

## JAN CHOMICKI, Ph.D.

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### Education

Ph.D. (Computer Science), Rutgers University, New Brunswick, New Jersey, January 1990. Dissertation entitled "Functional Deductive Databases: Query Processing in the Presence of Limited Function Symbols," supervised by Professor Tomasz Imieliński.

M.S. with honors (Computer Science), Warsaw University, Warsaw, Poland, June 1979.

### Employment summary

2000 to date	Associate Professor	Department of Computer Science and Engineering University at Buffalo, State University of New York, Buffalo, NY
spring 2007	Visiting Professor	Institute of Informatics Warsaw University, Warsaw, Poland
1995–2000	Assistant Professor	Department of Computer Science Monmouth University, West Long Branch, NJ
1998–2000	Research Consultant	Network Computing Department Bell Labs, Lucent Technologies, Murray Hill, NJ
summer 1996	Visiting Researcher	Bell Communications Research Morristown, NJ
1990–1995	Assistant Professor	Department of Computing and Information Sciences Kansas State University, Manhattan, KS
summer 1994	Visiting Researcher	European Community Research Centre (ECRC) Munich, Germany
summer 1991	Visiting Researcher	Database Technology Department Hewlett-Packard Laboratories, Palo Alto, CA
1989–1990	Visiting Lecturer	Department of Computer Science University of North Carolina, Chapel Hill, NC
1988–1989	Faculty Research Assistant	Institute for Advanced Computer Studies University of Maryland, College Park, MD Worked with Professor Jack Minker and his group
1984–1988	Research and Teaching Assistant	Department of Computer Science Rutgers University, New Brunswick, NJ
1981–1983	Research Assistant and Lecturer	Institute of Informatics Warsaw University, Warsaw, Poland
1979–1981	Software Engineer	Center for Software Design and Applications Warsaw, Poland

## Personal information

Dual U.S. and Polish citizen. Languages: English, Polish, French, Russian.

## Grants and awards

2007		Fulbright Lecturing Award, Warsaw University, Poland
2003–2006	PI (100%)	<b>National Science Foundation Award IIS-0307434</b> (\$290,000) <i>Preference Queries</i> No-cost extension to 2008
2001–2004	PI (100%)	<b>National Science Foundation Award IIS-0119186</b> (\$230,000) <i>Consistent Answers to SQL Queries</i> No-cost extension to 2005
2001–2003	Co-PI	<b>National Science Foundation Award EIA-0131937</b> (\$100,000 to Univ. Nebraska-Lincoln) <i>Spatio-temporal Models of Biogeophysical Fields for Ecological Forecasting: A Cross-Disciplinary Incubation Activity.</i>
1999–2001	PI (100%)	<b>National Science Foundation Award INT-9901877</b> (\$14,209) <i>U.S.-Chile Cooperative Research: Queries in Inconsistent Databases</i> No-cost extension to 2002
1996–1999	PI (100%)	<b>National Science Foundation Award IRI-9632870</b> (\$145,500) <i>Constraint-Based Database Interoperability</i> No-cost extension to 2000
1991–1993	PI (100%)	<b>National Science Foundation Research Initiation Award IRI-9110581</b> (\$70,000) <i>Dynamic Integrity Constraints in Databases</i> No-cost extension to 1994
1994–1996	Co-PI	NATO Collaborative Research Grant CRG 940110 (\$5,500) <i>Constraint-Generating Dependencies</i>
1993		Kansas State University Faculty Development Award (\$945)
1992		Kansas State University Faculty Development Award (\$1,000).

## Research interests

Logical foundations of databases; database integrity; query languages; spatiotemporal databases; policy management; pervasive information management.

## Publications

### Journal papers

1. J. Chomicki, “Database Querying under Changing Preferences.” *Annals of Mathematics and Artificial Intelligence*, 50(1-2), June 2007, pp. 79–109. Special issue: selected papers from FOIKS’2006.
2. J. Chomicki, “Semantic Optimization Techniques for Preference Queries.” *Information Systems*, 32(5), July 2007, pp. 670–684.
3. J. Chomicki, J. Marcinkowski, “Minimal-Change Integrity Maintenance Using Tuple Deletions.” *Information and Computation*, 197(1-2), 2005, pp. 90–121.

4. J. Chomicki, "Preference Formulas in Relational Queries." *ACM Transactions on Database Systems*, 28(4), December 2003, pp.427–466.
5. J. Chomicki, S. Haesevoets, B. Kuijpers and P. Revesz, "Classes of Spatiotemporal Objects and their Closure Properties." *Annals of Mathematics and Artificial Intelligence*, 39(4), December 2003, pp. 431–461.
6. M. Arenas, L. Bertossi, J. Chomicki, "Answer Sets for Consistent Query Answering in Inconsistent Databases." *Theory and Practice of Logic Programming*, 3(4-5), 2003, pp. 393–424.
7. J. Chomicki, D. Goldin, G. Kuper and D. Toman, "Variable Independence in Constraint Databases." *IEEE Transactions on Knowledge and Data Engineering*, 15(6), November/December 2003, pp. 1422–1436.
8. J. Chomicki, J. Lobo and S. Naqvi, "Conflict Resolution Using Logic Programming." *IEEE Transactions on Knowledge and Data Engineering*, 15(1), January/February 2003, pp. 244–249.
9. M. Arenas, L. Bertossi, J. Chomicki, X. He, V. Raghavan, and J. Spinrad, "Scalar Aggregation in Inconsistent Databases." *Theoretical Computer Science*, 296(3), March 2003, pp. 405–434. Special issue: selected papers from ICDT'2001.
10. J. Chomicki, D. Toman, and M. Böhlen, "Querying ATSQL Databases with Temporal Logic." *ACM Transactions on Database Systems*, 26(2), June 2001, pp. 145–178.
11. J. Chomicki and P. Revesz, "Constraint-Based Interoperability of Spatiotemporal Databases." *Geoinformatica*, 3(3), September 1999, pp. 211–243.
12. M. Baudinet, J. Chomicki and P. Wolper, "Constraint-Generating Dependencies." *Journal of Computer and System Sciences*, 59(1), 1999, pp. 94–115.
13. D. Toman and J. Chomicki, "Datalog with Integer Periodicity Constraints." *Journal of Logic Programming*, 35(3), June 1998, pp. 263–290.
14. J. Chomicki, "Efficient Checking of Temporal Integrity Constraints Using Bounded History Encoding." *ACM Transactions on Database Systems*, 20(2), June 1995, pp. 149–186.
15. J. Chomicki and D. Toman, "Implementing Temporal Integrity Constraints Using an Active DBMS." *IEEE Transactions on Knowledge and Data Engineering*, special section on Temporal and Real-Time Databases, 7(4), August 1995, pp. 566–581. *Submission acceptance rate =  $4/34 = 12\%$ .*
16. J. Chomicki and D. Niwinski, "On the Feasibility of Checking Temporal Integrity Constraints." *Journal of Computer and System Sciences*, 51(3), December 1995, pp. 523–535.
17. J. Chomicki, "Depth-Bounded Bottom-Up Evaluation of Logic Programs." *Journal of Logic Programming*, 25(1), October 1995, pp. 1–31.
18. J. Chomicki and T. Imielinski, "Finite Representation of Infinite Query Answers." *ACM Transactions on Database Systems*, 18(2), June 1993, pp. 181–223.

19. J. Chomicki and V.S. Subrahmanian, “Generalized Closed World Assumption is  $\Pi_2^0$ -complete.” *Information Processing Letters*, 34(6), 28 May 1990, pp. 289–291.

### Books

20. J. Chomicki, R. van der Meyden, G. Saake, editors, “Logics for Emerging Applications of Databases,” Springer-Verlag, 2003.
21. J. Chomicki and G. Saake, editors, “Logics for Databases and Information Systems,” Kluwer, 1998, 430 pp.

### Book chapters

22. J. Chomicki and D. Toman, “Temporal Databases.” In *Handbook of Time in Artificial Intelligence*, M. Fisher et al., editors, Elsevier, 2005, pp. 429–467.
23. J. Chomicki and J. Marcinkowski, “On the Computational Complexity of Minimal-Change Integrity Maintenance in Relational Databases.” In *Inconsistency Tolerance*, L. Bertossi, A. Hunter, T. Schaub, editors, Springer-Verlag, 2004, pp. 119–150.
24. L. Bertossi and J. Chomicki, “Query Answering in Inconsistent Databases.” In *Logics for Emerging Applications of Databases*, J. Chomicki, R. van der Meyden, G. Saake, editors, Springer-Verlag, 2003, pp. 43–83.
25. J. Chomicki and L. Libkin, “Aggregate Languages for Constraint Databases.” In *Constraint Databases*, G. Kuper, L. Libkin, J. Paredaens, editors, Springer-Verlag, 2000, pp. 131–154.
26. J. Chomicki and D. Toman, “Temporal Logic in Information Systems.” In *Logics for Databases and Information Systems*, J. Chomicki and G. Saake, editors, Kluwer, 1998, pp. 131–140.
27. M. Baudinet, J. Chomicki and P. Wolper, “Temporal Deductive Databases.” In *Temporal Databases*, A. Tansel et al., editors, Benjamin/Cummings, 1993, pp. 294–320.

### Refereed and invited conference and workshop papers

28. D. Mindolin and J. Chomicki, “Hierarchical CP-Networks,” *Proc. 3rd Multidisciplinary Workshop on Advances in Preference Handling*, September 2007, Vienna, Austria.
29. J. Chomicki, “Consistent Query Answering: Five Easy Pieces,” *Proc. 11th International Conference on Database Theory (ICDT)*, January 2007, Barcelona, Spain, Springer LNCS 4353, pp. 1-17. Keynote talk.
30. J. Chomicki, “Consistent Query Answering: Opportunities and Limitations,” *Proc. 2nd International Workshop on Logical Aspects and Applications of Integrity Constraints (LAAIC)*, September 2006, Krakow, Poland, IEEE Computer Society Press, pp. 527–531. Keynote talk.
31. S. Staworko and J. Chomicki, “Validity-Sensitive Querying of XML Databases,” *Proc. EDBT’06 International Workshop on Database Technologies for Handling XML Information on the Web*, March 2006, Munich, Germany, to appear. *Regular paper acceptance rate = 10/35 = 29%*.

32. S. Staworko, J. Chomicki and J. Marcinkowski, "Preference-Driven Querying of Inconsistent Relational Databases," *Proc. EDBT'06 International Workshop on Inconsistency and Incompleteness in Databases*, March 2006, Munich, Germany, to appear. *Regular paper acceptance rate =  $5/10 = 50\%$ .*
33. J. Chomicki, "Iterative Modification and Incremental Evaluation of Preference Queries," *Proc. 4th International Symposium on Foundations of Information and Knowledge Systems*, February 2006, Budapest, Hungary, Springer, LNCS 3861, pp. 63–82. *Regular paper acceptance rate =  $14/53 = 26\%$ .* Full version invited to a special issue of *Annals of Mathematics and Artificial Intelligence*.
34. J. Chomicki and J. Song, "Monotonic and Nonmonotonic Preference Revision," *Proc. IJCAI 2005 Multidisciplinary Workshop on Advances in Preference Handling*, July 2005, Edinburgh, Scotland, UK. *Regular paper acceptance rate =  $17/46 = 37\%$ .*
35. J. Chomicki, J. Marcinkowski and S. Staworko, "Computing Consistent Query Answers Using Conflict Hypergraphs," *Proc. 13th Thirteenth Conference on Information and Knowledge Management*, November 2004, Washington, D.C., ACM Press, pp. 417–426. *Regular paper acceptance rate =  $59/303 = 19\%$ .* Short version in *Workshop on Information Integration on the Web*, August 2004, Toronto, Canada.
36. J. Chomicki, "Semantic Optimization of Preference Queries," *Proc. 1st International Symposium on Applications of Constraint Databases*, June 2004, Paris, France, Springer-Verlag, LNCS 3074, pp. 133–148. *Regular paper acceptance rate =  $10/28 = 37\%$ .*
37. J. Chomicki, J. Marcinkowski and S. Staworko, "Hippo: a System for Computing Consistent Query Answers to a Class of SQL queries," *Proc. 9th International Conference on Extending Database Technology*, March 2004, Heraklion, Greece (system demo).
38. J. Chomicki, "Consistent Query Answering: Recent Developments and Future Directions," *Proc. Sixth IFIP TC-11 WG 11.5 Working Conference on Integrity and Internal Control in Information Systems*, November 2003, Lausanne, Switzerland, Kluwer Publishers, 2004, pp. 219–239. Keynote talk.
39. J. Chomicki, P. Godfrey, J. Gryz, D. Liang, "Skyline with Presorting," *Proc. 19th International Conference on Data Engineering*, March 2003, Bangalore, India (poster).
40. L. Bertossi, J. Chomicki, A. Cortes and C. Gutierrez, "Consistent Answers from Integrated Data Sources," *Proc. 5th International Conference on Flexible Query Answering Systems*, October 2002, Copenhagen, Denmark, Springer-Verlag, LNCS 2522, pp. 71–85.
41. J. Chomicki, "Querying with Intrinsic Preferences," *Proc. 8th International Conference on Extending Database Technology (EDBT 2002)*, March 2002, Prague, Czech Republic, Springer-Verlag, LNCS 2287, pp. 34–51. *Regular paper acceptance rate =  $36/207 = 17\%$ .*
42. M. Arenas, L. Bertossi and J. Chomicki, "Scalar Aggregation in FD-Inconsistent Databases," *Proc. 8th International Conference on Database Theory (ICDT'2001)*, January 2001, London, UK, Springer-Verlag, LNCS 1973, pp. 39–53. *Regular paper acceptance rate =  $26/75 = 35\%$ .*

43. J. Chomicki and J. Lobo, "Monitors for History-Based Policies." *Proc. International Workshop on Policies for Distributed Systems and Networks (POLICY'2001)*, January 2001, Bristol, UK, pp. 57–72. *Regular paper acceptance rate = 16/43 = 37%*.
44. M. Arenas, L. Bertossi and J. Chomicki, "Specifying and Querying Database Repairs using Logic Programs with Exceptions." *Proc. 4th International Conference on Flexible Query Answering Systems (FQAS'2000)*, October 2000, Warsaw, Poland, Springer-Verlag.
45. J. Chomicki, J. Lobo and S. Naqvi, "A Logic Programming Approach to Conflict Resolution in Policy Management." *Proc. 7th International Conference on Principles of Knowledge Representation and Reasoning (KR'2000)*, April 2000, Breckenridge, Colorado, Morgan Kaufmann, pp. 121–132. *Regular paper acceptance rate = 62/172 = 36%*.
46. J. Chomicki, Y. Liu, and P. Revesz, "Animating Spatiotemporal Constraint Databases," *Proc. International Workshop on Spatio-Temporal Database Management (STDBM'99)*, September 1999, Edinburgh, Scotland, Springer-Verlag, LNCS 1678, pp. 224–241. *Regular paper acceptance rate = 13/30 = 43%*.
47. J. Chomicki and P. Revesz, "A Geometric Framework for Specifying Spatiotemporal Objects," *Proc. 6th International Workshop on Temporal Representation and Reasoning (TIME'99)*, May 1999, Orlando, Florida, IEEE Computer Society, pp. 41–46.
48. M. Arenas, L. Bertossi and J. Chomicki, "Consistent Query Answers in Inconsistent Databases," *Proc. 18th ACM Symposium on Principles of Database Systems (PODS'99)*, June 1999, Philadelphia, Pennsylvania, pp. 68–79. *Regular paper acceptance rate = 32/116 = 28%*.
49. M. Arenas, L. Bertossi and J. Chomicki, "Query Evaluation in Almost Consistent Databases Using Residues," *Proceedings of the International Conference of the Chilean Computer Science Society*, November 1998, IEEE Computer Society, pp. 8–14.
50. J. Chomicki, S. Naqvi, M. F. Pucci, and R. W. Underwood, "Decentralized Micropayment Consolidation," *Proc. 18th International Conference on Distributed Computing Systems*, May 1998, Amsterdam, The Netherlands, IEEE Computer Society, pp. 332–341. *Regular paper acceptance rate = 68/305 = 22%*.
51. J. Chomicki and P. Revesz, "Constraint-Based Interoperability of Spatiotemporal Databases," *Proc. 5th International Symposium on Large Spatial Databases (SSD'97)*, July 1997, Berlin, Germany, Springer-Verlag, LNCS 1262, pp. 142–161.
52. J. Chomicki, D. Goldin and G. Kuper, "Variable Independence and Aggregation Closure," *Proc. 15th ACM Symposium on Principles of Database Systems (PODS'96)*, June 1996, Montreal, Canada, pp. 40–48. *Regular paper acceptance rate = 22/94 = 26%*.
53. M. Böhlen, J. Chomicki, R. Snodgrass and D. Toman, "Querying TSQL2 Databases with Temporal Logic," *Proc. 5th International Conference on Extending Database Technology (EDBT'96)*, March 1996, Avignon, France, Springer-Verlag, LNCS 1057, pp. 325–341. *Regular paper acceptance rate = 31/178 = 17%*.

54. J. Chomicki and G. Kuper, "Measuring Infinite Relations," *Proc. 14th ACM Symposium on Principles of Database Systems (PODS'96)*, May 1995, San Jose, California, pp. 78–85. *Regular paper acceptance rate = 25/94 = 27%*.
55. M. Baudinet, J. Chomicki and P. Wolper, "Constraint-Generating Dependencies," *Proc. 5th International Conference on Database Theory (ICDT'95)*, Prague, Czech Republic, January 1995, Springer-Verlag, LNCS 893, pp.322–337. *Regular paper acceptance rate = 25%*.
56. D. Toman, J. Chomicki, and D. S. Rogers, "Datalog with Integer Periodicity Constraints," *Proc. International Logic Programming Symposium (ILPS'94)*, November 1994, Ithaca, New York, MIT Press, pp. 189–203.
57. J. Chomicki, "Temporal Query Languages: a Survey," *Proc. 1st International Conference on Temporal Logic (ICTL'94)*, July 1994, Bonn, Germany, Lecture Notes in Artificial Intelligence 827, Springer-Verlag, pp. 506–534.
58. D. Toman and J. Chomicki, "Implementing Temporal Integrity Constraints Using an Active DBMS," *Proc. 4th IEEE International Workshop on Research Issues in Data Engineering: Active Database Systems (RIDE-ADS'94)*, February 1994, Houston, Texas, pp. 87–95.
59. J. Chomicki and D. Niwinski, "On the Feasibility of Checking Temporal Integrity Constraints," *Proc. 12th ACM Symposium on Principles of Database Systems (PODS'93)*, May 1993, Washington, D.C., pp. 202–213. *Regular paper acceptance rate = 26/115 = 23%*.
60. M. Baudinet, J. Chomicki and P. Wolper, "Temporal Databases: Beyond Finite Extensions," *Proc. International Workshop on an Infrastructure for Temporal Databases*, June 1993, Arlington, Texas.
61. J. Chomicki and W. Litwin, "Declarative Definition of Object-Oriented Multidatabase Mappings," *Proc. International Workshop on Distributed Object Management*, August 1992, Edmonton, Canada. Also in *Distributed Object Management*, M.T. Ozsu, U. Dayal, and P. Valduriez, editors, Morgan Kaufmann, 1993, pp. 375–392.
62. J. Chomicki, "Real-Time Integrity Constraints," *Proc. 11th ACM Symposium on Principles of Database Systems (PODS'92)*, June 1992, San Diego, California, pp. 274–282. *Regular paper acceptance rate = 32/105 = 30%*.
63. J. Chomicki, "History-less Checking of Dynamic Integrity Constraints", *Proc. 8th IEEE International Conference on Data Engineering (ICDE'92)*, February 1992, Phoenix, Arizona, pp. 557–564. *Regular paper acceptance rate = 69/213 = 32%*.
64. J. Chomicki, "Polynomial Time Query Processing in Temporal Deductive Databases," *Proc. 9th ACM Symposium on Principles of Database Systems (PODS'90)*, April 1990, Nashville, Tennessee, pp. 379–391. *Regular paper acceptance rate = 33/152 = 22%*.
65. J. Chomicki and T. Imielinski, "Relational Specifications of Infinite Query Answers," *Proc. ACM SIGMOD International Conference on Management of Data*, May 1989, Portland, Oregon, pp. 174–183. *Regular paper acceptance rate = 33/135 = 24%*.

66. J. Chomicki and T. Imielinski, “Temporal Deductive Databases and Infinite Objects,” *Proc. 7th ACM Symposium on Principles of Database Systems (PODS’88)*, March 1988, Austin, Texas, pp. 61–73. *Regular paper acceptance rate = 33/109 = 30%*.
67. N. Minsky, D. Rozenshtein, and J. Chomicki, “A Controllable PROLOG Database System,” *Proc. 2nd IEEE International Conference on Data Engineering (ICDE’86)*, February 1986, Los Angeles, California, pp. 618–628.
68. J. Chomicki and N. Minsky, “Towards a Programming Environment for Large PROLOG Programs,” *Proc. 2nd IEEE International Symposium on Logic Programming (ISLP’85)*, July 1985, Boston, Massachusetts, pp. 230–241.

### Invited papers

69. J. Chomicki and Peter Z. Revesz, “Parametric Spatiotemporal Objects,” *Bulletin IA\*AI (Italian Association for Artificial Intelligence)*, Vol. 14, No.1, March 2001, pp. 41–47.
70. J. Chomicki, “Temporal Integrity Constraints in Relational Databases,” *IEEE Data Engineering Bulletin*, Vol. 17, No.2, June 1994, pp. 33–37. Special issue on Database Constraint Management, edited by Jennifer Widom.

### Supervision of student research

**Ph.D. supervisor:** David Toman, Associate Professor, Dept. of Computer Science, University of Waterloo (March 1996); Slawomir Staworko, Postdoctoral fellow, INRIA Lille, France (May 2007).

**M.S. supervisor:** Danlan Zheng (August 1992), Herbert Whitney (October 1992), Jaideep Jain (October 1993), Mallika Viswas (May 2002), Vaishali Ekhar (May 2003), Snehal Kasodekar (September 2004), Vaibhav Puranik (September 2004), Jaekyung Song (May 2005), Priyanka Kasliwal (September 2005).

**Ph.D. committee member:** Junhu Wang, Griffith University, Australia (September 2002); Ramazan Savas Aygun, University at Buffalo (May 2003); Munirathnam Srikanth, University at Buffalo (August 2004); Alessandra Mileo, University of Milan, Italy (December 2005); Weihang Huang, University at Buffalo.

**Current Ph.D. Students:** Xi Zhang, Denis Mindolin.

### Other professional activities

#### Editorships

Co-editor, special issue of Information and Computation: selected papers from TIME 2005, 205(1), January 2007.

Associate Editor, ACM Transactions on Database Systems (from 2004).

Editorial Board, Journal of Applied Logic (from 2004).

Editorial Board, Information Processing Letters (from 2002).

Editorial Board, ACM SIGMOD DiSC (2001).

**Steering Committee member**, TIME Series of international conferences (from 2001).

**Program Co-Chair**, TIME Symposium, Burlington, Vermont, 2005.

**General Co-Chair**, TIME-ICTL Symposium, Cairns, Queensland, Australia, 2003.

### **Organizer or co-organizer**

- 2006 EDBT'06 Workshop on *Inconsistency and Incompleteness in Databases*
- 2004 Dagstuhl Workshop on *Preferences: Specification, Inference, Applications*
- 2002 NSF BDEI Workshop on *Spatiotemporal Data Models of Biogeophysical Fields for Ecological Forecasting*
- 2001 IJCAI-01 Workshop on *Inconsistency in Data and Knowledge*
- 2000 Dagstuhl Workshop on *Logics for Emerging Applications of Databases*
- 1995 Dagstuhl Workshop on *Logic and Information Systems*
- 1990 Workshop on *Deductive Databases*, North American Conference on Logic Programming

### **Invited plenary talks and tutorials**

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|------|--|--|
| 2007 | Consistent Query Answering:<br>Five Easy Pieces<br>(keynote talk)                          | 11th International Conference<br>on Database Theory (ICDT)<br>Barcelona, Spain   |
| 2006 | Consistent Query Answering:<br>Opportunities and Limitations<br>(keynote talk)             | 2nd International Workshop<br>on Logical Aspects and Applications<br>of Integrity Constraints (LAAIC)<br>Kraków, Poland          |
| 2004 | Towards a Decision Query Language<br>(keynote talk)  | Italian Symposium on<br>Advances in Database Systems (SEBD)<br>S. Margherita di Pula, Italy                                      |
| 2003 | Consistent Query Answering:<br>Recent Developments and Future<br>Directions (keynote talk) | Sixth IFIP TC-11 WG 11.5 Working Conference<br>on Integrity and Internal Control in Information Systems<br>Lausanne, Switzerland |
| 2002 | Spatiotemporal Databases<br>(invited plenary talk)   | NSF BDEI Workshop on Spatio-temporal Models<br>of Biogeophysical Fields for Ecological Forecasting<br>La Jolla, California       |
| 2001 | Spatiotemporal Databases<br>(invited plenary talk)   | Workshop on Complex Reasoning on Geographical Data<br>(International Conference on Logic Programming)<br>Paphos, Cyprus          |
| 1998 | Temporal Databases<br>(tutorial, with D. Toman)  | International Conference on Extending Database Technology<br>Valencia, Spain   |
| 1997 | Temporal Databases<br>(tutorial, with D. Toman)  | International Conference on Temporal Logic<br>Manchester, England  |
| 1996 | Temporal Query Languages<br>(invited plenary talk)   | Chilean Computer Science Conference<br>Valdivia, Chile   |
| 1993 | Temporal Databases<br>(invited tutorial)   | ACM Symposium on Principles of Database Systems<br>Washington, D.C.  |

**Program committee member** (partial list)

- 2008 ACM Symposium on Principles of Database Systems (PODS)  
International Conference on Extending Database Technology (EDBT)
- 2007 International Conference on Very Large Data Bases (VLDB)  
International Semantic Web Conference/Asian Semantic Web Conference (ISWC+ASWC)  
International Conference on Scalable Uncertainty Management (SUM)  
VLDB Multidisciplinary Workshop on Advances in Preference Handling  
International Conference on Data Engineering (ICDE)  
International Workshop on Database Ranking (DBRank)
- 2006 International Symposium on Temporal Representation and Reasoning (TIME)  
IFIP International Conference on Theoretical Computer Science  
ECAI Multidisciplinary Workshop on Advances in Preference Handling  
ICDE Workshop on Electronic Chronicles  
International Symposium on Flexible Query Answering Systems (FQAS)
- 2005 ACM Symposium on Principles of Database Systems (PODS)  
IJCAI Multidisciplinary Workshop on Advances in Preference Handling
- 2004 ACM Symposium on Management of Data (SIGMOD)  
International Workshop on Spatio-Temporal Database Management (STDBM)  
International Symposium on Applications of Constraint Databases (CDB)  
International Workshop on Policies for Distributed Systems and Networks (POLICY)
- 2003 International Symposium on Spatial and Temporal Databases (SSTD)  
International Workshop on Policies for Distributed Systems and Networks (POLICY)
- 2002 International Symposium on Flexible Query Answering Systems (FQAS)  
International Workshop on Policies for Distributed Systems and Networks (POLICY)
- 2001 International Conference on Very Large Data Bases (VLDB)  
International Symposium on Spatial and Temporal Databases (SSTD)  
International Symposium on Temporal Representation and Reasoning (TIME)  
International Workshop on Foundations and Models for Information Integration (FMII)  
International Workshop on Policies for Distributed Systems and Networks (POLICY)
- 2000 International Symposium on Advances in Databases and Information Systems (ADBIS)  
International Workshop on Temporal Representation and Reasoning (TIME)
- 1999 International Symposium on Advances in Databases and Information Systems (ADBIS)  
International Workshop on Temporal Representation and Reasoning (TIME)  
International Workshop on Knowledge Representation and Databases (KRDB)  
International Workshop on Spatio-Temporal Database Management (STDBM)
- 1998 International Symposium on Advances in Databases and Information Systems (ADBIS)  
International Workshop on Temporal Representation and Reasoning (TIME)
- 1997 International Conference on Deductive and Object-Oriented Databases (DOOD)  
International Conference on Temporal Logic (ICTL)
- 1996 International Workshop on Logic in Databases (LID)  
International Workshop on Temporal Representation and Reasoning (TIME)
- 1995 ACM Symposium on Principles of Database Systems (PODS)  
International Conference on Database Theory (ICDT)
- 1994 International Conference on Very Large Data Bases (VLDB)

## **Reviewer**

National Science Foundation  
National Sciences and Engineering Research Council of Canada  
Israeli Science Foundation  
Journal of the ACM  
Journal of Computer and System Sciences  
ACM Transactions on Computational Logic  
ACM Transactions on Database Systems  
ACM Transactions on Information Systems  
IEEE Transactions on Knowledge and Data Engineering  
IEEE Transactions on Selected Areas in Communication  
Artificial Intelligence Journal  
Information Processing Letters  
Information Systems  
Theoretical Computer Science  
VLDB Journal  
Journal of Logic Programming  
Journal of Logic and Computation  
Journal of Symbolic Computation  
Journal of Automated Reasoning  
Journal of Applied Logic  
Journal of Networking and Systems Management  
Annals of Mathematics in Artificial Intelligence  
Geoinformatica  
Computer Journal  
Journal of Experimental and Theoretical AI  
Addison-Wesley  
Morgan Kaufmann  
Birkhauser  
McGraw-Hill  
John Wiley  
Pearson  
numerous conferences and workshops

## **Panelist**

2006 National Science Foundation  
2005 National Science Foundation  
2004 ARISE Workshop on Exchange and Integration of Data, IBM Toronto  
2004 National Science Foundation  
2003 National Science Foundation  
2002 National Science Foundation  
2001 IJCAI-01 Workshop on Inconsistency in Data and Knowledge  
1999 International Workshop on Temporal Representation and Reasoning  
1999 International Workshop on Spatio-Temporal Database Management  
1997 National Science Foundation

## Invited talks (1997-2007)

2007	“How to (repeatedly) Change Preferences” “Consistent Query Answering” “Consistent Query Answering”	University of Calabria, Italy University of Rome, Italy Warsaw University, Poland
2006	“Towards a Decision Query Language” “How to (repeatedly) Change Preferences”	Univ. Milan, Italy Free Univ. Bolzano, Italy
2005	“Towards a Decision Query Language” “Spatiotemporal Databases”	University of Kentucky Dept. Geography, UB
2004	“Scalable Computation of Consistent Query Answers” “Preference Queries in Relational Databases” “Optimization of Preference Queries” “Consistent Query Answering”	IBM Toronto, Canada Cornell University Dagstuhl Lucent Bell Labs
2003	“Preference Queries in Relational Databases” “Computing Consistent Query Answers Using Conflict Hypergraphs” “Computing Consistent Query Answers Using Conflict Hypergraphs”	EPFL, Lausanne TU Wien Dagstuhl
2002	“Querying with Intrinsic Preferences” “Querying with Intrinsic Preferences” “Querying with Intrinsic Preferences”	Catholic Univ. of Chile Warsaw Univ. Wroclaw Univ.
2001	“Consistent Query Answers in Inconsistent Databases” “Consistent Query Answers in Inconsistent Databases” “Consistent Query Answers in Inconsistent Databases” “Conflict Resolution in Policy Management” “Consistent Query Answers in Inconsistent Databases”	National Tech. Univ. Athens College of William and Mary Kent State University Catholic University of Chile Dept. Geography, UB
2000	“Consistent Query Answers in Inconsistent Databases” “Consistent Query Answers in Inconsistent Databases” “Consistent Query Answers in Inconsistent Databases” “Conflict Resolution in Policy Management” “Conflict Resolution in Policy Management” “Conflict Resolution in Policy Management” “Axiomatic Conflict Resolution in Policy Management” “Axiomatic Conflict Resolution in Policy Management” “Axiomatic Conflict Resolution in Policy Management”	Univ. Toronto Univ. Waterloo Warsaw Univ. DIMACS York University Dagstuhl SUNY Buffalo RPI Penn State University
1999	“Axiomatic Conflict Resolution in Policy Management” “Axiomatic Conflict Resolution in Policy Management” “A Geometric Framework for Specifying Spatiotemporal Objects” “A Geometric Framework for Specifying Spatiotemporal Objects”	Lucent Bell Labs Concordia University University of Chile Catholic University of Chile
1997	“Constraint-Based Interoperability of Spatiotemporal Databases” “Temporal Considered Harmful in Temporal Database Design” “Variable Independence in Constraint Databases” “Variable Independence in Constraint Databases”	Dagstuhl Dagstuhl Imperial College University of Magdeburg