

Curriculum Vitae
Phokion G. Kolaitis
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Current Positions

- 2012-present Distinguished Professor of Computer Science, University of California Santa Cruz (UC Santa Cruz)
- 2014-present Principal Research Staff Member (part-time), Computer Science Principles and Methodologies, IBM Almaden Research Center.

Earlier Positions Held

- 2014-2015 Chair, Computer Science Department, UC Santa Cruz
- 2008-2014 Research Staff Member (part-time), Computer Science Principles and Methodologies, IBM Almaden Research Center.
- 2004–2008 Research Staff Member and Senior Manager, Computer Science Principles and Methodologies, IBM Almaden Research Center (on leave without pay from UC Santa Cruz)
- 2001–2002 Academic Visitor, Foundations of Computer Science Group, IBM Almaden Research Center, San Jose (on sabbatical leave from UC Santa Cruz)
- 1997–2001 Chair, Computer Science Department, UC Santa Cruz
- 1994–2012 Professor, Computer Science, UC Santa Cruz
- 1993–1994 Visiting Associate Professor, Computer Science Department, Stanford University (supported by a Guggenheim Fellowship and a sabbatical leave from UC Santa Cruz)
- 1990–1994 Associate Professor, Computer & Information Sciences, UC Santa Cruz
- 1988–1990 Assistant Professor, Computer & Information Sciences, UC Santa Cruz
- 1987–1988 Visiting Associate Professor, Computer Science Department, Stanford University
- 1986–1987 Visiting Scientist, Foundations of Computer Science Group, IBM Almaden Research Center, San Jose
- 1981–1986 Assistant Professor of Mathematics, Occidental College, Los Angeles (promoted to Associate Professor and granted tenure in April 1986)
- 1984–1985 Visiting Assistant Professor, Dept. of Mathematics, University of California, Los Angeles (partially supported by a J.D. MacArthur Research Professorship from Occidental College)
- 1979–1981 L.E. Dickson Instructor, Department of Mathematics, The University of Chicago

Military Service

- 1978–1979 Served a nine-month mandatory service in the Greek Navy

Education

- Ph.D. 1978 University of California, Los Angeles; Mathematics
- M.A. 1974 University of California, Los Angeles; Mathematics
- Diploma 1973 University of Athens, Greece; Mathematics

Honors and Awards

- Foreign Member, Academia Europaea, elected in 2017.
- Foreign Member, Finnish Academy of Science and Letters, elected in 2007.
- Honorary Doctoral Degree (*Doctor Honoris Causa*), Department of Mathematics and Department of Informatics & Telecommunications, University of Athens, Greece, November 2014.
- Fellow of the American Association for the Advancement of Science (AAAS), elected in 2010.
- Fellow of the Association for Computing Machinery (ACM), elected in 2005.
- Guggenheim Fellowship, awarded by the John Simon Guggenheim Memorial Foundation, 1993-94.
- ACM PODS Alberto O. Mendelzon *Test-of-Time Award* for the paper “Composing Schema Mappings: Second-Order Logic to the Rescue” (co-authored with R. Fagin, L. Popa, and W.-C. Tan), 2014.
- International Conference on Database Theory *Test-of-Time Award* for the paper “Data Exchange: Semantics and Query Answering” (co-authored with R. Fagin, R.J. Miller, and L. Popa), 2013.
- ACM PODS Alberto O. Mendelzon *Test-of-Time Award* for the paper “Conjunctive-Query Containment and Constraint Satisfaction” (co-authored with Moshe Y. Vardi), 2008.
- *Best Paper Award* for the paper “Generalized Satisfiability Problems via Operator Assignments” (co-authored with A. Atserias and S. Severini), 21st International Symposium on Fundamentals of Computation Theory (FCT 2017), 2017.
- *Best Paper Award* for the paper “A Declarative Framework for Linking Entities” (co-authored with D. Burdick, R. Fagin, L. Popa, and W.-C. Tan), 18th International Conference on Database Theory (ICDT 2015), 2015.
- *Best Paper Award* for the paper “Learning Schema Mappings” (co-authored with B. ten Cate and V. Dalmau), 15th International Conference on Database Theory (ICDT 2012), 2012.
- *Best Paper Award* for the paper “Repair Checking in Inconsistent Databases: Algorithms and Complexity” (co-authored with F. Afrati), 12th International Conference on Database Theory (ICDT 2009), 2009.
- IBM Research Division Outstanding Innovation Award for “Synthesis of Schema Mappings from Data Examples”, 2015.
- IBM Research Division Outstanding Technical Accomplishment Award, for “Schema Mappings Research: Theory and Practice”, 2008.
- IBM Research Division Outstanding Innovation Award for “Foundations of Schema Mappings”, 2005.
- *Excellence in Teaching Award*, awarded by the graduating computer science and computer engineering majors of UC Santa Cruz, 1995.

Other Honors

- Visiting Fellow, Isaac Newton Institute for the Mathematical Science, Special Programme on *Semantics and Syntax: A Legacy of Alan Turing*, Cambridge, UK, March-April 2012.
- Plumer Visiting Research Fellow, St. Anne’s College, University of Oxford, January-March, 2009.
- Invited Participant, Special Programme on Logic and Algorithms, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, February-March 2006.
- Invited Professor, LIX Laboratory, Ecole Polytechnique, Paris, France, February 2003.

- Invited Participant, 2000-01 Program on Mathematical Logic, Institut Mittag-Leffler, The Swedish Royal Academy of Sciences, Sweden, April 2001.
- Invited Professor, University of Nancy and LORIA (French National Institute for Research in Computer Science and Control – formerly named INRIA-Lorraine), Nancy, France, July 1997.
- Invited Professor, University of Nancy and INRIA-Lorraine (French National Institute for Research in Computer Science and Control), Nancy, France, June-July 1993.

Selected Extramural Grants

- Principal Investigator, “Aspects of Integrating Heterogeneous and Inconsistent Data”, NSF Grant No. IIS-1217869, \$481,000, 2012-2016.
- Principal Investigator, “Data Interoperability via Schema Mappings”, NSF ARRA Grant No. IIS-0905276, \$1,151,548, 2009-2013.
- Principal Investigator, IIS-0430994 “Metadata Model Management: Schema Mappings and Data Exchange”, NSF Grant No. IIS-0430994, \$759,722, 2004-2010.
- Principal Investigator, “Constraint Satisfaction and Database Query Evaluation”, NSF Grant No. IIS-9907419, \$188,388. Supplemental support in the amount of \$45,000 awarded in August 2002; total award \$233,388, 2000-2004.
- Principal Investigator, “Automated Deduction and Computational Complexity”, NSF Grant No. CCR-9732041, \$182,982, 1998-2001.

Editorial Board Service

- Area Editor for Database Systems and Theory, *Journal of the Association for Computing Machinery*, 2009 to present.
- Associate Editor, *ACM Transactions on Database Systems*, 2005–2011.
- Editor, *The Bulletin of Symbolic Logic*, 2002–2008.
- Editorial Board Member, *International Journal of the Foundations of Computer Science*, 2002 to present.
- Editorial Board Member, *Theory of Computing Systems*, 2001 to present.
- Managing Editor, *Annals of Pure and Applied Logic*, 1997–2008.
- Editorial Board Member, *Journal of Logic and Computation*, 1991 to present.

Selected Leadership Service to the Profession

- General Chair, ACM Symposium on Principles of Database Systems (PODS), 2006–2008.
- General Chair, IEEE Symposium on Logic in Computer (LICS), 2003–2006.
- Program Committee Chair, 2nd East-Asian School on Logic, Language, and Computation, 2012.
- Program Committee Chair, 18th IEEE Symposium on Logic in Computer Science (LICS), 2003.
- Program Committee Chair, 21st ACM Symposium on Principles of Database Systems (PODS), 2002.
- Program Committee Co-Chair, 6th International Conference on Database Theory (ICDT), 1997.
- Co-organizer, Simons Institute for the Theory of Computing Program on *Logical Structures in Computation*, Fall 2016.

- Co-organizer, DEIS '10 - *Advanced School on Data Exchange, Integration, and Streams* (GI-Dagstuhl Seminar), Dagstuhl - Leibniz Center for Informatics, Germany, November 2010.
- Co-organizer, Dagstuhl Seminar 09941 on *The Constraint Satisfaction Problem: Complexity and Approximability*, Schloss Dagstuhl - Leibniz Center for Informatics, Germany, October 2009.
- Co-organizer INFINT 2009 - Bertinoro Workshop on *Data and Service Integration*, University Residential Center of Bertinoro, Italy, 2009.
- Member, Scientific Advisory Board, Simons Institute for the Theory of Computing, 2017 to present.

Postdoctoral Scholars Mentored

- 2012-13 Dr. André Hernich, Humbolt University of Berlin, Germany; visited UC Santa Cruz during the academic year 2012-13 supported by a postdoctoral fellowship from DAAD (German Academic Exchange Service).
- 2011-12 Dr. Gaelle Fontaine, University of Amsterdam, The Netherlands; visited UC Santa Cruz from January 2011 to March 2012, supported by a NSF Grant.
- 2009-10 Dr. Walied Othman, University of Hasselt, Belgium; visited UC Santa Cruz January 2010 to July 2010, supported by a NSF Grant,.
- 2009-11 Dr. Balder ten Cate, University of Amsterdam, The Netherlands; visited UC Santa Cruz from October 2009 to October 2011 supported by a NSF Grant.
- 2008-09 Dr. Juha Kontinen, University of Helsinki; visited UC Santa Cruz from September to December 2008, supported by a grant from the Academy of Finland and a NSF grant.
- 2007-08 Dr. Balder ten Cate, University of Amsterdam, The Netherlands; visited UC Santa Cruz and the IBM Almaden Research Center from January 2008 to June 2008, supported by a NSF grant.
- 2006-08 Dr. Elitza Maneva, University of California, Berkeley; mentored while she was a postdoctoral scholar at the IBM Almaden Research Center.
- 2006-07 Dr. Vassia Pavlaki, National Technical University of Athens, Greece; visited UC Santa Cruz and the IBM Almaden Research Center March 2007 to June 2007, supported by a NSF Grant.
- 2000-01 Dr. Victor Dalmau, Technical University of Catalonia (UPC), Spain visited UC Santa Cruz during the entire academic year 2000-01 and during the fall of 2001, supported by a NSF Grant
- 1997-98 Dr. Martin Otto, Technical University of Aachen, Germany, visited UC Santa Cruz during the entire academic year 1997-98, supported by a grant from DFG (German Science Foundation).
- 1995-96 Dr. Martin Grohe, University of Freiburg, Germany, visited UC Santa Cruz during the entire academic year 1995-96, supported by a postdoctoral fellowship from DAAD (German Academic Exchange Service).
- Dr. Kerkko Luosto, University of Helsinki, Finland, visited UC Santa Cruz from September 1995 to February 1996, supported by a grant from the Academy of Finland.
- 1994-95 Dr. Miki Hermann, INRIA-Lorraine, France, visited UC Santa Cruz during the entire academic year 1994-95, supported by a NATO postdoctoral fellowship.

Ph.D. Theses Supervised

- 2017 Kun Qian, “Discovering Information Integration Specifications from Data Examples” (supervised jointly with Balder ten Cate and Wang-Chiew Tan).
- 2016 Richard Halpert, “Inconsistencies in Data Exchange” (supervised jointly with Balder ten Cate).

- 2013 Enela Pema, “Consistent Query Answering of Conjunctive Queries under Primary Key Constraints”, (supervised jointly with Wang-Chiew Tan).
- 2006 Jonathan Panttaja, “Complexity in Databases, Games, and Logic”.
- 2004 Delbert D. Bailey, “Structural Phase Transitions of Boolean Satisfiability Variants”.
- 2002 Albert Atserias, “Fixed-Point Logics, Descriptive Complexity, and Random Satisfiability”.
- 1996 Ian Barland, “Expressing Optimization Problems as Integer Programs, and Undirected Path Problems: a Descriptive Complexity Approach”.
- 1993 Madhukar Thakur, “Descriptive Complexity of Optimization and Counting Problems”.

Invited Talks in Conferences and Workshops, Invited Short Courses (since 2000)

- 2017 “Schema Mappings: Structural Properties and Limits”, Invited Talk, Joint Special Highlight Session of the 2017 Logic Colloquium (LC 2017) and the 2017 EACSL Annual Conference on Computer Science Logic (CSL 2017)
- 2016 “Coping with Inconsistent Databases: Semantics, Algorithms, and Complexity”, Invited Talk, 19th International Conference on Theory and Applications of Satisfiability Testing, Bordeaux, France, July 2016.
 “Logic and Databases”, Short Course, Program on Logical Structures in Computation, Simons Institute for the Theory of Computing, Berkeley, USA, August-September 2016.
- 2015 “The Ubiquity of Database Dependencies”, Invited Talk, 10th International Computer Science Symposium in Russia (CSR 2015), Listvyanka, Russia, July 2015.
 “The Query Containment Problem: Set Semantics vs. Bag Semantics”, Dagstuhl Seminar on “Logics for Dependence and Independence”, Schloss-Dagstuhl Leibniz Center for Informatics, Dagstuhl, Germany, June 2015.
- 2014 “Schema Mappings and Data Examples: An Interplay between Syntax and Semantics”, Invited Talk, 5th International Symposium on Games, Automata, Logics, and Automated Verification (GandALF 2014), Verona, Italy, September 2014.
 “The Ubiquity of Database Dependencies”, Invited Talk, Dagstuhl Seminar on “Querying and Reasoning under Expressive Constraints”, Schloss-Dagstuhl Leibniz Center for Informatics, Dagstuhl, Germany, August 2014.
 “Logic and Databases”, Invited Short Course, 1st EATCS Summer School for Young Researchers, Czech Republic, July 2014.
 “Reflections on Definability and Complexity”, Invited Talk, LCC 2014/Immerman Fest, Vienna, Austria, July 2014.
 “Logic and Computation”, Invited Short Course, 3rd East Asian Summer School on Logic, Language, and Computation, Beijing, China, July 2014.
 “Database Dependencies”, Invited Tutorial, Master Class on Dependence Logic, Royal Netherlands Academy of Arts and Sciences (KNAW), Amsterdam, March 2014.
- 2013 “Aspects of Database Query Evaluation”, Invited Talk, Workshop on Horizons in Theoretical Computer Science: A Celebration of Mihalis Yannakakis 60th Birthday, Princeton University, August 2013.
 “Schema Mappings and Data Examples: An Interplay of Syntax and Semantics”, Invited Talk, 9th Panhellenic Logic Symposium (PLS ’9), National Technical University, Athens, Greece, July 2013.

- Invited Panel Presentation, “Reflections on PODS (the ACM Symposium on Principles of Database Systems)”, 2013 ACM SIGMOD/PODS Conference, New York, New York, June 2013.
- “The Query Containment Problem: Set Semantics vs. Bag Semantics”, Invited Talk, 7th Alberto Mendelzon International Workshop on Foundations of Data Management, Puebla, Mexico, May 2013.
- “Schema Mappings and Data Examples”, Tutorial (three hours long) co-taught with B. ten Cate and W.-C. Tan, 16th International Conference on Extending Database Technology (EDBT 2013), Genoa, Italy, March 2013.
- “Foundations and Applications of Schema Mappings”, Invited Talk, Dagstuhl Seminar on “Dependence Logic: Theory and Applications”, Schloss-Dagstuhl Leibniz Center for Informatics, Dagstuhl, Germany, February 2013.
- 2012 “A Retrospective on Datalog 1.0”, Keynote Talk, Datalog 2.0 Workshop, Vienna, Austria, September 2012.
- “Schema Mappings and Data Exchange”, Invited Short Course in the East-Asian School on Logic, Language, and Computation (EASLLC ’12), Southwest University, Chongqing, China, August 2012.
- “Schema Mappings and Data Exchange”, Invited Short Course in the PhD Open Program, Computer Science Department, University of Warsaw, Poland, April 2012.
- 2011 “Schema Mappings and Data Examples: An Interplay Between Syntax and Semantics”, 31st IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS), Mumbai, India, December 2011.
- “Logic and Databases”, Invited Tutorial, Workshop on Finite and Algorithmic Model Theory, IIT Bombay, Mumbai, India, December 2011.
- “Schema Mappings and Data Examples”, Keynote Talk, 2011 International Workshop on Logic in Databases (LID 2011), Uppsala, Sweden, March 2011.
- “Random Graphs and the Parity Quantifier”, Invited Talk, VIG Logic Meeting, University of California, Los Angeles, February 2011.
- 2010 “Relational Databases, Logic, and Complexity”, Invited Short Course, Sino-European School on Logic, Language, and Information (SELLC ’10), Guangzhou, China, December 2010.
- “Random Graphs and the Parity Quantifier”, Invited Talk, Set Theory, Model Theory, Generalized Quantifiers, and Foundations of Mathematics, Meeting in Honor of Jouko Väänänen’s 60th Birthday, Helsinki, Finland, September 2010.
- “Composing and Inverting Schema Mappings”, Invited Talk, 23rd International Workshop on Description Logics (DL 2010), Waterloo, Canada, May 2010.
- 2009 “Relational Databases, Logic, and Complexity”, Invited Short Course, 2009 GII Doctoral School on Advances in Databases, University of Calabria Italy, September 2009.
- “Repair Checking in Inconsistent Databases: Algorithms and Complexity”, Invited Talk, Tenth International Workshop on Logic and Computational Complexity (LCC ’09), Los Angeles, August 2009.
- “Foundations and Applications of Schema Mappings”, Plenary Talk, 2009 Computability in Europe Conference (CiE 2009), Heidelberg, Germany, July 2009.
- 2008 “Foundations and Applications of Schema Mappings”, Invited Tutorial, 2008 Workshop on Logic and Algorithms (LAA 2008), University of Edinburgh, UK, July 2008.

- “Computer Science Workshops: Blurring the distinction between conferences and workshops”, Invited Panel Presentation, Panel on “Paper and Proposal Reviews: Is the Process Flawed?”, 2008 CRA Snowbird Conference, Snowbird, Utah, July 2008.
- “Logic and Constraint Satisfaction: An Introduction”, Invited Tutorial, AIM Workshop on “Applications of universal algebra and logic to the constraint satisfaction problem”, American Institute of Mathematics (AIM), Palo Alto, California, March 2008.
- 2007 Invited Talk, 22nd Annual IEEE Symposium on Logic in Computer Science (LICS 2007), Wroclaw, Poland, July 2007.
- Invited Panelist, Panel on “How can academia and industry work together to address educational issues”, Google Education Summit, Mountain View, California, July 2007.
- 2006 “Data Exchange”, Invited Short Course, Bertinoro Ph.D. School on Data and Service Integration (DASI '06), Bertinoro, Italy, December 2006.
- “Constraint Satisfaction and Logic”, Invited Tutorial, Workshop on Mathematics of Constraint Satisfaction: Algebra, Logic and Graph Theory, Isaac Newton Institute Satellite Workshop at the University of Oxford, Special Programme on Logic and Algorithms, Oxford, UK, March 2006.
- “Foundations of Schema Mappings”, Invited Tutorial, Workshop on Logic and Databases, Special Programme on Logic and Algorithms, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, March 2006.
- 2005 “Constraint Satisfaction, Complexity, and Logic”, Invited Tutorial, Logic Colloquium 2005, Association for Symbolic Logic European Summer Meeting, Athens, Greece, August 2005.
- Invited Talk, Fifth Panhellenic Logic Symposium (PLS 2005), Athens, Greece, July 2005.
- Keynote Talk, 24th Annual ACM Symposium on Principles of Database Systems (PODS 2005), Baltimore, Maryland, June 2005.
- “Constraint Satisfaction, Databases, and Logic”, Invited Short Course, Computer Science Department, University of Rome “La Sapienza”, Italy, April 2005.
- 2004 Invited Lecture, Workshop on Logic and Computational Complexity, Turku, Finland, July 2004.
- Invited Lecture, Third Hellenic Conference on Artificial Intelligence (SETN '04), Samos, Greece, May 2004.
- 2003 Invited Lecture, CISE Distinguished Lecture Series, National Science Foundation, December 2003.
- Advanced course on “Constraint Satisfaction, Complexity, and Logic”, Logic and Computation Section, 15th European Summer School on Logic, Language and Information (ESSLLI 2003 - www.logic.at/esslli03/), Vienna, Austria, August 2003.
- Invited Lecture, Eighteenth International Joint Conference on Artificial Intelligence (IJCAI 2003), Acapulco, Mexico, August 2003.
- Invited Lecture, 2003 Annual Meeting of the Association for Symbolic Logic, Chicago, June 2003.
- Principal Speaker, 15th McGill Invitational Workshop on Computational Complexity, Bellairs Research Institute of McGill University, St. James, Barbados, March 2003.
- Invited Lecture, Biannual UCLA Logic Meeting, Los Angeles, January 2003.
- 2002 Invited Lecture, 2nd International Workshop on Complexity in Automated Deduction, 2002 Federated Logic Conference (FloC 2002), Copenhagen, Denmark, July 2002.

Invited advanced course on “Constraint Satisfaction, Complexity, and Logic”, 1st North American Summer School on Logic, Language and Information (NASSLLI '02 - www.stanford.edu/group/nasslli/), Stanford University, June 2002.

Invited Lecture, Symposium on the Effectiveness of Logic in Computer Science (ELICS02), Max Planck Institute for Computer Science (MPI), Saarbrücken, Germany, March 2002.

2001 Invited to give a talk at the 6th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR '01), Vienna, Austria, September 17–19, 2001. Was unable to travel to Europe due to the events of September 11, 2001; the slides of invited talk were distributed to the participants of the conference.

Advanced course on “Combinatorial Games in Finite Model Theory”, Logic and Computation Section, 13th European Summer School on Logic, Language and Information (ESSLLI 2001 - www.helsinki.fi/esslli/), Helsinki, Finland, August 2001.

2000 Invited Lecture, Ninth CSLI Workshop on Logic, Language and Computation (LLC 9), Stanford University, May 2000.

Invited Lecture, Symposium in Honor of the 80th Birthday of Roland Fraïssé, Mathematics Institute of Luminy, Marseille, France, May 2000.

Patents Issued

1. “Interactive Generation of Integrated Schemas”, US Patent 8,180,810, May 15, 2012; co-inventors L. Chiticariu and L. Popa.
2. “Sequential Composition of XML Schema Mappings”, US Patent 7,783,680, August 24, 2010; co-inventors: R. Fagin, L. Popa, W.-C. Tan, C. Yu.
3. “Quasi-inverses of schema mappings”, US Patent 7,689,581, March 30, 2010; co-inventors: R. Fagin, L. Popa, W.-C. Tan.
4. “System and Method for Performing a High-Level Multi-Dimensional Query on a Multi-Structural Database”, US Patent 7,519,582, April 14, 2009; co-inventors: R. Fagin, R. Guha, R. Kumar, J. Novak, D. Sivakumar, and A. Tomkins.

Books Edited

1. *Reasoning Web. Reasoning and the Web in the Big Data Era*, M. Koubarakis, G.B. Stamou, G. Stoilos, I. Horrocks, Ph. Kolaitis, G. Lausen, G. Weikum (Eds.), 10th International Summer School 2014, Lecture Notes in Computer Science 8714, Springer, 2014.
2. *Data Exchange, Integration, and Streams*, Ph. Kolaitis, M. Lenzerini, N. Schweikardt (Eds.), Dagstuhl Follow-Ups 5, Schloss Dagstuhl - Leibniz-Zentrum für Informatik, ISBN 978-3-939897-61-3, 2013.
3. *Complexity of Constraints : An Overview of Current Research Themes*, N. Creignou, Ph. Kolaitis, H. Vollmer (Eds.), Lecture Notes in Computer Science 5250, Springer, 2008.
4. *Proceedings of the 2nd Panhellenic Logic Symposium*, Ph. Kolaitis and G. Koletsos (Eds.), National Technical University of Athens, 1999.
5. *Database Theory - ICDT 1997*, Proceedings of the 6th International Conference on Database Theory, F. Afrati and Ph. Kolaitis (Eds.), Lecture Notes in Computer Science 1186, Springer-Verlag, 1997.
6. *Descriptive Complexity and Finite Models*, N. Immerman and Ph. Kolaitis (Eds.), DIMACS Series in Discrete Mathematics and Theoretical Computer Science, volume 31, American Mathematical Society, 1997.

Special Issues Edited

1. Selections from the *18th IEEE Annual Symposium on Logic in Computer Science (LICS 2003)*, Ph.G. Kolaitis (Ed.), *ACM Transactions on Computational Logic*, 6(4), October 2005, pp. 674–842.
2. Foreword, Selections from the Twenty-First ACM Symposium on Principles of Database Systems (PODS 2002), Ph. G. Kolaitis and V. Vianu, *Journal of the Association for Computing Machinery*, Volume 51, Number 1, 2004.
3. Foreword, Selections from the Twenty-First ACM Symposium on Principles of Database Systems (PODS 2002), Ph. G. Kolaitis and M. J. Franklin, *ACM Transactions of Database Systems*, Volume 29, Number 1, 2004
4. Selections from the 6th International Conference on Database Theory (ICDT 1997), F. Afrati and Ph. G. Kolaitis (Eds.), *Theoretical Computer Science*, Vol. 239, No. 2, May 2000, pp. 187–338.

Chapters in Books

1. “Schema Mappings: A Case of Logical Dynamics in Database Theory” (with B. ten Cate) in “Johan van Benthem on Logic and Information Dynamics”, A. Baltag and S. Smets, editors, Springer, 2014, pp. 67-100. Invited chapter in a volume in honor of Johan van Benthem’s 65th birthday.
2. “Schema mapping evolution through composition and inversion” (with R. Fagin, L. Popa, and W.-C. Tan) in “Schema Matching and Mapping”, Z. Bellahsene, A. Bonifati, and E. Rahm, editors, Springer, 2010, pp. 191-222.
3. “The Expressive Power of Logics on Finite Models” in “Finite Model Theory and its Applications”, EATCS Series: Texts in Theoretical Computer Science, Springer, 2007, pp. 27–124.
4. “A Logical Approach to Constraint Satisfaction” (with M.Y. Vardi) in “Finite Model Theory and its Applications”, EATCS Series: Texts in Theoretical Computer Science, Springer, 2007, pp. 339–371.

Research Articles in Journals and Peer-Reviewed Conference Proceedings

(in all my publications, the authors are listed in alphabetical order)

1. “Foundations of Information Integration under Bag Semantics” (with André Hernich), *Proceedings of the 32nd Annual ACM/IEEE Symposium on Logic in Computer Science (LICS 2017)*, Reykjavik, Iceland, 2017, pp. 1–12.
2. “Approximation Algorithms for Schema-Mapping Discovery from Data Examples” (with B. ten Cate, K. Qian, and W.-C. Tan), *ACM Transactions on Database Systems*, vol. 42, no. 2, 2017, pp. 12:1-12:41.
 - Preliminary version in *Proceedings of the 9th Alberto Mendelzon International Workshop on Foundations of Data Management*, 11 pages, May 2015.
3. “Aggregation of Votes with Multiple Positions on Each Issue” (with L. Kirousis and J. Livieratos), *Proceedings of the 16th International Conference on Relational and Algebraic Methods in Computer Science (RAMiCS 2017)*, Lyon, France, 2017, Springer, pp. 209-225.
4. “Expressive Power of Entity Linking Frameworks” (with D. Burdick, R. Fagin, L. Popa, and W.-C. Tan), *Proceedings of the 20th International Conference on Database Theory (ICDT 2017)*, Venice, Italy, 2017, pp. 10:1–10:18.
5. “Dependence Logic and Constraint Satisfaction” (with L. Hella), in *Proceedings of the 25th EACSL Annual Conference on Computer Science Logic, (CSL 2016), August 29 - September 1, 2016, Marseille, France*, pp. 14:1–14:17. Full version invited to a special issue of *Logical Methods in Computer Science*.

6. “Limits of Schema Mappings” (with R. Pichler, E. Sallinger and V. Savenkov), in *Proceedings of the 19th International Conference on Database Theory (ICDT 2016)*, March 2016, pp. 19:1–19:17. Full version invited to a special issue of *Theory of Computing Systems*.
7. “Practical Query Answering in Data Exchange Under Inconsistency-Tolerant Semantics” (with B. ten Cate and R. Halpert), in *Proceedings of the 19th International Conference on Extending Database Technology (EDBT 2016)*, March 2016, pp. 233–244.
8. “Exchange-Repairs: Managing Inconsistency in Data Exchange (with B. ten Cate and R. Halpert)”, *Journal on Data Semantics*, pp. 1-21, February 2016. Invited paper from the *8th International Conference on Web Reasoning and Rule Systems (RR 2014)*.
 - Preliminary version in *Proceedings of the 8th International Conference on Web Reasoning and Rule Systems (RR 2014)*, Lecture Notes in Computer Science 8741, Springer, 2014, pp. 140-156.
9. “A Declarative Framework for Linking Entities” (with D. Burdick, R. Fagin, L. Popa, and W.-C. Tan), *ACM Transactions on Database Systems*, vol. 41, no. 3, 2016, pp. 17:1–17:38.
 - Preliminary version in *Proceedings of the 18th International Conference on Database Theory (ICDT 2015)*, *Best Paper Award*, pp. 25-43, March 2015.
10. “On the Data Complexity of Consistent Query Answering” (with B. ten Cate and G. Fontaine), *Theory of Computing Systems*, 57(4), pp. 843-891, 2015. Invited paper from the *15th International Conference on Database Theory (ICDT 2012)*.
 - Preliminary version in *Proceedings of the 15th International Conference on Database Theory (ICDT 2012)*, pp. 22-33, March 2012.
11. “Dichotomies in the Complexity of Preferred Repairs” (with R. Fagin and B. Kimelfeld), *Proceedings of the 34th ACM Symposium on Principles of Database Systems (PODS 2015)*, pp. 3-15, June 2015.
12. “The Complexity of Mining Maximal Frequent Subgraphs” with B. Kimelfeld, *ACM Transactions on Database Systems*, 39(4), 33 pages, 2014. Invited paper from the *32nd ACM Symposium on Principles of Database Systems (PODS 2013)*.
 - Preliminary version in *Proceedings of the 32nd ACM Symposium on Principles of Database Systems (PODS 2013)*, pp. 13-24, June 2013.
13. “Nested Dependencies: Structure and Reasoning” (with R. Pichler, E. Sallinger, and V. Savenkov), *Proceedings of the 33rd ACM Symposium on Principles of Database Systems (PODS 2014)*, 176-187, 2014. Full version invited to the *ACM Transactions on Database Systems*.
14. “Random graphs and the parity quantifier” (with S. Kopparty), *Journal of the Association for Computing Machinery*, 60 (5), 2013, 37 pages.
 - Preliminary version in *Proceedings of the 41st Annual ACM Symposium on Theory of Computing (STOC 2009)*, 2009, pp. 705-714.
15. “The Semantics of Aggregate Queries in Data Exchange Revisited” (with F. Spezzano), *Proceedings of the 7th International Conference on Scalable Uncertainty Management (SUM 2013)*, Lecture Notes in Computer Science 8078, Springer, pp. 233-246, September 2013.
16. “Efficient Querying of Inconsistent Databases with Binary Integer Programming” (with E. Pema and W.-C. Tan), *PVLDB*, 6(6), 397-408, 2013.
17. “Robust Constraint Satisfaction and Local Hidden Variables in Quantum Mechanics” (with S. Abramsky and G. Gottlob), *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI 2013)*, August 2013.

18. “Data exchange with arithmetic operations” (with B. ten Cate and W. Othman), *Proceedings of the 16th International Conference on Extending Database Technology (EDBT 2013)*, pp. 537-548, March 2013.
19. “Learning Schema Mappings” (with B. ten Cate and V. Dalmau), *ACM Transactions on Database Systems*, 38 (4), 28 pages, 2013. Invited paper from the *15th International Conference on Database Theory (ICDT 2012)*.
 - Preliminary Version in *Proceedings of the 15th International Conference on Database Theory (ICDT 2012)*, *Best Paper Award*, pp. 182-195, March 2012.
20. “Local Transformations and Conjunctive-Query Equivalence” (with R. Fagin), *Proceedings of the 31st ACM Symposium on Principles of Database Systems (PODS 2012)*, pp. 179-190, May 2012.
21. “A Dichotomy in the Complexity of Consistent Query Answering for Queries with Two Atoms” (with E. Pema), *Information Processing Letters*, 112(3), pp. 77-85, 2012.
22. “Characterizing Schema Mappings via Data Examples” (with B. Alexe, B. ten Cate, and W.C. Tan), *ACM Transactions on Database Systems* 36(4): 23, 48 pages, 2011. Invited paper from the *29th ACM Symposium on Principles of Database Systems (PODS 2010)*.
 - Preliminary version in *Proceedings of the 29th ACM Symposium on Principles of Database Systems (PODS 2010)*, pp. 261-272, June 2010.
23. “Designing and Refining Schema Mappings via Data Examples” (with B. Alexe, B. ten Cate, and W.-C. Tan), *Proceedings of the 31st ACM SIGMOD International Conference on Management of Data (SIGMOD)*, pp. 133-144, 2011.
24. “Probabilistic Data Exchange” (with R. Fagin and B. Kimelfeld), *Journal of the Association for Computing Machinery*, 58 (4), 55 pages, July 2011.
 - Preliminary version in *Proceedings of the 13th International Conference on Database Theory (ICDT 2010)*, March 2010, pp. 76-88.
25. “The Quest for a Logic for Polynomial-Time Computation”, Invited Technical Perspective, *Communications of the ACM*, 54 (6), pp. 103, 2011.
26. “Reverse Data Exchange: Coping with Nulls” (with R. Fagin, L. Popa, and W.-C. Tan), *ACM Transactions on Database Systems*, 36 (2), 42 pages, 2011. Invited paper from the *Twenty-eighth ACM Symposium on Principles of Database Systems (PODS 2009)*.
 - Preliminary version in *Proceedings of the Twenty-Eighth ACM Symposium on Principles of Database Systems (PODS 2009)*, 2009, pp. 23–32.
27. “Database Constraints and Homomorphism Dualities” (with B. ten Cate and W.-C. Tan), *Proceedings of 16th International Conference on Principles and Practice of Constraint Programming (CP 2010)*, September 2010, pp. 475-490.
28. “Characterizing Schema Mappings via Data Examples” (with B. Alexe and W.C. Tan), *Proceedings of the 29th ACM Symposium on Principles of Database Systems (PODS 2010)*, June 2010, pp. 261-272. Full version invited to the *ACM Transactions on Database Systems*.
29. “Structural characterizations of schema-mapping languages” (with B. ten Cate), *Communications of the Association for Computing Machinery*, 53 (1), 2010, pp. 101-110 - Invited *Research Highlight*.
 - Earlier version in *Proceedings of the 12th International Conference on Database Theory (ICDT 2009)*, 2009, pp. 63-72. 2009.
30. “Laconic Schema Mappings: Computing the Core with SQL Queries” (with B. ten Cate, L. Chiticariu, and W.-C. Tan), *Proceedings of the 35th International Conference on Very Large Databases (VLDB 2009)*, 2009, pp. 1006–1117.

31. “Repair checking in inconsistent databases: algorithms and complexity” (with F. Afrati), *Proceedings of the 12th International Conference on Database Theory ICDT 2009*, 2009, pp. 31-41. *Best Paper Award*.
32. “The connectivity of Boolean satisfiability: computational and structural dichotomies” (with P. Gopalan, E. Maneva, and C.H. Papadimitriou), *SIAM J. of Computing*, vol. 38, no. 6, 2009, pp. 2330–2355.
 - Preliminary version in *Proceedings of 33rd International Colloquium on Automata, Languages and Programming (ICALP 2006)*, LNCS 4051, Springer, 2006, pp. 346–357.
33. “Structure identification of Boolean relations and plain bases for co-clones” (with N. Creignou and B. Zanuttini), *Journal of Computer and System Sciences*, 74, 2008, pp. 1003-1115.
34. “Answering aggregate queries in data exchange” (with F. Afrati), *Proceedings of the Twenty-seventh ACM Symposium on Principles of Database Systems (PODS 2008)*, 2008, pp. 129-138.
35. “Towards a theory of schema-mapping optimization (with R. Fagin, A. Nash, and L. Popa), Proc. of the *Twenty-seventh ACM Symposium on Principles of Database Systems (PODS 2008)*, pp. 33–42.
36. “Interactive generation of integrated schema” (with L. Chiticariu and L. Popa), *Proceedings of the 28th ACM SIGMOD International Conference on Management of Data (SIGMOD 2008)*, 2008, pp. 833-846.
37. “Quasi-inverses of schema mappings” (with R. Fagin, L. Popa, and W.-C. Tan), *ACM Transactions on Database Systems*, 33, (2), 2008. Invited paper from the *Twenty-sixth ACM Symposium on Principles of Database Systems (PODS 2007)*.
 - Preliminary version in *Proceedings of the Twenty-sixth ACM Symposium on Principles of Database Systems (PODS 2007)*, 2007, pp. 123-132.
38. “Semi-automatic schema integration in Clio” (with L. Chiticariu, M.A. Hernández, and L. Popa), *Proceedings of the 33rd Very Large Databases Conference (VLDB 2007)*, demo track, pp. 1326-1329.
39. “Reflections on Finite Model Theory”, Invited paper, *Proceedings of the Twenty-second Annual IEEE Symposium on Logic in Computer Science, (LICS 2007)*, pp. 257–269
40. “Phase transitions of PP-complete satisfiability problems” (with D.D. Bailey and V. Dalmau), *Discrete Applied Mathematics* 155(12): 1627-1639 (2007). Special issue on Boolean satisfiability.
 - Preliminary version in *Proceedings of the Seventeenth International Joint Conference on Artificial Intelligence (IJCAI 2001)*, pages 183–189.
41. “Peer data exchange” (with A. Fuxman, R.J. Miller, and W.-C. Tan), *ACM Transactions on Database Systems*, 31 (4), December 2006, pp. 1454–1498. Invited paper from the *Twenty-Fourth ACM Symposium on Principles of Database Systems (PODS 2005)*.
 - Preliminary version in *Proceedings of the Twenty-Fourth ACM Symposium on Principles of Database Systems (PODS 2005)*, pp. 160–171.
42. “The containment problem for *real* conjunctive queries with inequalities” (with T.S. Jayram and E. Vee), *Proceedings of the Twenty-fifth ACM Symposium on Principles of Database Systems (PODS 2006)*, pp. 80–89, 2006.
43. “The complexity of data exchange” (with J. Panttaja and W.-C. Tan), *Proceedings of the Twenty-fifth ACM Symposium on Principles of Database Systems (PODS 2006)*, pp. 30–39, 2006.
44. “On preservations under homomorphisms and unions of conjunctive queries” (with A. Atserias and A. Dawar), *Journal of the Association for Computing Machinery*, 53 (2), March 2006, pp. 208-237. Invited paper from the *Twenty-Third ACM Symposium on Principles of Database Systems (PODS 2004)*.

- Preliminary version in *Proceedings of the Twenty-Third ACM Symposium on Principles of Database Systems* (PODS 2004), pp. 319–329.
45. “Composing schema mappings: second-order dependencies to the rescue” (with R. Fagin, L. Popa, and W.-C.Tan), *ACM Transactions on Database Systems*, 30 (4), December 2005, pp. 994–1055. Invited paper from the *Twenty-Third ACM Symposium on Principles of Database Systems* (PODS 2004).
 - Preliminary version in *Proceedings of the Twenty-Third ACM Symposium on Principles of Database Systems* (PODS 2004), pp. 83-94.
 46. “Schema Mappings, Data Exchange, and Metadata Management”, Invited Paper, *Proceedings of the Twenty-Fourth ACM Symposium on Principles of Database Systems* (PODS 2005), pp. 61-75.
 47. “Data exchange: getting to the core” (with R. Fagin and L. Popa), *ACM Transactions on Database Systems*, 30 (1), March 2005, pp. 174–210. Invited paper from the *Twenty-Second ACM Symposium on Principles of Database Systems* (PODS 2003).
 - Preliminary version in *Proceedings of the Twenty-Second ACM Symposium on Principles of Database Systems* (PODS 2003), pp. 90–101.
 48. “Data exchange: semantics and query answering” (with R. Fagin, R.J. Miller, and L. Popa), *Theoretical Computer Science*, 336, 2005, pp. 89-124. Special issues with selections from the 9th International Conference on Database Theory - ICDT 2003).
 - Preliminary version in *Proceedings of the 9th International Conference on Database Theory* (ICDT 2003), LNCS Series, Volume 2572, Springer, 2003, pp. 207–224.
 49. “Efficient implementation of large-scale, multi-structrural databases” (with R. Fagin, R. Kumar, J. Novak, D. Sivakumar, and A. Tomkins), *Proceedings of the 2005 Conference on Very Large Databases* (VLDB 2005), pp. 958–969.
 50. “Subtractive reductions and complete problems for counting complexity classes” (with A. Durand and M. Hermann), *Theoretical Computer Science*, 340, 2005, pp. 496-513. Invited paper from the *25th International Symposium on Foundations of Computer Science* (MFCS 2000).
 - Preliminary version in *Proceedings of 25th International Symposium on Foundations of Computer Science* (MFCS 2000), LNCS 1893, Springer, 2000, pp. 323–332.
 51. “Constraint propagation as a proof system” (with A. Atserias and M.Y. Vardi), *Proceedings of the 10th International Conference on Principles and Practice of Constraint Programming* (CP 2004), Lecture Notes in Computer Science, Volume 3258, pp. 77-91, 2004.
 52. “Existential second-order logic over graphs: charting the tractability frontier” (with T. Schwentick and G. Gottlob), *Journal of the Association for Computing Machinery*, Volume 51, Number 2, 2004, pp. 312–362.
 - Preliminary version in: *Proceedings of 41st Annual IEEE Symposium on Foundations of Computer Science* (FOCS 2000), pp. 664–674, October 2000.
 53. “A dichotomy in the complexity of propositional circumscription” (with L.M. Kirousis), *Theory of Computing Systems*, 37 (6), pp. 695–715, 2004.
 - Preliminary version in *Proceedings of the Sixteenth Annual IEEE Symposium on Logic in Computer Science* (LICS 2001), pp. 71–80, June 2001.
 54. “On the complexity of existential pebble games” (with J. Panttaja), *Proceedings of Computer Science Logic CSL 2003*, Lecture Notes in Computer Science 2803, Springer 2003, pp. 314–329.
 55. “Constraint satisfaction, databases, and logic”, Invited paper, *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence* (IJCAI 2003), pp. 1587–1595.

56. “Phase transitions of bounded satisfiability problems” (with D. D. Bailey), *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI 2003)*, pp. 1187–1193.
57. “The complexity of minimal satisfiability problems” (with L.M. Kirousis), *Information and Computation*, Volume 187, Number 1, pp. 20–39, 2003.
- Preliminary version in *Proceedings of 18th International Symposium on Theoretical Aspects of Computer Science (STACS 2001)*, Lecture Notes in Computer Science, vol. 2010, pages 407–418, 2001.
58. “Constraint satisfaction, bounded treewidth, and finite-variable logics” (with M.Y. Vardi and V. Dalmau), *Proceedings of the Eighth International Conference on Principles and Practice of Constraint Programming (CP 2002)*, Lecture Notes in Computer Science Series, Vol. 2470, Springer, 2002, pp. 311–326.
59. “Comparing phase transitions and peak cost in PP-complete satisfiability problems” (with D.D. Bailey and V. Dalmau), *Proceedings of the Eighteenth Conference on Artificial Intelligence (AAAI ’02)*, AAAI Press/The MIT Press, 2002, pp. 620–626. Invited for presentation in a plenary session of AAAI ’02.
60. “In search of a phase transition in the AC-matching problem” (with T. Raffill), *Proceedings of the Seventh International Conference on Principles and Practice of Constraint Programming (CP 2001)*, Lecture Notes in Computer Science Series, Vol. 2239, Springer, 2001, pp. 433–450.
61. “On the complexity of model checking and inference in minimal models” (with L.M. Kirousis), Invited Paper, *Proceedings of the 6th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR ’01)*, Lecture Notes in Artificial Intelligence Series, Vol. 2173, Springer, 2001, pp. 42–53.
62. “On the unusual effectiveness of logic in computer science” (with J.Y. Halpern, R. Harper, N. Immerman, M.Y. Vardi, V. Vianu), *Bulletin of Symbolic Logic*, 7:2(2001), pp. 213–236.
63. “0-1 Laws for fragments of existential second-order logic: a survey” (with M.Y. Vardi), Invited Paper, *Proceedings of 25th International Symposium on Foundations of Computer Science (MFCS 2000)*, Lecture Notes in Computer Science, Vol. 1893, Springer-Verlag, 2000, pp. 84–98.
64. “A game-theoretic approach to constraint satisfaction” (with M.Y. Vardi), *Proceedings of the Seventeenth National Conference on Artificial Intelligence (AAAI 2000)*, AAAI Press/The MIT Press, 2000, pp. 175–181.
65. “Conjunctive-query containment and constraint satisfaction” (with M.Y. Vardi), *Journal of Computer and System Sciences*, 61, 2000, pp. 302–332. Special issue with selections from the 17th ACM Symposium on Principles of Database Systems - PODS 1998).
- Preliminary version in *Proceedings of the Seventeenth ACM Symposium on Principles of Database Systems (PODS 1998)*, Seattle, Washington, 1998, pp. 205–213.
66. “Unification algorithms cannot be combined in polynomial time” (with M. Hermann), *Information and Computation*, vol. 162, no. 1–2, 2000, pp. 24–42. Special issue with selections from the Proceedings of the 13th International Conference on Automated Deduction).
- Preliminary version in *Proceedings of 13th International Conference on Automated Deduction (CADE-13)*, Lecture Notes in Computer Science (subseries LNAI), Vol. 1104, Springer-Verlag, 1996, pp. 246–260.
67. “On the complexity of counting the Hilbert basis of a linear Diophantine system” (with M. Hermann and L. Juban), *Proceedings of 6th International Conference on Logic for Programming and Automated Reasoning (LPAR ’99)*, Lecture Notes in Artificial Intelligence, Vol. 1705, Springer-Verlag, 1999, pp. 13–33.

68. “Computational complexity of simultaneous elementary matching problems” (with M. Hermann), *Journal of Automated Reasoning*, Vol. 23, No. 2, August 1999, pp. 107–136.
- Preliminary version in: *Proceedings of 20th International Symposium on Mathematical Foundations of Computer Science* (MFCS '95), Lecture Notes in Computer Science, Vol. 969, Springer-Verlag 1995, pp. 359–70.
69. “First-order logic vs. fixed-point logic in finite set theory” (with A. Atserias), *Proceedings of the Fourteenth Annual IEEE Symposium on Logic in Computer Science* (LICS '99), Trento, Italy, 1999, pp. 275–284.
70. “Integer programming as a framework for optimization and approximability” (with I. Barland and M.N. Thakur), *Journal of Computer and System Sciences*, Oct. 1998, vol.57, no. 2), pp. 144-161 (*Special issue: Selections from the Eleventh Annual IEEE Conference on Computational Complexity*).
- Preliminary version in: *Proceedings of Eleventh Annual IEEE Conference on Computational Complexity* 1996, pp. 249–59.
71. “On the boundedness problem for two-variable first-order logic” (with M. Otto), *Proceedings of Thirteenth Annual IEEE Symposium on Logic in Computer Science* (LICS '98), Indianapolis, Indiana, 1998, pp. 513–524.
72. “On the complexity of the containment problem for conjunctive queries with built-in predicates” (with D.L. Martin and M.N. Thakur), *Proceedings of the Seventeenth ACM SIGACT-SIGMOD-SIGART Symposium on Principles of Database Systems* (PODS '98), Seattle, Washington, 1998, pp. 197–204.
73. “On the complexity of unification and disunification in commutative idempotent semigroups”, *Proceedings of Third International Conference on Principles and Practice of Constraint Programming* (CP 1997), *Lecture Notes in Computer Science*, Vol. 1330, Springer-Verlag, 1997, pp. 282–296.
74. “Can Datalog be approximated?” (with S. Chaudhuri), *Journal of Computer and System Sciences*, Oct. 1997, vol. 55, no. 2, pp. 355-369 (*Special issue: Selections from from the Thirteenth ACM Symposium on Principles of Database Systems*).
- Preliminary version in: *Proceedings of the Thirteenth ACM Symposium on Principles of Database Systems* (PODS '94), Minneapolis, Minnesota, 1994, pp. 86–96.
75. “Infinitary logic in finite model theory” (invited paper), *Logic and Scientific Methods: Volume One of the Tenth International Congress of Logic, Methodology and Philosophy of Science*, ed. by Maria Luisa Dalla Chiara et al., Kluwer Academic Publishers, 1997, pp. 107–125.
76. “How to define a linear order on finite models” (with L. Hella and K. Luosto), *Annals of Pure and Applied Logic*, Oct. 1997, vol.87, no. 3, pp. 241–67 (*Special issue: Selections from the 9th Annual IEEE Symposium on Logic in Computer Science*).
- Preliminary version in: *Proceedings of 9th Annual IEEE Symposium on Logic in Computer Science* (LICS '94), Paris, France, 1994, pp. 40–49.
77. “On the decision problem for two-variable first-order logic” (with E. Grädel and M.Y. Vardi), *The Bulletin of Symbolic Logic*, Volume 3, Number 1, March 1997, pp. 53–69.
78. “Almost everywhere equivalence of logics in finite model theory” (with L. Hella and K. Luosto), *The Bulletin of Symbolic Logic*, Volume 2, Number 4, December 1996, pp. 422–443.
79. “On the expressive power of variable-confined logics” (with M.Y. Vardi), *Proceedings of 11th Annual IEEE Symposium on Logic in Computer Science* (LICS '96), 1996, pp. 348–359.
80. “The complexity of counting problems in equational matching” (with M. Hermann), *Journal of Symbolic Computation*, 1995, vol.20, (no.3), pp. 343–62.

- Preliminary version in: *Proceedings of 12th International Conference on Automated Deduction (CADE-12)*, Lecture Notes in Computer Science (subseries LNAI) 814, Springer-Verlag, 1994, pp. 560–74.
81. “Implicit definability and infinitary logic in finite model theory” (with A. Dawar and L. Hella), *Proceedings 22nd International Colloquium on Automata, Languages, and Programming (ICALP '95)*, Lecture Notes in Computer Science, Vol. 944, Springer-Verlag 1995, pp. 624–635.
 82. “Generalized quantifiers and pebble games on finite structures” (with J. K. Väänänen), *Annals of Pure and Applied Logic*, 1995, vol.74, (no.1), pp. 23–75.
 - Preliminary version in: *Proceedings of Seventh Annual IEEE Symposium on Logic in Computer Science (LICS 92)*, Santa Cruz, California, 1992, pp. 348–359.
 83. “On the expressive power of Datalog: Tools and a case study” (with M.Y. Vardi), *Journal of Computer and System Sciences*, 1995, vol.51, (no.1) pp. 110–34 (*Special issue: Selections from the Ninth Annual ACM Symposium on Principles of Database Systems*).
 - Preliminary version in: *Proceedings Ninth Annual ACM Symposium on Principles of Database Systems (PODS 1990)*, Nashville, Tennessee, 1990, pp. 61–71.
 84. “Approximation properties of NP-minimization classes” (with M.N. Thakur), *Journal of Computer and System Sciences*, 1995, vol.50, (no.3), pp. 391–411 (*Special issue: Selections from the Sixth Annual IEEE Conference on Structure in Complexity*).
 - Preliminary version in: *Proceedings Sixth Annual IEEE Conference on Structure in Complexity Theory*, Chicago, Illinois, 1991, pp. 353–366.
 85. “Logical definability of NP optimization problems” (with M.N. Thakur), *Information and Computation*, 1994, vol.115, (no.2), pp. 321–53.
 86. “Polynomial-time optimization, parallel approximation, and fixpoint logic” (with M.N. Thakur), in *Proceedings of Eighth Annual IEEE Conference on Structure in Complexity Theory*, pp. 31–41.
 87. “Infinitary logic for computer science” (with M.Y. Vardi), *Proceedings 19th International Colloquium on Automata, Languages, and Programming (ICALP '92 - invited paper)*, Lecture Notes in Computer Science, Vol. 623, Springer-Verlag 1992, pp. 450–473.
 88. “Fixpoint logic vs. infinitary logic in finite-model theory” (with M.Y. Vardi), *Proceedings of Seventh Annual IEEE Symposium on Logic in Computer Science (LICS 92)*, Santa Cruz, California, 1992, pp. 46–57.
 89. “Infinitary logic and 0-1 laws” (with M.Y. Vardi), *Information and Computation*, Volume 98, June 1992, pp. 258–294 (*Special issue: Selections from the Fifth Annual IEEE Symposium on Logic in Computer Science*).
 - Preliminary version in: *Proceedings of Fifth IEEE Annual Symposium on Logic in Computer Science (LICS 90)*, Philadelphia, Pennsylvania, 1990, pp. 156–167.
 90. “0-1 laws for fragments of second-order logic: an overview” (with M.Y. Vardi), *Logic from Computer Science*, Mathematical Sciences Research Institute Publications 21, Springer-Verlag 1991, pp. 265–286.
 91. “Why not negation by fixpoint?” (with C.H. Papadimitriou), *Journal of Computer and System Sciences*, August 1991, V43 N1, pp. 125–144 (*Special issue: Selections from the Seventh Annual ACM Symposium on Principles of Database Systems*).
 - Preliminary version in: *Proceedings of the Seventh Annual ACM Symposium on Principles of Database Systems (PODS 1988)*, Austin, Texas, 1988, pp. 231–239.

92. “The expressive power of stratified logic programs”, *Information and Computation*, Volume 90, Number 1, January 1991, pp. 50–66.
93. “Implicit definability on finite structures and unambiguous computations”, *Proceedings of Fifth IEEE Annual Conference on Logic in Computer Science (LICS 90)*, Philadelphia, Pennsylvania, 1990, pp. 168-180.
94. “0-1 laws and decision problems for fragments of second-order logic” (with M. Y. Vardi), *Information and Computation* Volume 87, Numbers 1/2, July/August 1990, pp. 302-338 (*Special issue: Selections from the Third IEEE Annual Symposium on Logic in Computer Science*).
 - Preliminary version in: *Proceedings of the Third IEEE Annual Symposium on Logic in Computer Science (LICS 1988)*, Edinburgh, Scotland, 1988, pp. 2-11.
95. “Some computational aspects of circumscription” (with C.H. Papadimitriou), *Journal of the Association for Computing Machinery*, vol. 37, No 1, January 1990, pp. 1–14.
 - Preliminary version in: *Proceedings of Seventh National Conference on Artificial Intelligence (AAAI 88)*, Saint Paul, Minnesota, 1988, Vol. 2, pp. 465–469.
96. “The decision problem for the probabilities of higher-order properties” (with M.Y. Vardi), *Proceedings of the Nineteenth Annual ACM Symposium on Theory of Computing*, (STOC 1987), New York, 1987, pp. 425-435.
97. “ K_{l+1} -free graphs: asymptotic structure and a 0-1 law” (with H.-J. Prömel and B.L. Rothschild), *Transactions of the American Mathematical Society*, Volume 303, Number 2, 1987, pp. 637-671.
98. “Asymptotic enumeration and a 0-1 law for m -clique free graphs” (with H.-J. Prömel and B.L. Rothschild), *Bulletin of the American Mathematical Society*, Volume 13, Number 2, 1985, pp. 160-162.
99. “On asymptotic probabilities of inductive queries and their decision problem”, *Proceedings of Logics of Programs '85*, ed. by R. Parikh, Lecture Notes in Computer Science, Vol. 193, Springer-Verlag 1985, pp. 153-166.
100. “Game Quantification”, *Model Theoretic Logics*, ed. by J. Barwise and S. Feferman, Perspectives in Mathematical Logic, Springer-Verlag 1985, pp. 365-421.
101. “Canonical forms and hierarchies in generalized recursion theory”, *Recursion Theory*, Proceedings of Symposia in Pure Mathematics, Volume 42, American Mathematical Society 1985, pp. 139-170.
102. “Model theoretic characterizations in generalized recursion theory”, *Logic Year 1979-80, The University of Connecticut*, ed. by M. Lerman, J.H. Schmerl and R.I. Soare, Lecture Notes in Mathematics, Vol. 859, Springer-Verlag 1981, pp. 104-119.
103. “Recursion and nonmonotone induction a quantifier”, *The Kleene Symposium*, ed. by J. Barwise, H.J. Keisler and K. Kunen, North-Holland 1980, pp. 367-389.
104. “Recursion in a quantifier vs. elementary induction”, *Journal of Symbolic Logic* 44 (1979), pp. 235-259.
105. “On recursion in E and semi-Spector classes”, *Cabal Seminar 1976-77*, ed. by A.S. Kechris and Y.N. Moschovakis, Lecture Notes in Mathematics, Vol. 689, Springer-Verlag 1978, pp. 209-243.

Refereed Reports on Advanced Schools, Panels, and Workshops

1. “Report on DEIS’10: Advanced School on Data Exchange, Information, and Streams (A GI-Dagstuhl Seminar)” (with M. Lenzerini and N. Schweikardt), *SIGMOD Record*, 40 (1), 2011, pp. 40-42.
2. “Paper and proposal reviews: is the process flawed?” (with H.F. Korth, Ph. A. Bernstein, M.F. Fernández, L. Gruenwald, K.S. McKinley, and M.T. Özsu), *SIGMOD Record*, 37 (3), 2008, pp. 36-39.

3. “Exchange, integration, and consistency of data: Report on the ARISE/NISR Workshop” (with L.E. Bertossi, J. Chomicki, P. Godfrey, A. Thomo, and C. Zuzarte), *SIGMOD Record*, 34 (7), 2005, pp. 87–90.