IOMS Department
Leonard N. Stern School of Business
New York University
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Alexander Tuzhilin

Research Interests	Knowledge Discovery in Databases (Data Mining), Personalization, Recommender Systems and Customer Relationship Management
Education	*New York University*, Courant Institute of Mathematical Sciences Ph.D. in Computer Science, October 1989 *Stanford University*, Department of Management Science and Engineering (formerly, EES Department), M.S. in Engineering Economics, October 1981 *New York University*, B.A. in Mathematics, June 1980
Regular Academic Positions	*New York University*, Stern School of Business NEC Faculty Fellow (2007 – present) Professor of Information Systems (2006 – present) Associate Professor of Information Systems (1996 – 2006) Assistant Professor of Information Systems (1989 – 1996)
Visiting Positions	*The Wharton School*, Department of Operations and Information Management, University of Pennsylvania, Visiting Associate Professor, September 2001 – August 2002 *Columbia University*, Computer Science Department Visiting Scientist, September 1997 – August 1998 *Ecole Nationale Superieure des Telecommunications*, Paris, France Visiting Scientist, March 1994 – August 1994
Industrial Positions	*Bell Laboratories*, Lucent Technologies. Consultant, April 1995 – December 1996 *Information Builders, Inc.*, New York, N.Y. Systems Developer, September 1985 – August 1987
Major Services Performed at the Stern School	Faculty Council Member of the Stern School (2001 – 2003, 2006 -) Ph.D. Program Coordinator for the IS Department (2000 – 2001, 2003 - 2007) Director of the Master of Science in Information Systems Program (joint program between Computer Science and the Stern School) (1996 – 2001)

Grant Support	NSF Grant ``Knowledge Discovery in Temporal Databases,'' Principal Investigator, 1994 – 1997.
	Center for Advanced Technologies, NYU, 1:1Pro Project, 1998.
	Center for Research in Information Systems, Stern School of Business, NYU, The e-Butler Project, 1998.
	Center for Information Intensive Organizations, NYU, Personalization Technologies for 1:1 Marketing Applications, 1999.
	Morgan Stanley Dean Witter "The ARTE Project", 2000 – 2001.
	Pfizer, Inc., Pharmaceutical Applications of Data Mining, 2002.
	Stern School of Business, NYU, Multidimensional Recommender Systems, 2002.
	Stern School of Business, NYU, Development of a Recommendation Query Language for Multidimensional Recommender Systems, 2003.
	Stern School of Business, NYU, Model Management for Statistical and Data Mining Models, 2004.
Patents	"System and Method for Dynamic Profiling of Users in One-to-One Applications." US Patent #6,236,978.
	"System and Method for Dynamic Profiling of Users in One-to-One Applications and for Validating User Rules." US Patent #6,871,186.
	"Method for Determining Actionable Patterns in a Database." US Patent #6,292,797.
	"System, process and software arrangement for providing multidimensional recommendations/suggestions." Patent pending.
Courses Taught at NYU	- Emerging Technologies and Business Innovation (MBA)
	- Customer Relationship Management Systems (MBA)
	- Database Management Systems (undergraduate and MBA)
	- Fundamentals of Computer Systems (undergraduate)
	- Technical Foundations of Information Systems (Ph.D.)
	- Computer-Based Systems for Management Support (undergraduate core)
	- Ph.D. Seminars
Honors and Awards	- Outstanding Service Award from the Technical Committee on Computational Intelligence (TCCI) of the IEEE Computer Society, 2003

- Dean's Dissertation Fellowship from NYU, September 1988

- Fellowship from the Stanford School of Engineering, September 1980

- Mathematics Award for Excellence from NYU, June 1980

Professional Activities

Editorial Activities:

Area Editor of the *INFORMS Journal on Computing* for the Knowledge and Data Management Area (2007 – present)

Associate Editor of the *INFORMS Journal on Computing* (2000 – 2007)

Member of the Editorial Board of the *Data Mining and Knowledge Discovery* journal (1997 – present)

Member of the Editorial Board of the *IEEE Transactions on Knowledge and Data Engineering* (2002 – 2006)

Member of the Editorial Board of *the Electronic Commerce Research Journal* (2000 - 2008)

Member of the Editorial Board of the *Journal of the Association for Information Systems* (1999 - 2002)

Guest Co-Editor of the Special Issue of the *International Journal on User Modeling and User-Adapted Interactions* on Data Mining for Personalization (scheduled publication: 2008).

Guest Co-Editor of the Special Issue of the *Informs Journal on Computing* on Mining Web-based Data for e-Business Applications, Vol. 15, No. 2, 2003.

Guest Editor of the special issue of the *Decision Support Systems* journal on knowledge discovery and its applications to business. Vol. 21, 1997.

Member of the Editorial Advisory Board of and wrote a foreword to the *Encyclopedia of Data Warehousing and Mining,* John Wang (ed.), IDEA Group, 2005.

Organizing Committee Member

ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, *Panels Chair,* Las Vegas, August 2008.

The 2nd KDD Workshop on Large-Scale Recommender Systems and the Netflix Prize Competition, *Chair of the Organizing Committee,* Las Vegas, August 2008.

Annual Meeting of the Institute for Operations Research and the Management Sciences (INFORMS), *Data Mining Cluster Co-Chair,* Washington, DC, November 2008.

17th ACM Conference on Information and Knowledge Management, *Knowledge Management Area Track Chair*, Napa Valley, October 2008.

Annual Meeting of the Institute for Operations Research and the Management Sciences (INFORMS), *Data Mining Cluster Co-Chair,* Seattle, November 2007.

Third Winter Information Systems Conference, *Member of the Core Committee,* Salt Lake City, Utah, February 2007.

AAAI'07 Workshop on Recommender Systems in E-Commerce, *Co-Organizer,* Vancouver, CA, July 2007.

IEEE International Conference on Data Mining, *Program Committee Vice-Chair,* Hong Kong, 2006.

IEEE International Conference on Data Mining, *Member of the IEEE ICDM Research Contributions and Outstanding Service Awards Committee*, 2006.

IEEE International Conference on Service Operations and Logistics, and Informatics (SOLI), *Advisory Board Member,* Shanghai, China, 2006.

International Workshop on Customer Relationship Management: Data Mining Meets Marketing, *Workshop Co-Chair,* New York, 2005.

IEEE International Conference on Data Mining, *Program Committee Co-Chair,* Melbourne, Florida, 2003.

IEEE International Conference on Data Mining, *Best Paper Awards Committee Chair,* Melbourne, Florida, 2003.

ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, *Panels Chair,* Boston, 2000.

Program Committee Member *(in chronological order):*

Second International ACM Conference on Recommender Systems, Lausanne, Switzerland, October 2008.

Workshop on Information Technologies and Systems (WITS), Paris, France, December 2008.

International Conference on Advanced Intelligence, Beijing, China, October 2008.

International Conference on Information Systems (ICIS), Design Sciences Track, Montreal, Canada, December, 2007.

Workshop on Information Technologies and Systems (WITS), Montreal, Canada, December 2007.

Sixth Workshop on e-Business (WeB), Montreal, Canada, December 2007.

ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, *Senior Program Committee Member,* San Jose, August 2007.

ACM Conference on Electronic Commerce, San Diego, CA, June 2007.

The First International Conference on Global Defense and Business Continuity, Silicon Valley, July 2007.

Fifth AAAI Workshop on Intelligent Techniques in Web Personalization, July 2007.

ACM KDD Workshop on Business Applications of Data Mining, Philadelphia, PA, 2006.

International Conference on Machine Learning (ICML), Pittsburgh, June 2006.

International Conference on Information Systems (ICIS), Design Sciences Track, Milwaukee, Wisconsin, December, 2006.

Workshop on Information Technologies and Systems (WITS), Milwaukee, WI, December 2006.

Fifth Workshop on e-Business (WEB 2006), Milwaukee, WI, Dec. 2006

ICIS SIG-DSS Workshop on Strategic and Behavioral Aspects of DSS, Milwaukee, WI, December 2006.

Fourth AAAI Workshop on Intelligent Techniques in Web Personalization, July, Boston, MA, 2006.

KDD workshop on Data Mining For Business Applications, Philadelphia, PA, August 2006.

Fifth IEEE International Conference on Data Mining, New Orleans, November, 2005.

Workshop on Information Technologies and Systems (WITS), Las Vegas, December 2005.

Third IJCAI Workshop on Intelligent Techniques in Web Personalization, August 2005, Edinburgh, Scotland.

Tenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, Seattle, WA, August 2004.

Workshop on Information Technologies and Systems (WITS), Washington, DC, December 2004.

SIGMOD Workshop on Research Issues in Data Mining and Knowledge Discovery, Paris, France, June 2004.

AAAI Workshop on Semantic Web Personalization, San Jose, July 2004.

Workshop on Information Technologies and Systems (WITS), Seattle, WA,

December 2003.

Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, Washington, DC, August 2003.

IJCAI-03 Workshop on Intelligent Techniques for Web Personalization, Acapulco, Mexico, August 2003.

NSF/NIJ Symposium on Intelligence and Security Informatics, Tucson, AZ, June 2003.

IEEE International Conference on Data Mining, Japan, December 2002

SIAM Data Mining Conference, Arlington, VA, April 2002.

Eighth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, Alberta, CA, July 2002.

Workshop on Information Technologies and Systems (WITS), Barcelona, Spain, December 2002.

Ninth International Symposium on Temporal Representation and Reasoning (TIME), July, 2002.

27th International Conference on Very Large Databases, Rome, Italy, September 11 – 14, 2001

Seventh International Conference on Knowledge Discovery and Data Mining, San Francisco, August 20 – 23, 2001.

International Workshop on Bioinformatics in Data Mining (BIOKDD 2001), San Francisco, August 2001.

Eight International Symposium on Temporal Representation and Reasoning (TIME), Udine, Italy, June 14-16, 2001

4th International Conference on Telecommunications and Electronic Commerce (ICTEC), Dallas, TX, November 8 – 11, 2001.

IJCAI-01 Workshop on Intelligent Techniques for Web Personalization, Seattle, WA, August 2001

First International Workshop on Databases, Documents, and Information Fusion, Magdeburg, Germany, 2001.

3rd International Conference on Telecommunications and Electronic Commerce (ICTEC), Dallas, TX, November 16-19, 2000.

International Workshop on Temporal, Spatial and Spatio-Temporal Data Mining, Lyon, France, September 13 – 16, 2000.

Sixth International Conference on Knowledge Discovery and Data Mining, Boston, August 2000 (Panels Chair, Program Committee Member)

WebKDD'2000 Workshop, Boston, MA, August 2000.

WebKDD'99 Workshop, San Diego, CA, August 1999.

SIGMOD'99 Data Mining Workshop, Philadelphia, May, 1999.

1st International Workshop on Evolution and Change in Data Management, Versailles, France, November, 1999.

Pacific Rim Workshop on Data Mining and Machine Learning, 1998.

16th International Conference on Conceptual Modeling (ER'98), Singapore 1998.

Fourth International Conference on Knowledge Discovery and Data Mining, New York, N.Y., August 1998.

15th International Conference on Conceptual Modeling (ER'97), Los Angeles, CA, November 1997.

SIGMOD'97 Data Mining Workshop, Tucson, AZ, June 1997.

NSF funding panel, 1997.

Third International Conference on Knowledge Discovery and Data Mining, Newport Beach, CA, August 1997.

Second International Conference on Knowledge Discovery and Data Mining, Portland, Oregon, August 1996.

First International Conference on Knowledge Discovery and Data Mining, Montreal, Canada, August 1995.

International Workshop on Temporal Databases, Zurich, Switzerland, September 1995.

Fifth Workshop on Information Technologies and Systems, Amsterdam, Netherlands, December 1995.

International Workshop on Temporal Reasoning in Deductive and Object-Oriented Databases, Singapore, December 1995.

AAAI Workshop on Knowledge Discovery in Databases, Washington, 1993

Invited Presentations:

Academic: Numerous presentations including those at MIT, Wharton, Columbia, CMU (Heinz School), NYU, UCLA, University of Minnesota, University of Maryland (College Park), University of Toronto, University of Florida (Gainesville), University of Texas at Dallas, University of Washington, Pennsylvania State, NJIT, Stevens Institute of Technology, Sorbonne, Moscow State University, Stockholm University and Swedish Royal Institute of Technology, Ecole Nationale Superieure des Telecommunications, Vienna University of Economics and Business, Politecnico di Torino, Politecnico di Bari, Free University of Bolzano, and others.

Invited tutorial on Personalization and Data Mining at the INFORMS Annual Meeting, Washington, DC, November 2008.

Invited tutorial on Context-Sensitive Recommender Systems at the Second ACM International Conference on Recommender Systems (RecSys08), Lausanne, Switzerland, October 2008.

Participation/Presentation at the Dagstuhl Seminars:

　　-- Data Mining: The Next Generation, July 2004.

　　-- Temporal Databases: Research and Practice, June 1997.

Participation in the "Architecture of On Demand Business Summit" at IBM T.J. Watson Research Center, May 2004.

Industrial (related to my research): Yahoo! Research, Bell Laboratories (Lucent), IBM Watson Research Center, Oracle, Computer Associates, Doubleclick, Morgan Stanley, Barnes&Noble.com, Telecordia, Merck, CuraGen, Genaissance Pharmaceuticals, CCS (Japan)

Ad Hoc Reviewing:

-- ACM Transactions on Database Systems
-- ACM Transactions on Internet Technologies
-- IEEE Transactions on Knowledge and Data Engineering
-- IEEE Transactions on Software Engineering
-- IEEE Transactions on Systems, Man and Cybernetics
-- IEEE Computer
-- Management Science
-- Operations Research
-- Information Systems Research
-- Journal of Data Mining and Knowledge Discovery
-- Journal of Intelligent Information Systems
-- Information Systems
-- Artificial Intelligence Journal
-- INFORMS Journal on Computing
-- Decision Support Systems Journal
-- Annals of Operations Research
-- Machine Learning Journal
-- International Journal of Electronic Commerce
-- Information Processing Letters
-- Journal of Software Practice and Experience
-- NSF Grant Proposals
-- SIGMOD, VLDB, ECDT, ICDE, KDD, ICDM, ER Conferences.

Ph.D. Student Advising

Dissertation Committee Chair (chronological order):

- *Akhmed Umyarov* (4th year PhD student); research area: recommender systems

- *Rong Zheng* (5th year PhD student); research area: personalization

(customer profiling/user modeling)

- *Tianyi Jiang*, Thesis title: "Generalized Approach to Customer Segmentation and Building Predictive Models of Customer Behavior," 2008. T. Jiang is currently the Chief Operating Officer of AvePoint.

- *Gedas Adomavicius* (CS Department, NYU). Thesis title: "Expert-Driven Validation of Set-Based Data Mining Results," 2002. G. Adomavicius is currently an Associate Professor of Information Systems with tenure at the Carlson School of Management, *University of Minnesota*.

- *Balaji Padmanabhan*, Thesis title: "Discovery of Unexpected Patterns in Data Mining Applications," 1999. B. Padmanabhan is currently an Anderson Professor of Global Management at the College of Business Administration, *University of South Florida*

- *P. Balasubramanian*, Thesis title: "Query-Driven Simulation for Decision Support," 1995. P. Balasubramanian is currently an Associate Professor of Information Systems with tenure at *Babson College*.

Dissertation Committee Member:

- Raghav Madhavan, "Design and Evaluation of Genetic Regression Methods for Knowledge Discovery," 1999.

- Don Berndt, "Designing a Knowledge Discovery Tool: The AX System," 1997.

- Nicky Ranganathan, "Constraint-Based Environments for Model Formulation and Analysis," 1994

- Hardeep Johar, "Coordination and Control in Distributed Work: Towards Intelligent Decision Support", 1994.

- Shlomo Hershkop (Computer Science Department, Columbia University), "Behavior-Based Email Analysis with Application to Spam Detection," 2005 (external thesis committee member).

- Sigal Sahar (Computer Science Department, Tel Aviv University). "What is Interesting: Studies on Interestingness in Knowledge Discovery," 2003 (external examiner)

- Wenke Lee (Computer Science Department, Columbia University), "A Data Mining Framework for Constructing Features and Models for Intrusion Detection Systems," 1999, (external thesis committee member).

- Andreas Prodromidis (Computer Science Department, Columbia University) "Management of Intelligent Learning Agents in Distributed Data Mining Systems," 1999, (external thesis committee member).

- Mauricio Hernandez (Computer Science Department, Columbia University), "A Generalization of Band Joins and the Merge/Purge Problem," March 1996 (external thesis committee member).

- Philip Chan (Computer Science Department, Columbia University), "An Extensible Meta-Learning Approach for Scalable and Accurate Inductive Learning," October 1996 (external thesis committee member).

List of Publications

Journal Publications (in chronological order)

1. "ReQuest: A Query Language for Customizing Recommendations". *Conditionally accepted* to the **INFORMS Information Systems Research Journal (ISR)** (with G. Adomavicius and R. Zheng).

2. "Improving Personalization Solutions through Optimal Segmentation of Customer Bases". To appear in the **IEEE Transactions on Knowledge and Data Engineering** (with T. Jiang).

3. "Using Context to Improve Predictive Models of Customers in Personalization Applications." **IEEE Transactions on Knowledge and Data Engineering,** 20(11), November 2008 (with M. Gorgoglione and C. Palmisano).

4. "Dynamic Micro Targeting: Fitness-Based Approach to Predicting Individual Preferences." To appear in the **Knowledge and Information Systems Journal (KAIS)** (with T. Jiang).

5. "Managing and Analyzing Large Collections of Data Mining Models." **Communications of the ACM,** 51(2), February 2008 (with Bing Liu).

6. "Validation Sequence Optimization: A Theoretical Approach." **INFORMS Journal on Computing** 19(2), Spring 2007 (with G. Adomavicius).

7. "Segmenting Customers from Population to Individuals: Does 1-to-1 Keep your Customers Forever?" **IEEE Transactions on Knowledge and Data Engineering**, 18(1), October 2006 (with T. Jiang).

8. "On Characterization and Discovery of Minimal Unexpected Patterns in Rule Discovery." **IEEE Transactions on Knowledge and Data Engineering**, 18(2), February 2006 (with B. Padmanabhan).

9. "Personalization Technologies: A Process-Oriented Perspective." **Communications of the ACM**, 48(1), October 2005 (with G. Adomavicius).

10. "Towards the Next Generation of Recommender Systems: A Survey of the State-of-the-Art and Possible Extensions." **IEEE Transactions on Knowledge and Data Engineering,** 17(6), June 2005, (with G. Adomavicius).

11. "Incorporating Contextual Information in Recommender Systems Using a Multidimensional Approach". **ACM Transactions on Information Systems,** 23(1), January 2005 (with G. Adomavicius, R. Sankaranarayanan and S. Sen).

12. "On the Use of Optimization for Data Mining: Theoretical Interactions and eCRM Opportunities," **Management Science**, 49(10), October 2003 (with B. Padmanabhan).

13. "e-Butler: An Architecture of a Customer-Centric Personalization System," **International Journal of Computational Intelligence and Applications**, vol. 2, no 3, October 2002 (with G. Adomavicius).

14. "Knowledge Refinement Based on the Discovery of Unexpected Patterns in Data Mining". **Decision Support Systems**, vol. 33, no. 3, July 2002 (with B. Padmanabhan).

15. "Using Data Mining Methods to Build Customer Profiles." **IEEE Computer**; vol. 34, no. 2, February 2001 (with G. Adomavicius).

16. "Expert-Driven Validation of Rule-Based User Models in Personalization Applications." **Data Mining and Knowledge Discovery Journal.** vol. 5, no 1/2, Special Issue on E-commerce and Data Mining, January 2001 (with G. Adomavicius).

17. "Unexpectedness as a Measure of Interestingness in Knowledge Discovery." **Decision Support Systems**, (27)3 (1999) pp. 303-318 (with B. Padmanabhan).

18. "Making Sense of Marketing Data: Some MIS Perspectives on the Analysis of Large Databases," **Journal of Market-Focused Management** (with S. Sen), vol. 3, p. 91–111, 1998.

19. "On the Analysis of Web Site Usage Data: How Much Can We Learn About the Consumer from Web Logfiles?" **European Journal of Marketing**, vol 32, no. 7, 1998 (Special Issue on Marketing in Cyberspace) (with S. Sen, B. Padmanabhan, N. White, R. Stein).

20. "Providing Information Systems Support for Simulations Using the Cassandra+ System." **Annals of Operations Research**, vol. 72, 1997 (with P. Balasubramanian).

21. "What Makes Patterns Interesting in Knowledge Discovery Systems." **IEEE Transactions of Knowledge and Data Engineering**, vol. 8, no. 6, December 1996 (with Avi Silberschatz).

22. "On Data Representation and Use in a Temporal Relational DBMS". **Information Systems Research** vol. 7, no. 3, September 1996 (with J. Clifford and A. Croker).

23. "Modeling Data-Intensive Reactive Systems with Relational Transition Systems." **Acta Informatica**, vol.33, no.3, May 1996 (with Z. Kedem).

24. "Using Query Driven Simulations for Querying Outcomes of Business Processes." **Decision Support Systems**, vol. 16, 1996 (with P. Balasubramanian).

25. "On Periodicity in Temporal Databases." **Information Systems**, vol. 20, no. 8, December 1995 (with J. Clifford).

26. "Templar: A Knowledge-Based Language for Software Specifications Using Temporal Logic." **ACM Transactions on Information Systems**, vol. 13, no. 3, July 1995.

27. "Extending Temporal Logic to Support High-Level Simulations." **ACM Transactions on Modeling and Computer Simulation**, vol. 5, no. 2, 1995.

28. "On Completeness of Historical Relational Query Languages." **ACM Transactions on Database Systems**, vol. 19, no. 1, March 1994 (with James Clifford and Albert Croker)

29. "Querying Datalog Programs with Temporal Logic." **Acta Informatica**, vol. 30, Dec. 1993.

30. "Abstract-Driven Pattern Discovery in Databases." **IEEE Transactions of Knowledge and Data Engineering**, vol. 5, no. 6, December 1993 (with V. Dhar).

31. "SimTL: A Simulation Language Based on Temporal Logic." **Transactions of the Society for Computer Simulation**, vol. 9, no. 2, 1992.

Articles in Non-refereed Journals and Magazines

32. "The Lane's Gifts v. Google Report". **Search Engine Marketing Research Journal**, Summer 2008.

33. "Automation's Next Wave." **Stern Business**, *March 2005.*

Submitted Articles

34. "Partitioning Customers Using Overlapping Segmentation Methods." Submitted to **WITS'08** (with R. Zheng).

In Preparation

35. "Model Management Revisited: A Sleeping Beauty Story" (with B. Liu).

36. "Using Aggregate Ratings to Improve Collaborative Filtering Recommendations" (with A. Umyarov)

Books

37. **Proceedings of the Third IEEE International Conference on Data Mining** (edited with Jude Shavlik and Xindong Wu), November 2003.

38. **Recent Advances in Temporal Databases**. Springer, September 1995 (edited with James Clifford).

Book Chapters

39. "Customer Relationship Management: An Interdisciplinary Approach," In **Web Usage Mining**, forthcoming, 2008.

40. "Personalization: The State of the Art and Future Directions." In **Handbook on Business Computing**, Elsevier Publishing, forthcoming, 2008.

41. "On Subjective Methods of Knowledge Evaluations in Data Mining." In **Handbook of Data Mining and Knowledge Discovery**. Oxford University Press. 2002.

42. "Minimum Description Length Principle." In **Handbook of Data Mining and Knowledge Discovery**. Oxford University Press. 2002.

43. "Finding Unexpected Patterns in Data." In **Data Retrieval and Data Mining**, T. Y. Lin and N. Cercone (eds), Kluwer Academic Publishers, 2002 (with B. Padmanabhan).

44. "Discovering Unexpected Patterns in Temporal Data Using Temporal Logic." In **Temporal Databases -- Research and Practice**. O. Etzion, S. Jajodia, S. Sripada (eds.). Springer, 1998 (with G. Berger).

45. "On Completeness of Languages for the Grouped and Ungrouped Historical Data Models." In **Temporal Databases**. A. Tansel, J. Clifford, S. Gadia, S. Jajodia, A. Segev, and R. Snodgrass (eds.), Benjamin/Cummings, 1993 (with J. Clifford and A. Croker).

46. "Application of Temporal Databases to Knowledge-Based Simulations." In **Temporal Databases**. A. Tansel, J. Clifford, S. Gadia, S. Jajodia, A. Segev, and R. Snodgrass (eds.), Benjamin/Cummings, 1993.

Major Refereed Conference Proceedings (in chronological order)
(acceptance rates between 7% and 35%; papers with acceptance rates below 15% highlighted)

47. "Improving Collaborative Filtering Recommendations Using External Data." **IEEE International Conference on Data Mining**, December 2008 (with A. Umyarov) (*acceptance rate = 70/724 = 9%*).

48. "The Long Tail of Recommender Systems and How to Leverage It." **ACM Conference on Recommender Systems**, October 2008 (with Y-J Park) (*acceptance rate = 20/124 = 16%*).

49. "Dynamic Micro Targeting: Fitness-Based Approach to Predicting Individual Preferences." **IEEE International Conference on Data Mining.** November 2007 (with T. Jiang) (*acceptance rate = 38/526 = 7%*).

50. "Leveraging Aggregate Ratings for Better Recommendations", **ACM Conference on Recommender Systems**, November, 2007 (with A. Umyarov) [short paper].

51. "User Profiling with Hierarchical Context: An e-Retailer Case Study." **Sixth International and Multidisciplinary Conference on Modeling and Using Context (CONTEXT'07)**, Denmark, August 2007 (with M. Gorgoglione and C. Palmisano).

52. "Personalization in Context: Does Context Matter when Building Personalized Customer Models?" **IEEE International Conference on Data Mining.** December 2006 (with M. Gorgoglione and C. Palmisano) (*acceptance rate = 73/776 = 9%*).

53. "Improving Personalization Solutions through Optimal Segmentation of Customer Bases" **IEEE International Conference on Data Mining.** December 2006 (with T. Jiang) (*acceptance rate = 73/776 = 9%*).

54. "Forming Segments from Individuals Using Grouping Methods." **16th Workshop on Information Technologies and Systems (WITS)**, (with T. Jiang) December 2006.

55. "Mining Actionable Patterns by Role Models". **IEEE International Conference on Data Engineering**, April 2006 (with K. Wang and Y. Jiang). (*acceptance rate 89/456 = 19.5%*)

56. **"**Mining Actions that Respond to Patterns." **IEEE International Conference on Data Mining.** November 2005 (with K. Wang, A. Fu and Y. Jiang) [short paper].

57. "Context-Aware Recommender Systems", **14th Workshop on Information Technologies and Systems (WITS)**, December 2004 (with G. Adomavicius, R. Sankaranarayanan and S. Sen).

58. "Divide and Prosper: Comparing Models of Customer Behavior from Populations to Individuals", **IEEE International Conference on Data Mining**, Nov. 2004 (with T. Jiang) [short paper].

59. "On the Discovery of Significant Statistical Quantitative Rules". **ACM SIGKDD Conference on Knowledge Discovery and Data Mining,** August 2004 (with B. Padmanabhan and H. Zhang) (*acceptance rate 40/337 = 12%*)

60. "Querying Multiple Sets of Discovered Rules," **ACM SIGKDD Conference on Knowledge Discovery and Data Mining,** July 2002 (with Bing Liu). (*acceptance rate 44/307 = 14%*)

61. "Handling Very Large Numbers of Association Rules in the Analysis of Microarray Data," **ACM SIGKDD Conference on Knowledge Discovery and Data Mining,** July 2002 (with Gedas Adomavicius) (*acceptance rate 44/307 = 14%*).

62. "Optimizing Sequences of Validation Operators in Data Mining Applications", **12th Workshop on Information Technologies and Systems (WITS)**, December 2002, Barcelona, Spain (with Gedas Adomavicius).

63. "Multidimensional Recommender Systems: A Data Warehousing Approach." In Proceedings of the **WECOM 2001 Conference**, Lecture Notes in Computer Science 2232, pp. 180 – 192, Springer-Verlag, 2001 (with G. Adomavicius).

64. "Small is Beautiful: Discovering the Minimal Set of Unexpected Patterns." **ACM SIGKDD Conference on Knowledge Discovery and Data Mining,** March 2000 (with B. Padmanabhan). (*acceptance rate 26/248 = 10%*).

65. "User Profiling in Personalization Applications through Rule Discovery and Validation." In **Proceedings of the 5th International Conference on Knowledge Discovery and Data Mining**, August 1999 (with G. Adomavicius) [short paper].

66. "A Belief-Driven Method for Discovering Unexpected Patterns." In **Proceedings of the 4th International Conference on Knowledge Discovery and Data Mining**, August 1998 (with B. Padmanabhan). (*acceptance rate 18/250 = 7%*).

67. "Discovery of Actionable Patterns in Databases: The Action Hierarchy Approach.'' In **Proceedings of the 3rd International Conference on Knowledge Discovery and Data Mining**, August 1997 (with G. Adomavicius) [short paper].

68. "Discovering Unexpected Rules in Data Mining Applications.'' In **Proceedings of the Workshop on Information Technologies and Systems (WITS),** 1997 (with B. Padmanabhan).

69. "Pattern Discovery in Temporal Databases: A Temporal Logic Approach." In **Proceedings of the 2nd International Conference on Knowledge Discovery and Data Mining**, August 1996 (with B. Padmanabhan) [short paper].

70. "On Subjective Measures of Interestingness in Knowledge Discovery." In **Proceedings of the 1st International Conference on Knowledge Discovery and Data Mining**, August 1995 (with A. Silberschatz) [short paper].

71. "A Temporal Relational Algebra as a Basis for Temporal Relational Completeness.'' In **Proceedings of the 16th International Conference on Very Large Data Bases**, Brisbane, Australia, August 1990 (with J. Clifford).

72. "Relational Database Behavior: Utilizing Relational Discrete Event Systems and Models." In **Proceedings of 8th ACM Symposium on Principles of Database Systems**, Philadelphia, PA, March 1989 (with Z. Kedem).

73. "Querying and Controlling the Future Behavior of Complex Objects." In **Proceedings of IEEE Fifth International Conference on Data Engineering**, Los Angeles, CA, February 1989 (with Z. Kedem).

74. "A Semantic Approach to Correctness of Concurrent Transaction Executions." In **Proceedings of ACM Symposium on Principles of Database Systems**, March 1985 (with P. Spirakis).

Other Refereed Publications

75. Tutorial "Personalization and Recommender Systems". Proceedings of the **INFORMS Annual Conference**, October, 2008 (with G. Adomavicius and Z. Huang).

76. "The effect of context on the predictive performance of segmentation", Proceedings of the **WI-IAT WPRRS Workshop**, Sydney, Australia, December 2008 (with M. Gorgoglione, S. Lombardi, C. Palmisano, U. Panniello and M. F. Faraone).

77. "Using Contextual Information for Modelling User behaviour in a Digital Store", **10th DELOS Workshop on Personalized Access, Profile Management and Context Awareness in Digital Libraries**, Corfu, Greece, June 2007 (with M. Gorgoglione and C. Palmisano).

78. "Incorporating Context into Recommender Systems Using Multidimensional Rating Estimation Methods." In Proceedings of the **First International Workshop on Web Personalization, Recommender Systems and Intelligent User Interfaces,** October 2005 (with G. Adomavicius).

79. "Analyzing Microarray Data Using Association Rules", **Proceedings of the ASDD Symposium**, July 2005 (with G. Adomavicius).

80. "Extending Recommender Systems: A Multidimensional Approach", **Proceedings of the IJCAI Workshop on Intelligent Techniques for Web Personalization**, August 2001 (with G. Adomavicius).

81. "Integrating User Behavior and Collaborative Methods in Recommender Systems." **On-Line Proceedings of the CHI Workshop on Recommender Systems**, May 1999 (with G. Adomavicius).

82. "Pattern Discovery in Temporal Databases: Some recent Results," **Proceedings of the AAAI Workshop on Predicting the Future: AI Approaches to Time Series Analysis**, May 1998.

83. "A Pattern Discovery Algebra." In **Proceedings of the ACM-SIGMOD Workshop on Research Issues in Data Mining and Knowledge Discovery**, May 1997.

84. "User-Assisted Knowledge Discovery: How Much Should the User be Involved?" In **Proceedings of the ACM-SIGMOD Workshop on Research Issues in Data Mining and Knowledge Discovery**, May 1996 (with A. Silberschatz).

85. "On Temporal Grouping." In **Proceedings of the International Workshop on Temporal Databases**, September 1995, Zurich, Switzerland (with James Clifford, Albert Croker, and Fabio Grandi).

86. "Grouped and Ungrouped Historical Data Models: Expressive Power and Completeness." In **Proceedings of the International Workshop on an Infrastructure for Temporal Databases**, June, 1993 (with James Clifford and Albert Croker).

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