M. OGIHARA. **Toward intelligent music information retrieval.** *IEEE Transactions on Multimedia*, 8(3):564–574, 2006.
22. A. BEYGELZIMER and M. OGIHARA. **The enumerability of P collapses P to NC.** *Theoretical Computer Science* 345(2-3): 248–259, 2005.
23. 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.
24. T. LI and M. OGIHARA. **Semisupervised learning from different information sources.** *Knowledge and Information Systems*, 7(3): 289–309 (2005).
25. 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.
26. 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*, 20:2421–2428, 2004.
27. T. LI, S. ZHU, and M. OGIHARA. **Algorithms for clustering high dimensional and distributed data.** *Intelligent Data Analysis*, 7(4):305–326, 2003.
28. T. LI, M. OGIHARA, and S. ZHU. **Association-based similarity testing and its applications.** *Intelligent Data Analysis*, 7(3):209–232, 2003.
29. 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.
30. A. BEYGELZIMER and M. OGIHARA. **The (non)enumerability of the determinant and the rank.** *Theory of Computing Systems*, 36(4):359–374, 2003.
31. R. 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.
32. 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.
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47. 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**:194–209, 1996.
48. E. ALLENDER and M. OGIHARA. **Relationships among PL, $\#L$, and the determinant**. *RAIRO – Theoretical Information and Application* **30**:1–21, 1996.
49. L. HEMASPAANDRA, A. NAIK, M. OGIHARA, and A. SELMAN. **Computing solutions uniquely collapses the polynomial hierarchy**. *SIAM Journal on Computing* **25**:597–608, 1996.
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52. L. HEMASPAANDRA, A. HOENE, and M. OGIHARA. **Reducibility classes of P-selective sets**. *Theoretical Computer Science* **155**:439–446, 1996. Erratum: **234**:323, 2000.
53. 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**:403–416, 1995.
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55. M. OGIHARA. **Equivalence of NC^k and AC^{k-1} closures of NP and other classes**, *Information and Computation* **120**:56–59, 1995.
56. M. OGIHARA. **On helping by parity-like languages**. *Information Processing Letters* **54**:41–43, 1995.
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58. L. HEMACHANDRA, M. OGIHARA, and S. TODA. **Space-efficient recognition of sparse self-reducible languages.** *Computational Complexity* 4:262–296, 1994.
59. M. OGIWARA. **Generalized theorems on the relationships among reducibility notions to certain complexity classes.** *Mathematical Systems Theory* 27:189–200, 1994.
60. M. OGIWARA and L. HEMACHANDRA. **A complexity theory for feasible closure properties.** *Journal of Computer and System Sciences* 46:295–325, 1993.
61. M. OGIWARA and A. LOZANO. **Sparse hard sets for counting classes.** *Theoretical Computer Science* 112:255–276, 1993.
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65. S. TODA and M. OGIWARA. **Counting classes are at least as hard as the polynomial-time hierarchy.** *SIAM Journal on Computing* 21:316–328, 1992.
66. M. OGIWARA and O. WATANABE. **On polynomial time bounded truth-table reducibility of NP sets to sparse sets.** *SIAM Journal on Computing* 20:471–483, 1991.
67. M. OGIWARA. **A method for generating cryptographically strong primes.** *The Transactions of the Institute of Electronics, Information and Communication Engineers* E73:985–994, 1990.
68. 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

69. 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.
70. 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.
71. 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.
72. T. LI, M. OGIHARA, B. SHAO, and D. WANG. **Machine Learning Approaches for Music Information Retrieval.** To appear. In M. J. Er and Y. Zhou, eds., *Machine Learning*, In-Tech Education and Publishing, 2009.
73. M. OGIHARA. **Molecular Computation.** In Z. Ésik, C. Martín-Vide, and V. Mitrană, eds., *Recent Advances in Formal Languages and Applications*, pages 255–268, Springer-Verlag, 2006.
74. 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.

75. 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*. Kluwer Academic Publishers, 2001.
76. 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*, Chapter 16, pages 377–396. Kluwer Academic Publishers, 2001.
77. 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.
78. 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, pages 255–264, 1999.
79. 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.
80. 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, Singapore, 1998.
81. 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, Singapore, 1998.
82. M. J. ZAKI, S. PARTHASARATHY, M. OGIHARA, and W. LI. **Parallel algorithms for discovery of association rules**. In P. Stolorz and R. Musick, eds., *Scalable High Performance Computing for Knowledge Discovery and Data Mining*. Kluwer Academic Publishers, 1998.
83. 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, New York, 1997.
84. 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.
85. 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.
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PUBLICATIONS IN SELECTIVE CONFERENCES

87. Q. CHENG, M. OGIHARA, and V. GUPTA. **Learning condition-dependent dynamical PPI networks from conflict-sensitive phosphorylation dynamics**. In *Proceedings of the IEEE Conference on Biomedicine and Bioinformatics (BIBM2011)*, to appear.
88. Q. CHENG, V. GUPTA, and M. OGIHARA. **Inferring conflict-sensitive phosphorylation dynamics**. In *Proceedings of ACM Conference on Computational Biology and Biomedicine*, to appear.

89. Y. HU and M. OGIHARA. **NextOne Player: a music recommendation system based on user behavior**. In *Proceedings of the International Society for Music Information Retrieval Conference (ISMIR2011)*, 103-110.
90. D. WANG and M. OGIHARA. **Potential relationship discovery in tag-aware music style clustering and artist social networks**. In *Proceedings of the International Society for Music Information Retrieval Conference (ISMIR2011)*, 435-442.
91. Q. CHENG, J. WEI, A. ZELIKOVSKY, and M. OGIHARA. **Fixed-parameter tractable combinatorial algorithms for metabolic networks alignments**. In *ICDM2010 Workshop on Biological Data Mining and Its Applications in Healthcare*, 679-686.
92. Q. CHENG, M. OGIHARA, J. WEI, and A. ZELIKOVSKY. **WS-GraphMatching: a web service tool for graph matching**. In *Proceedings of the ACM Conference on Information and Knowledge Mining*, pages 1949-1950.
93. D. WANG, T. LI, and M. OGIHARA. **Are tags better than audio? The effect of joint use of tags and audio content features for artistic style clustering**, In *Proceedings of the Eleventh International Society for Music Information Retrieval Conference (ISMIR'10)*, pages 57-62.
94. J. LI, T. LI, and M. OGIHARA. **Hierarchical co-clustering of artists and tags**, In *Proceedings of the Eleventh International Society for Music Information Retrieval Conference (ISMIR'10)*, pages 249-254.
95. M. INOUE, M. OGIHARA, R. HANADA, and N. FURUYAMA. **Utility of gestural cues in indexing semantic miscommunication**. In *Proceedings of the International Workshop on Multimedia and Semantic Technologies (MUST2010)*.
96. H. ZHAO, A. LALL, M. OGIHARA, and J. XU. **Global iceberg detection over distributed data streams**, In *Proceedings of the Twenty-sixth International Conference on Data Engineering (ICDE'10)*, pages 557-568.
97. F. WANG, X. WANG, B. SHAO, T. LI, and M. OGIHARA. **Tag integrated multi-label music style classification with hypergraphs**, In *Proceedings of the Tenth International Symposium on Music Information Retrieval (ISMIR09)*, pages 363-368.
98. E. ZENG and M. OGIHARA. **Nonnegative least squares – a new look into SAGE data**. *Proceedings of the Eighth Annual Conference on Computational Systems Biology (CSB'09)*.
99. Q. ZHANG, Y. WU, T. LI, M. OGIHARA, J. JOHNSON, and X. HUANG. **Mining product reviews based on shallow dependency parsing**. In *Proceedings of the Thirty-second Annual International ACM Conference on Research and Development in Information Retrieval (SIGIR'09)*, pages 726-727.
100. A. LALL, M. OGIHARA, and J. XU. **An efficient algorithm for measuring medium-to-large-sized flows in network traffic**. In *IEEE INFOCOM2009*, pages 2711-2715.
101. B. SHAO, T. LI, and M. OGIHARA. **Quantify music artist similarity based on style and mood**. In *10th ACM International Workshop on Web Information and Data Management (WIDM 2008)*, pages 119-124, 2008.
102. M. OGIHARA and T. LI. **N-gram chord profiles for composer style representation**. In *Proceedings of the 2008 Symposium on Music Information Retrieval*, pages 671-676, 2008.
103. H. ZHAO, A. LALL, M. OGIHARA, O. SPATSCHECK, J. WANG, and J. XU. **Data streaming algorithm for estimating entropies of OD flows**. In *Proceedings of the 2007 ACM Internet Measurement Conference*, pages 279-290, 2007.
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112. A. LALL, V. SEKAR, M. OGIHARA, J. XU, and H. ZHANG. **Streaming algorithms for estimating entropy of network traffic data**. In *Proceedings of the Joint International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS'06)*, pages 145–156, 2006.
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243. 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.
244. 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.
245. 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.
246. 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.
247. M. OGIWARA. **Paddable sets in number theory**. Research Report C94. Department of Information Sciences, Tokyo Institute of Technology, June 1989.
248. M. OGIWARA. **A method for generating cryptographically strong primes**. Research Report C93. Department of Information Sciences, Tokyo Institute of Technology, April 1989.

GRANT SUPPORT

- “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 Institute 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 Institute 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–)
- *Central European Journal of Computer Science*, Editor (2010–)
- *ISRN Journal on Computational Mathematics*, Editor (2011–)

PROFESSIONAL ORGANIZATIONS

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

OTHER PROFESSIONAL ACTIVITIES

CONFERENCE PRESENTATION

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

INVITED SEMINARS & Keynote/Plenary Talks

1. *Biological Data Mining*. ACM Research in Applied Computing Symposium, 2011. Miami, FL, November 3, 2011
2. *Algorithmic Analysis of Network Traffic Data*. NEC, Japan, May 26, 2011
3. *Computational Analysis of Music Data*. Plenary Talk, The Sixth International Conference on Computer Science and Education, Hefei, China, August 21, 2010
4. *Nonnegative Least Squares for High-throughput Biological Data Analysis*. Beijing University, Beijing, China, August 21, 2010

5. *Algorithmic Analysis of Network Traffic Data*. University of Maryland at Baltimore County, May 1, 2009.
6. *Computational Analysis of Music Data*. University of Rochester, December 1, 2008.
7. *Entropy Estimation of Network Traffic Flow Data*. Tokyo Institute of Technology, November 14, 2008.
8. *Algorithmic Analysis of Network Traffic*. 2008 Kyoto Prize Workshop. November 12, 2008.
9. *Entropy Estimation of Network Traffic Flow Data*. Florida International University. November 30, 2007.
10. *Estimating Entropy of Network Traffic Flow Data*. Michigan State University, East Lansing, Michigan. April 26, 2007.
11. *Data Mining for Exploring Databases*. Georgetown University, Georgetown, Washington DC. March 22, 2007.
12. *Data Mining for Exploring Databases*. February 22, 2007. University of Miami, Coral Gables, Florida.
13. *Estimating Entropy of Network Flow Data*. Toyota Technological Institute, Chicago, Illinois. January 19, 2006.
14. *Molecular Computation: Theory and Experiments*. Department of Mathematical Linguistics, Rovira i Virgili University, Tarragona, Spain. October 3–6, 2005 (four-day lecture).
15. *Daubechies Wavelet Coefficient Histograms for Music Information Retrieval*. Department of Computer Science, Heinrich-Heine University of Düsseldorf, Düsseldorf, Germany. July 25, 2005.
16. *Machine Learning Approaches to Music Information Retrieval*. Department of Computer Science and Engineering, State University of New York, Buffalo, New York. October 21, 2004.
17. *Molecular computation: theory and experiments*. Department of Mathematical Linguistics, Rovira i Virgili University, Tarragona, Spain. November 8–12, 2004.
18. *Semi-supervised Learning from Heterogeneous Data*. IBM T. J. Watson Research Center, Harthorn, New York. February 26, 2004.
19. *Data Mining for Studying Large Databases*. Xerox, Webster, New York. February 12, 2004.
20. *Machine Learning Approaches to Music Information Retrieval*. Department of Computer Science, University of Texas, Dallas, Texas. October 17, 2003.
21. *Enumerative Approximations of the Rank and the Determinant*. Universität zu Lübeck, Lübeck, Germany. March 3, 2003.
22. *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.
23. *Tissue Sample Classification Based on Gene Expression*. Invited Talk. *Frontiers of Theoretical Computer Science* Nihon University, Tokyo, Japan. September 27, 2002.
24. *A Biologically Relevant Classification Approach to Microarray Data Analysis*. Keck Graduate Institute, Claremont, California. June 14, 2002
25. *A Biologically Relevant Classification Approach to Microarray Data Analysis*. Georgia Institute of Technology, Atlanta, Georgia. April 4, 2002
26. *A Biologically Relevant Classification Approach to Microarray Data Analysis*. NEC Research Institute, Princeton, New Jersey. January 11, 2002
27. *Computational Approaches to Microarray Data Analysis*. Rochester Nathan Shock Center Workshop, University of Rochester, Rochester, New York. October 20, 2001
28. *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

29. *Self-Avoiding Random Walks*. Department of Computer Science, McGill University, Montreal, Canada. April 20, 2001
30. *DNA-Based Parallel Circuit Evaluation*. Department of Computer Science University of Chicago, Chicago, Illinois. December 13, 2000
31. *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
32. *Reducing the Number of Solutions of NP Functions*. Department of Information Science and Applied Mathematics, Tokyo Institute of Technology, Tokyo, Japan. June 23, 2000
33. *Foundations of Data Mining*. Department of Computer Science, Universitat Politecnica de Catalunya, Barcelona, Spain. November 12, 1999
34. *DNA-Based Parallel Computation by "Counting"*. Department of Computer Science, Universitat Politecnica de Catalunya, Barcelona, Spain. November 9, 1999
35. *DNA-Based Massively Parallel Simulation of Boolean Circuits*. National Science Foundation, Arlington, Virginia. October 1, 1999
36. *Relating the Minimum DNA Computation Model and the Boolean circuit Model*. Department of Computer Science, Tokyo University, Tokyo, Japan. July 29, 1999
37. *Massively Parallel Computation with DNA*. National Institute for Standards and Technology, Gaithersburg, Maryland. June 25, 1999.
38. *Massively Parallel Computation with DNA*. ACM Rochester Chapter, Rochester, New York. March 18, 1999.
39. *Boolean Circuit Evaluation by Liquid-Phase DNA Chemistry*. Department of Computer Science, University of Western Ontario, London, Ontario, Canada, February 12, 1999.
40. *On the Power of Minimum DNA Computation Model*. Department of Computer Science, University of Wisconsin, Madison, Wisconsin. July 27, 1998.
41. *DNA-Based Methods for Circuit Evaluation*. Cold Spring Harbor Laboratory, March 25, 1998.
42. *DNA-Based Circuit Evaluation*. McMaster University, Hamilton, Canada, March 12, 1998.
43. *Sparse Hard Sets for P*. Department of Computer Science, University of Minnesota, St. Paul, Minnesota. April 12, 1997.
44. *Simulating Circuits on DNA* Complexity Theory Seminar, IBM Yamato Laboratory, Tokyo, Japan. December 13, 1996.
45. *Recent Progress on Sparse Hard Sets*. Oberwolfach Mathematical Institute, Oberwolfachwalke, Germany. November 13, 1996,
46. *Sparse Hard Sets*. Colloquium, Department of Computer Science, Universität Ulm, Germany. November 8, 1996.
47. *The PL Hierarchy Collapses*. The American Mathematical Society Meeting at Greensboro, A Special Session on Computational Complexity, Greensboro, North Carolina. November 22, 1995.
48. *The PL Hierarchy Collapses*. Colloquium, Department of Computer Science, University of Chicago, Chicago, Illinois. November 10, 1995.
49. *How hard is counting?* Department of Computer Science, University of Rochester, Rochester, New York. November 23, 1992.
50. *On oracles that compute values*. Colloquium, Department of Computer Science, Boston University, Boston, Massachusetts. October 23, 1992.
51. *On oracles that compute values*. Department of Computer Science, State University of New York, Buffalo, New York. October 8, 1992.

52. *On oracles that compute values.* Department of Computer Science, Rutgers University, New Brunswick, New Jersey. August 26, 1992.
53. *On p -closeness of polynomial-time hard sets.* Department of Computer Science, University of Chicago, Chicago, Illinois. April 1, 1992.
54. *On one word-decreasing self-reducible sets.* Department of Computer Science, University of Rochester, Rochester, New York. February, 1991.
55. *On one word-decreasing self-reducible sets.* Department of Computer Science, State University of New York, Buffalo, New York. February, 1991.
56. *On the power of exact counting.* Department of Computer Science, University of Rochester. Rochester, New York. May, 1990.
57. *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 24th IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2012*, Program Committee Member.
2. *International Conference on Machine Learning and Applications (ICMLA), 2012*, Program Committee Member.
3. *International Society for Music Information Retrieval Conference (ISMIR), 2012*, Program Committee Member.
4. *International Conference on Knowledge Discovery and Information Retrieval (KDIR), 2012*, Program Committee Member.
5. *The Fifth International Conference on Business Process and Services Computing (BPSC), 2012*, Program Committee Member.
6. *The 21st ACM International Conference on Information and Knowledge Management (CIKM). 2012*, Program Committee Member
7. *The Sixth International Conference on Combinatorial Optimization and Applications (COCOA), 2012*, Program Committee Member.
8. *The 4th International Workshop on Advances in Music Information Research (AdMIRe), 2012.* Program Committee Member.
9. *The 6th International Conference on Language and Automata Theory and Applications (LATA), 2012.* Program Committee Member.
10. *The Ninth Annual Conference on Theory of Applications of Models of Computation (TAMC), 2012*, Program Committee Member.
11. *The 23rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2011)*, Program Committee Member.
12. *International Conference on Machine Learning and Applications (ICMLA), 2011*, Senior Program Committee Member.
13. *The Fifth International Conference on Combinatorial Optimization and Applications (COCOA), 2011*, Program Committee Member.
14. *International Conference on Knowledge Discovery and Information Retrieval (KDIR), 2011*, Program Committee Member.
15. *International Symposium on Algorithms and Computation (ISAAC), 2011*, Program Committee Member.
16. *International Conference on Business Information Systems (BIS), 2011*, Program Committee Member.
17. *The Fourth International Conference on Business Process and Services Computing (BPSC), 2011*, Program Committee Member.

18. *The International Society for Music Information Retrieval Conference (ISMIR)*, 2011, General Chair.
19. *The Seventeenth Annual International Computing and Combinatorics Conference (COCOON)*, 2011, Program Committee Member.
20. *The Eighth Annual Conference on Theory of Applications of Models of Computation (TAMC)*, 2011, Program Chair.
21. *The Fourth International Conference on Combinatorial Optimization and Applications (COCOA)*, 2010, Program Committee Member.
22. *The Third International Conference on Business Process and Services Computing (BPSC)*, 2010, Program Committee Member.
23. *The Seventh Annual Conference on Theory of Applications of Models of Computation (TAMC)*, 2010, Program Committee Member.
24. *International Conference on Business Information Systems (BIS)*, 2010, Program Committee Member.
25. *Pacific Symposium on Knowledge Discovery and Data Mining (PAKDD)*, 2010, Program Committee Member.
26. *International Conference on Machine Learning and Applications (ICMLA)*, 2010, Program Committee Member.
27. *Fifth International Conference on Stochastic Algorithms: Foundations and Applications (SAGA)*, 2009, Program Committee Member.
28. *International Conference on Machine Learning and Applications (ICMLA)*, 2009, Program Committee Member.
29. *SIGKDD International Conference on Knowledge Discovery and Data Mining (SIGKDD)*, 2009, Program Committee Member.
30. *International Symposium on Algorithms and Computation (ISAAC)*, 2009, Program Committee Member.
31. *Pacific Symposium on Knowledge Discovery and Data Mining (PAKDD)*, 2009, Program Committee Member.
32. *International Conference on Business Process and Computation (BPSC)*, 2009, Program Committee Member.
33. *International Conference on Business Information Systems (BIS)*, 2009, Program Committee Member.
34. *International Conference on Machine Learning and Applications (ICMLA)*, 2008, Program Committee Member.
35. *International Symposium on Methodologies for Intelligent Systems (ISMIS)*, 2008, Program Committee Member.
36. *International Conference on Business Process and Computation (BPSC)*, 2008, Program Committee Member.
37. *The 14th International Meeting on DNA Computing (DNA)*, 2008, Program Committee Member.
38. *SIAM Data Mining (SDM)*, 2008, Technical Program Committee Member.
39. *The 2nd International Conference on Language and Automata Theory and Applications (LATA)*, 2008. Program Committee Member.
40. *International Conference on Business Information Systems (BIS)*, 2008, Program Committee Member.
41. *The 2007 International Conference on Machine Learning and Applications (ICMLA)*, 2007, Program Committee Member, Special Session Chair.
42. *International Conference on Language and Automata Theory and Applications (LATA)*, 2007. Program Committee Member.
43. *International Conference on Business Information Systems (BIS)*, 2007, Program Committee Member.

44. *The SIGKDD Workshop on Temporal Data Mining (TDM), 2006*, Program Committee Member.
45. *International Conference on Business Information Systems (BIS), 2006*, Program Committee Member.
46. *The 2006 International Conference on Machine Learning and Applications (ICMLA), 2006*, Publicity Chair.
47. *International Conference on Business Information Systems (BIS), 2005*, Program Committee Member.
48. *The Fifth SIGKDD Workshop on Biological Data Mining (BIOKDD), 2005*, Program Committee Member.
49. *International Conference on Foundations of Computing Theory (FCT), 2005*, Program Committee Member.
50. *International Conference on Business Information Systems (BIS), 2004*, Program Committee Member.
51. *International Conference on Business Information Systems (BIS), 2003*, Program Committee Member.
52. *National Academy of Engineering Frontiers of Engineering (FOE), 2003*, Organizing Committee Member.
53. *International Conference on Business Information Systems (BIS), 2002*, Program Committee Member.
54. *Third International Conference on Unconventional Model of Computation (UMC), 2002*, Program Committee Member.
55. *First International Congress on Autonomous Intelligent Systems (ICAIS), 2002*, Program Committee Member.
56. *International Conference on Business Information Systems (BIS), 2001*, Program Committee Member.
57. *International Symposium on Algorithms and Computation (ISAAC), 2001*, Program Committee Member.
58. *Genetic and Evolutionary Computation Conference (GECCO), 2001*, Technical Program Committee Member.
59. *Genetic and Evolutionary Computation Conference (GECCO), 2000*, Technical Program Committee Member.
60. *Symposium on Theoretical Aspects of Computer Science (STACS), 2000*, Program Committee Member.
61. *Genetic and Evolutionary Computation Conference (GECCO), 1999*, Technical Program Committee Member.
62. *International Symposium on Algorithms and Computation (ISAAC), 1996*, Program Committee Member.
63. *IEEE Conference on Computational Complexity (COMPLEXITY), 1996*. Program Committee Member.

JOURNAL REFEREE

1. *Algorithmica*
2. *Annals of Pure and Applied Logic*
3. *Bioinformatics*
4. *BioSystems*
5. *BMC Bioinformatics*
6. *BMC Genomics*
7. *Bulletin of Mathematical Biology*

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

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 European Science Foundation, National Institute of Health, National Science Foundation, and Research Grants Council of Hong Kong.

COURSES TAUGHT

CSC101	Computer Science Without Programming, '04F, '05F, '06F
CSC120Q	Introduction to Computational Molecular Biology, '00S (co-taught with John Huelsenbeck; cross-listed as BIO120Q)
CSC220	Computer Programming II, '08F, '09S, '09F, '10F
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 (formerly, Theory of Computation I), '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
CSC527	Theory of Computation, '08S, '10S, '11S
FNS190	Freshmen Seminar: iListen/uListen, '11F

POSTGRADUATE ADVISING

- Dingding Wang (2011.3-), Qiong Cheng (2010.1-2011.3), Youlong Yang (2006.9-2007.8), Erliang Zeng (2008.8-2009.6).

GRADUATE ADVISING

- **Ph.D. Students** Alina Beygelzimer (PhD: 2003), Yin-He Cheng (PhD: 2004), 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** Matthew Hyatt (PhD: 2011), Piotr Faliszewski (PhD: 2008), Shan He (PhD: 2007), Christopher Homan (PhD: 2003), 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), 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)

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
2011–2014	U. Miami, Research Council Member
2012–	U. Miami, Academic Computing Advisor Committee Member