Curriculum Vitae
Avigdor Gal

I.D. No.:	058719519
Date and place of Birth:	June 7, 1964; Tel-Aviv-Jaffa, Israel
Family Status:	Married + 2
Address:	Faculty of Data & Decision Sciences
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ACADEMIC DEGREES

D.Sc.- July 1995: Information Systems Engineering, Technion - Israel Institute of Technology. Title: TALE — A Temporal Active Language and Execution Model. (Supervisors: Opher Etzion and Dov Dori).

B.Sc.- (*Cum Laude*), July 1990: Computer Science (Information Systems Engineering), Technion - Israel Institute of Technology.

ACADEMIC APPOINTMENTS

November 2020-present The Benjamin and Florence Free Chaired Professor, Faculty of Industrial Engineering & Management, Technion — Israel Institute of Technology.

June 2017-October 2020 Full Professor, Faculty of Industrial Engineering & Management, Technion — Israel Institute of Technology.

May 2007-May 2017 Associate Professor, Faculty of Industrial Engineering & Management, Technion — Israel Institute of Technology.

March 2001–April 2007 Senior Lecturer, Faculty of Industrial Engineering & Management, Technion — Israel Institute of Technology.

September 1997-February 2001 Assistant Professor, Department of Management Science & Information Systems, Rutgers University.

September 1995-August 1997 Post-doctoral Fellow, Department of Computer Science, University of Toronto.

PROFESSIONAL EXPERIENCE

January 2023–present BPM Conference Steering Committee.

January 2016–present Consultant to startup companies, including Pagaya, Selfit, Datricks, and Urbanico.

February 2012–present Member of Steering Committee of DEBS, ACM International Conference on Distributed Evnet-Based Systems.

May 2005–present Affiliate member of BPMCenter, Queensland University of Technology and TU Eindhoven.

January 2005–March 2005 Information Systems consultant to Giza, a venture capital fund.

January 2005–present CoopIS Advisory Board Member

September 2001–December 2004 Member of the IFCIS, International Foundation of Cooperative Information Systems.

December 1998-February 2001 Associate Faculty and Steering Group Member (as of September 2000), Rutgers University Distributed Laboratory for Digital Libraries (http://scils.rutgers.edu/RDLDL/).

November 1998-July 1999 Information technology consultant to ChannelActive and MyZebra.com.

December 1997-February 2001 Member of the Graduate School of Management, Rutgers University.

December 1997-February 2001 Associate Director, ITECC, Information Technology and Electronic Commerce Clinic, School of Business, New Brunswick.

May 1997-March 1998 Information Systems consultant to Revenue Canada.

September 1990-July 1995 Information systems consultant to the Israeli Air Force, as part of reserves service.

RESEARCH INTERESTS

1. Semantic Integration of Data Resources

2. Event Processing

3. Management of Uncertain Data

4. Business Process Management

5. Temporal Databases and Temporal Evolution of Databases

TEACHING EXPERIENCE

Theoretical Foundations in Information Systems [graduate].

Advanced Topics in Information Systems [graduate and senior level undergraduate].

Seminar in Information Systems and Knowledge Engineering [senior level undergraduate].

Data Structures & Algorithms

Database Management

Distributed Database Systems [graduate and senior level undergraduate].

Data Integration under Uncertainty [graduate and senior level undergraduate].

Responsible AI, Law, Ethics & Society

TECHNION ACTIVITIES

2001–2004 Member of the Computer Infrastructure committee at the Technion.

2001-2002 Research seminar coordinator for the Information Systems Engineering seminar.

2002 Member of Kaplan Prize committee.

2002-2006 Academic program advisor to the MBA technological track.

2002–2005 Student counsellor for Information Systems Engineering undergraduate students.

2006-2007 Assistant to the Dean, in charge of promoting Faculty curricula.

2008-2011 Vice Dean for Teaching.

2012-2014 Technion's representative in the Board of Directors of the National Institute for Testing & Evaluation

2016-2018 Academic co-Director of TPADS (Technion Poalim Data Science) research center

2016- Academic co-Director of Data Science & Engineering undergraduate program

2016- Academic co-Director of Data Science graduate program

2018-2019 Technion's Post Doctoral Scholarships and Research Awards Committee (nominated).

2018-2020 Technion's Senate member (elected).

2018-2019 Technion's Standing Committee for Educational Programs (elected).

2019-2021 Applied Science Cornell (JTCI) Committee (nominated).

2023- Co-chair, Center for Humanities & AI

EDITORIAL DUTIES

1998: Guest editor for the International Journal of Cooperative Information Systems.

2001–2004: Associate Editor, ACM SIGMOD Record.

2007-2008, 2013-present: Editorial Board, Encyclopedia of Database Systems.

2012-2013: Guest editor for Information Systems.

2012-present Editorial Board, Journal on Data Semantics (JoDS).

2012-present Editorial Advisory Board, Information Systems.

2012-2016 Associate Editor, Computing

2013-2014: Guest editor for ACM Transactions on Internet Technology (TOIT).

2016-2018: Guest editor for Information Systems.

CONFERENCE ORGANIZATION DUTIES

1998: Program co-Chair: Workshop on "Distributed Heterogeneous Information Services", held as part of HICSS'98 (January 1998).

2000: General co-Chair, 5th IFCIS International Conference on Cooperative Information Systems (CoopIS'2000), Eilat, Israel.

2002: Program Committee co-Chair, The Fifth Workshop on Next Generation Information Technologies and Systems (NGITS'2002), Caesarea, Israel.

2003: Panel co-Chair: International Conference on Conceptual Modeling (ER'2003), Chicago, Illinois.

2004: European and Middle East area coordinator: Very Large DataBases conference (VLDB'2004), Toronto, Canada.

2004: Program committee co-Chair, 9th IFCIS International Conference on Cooperative Information Systems (CoopIS'2004), Agia Napa, Cyprus.

2005: Demo co-Chair: International Conference on Mobile Data Management (MDM'2005), Cyprus.

2006: Program Committee co-Chair: 3rd Workshop on Information Integration on the Web (II-Web'2006), Edinburgh, Scotland

2009: Program committee co-Chair: The 8th International Conference on Ontologies, DataBases, and Applications of Semantics (ODBASE'2009), Algarve, Portugal.

2009: Panel Chair: The 18th ACM Conference on Information and Knowledge Management (CIKM'2009), Hong Kong, China

2010: Dagstuhl seminar 10042 co-organizer, "Semantic Challenges in Sensor Networks", January 2010.

2011: Program co-Chair: 5th ACM International Conference on Distributed Evnet-Based Systems (DEBS'2011),Westecheter County, NY, USA

2011: Senior Program committee member: 30th International Conference on Conceptual Modeling

(ER'2011), Brussels, Belgium

2012: Program committee co-Chair: 10th International Conference on Business Process Management (BPM'2012), Tallinn, Estonia

2014: Organizer: Research Workshop of the Israel Science Foundation: TCE Big Days on Big Data, Haifa, Israel

2014: General co-Chair: 12th International Conference on Business Process Management (BPM'2014), Haifa, Israel

2016: General co-Chair: 10th ACM International Conference on Distributed and Evnet-Based Systems (DEBS'2016), Irvine, California, USA

2016: Dagstuhl seminar 16341 co-organizer, "Integrating Process-Oriented and Event-Based Systems", August 2016.

2019: Tutorial co-Chair: 13th ACM International Conference on Distributed and Evnet-Based Systems (DEBS'2019), Darmstadt, Germany

2019: Dagstuhl seminar 19391 co-organizer, "Data Ecosystems: Sovereign Data Exchange among Organizations", September 2019.

2020: Senior Program committee member: IEEE International Conference on Data Engineering (ICDE'2020). Dallas, Texas, USA

2021: Senior technical program committee member: International Conference on Database Systems for Advanced Applications (DASFAA'2021). Taipei, Taiwan

2023: Senior PC Member: International Conference on Business Process Management (BPM 2023). Utrecht, The Netherlands

2024: Senior PC Member: International Conference on Extending Database Technology (EDBT'2024). Paestum, Italy

PUBLIC PROFESSIONAL ACTIVITIES

Numerous reviews to journals such as Journal of the ACM (JACM), ACM Transactions on Database Systems (TODS), IEEE Transactions on Knowledge and Data Engineering (TKDE), VLDB Journal (VLDBJ), ACM Transactions on Internet Technology (TOIT), and ACM Computing Surveys.

Numerous reviews for funding agencies such as NSF (US) and Research Grants Council (RGC), Hong Kong, China.

Numerous participation in conference program committees such as DEBS, BPM, ER, SIGMOD, VLDB, ICDE, CIKM, IJCAI, AAAI, CoopIS, ODBASE, CAiSE, ISWC, and IIWeb.

Member of numerous MALAG (Council for Higher Education) committees, evaluating B.Sc. and M.Sc. programs in Data Science, Information Systems Engineering, and Management Information Systems.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

1. IEEE Computer Society (Senior Member).

2. Association for Computing Machinery.

HONORS

1987-1989 Dean's List for Outstanding Achievements- Technion, Israel Institute of Technology.

1990 President's List for Highly Outstanding Achievements- Technion, Israel Institute of Technology.

1993-1995 The Miriam and Aaron Gutwirth for Outstanding Research Achievements (Highly Outstanding Research Achievements for 1995).

1998 Best Paper Award for the paper "Information Services for the Web: Building and Maintaining Domain Models" at CoopIS'98.

2002-2004 IBM Faculty Award for $20,000 annualy.

2002-2004 Alexander Goldberg Academic Lectureship in Industrial Engineering and Management - England (including an award for $800 annualy).

2006-present IEEE Computer Society Senior member.

2009, 2012, 2015 Technion Award for Outstanding Achievements in Teaching (top 4% Technion-wide in teaching evaluations for the course category).

2009 Opossum (created jointly with Eran Toch, Iris Reinhartz Berger, and Dov Dori) won the 3rd International Semantic Service Selection Contest at the Third International Workshop SMR2 2009 on Service Matchmaking and Resource Retrieval in the Semantic Web as the fastest OWL-S matchmaker.

2010, 2011, 2013, 2014 Technion Excellence in Teaching (top 12% Technion-wide in teaching evaluations for the course category).

2011 - 2015 Technion-Microsoft Electronic Commerce Research Award for $15,000 per year.

2012 Yanai Award for Excellence in Academic Education.

2013 Audience Award for the paper "Grand Challenge: The TechniBall System" at DEBS'2013.

2014 ICAPS 2014 Honorable Mention for the Outstanding Paper Award for the paper "Goal Recognition Design."

2014 Audience Award for the paper "Grand Challenge: Scalable Stateful Stream Processing for Smart Grids" at DEBS'2014.

2017 Best Paper Award for the paper "Temporal Network Representation of Event Logs for Improved Performance Modelling in Business Processes" at BPM'2017.

2018 TPADS (Technion Poalim Data Science) research center Award for $20,000 (joint with Prof. Benny Kimelfeld).

2018 Accenture Research Award for $50,000.

2018 Test of Time Award for the paper "Complex Event Processing Over Uncertain Data" at DEBS'2018.

2019 JPMorgan Faculty Award for $150,000.

POST-DOCTORAL FELLOWS

September 2004-August 2006 Aviv Segev

September 2010-August 2011 Michael Katz

October 2011-September 2013 Matthias Weidlich

October 2016-September 2017 Arik Senderovich

January 2017-June 2018 Nicolo Rivetti

October 2020-August 2021 Roee Shraga

GRADUATE STUDENTS
PhD Theses:

1. **Mati Golani**: Topic: "Dynamic Model for Business Process Management in Workflows." Ph.D. Completed: December 2005.

2. **Rami Rashkovits**: Topic: "Managing Dynamic Web Object Caching: the Latency versus Obsolescence Tradeoff." Ph.D. Completed: July 2007.

3. **Segev Wasserkrug: (Joint with Dr. Opher Etzion)** Topic: "A Language and an Execution Model for Uncertain Inference and Prediction of Events in Active Systems." Ph.D. Completed: September 2008.

4. **Haggai Roitman**: Topic: "Profile-Based Online Data Delivery (PBODD): Models and Algorithms." Ph.D. Completed: October 2008.

5. **Maya Lincoln**: Topic: "Framework and Tools for the Generation and Cusomization of Business Process Model Content" Ph.D. Completed: October 2011.

6. **Tomer Sagi** (2013 Jacobs Scholarship Award): Topic: "Schema Matching Quality Prediction" Ph.D. Completed: April 2015.

7. **Batya Kenig**: Topic: "Message Propagation Algorithms for Weighted Model Counting" Ph.D. Completed: December 2015.

8. **Arik Senderovich** (Joint with Prof. Avishai Mandelbaum) (2016 Faculty Excellence Scholarship Award, Best dissertation award at BPM'2017): Topic: "Service Analysis and Simulation In Process Mining" Ph.D. Completed: February 2017.

9. **Sarah Keren:** (Joint with Dr. Erez Karpas) (2016 Eric and Wendy Schmidt Postdoctoral Award, 2017 Jacobs Scholarship Award, 2017 National Postdoctoral Award for Advancing Women in Science) Topic: "Goal Recognition Design" Ph.D. Completed: June 2018.

10. **Roee Shraga** (2017 Leonard and Diane Sherman Interdisciplinary Graduate School Fellowship, 2018 Faculty Excellence Scholarship Award, 2019 Daniel Award, 2019 Grinblat Award, 2020 Miriam and Aaron Gutwirth for Outstanding Research Achievements): Topic: "(Artificial) Mind over Matter: Integrating Humans and Algorithms in Solving Matching Problems" Ph.D. Completed: September 2020.

11. **Alon Sagi** (Joint with Dr. Dani Broitman) (2020 VATAT Award for interdisciplinary research in Data Science): Topic: "Analyzing and forecasting changes in demand for neighborhoods using Data Science tools" Ph.D. Completed: December 2022.

PhD Theses (in progress):

1. **Coral Scharf** (2021 VATAT Award for Data Science research) Topic: "Quality-aware Ranking for Recommendation Systems" Ph.D. (expected completion: September 2023).

2. **Bar Genossar** Topic: "Deep Learning with Knowledge Graphs for Data Integration Betterment" Ph.D. (expected completion: September 2025).

MSc Theses:

1. **Ateret Anaby-Tavor**: Topic: "Enhancing the Formal Similarity based Model of Schema Matching." M.Sc. Completed: June 2003.

2. **Gabi Koifman**: (Joint with Dr. Onn Shehori) Topic: "Multi-Agent Negotiation over Database-based Information Goods." M.Sc. Completed: February 2004.

3. **Yochai Ben-Haim**: Topic: "Multi-Directional Asynchronous Updates of Replicas with Auto-Counter Primary Key Attributes." M.Sc. Completed: June 2004.

4. **Jacob Avidar**: Topic: "Run-Time Process Scheduling in Hard Real Time Systems with Process Dependency Constraints." M.Sc. Completed: September 2004.

5. **Sarit Reiner**: Topic: "A Generic Software for Transcription Policy Analysis." Completed: April 2005.

6. **Shimon Golan**: (Joint with Prof. Ron Pinter) Topic: "Efficient Algorithms for Computing Resource Availability and Update Patterns." M.Sc. Completed: June 2006.

7. **Inbal Yahav**: Topic: "Bid-Based Online Scheduling of Unit-Length Tasks with Hard Deadlines" M.Sc. Completed: June 2006.

8. **Ami Eyal**: Topic: "Self Organizing Semantic Topologies in Peer Database Systems." M.Sc. Completed: May 2007.

9. **Anan Marie:** Topic: "Machine Learning Approach to Schema Matcher Orchestration." M.Sc. Completed: March 2008.

10. **Yulia Turchin**: Topic: "Rule Tuning with Uncertain Events." M.Sc. Completed: August 2009.

11. **Ella Rabinovich**: (Joint with Dr. Opher Etzion) Topic: "Optimization of Event Pattern Execution Plans" M.Sc. Completed: November 2011.

12. **Eitam Shitrit**: Topic: "Improving Process Matching using Passage Language Models" M.Sc. Completed: January 2014.

13. **Nimrod Busani**: Topic: "Incorporating Uncertainty into Event-Based Monitoring Systems" M.Sc. Completed: March 2014.

14. **Adham Hurani**: Topic: "Schema Matching using an SVM Classifier and User Feedback" M.Sc. Completed: October 2015.

15. **Liron Valdman**: Topic: "Sensor Selection for Complex Event Detection" Completed: November 2015.

16. **Sapir Golan**: Topic: "Probabilistic Entity Resolution" Completed: September 2017.

17. **Jonathan Svirsky**: Topic: "Incremental Entity Resolution" Completed: November 2017.

18. **Alon Lekhtman**: Topic: "Efficient Probabilistic Top-K Query Answering Utilizing Database Indices" Completed: February 2018.

19. **Yossi Dahari**: Topic: "Model synthesis in process mining" Completed (with distinction): August 2018.

20. **Dafna Schumacher**: Topic: "Inductive Data-aware Process Discovery" Completed: June 2019.

21. **Guy Berkenstadt**: Topic: "Performance Inference in Queueing Networks with Partial Information" Completed: April 2021.

22. **Bar Gennosar**: Topic: "Granular Blocking for Multiple Intents" M.Sc. Completed: December 2021.

23. **Shay Yosipov**: Topic: "Generalized Consensuality for Better Schema Matching " M.Sc. Completed: February 2023.

24. **Naama Berman**: Topic: "Learning from (and about) Matchers: a Weakly Supervised Approach to Entity Matching " M.Sc. Completed: February 2023.

MSc Theses (in progress):

1. **Matan Solomon**: Topic: "Graph Representation Learning For Human Annotators Representation" M.Sc. (expected completion: February 2024).

2. **Sagi Levy**: Topic: "Dynamic Blockchain: Block Size and Monopolistic Auctions" M.Sc. (expected completion: February 2024).

RESEARCH GRANTS

January 2023-December 2025 Israel Ministry of Science & Technology (MOST), "Measuring mobility risk: developing and testing a data science tool in a natural experiment", NIS 349,600 (joint with Prof. Karel Martens).

January 2022-December 2025 Council of Higher Education - VATAT, "Tackling the Curse of Dimensionality by Leveraging Synergies between Automated Planning and Data Science", NIS 1,120,000 (joint with Prof. Erez Karpas, Prof. Tamir Hazan, and Dr. Aviv Tamar).

October 2021-September 2023 Joint GTEP+MLIS Nevet Program, "Development of an urban-scale building electricity consumption model based on building characteristics, climatic conditions and occupant behavioural profiles", $50,000 (joint with Dr. Or Aleksandrowicz).

August 2021-July 2023 Israel Science Foundation, "Data in Control: On the use of Data in Process Discovery", 723,762 NIS.

June 2019-May 2022 The Office of the Chief Scientist of the Ministry of Industry, Trade & Labor, The MAGNET Program, "FoodIoT", 63,916,219 NIS. Technion share: 8,213,378 NIS, My share: 1,055,223 NIS.

September 2016-September 2017 Microsoft, "Efficient Probabilistic Top-K Query Answering Utilizing Database Indices", $20,000.

April 2016-March 2017 The Institute on Transportation Innovation, Tel Aviv University, "Multi Modal Routing", 150,000 NIS (joint with Prof. Yoram Shiftan).

December 2015-November 2018 Commission Of The European Communities, H2020 programme, Information Communication Technology, Research and Innovation Actions, "VaVeL: Variety, Veracity, VaLue: Handling the Multiplicity of Urban Sensors", €3,999,668. Technion share: €440,068 (joint with Prof. Assaf Schuster and Prof. Shie Manor).

June 2015-May 2018 The Office of the Chief Scientist of the Ministry of Industry, Trade & Labor, The MAGNET Program, "InfoMedia", 55,690,000 NIS. Technion share: 1,276,000 NIS (joint with Prof. Roi Reichert).

June 2014-May 2015 Robert H. Shillman Foundation for Global Security, "Intention Detection under Uncertainty", $19,000.

Septemebr 2012-August 2015 Commission Of The European Communities, 7th Framework programme, Information Society Technology, Specific Targeted Research Project, "Intelligent Synthesis and Real-tIme Response using Massive Streaming of Heterogeneous Data", €2,779,995. Technion share: €558,717 (joint with Prof. Assaf Schuster and Prof. Shie Manor).

June 2012-November 2015 DFG, "Collaboration Scenarios and Interacting Business Processes based on Service Compositions", €442,700. Technion share: €98,400.

February 2012-December 2014 Robert H. Shillman Foundation for Global Security, "A Model for Identification and Analysis of Exceptions", $31,000.

October 2010-September 2011 State of Israel — Ministry of Industry, Commerce and Employment, Magneton, "Efficient Consumption of Enterprise Services using Semantic Technologies", NIS 662,000. Technion share: NIS 180,000. Industrial partner: SAP.

Sptember 2010-February 2013 Commission Of The European Communities, 7th Framework programme, Information Society Technology, Specific Targeted Research Project, "Network is the Business (NisB)", €4,800,000. Technion share: €453,600.

July 2009-June 2010 Umbrella Cooperation, "Models for Quality Management in Schema Matching with Applications to Medicine", $14,000. Technion share: $4,500.

January 2004-May 2007 Commission Of The European Communities, 6th Framework programme, Information Society Technology, Integrated Project, "Impact of eGovernment on Local Government Services", €5,952,798. Technion share: €128,000 (joint with Prof. Dov Dori).

January 2004-December 2007 Commission Of The European Communities, 6th Framework programme, e-Health, Integrated Project, "Building knowledge driven and dynamically networked communities within European healthcare systems", €6,700,000. Technion share: €180,000 (joint with Prof. Dov Dori).

February 2004-October 2006 Commission Of The European Communities, 6th Framework programme, Information Society Technology, Specific Targeted Research Project, "Quality of Service and Legitimacy in eGovernment", €1,709,910. Technion share: €115,160.

September 2003-August 2006: The National Science Foundation, Information Technology Research, "Digital Resource Profiling for Wide Area Applications", $325,589 (consultant).

September 2002-August 2003: The Davidson Fund for Management Sciences and Applications, "Information Management of Dynamic Web Pages in Cache Memory", $6,000.

July 2001-June 2002: State of Israel — Ministry of Science, Culture and Sport and Republic of Italy — Consiglio Nazionale delle Ricerche, "Metadata Imprecision in Heterogeneous Data Sources", ˜$4,500

LIST OF PUBLICATIONS:[1]

Thesis:

D.Sc., "TALE—Temporal Active Language and Execution Model" (Technion, 1995).

Books:

1. A. Gal - *Uncertain Schema Matching*. Morgan & Claypool Publishers, 2011.

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[1]Publications marked with * represent a joint work with a student or a post-doctoral fellow.

<u>Refereed in Journals and Collected Articles:</u>

1. A. Gal, O. Etzion, A. Segev - Representation of Highly-Complex Knowledge in a Database. *Journal of Intelligent Information Systems, 3(2)*:185-203, Mar. 1994.

2. A. Gal, O. Etzion - Maintaining Data Driven Rules in Databases. *IEEE Computer, 28(1)*:28-38, Jan. 1995.

3. D. Dori, A. Gal, O. Etzion - Temporal Active Database: a Key to Computer Integrated Manufacturing. *International Journal of CIM, 9(2)*:89-104, 1996.

4. A. Gal, O. Etzion - Parallel Execution Model for a Temporal Databases. *International Journal of Computer Systems Science and Engineering, 12(5)*:317-327, 1997.

5. A. Gal, O. Etzion - A Multi-Agent Update Process in a Database with Temporal Data Dependencies and Schema Versioning. *IEEE Transactions on Knowledge and Data Engineering*, 10(1):21-37, 1998.

6. A. Gal - Semantic Interoperability in Information Services: Experiencing with CoopWARE. *SIGMOD Record*, 28(1):68-75, 1999. (part of a special issue on Semantic Interoperability in Global Information Systems which had a 26% acceptance ratio).

7. A. Gal, S. Kerr, J. Mylopoulos - Information Services for the Web: Building and Maintaining Domain Models. *International Journal of Cooperative Information Systems*, 8(4):227-254, 1999.

8. A. Gal, J. Mylopoulos - Supporting Distributed Autonomous Information Services Using coordination. *International Journal of Cooperative Information Systems.* 9(3):255-282, 2000.

9. A. Gal, J. Mylopoulos - Towards Web-Based Application Management Systems. *IEEE Transactions on Knowledge and Data Engineering.* 13(4): 683-702, 2001.

10. A. Gal, J. Eckstein - Managing Periodically Updated Data in Relational Databases: A Stochastic Modeling Approach. *Journal of the ACM.* 48(6): 1141-1183, 2001.

11. V. Atluri, A. Gal - An Authorization Model for Temporal and Derived Data: Securing Information Portals. *ACM Transactions on Information and System Security (TISSEC)*, 5(1):62-94, 2002.

12. A. Gal, J. Eckstein, Z. Stoumbos - Scheduling of Data Transcription in Periodically Connected Databases. *Stochastic Analysis and Applications*, 21(5):1021-1058, 2003.

13. * A. Gal, A. Anaby-Tavor, A. Trombetta, D. Montesi - A Framework for Modeling and Evaluating Automatic Semantic Reconciliation. *VLDB Journal*, 14(1):50-67, 2005.

14. A. Gal - Managing Uncertainty in Schema Matching with Top-K Schema Mappings. *Journal on Data Semantics*, 6:90-114, 2006.

15. L. Bright, A. Gal, L. Raschid - Adaptive Pull-Based Policies for Wide Area Data Delivery. *ACM Transactions on Database Systems (TODS)*, 31(2):631 - 671, 2006.

16. A. Gal - Why is Schema Matching Tough and What Can We Do About It? *SIGMOD Record,* 35(4):2-5, 2007.

17. * C. Domshlak, A. Gal, H. Roitman - Rank Aggregation for Automatic Schema Matching. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 19(4):538-553, 2007.

18. * A. Segev, A. Gal - Putting Things in Context: A Topological Approach to Mapping Contexts to Ontologies. *Journal on Data Semantics*, 9:113-140, 2007.

19. E. Toch, A. Gal, I. Reinhartz-Berger, D. Dori - A Semantic Approach to Approximate Service Retrieval. *ACM Transactions on Internet Technology (TOIT)*, 8(1), November 2007.

20. * J. Eckstein, A. Gal, S. Reiner - Monitoring an Information Source under a Politeness Constraint. *INFORM Journal on Computing*, (20)1:3-20, December 2007.

21. V. Zadorozhny, L. Raschid, A. Gal - Scalable Catalog Infrastructure for Managing Access Costs and Source Selection in Wide Area Networks. *International Journal of Cooperative Information Systems (IJCIS)*, 17(1):77-109, March 2008.

22. * A. Segev, A. Gal - Enhancing Portability with Multilingual Ontology-Based Knowledge Management. *Decision Support Systems*, 45(3):567-584, June 2008.

23. * S. Wasserkrug, A. Gal , O. Etzion - Detection of Uncertain Events in Intelligence and Security Informatics. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 20(8):1111-1114, August 2008.

24. * A. Gal, T. Sagi - Tuning the Ensemble Selection Process of Schema Matchers. *Information Systems*, 35(8):845-859. 2010.

25. * H. Roitman, A. Gal, L. Raschid - A Dual Framework and Algorithms for Targeted Online Data Delivery. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 23(1):5-21, January 2011.

26. * S. Wasserkrug, A. Gal , O. Etzion, Y. Turchin - Efficient Processing of Uncertain Events in Rule-Based Systems. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 24(1):45-58, January 2012.

27. * R. Rashkovits, A. Gal - A Cooperative Model for Preference-Based Information Sharing in Narrow Bandwidth Networks. *International Journal of Cooperative Information Systems.* 22(10), March 2013.

28. * B. Kenig, A. Gal - MFIBlocks: An Effective Blocking Algorithm for Entity Resolution. *Information Systems.* 38(6):908-926, September 2013.

29. * T. Sagi, A. Gal - Schema Matching Prediction with Applications to Data Source Discovery and Dynamic Ensembling. *VLDB Journal*, 22(5):689-710, September 2013.

30. * A. Artikis, A. Gal, V. Kalogeraki, and M. Weidlich. Event Recognition: Challenges and Current Techniques. ACM Transactions on Internet Technology (TOIT), 14(1), pp. 1-9, 2014.

31. * M. Weidlich, H. Ziekow, A. Gal, J. Mendling, M. Weske - Optimising Event Pattern Matching using Business Process Models. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 26(11):2759-2773, November 2014.

32. * A. Senderovich, M. Weidlich, A. Gal, A. Mandelbaum - Queue Mining for Delay Prediction in Multi-Class Service Processes. *Information Systems*, 53:278-295, October-November 2015.

33. * A. Senderovich, M. Weidlich, L. Yedidsion, A. Gal, A. Mandelbaum, S. Kadish, C.A. Bunnell - Conformance Checking and Performance Improvement in Scheduled Processes: A Queueing-Network Perspective. *Information Systems*, 62:185-206, December 2016.

34. * A. Gal, A. Mandelbauma, F. Schnitzler, A. Senderovich, M. Weidlich - Traveling Time Prediction in Scheduled Transportation with Journey Segments. *Information Systems*, 64:266-280, March 2017.

35. * T. Sagi, A. Gal, O. Barkol, R. Bergman, A. Avram - Multi-Source Uncertain Entity Resolution: Transforming Holocaust Victim Reports into People. *Information Systems*, 65:124-136, April 2017.

36. * T. Sagi, A. Gal - Non-Binary Evaluation Measures for Big Data Integration. *VLDB Journal*, 27(1):105-126, 2018.

37. J. Mendling *et al.* - Blockchains for Business Process Management - Challenges and Opportunities. *ACM Transactions on Management Information Systems*, 9(1):1-16, February 2018.

38. * A. Gal, A. Senderovich, M. Weidlich - Challenge Paper: Data Quality Issues in Queue Mining. *Journal of Data and Information Quality (JDIQ)*, 9(4), April 2018.

39. * A. Senderovich, A. Shleyfman, M. Weidlich, A. Gal, A. Mandelbaum - To Aggregate or to Eliminate? Optimal Model Simplification for Improved Process Performance Prediction. *Information Systems*, 78:96-111, 2018.

40. * A. Gal, D. Gunopulos, N. Panagiotou, N. Rivetti, A. Senderovich, N. Zygouras - REMI: A Framework of Reusable Elements for Mining Heterogeneous Data with Missing Information. *Journal of Intelligent Information Systems (JIIS)*, 51(2):367-388, Oct 2018.

41. N.Q.V. Hung, M. Weidlich, N.T. Tam, Z. Miklós, K Aberer, A. Gal, B. Stantic - Handling Probabilistic Integrity Constraints in Pay-as-you-go Reconciliation of Data Models. *Information Systems*, 83:166-180, 2019.

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Invited Publications in Journals and Collected Articles:

1. * A. Gal, G. Modica. H. Jamil, A. Eyal - Automatic Ontology Matching using Application Semantics. *AI Magazine.* 26(1):21-32, 2005.

2. * A. Gal, A. Segev, C. Tatsiopoulos, K. Sidiropoulos, P. Georgiades - Agent Oriented Data Integration. Lecture Notes in Computer Science, Springer 2005.

3. A. Gal, A. Senderovich - Process Minding: Closing the Big Data Gap. *Proceedings of Business Process Management - 18th International Conference, BPM 2020*, pp. 3-16, Seville, Spain, September 2020.

Refereed Conference Proceedings:

1. O. Etzion, A. Gal, A. Segev - A Temporal Support in Active Databases, *Proc. Workshop on Information Technologies and Systems 92*, Dallas, TX, December 1992, pp. 245-254.

2. O. Etzion, A. Gal, A. Segev - Temporal Active Databases, *Proc. Int. Workshop on Temporal Databases*, Arlington, TX, June 1993.

3. A. Gal, O. Etzion, A. Segev - Representation of Highly-Complex Knowledge in a Database. *Proc. NGITS '93 - Int. workshop on Next Generation Information Technologies and Systems*, Haifa, Israel, June 1993, pp. 67-75. (31% acceptance ratio for regular papers).

4. O. Etzion, A. Gal, A. Segev - Retroactive and Proactive Processing, *Fourth International Workshop on Research Issues in Data Engineering: Active Database Systems*, Houston, Texas, February 14-15, 1994. IEEE-CS 1994, ISBN 0-8186-5360-4, pp. 126-131.

5. A. Gal, O. Etzion - A Parallel Execution Model for Updating Temporal Databases. *Proc. ISCA Seventh International Conference on Parallel and Distributed Computing Systems*, Las Vegas, Nevada, October 1994, ICSA, ISBN 1-880843-09-9, pp. 34-39. (30% acceptance ratio).

6. A. Gal, O. Etzion - CODES — A Design Tool for Computerized System, *Proc. NGITS '95 - Int. workshop on Next Generation Information Technologies and Systems*, Naharia, Israel, June 1995, pp. 116-123. (31% acceptance ratio).

7. A. Gal, O. Etzion - Handling Change Management using Temporal Active Repositories. *M. Papazoglou (Ed) - Object Oriented: Entity Relationship,* Springer Verlag, pp. 378-387**, 1995.** (The paper was originally presented at the ER'95 conference, which had a 30% acceptance ratio).

8. A. Gal, O. Etzion, A. Segev - A Language for the Support of Constraints in Temporal Active Databases. *Proc. ILPS'95–Workshop on Constraints, Databases and Logic Programming*, Portland, Oregon, December 1995, pp. 42-58.

9. A. Gal, D. Dori - Combining Simultaneous Values and Temporal Data Dependencies. *Proc. Third International Workshop on Temporal Representation and Reasoning (TIME'96)*, Key West, Florida, May 1996, pp. 112-119. (44% acceptance ratio).

10. A. Gal, O. Etzion, A. Segev - TALE — A Temporal Active Language and Execution Model. *P. Constantopoulos, J. Mylopoulos, Y. Vassiliou (EDs) - Advanced Information Systems Engineering,* Springer, pp. 60-81, 1996. (The paper was originally presented at the CAiSE*96 conference, which had a 30% acceptance ratio).

11. A. Gal, O. Etzion - Experimenting Systems Analysis Teaching Using a Comparative Approach. *Proc. Workshop on Evaluation of Modeling Methods in System Analysis and Design*, Crete, Greece, May 1996. (50% acceptance ratio).

12. J. Mylopoulos, A. Gal, K. Kontogiannis, M. Stanley - A Generic Integration Architecture for Cooperative Information Systems. *Proceedings of the First IFCIS International Conference on Cooperative Information Systems (CoopIS'96)*, Brussels, Belgium, June 19-21, 1996, Organized by IFCIS, The Intn'l Foundation on Cooperative Information Systems, IEEE-CS Press, 1996, ISBN 0-8186-7505-5, pp. 208-217. (36% acceptance ratio).

13. A. Gal - Modelling Cooperation among Information Systems using Control Elements. *Proc. NGITS '97 - Int. workshop on Next Generation Information Technologies and Systems*, Jerusalem, Israel, June 1997, pp. 125-132. (60% acceptance ratio).

14. A. Gal - Handling Constantly Changing Metadata. *Proc. Second IEEE Metadata Conference*, Silver Spring, Maryland, September 1997.

15. S. Kerr, A. Gal, J. Mylopoulos - Information Services for the Web: Building and Maintaining Domain Models. *Proceedings of the 3rd IFCIS International Conference on Cooperative Information Systems*, New York City, New York, USA, August 20-22, 1998, Sponsored by IFCIS, The Intn'l Foundation on Cooperative Information Systems, IEEE-CS Press, 1998, ISBN 0-8186-8380-5, pp. 4-13. (number 1 in evaluation, best paper award, 28% acceptance ratio).

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17. A. Gal, D. Montesi - Inter-Enterprise Workflow Management Systems: Enhancing Trust in Electronic Commerce. *10th International Workshop on Database & Expert Systems Applications*, Florence, Italy, 1-3 September, 1999, Proceedings. IEEE Computer Society, 1999, ISBN 0-7695-0281-4, pp. 623-627.

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24. * S. Wasserkrug, O. Etzion, A. Gal - Inference and Prediction of Uncertain Events in Active Systems: A Language and Execution Model. *Proceedings of the VLDB 2003 PhD Workshop. Co-located with the 29th International Conference on Very Large Data Bases (VLDB 2003).* Berlin, September 12-13, 2003. CEUR Workshop Proceedings 76 Technical University of Aachen (RWTH) 2003 (ranked one of the top 5 papers out of a total of 34).

25. * O. Shehory, G. Koifman, A. Gal - Negotiation-Based Price Discrimination for Information Goods. *Proceedings of the Third International Joint Conference on Autonomous Agents and Multi Agent Systems (AAMAS'04).* New York City, July 19-23 July, 2004 (24% acceptance rate).

26. V. Zadorozhny, A. Gal, L. Raschid, Q. Ye - Wide Area Performance Monitoring Using Aggregate Latency Profiles. *Proceedings of the International Conference on Web Engineering (ICWE 2004).* Munich, July 28-30, 2004 (36% acceptance rate).

27. * A. Segev, A. Gal - Putting Things in Context: A Topological Approach to Mapping Contexts and Ontologies. *Proceedings of the AAAI Workshop on Contexts and Ontologies: Theory, Practice and Applications.* Pittsburgh, July 9-13, 2005 (28% acceptance rate).

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29. * M. Golani, A. Gal - Flexible Business Process Management using Forward Stepping and Alternative Paths. *Proceedings of the Third Conference on Business Process Management (BPM'05).* Nancy, France, September 6-8, 2005 (13% acceptance rate).

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44. * I. Yahav, A. Gal, N. Larson - Bid-Based Approach for Pricing Web Services. *Proceedings of the 14th International Conference on Cooperative Information Systems (CoopIS 2006).* Montpellier, France, Nov 1 - Nov 3, 2006 (28% acceptance rate).

45. * A. Segev, A. Gal - Puzzling It Out: Supporting Ontology Evolution with Applications to eGovernment. *Proceedings of IJCAI-Workshop on Modeling and Representation in Computational Semantics (MRCS-2007).* Hyderabad, India, January 7, 2007.

46. M. Shmueli-Scheuer, A. Chaudhary, A. Gal, C. Li - Communication-Efficient Query Answering with Quality Guarantees in Client-Server Applications. Proceedings of the 10th International Workshop on the Web and Databases (WebDB'2007), Beijing, Chaina, June 2007.

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50. * A. Marie, A. Gal. Managing Uncertainty in Schema Matcher Ensembles. Proceedings of the 1st International Conference on Scalable Uncertainty Management. Washington, DC, October 2007, pp. 60-73.

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74. * N.Q.V. Hung, T.K. Wijaya, Z. Miklós, K. Aberer, E. Levy, V. Shafran, A. Gal, M. Weidlich. Minimizing Human Effort in Reconciling Match Networks. *Proceedings of the 32nd International Conference on Conceptual Modeling (ER'13)*. Hong Kong, China, November 11-13, 2013 (regular, 18% acceptance rate).

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87. * A. Gal, A. Mandelbaum, F. Schnitzer, A. Senderovich, M. Weidlich - On Predicting Traveling Times in Scheduled Transportation (Extended Abstract). *2nd International Workshop on Mining Urban Data (MUD'2015).* Lille, France, July 2015.

88. * A. Senderovich, A. Rogge-Solti, A. Gal, J. Mendling, A. Mandelbaum, S. Kadish and C. Bunnel. Data-Driven Performance Analysis of Scheduled Processes. *Proceedings of the 13th Conference on Business Process Management (BPM'15).* Innsbruck, Austria, September 2015 (18% acceptance rate).

89. * A. Senderovich, S.J.J. Leemans, S. Harel, A. Gal, A. Mandelbaum, W.M.P. van der Aalst - Discovering Queues from Event Logs with Varying Levels of Information. *Proceedings of the*

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90. * B. Kenig, A. Gal. On the Impact of Junction-Tree Topology on Weighted Model Counting. *Proceedings of the 9th International Conference on Scalable Uncertainty Management (SUM'2013).* Quebec City, Quebec, Canada, September 16-18, 2015.

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92. * B. Kenig, A. Gal. Exploiting the Hidden Structure of Junction Trees for MPE. *Proceedings of the AAAI-16 Workshop on Beyond NP.* Pheonix, Arizona, USA, February 2016.

93. A. Gal, H. Roitman, T. Sagi. From Diversity-based Prediction to Better Ontology & Schema Matching. *Proceedings of the 25th International World Wide Web Conference, WWW'2016*, Montreal, Quebec, Canada, April 2016. (16% acceptance rate).

94. * A. Senderovich, A. Rogge-Solti, A. Gal, J. Mendling, A. Mandelbaum- The ROAD from Sensor Data to Process Instances via Interaction Mining. *Proceedings of 28th International Conference on Advanced Information Systems Engineering (CAiSE'16).* Ljubljana, Slovenia, June 2016 (17% acceptance rate).

95. T. Sagi, A. Gal, O. Barkol, R. Bergman, A. Avram. Multi-Source Uncertain Entity Resolution at Yad Vashem: Transforming Holocaust Victim Reports into People. *Proceedings of the ACM SIGMOD Conference*, San Francisco, California, USA, June 2016.

96. * S. Keren, A. Gal, E. Karpas - Privacy Preserving Plans in Partially Observable Environments. *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI'2016).* NYC, NY, USA, July 2016.

97. * G. Papadakis, J. Svirsky, A. Gal, T. Palpanas. Comparative Analysis of Approximate Blocking Techniques for Entity Resolution. *Proceedings of the VLDB Endowment*, 9(8), September 2016.

98. * A. Rogge-Solti, A. Senderovich, M. Weidlich, J. Mendling, and A. Gal. In Log and Model We Trust? a Generalized Conformance Checking Framework. In Business Process Management. *Business Process Management - 14th International Conference, BPM 2016*, Rio de Janeiro, Brazil, September 2016 (17% acceptance rate).

99. * A. Senderovich, A. Shleyfman, M. Weidlich, A. Gal, and A. Mandelbaum. P^3-Folder: Optimal Model Simplication for Improving Accuracy in Process Performance Prediction. *Business Process Management - 14th International Conference, BPM 2016*, Rio de Janeiro, Brazil, September 2016 (17% acceptance rate).

100. * H.v.d. Aa, A. Gal, H. Leopold, H.A. Reijers, T. Sagi, and R. Shraga. Instance-level Process Matching using Event Log Information. *Proceedings of 29th International Conference on Advanced Information Systems Engineering (CAiSE'17).* Essen, Germany, June 2017 (21% acceptance rate).

101. * S. Keren, E. Karpas, A. Gal, L. Pineda, and S. Zilberstein - Equi-Reward Utility Maximizing Design in Stochastic Environments. *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI'2017)*. Melbourne, Australia, August 2017 (26% acceptance rate).

102. * A. Senderovich, M. Weidlich, and A. Gal - Temporal Network Representation of Event Logs for Improved Performance Modelling in Business Processes. *Business Process Management - 15th International Conference, BPM 2017*, Barcelona, Spain, September 2017 (16% acceptance rate, best paper award).

103. M. Bauer, A. Senderovich, A. Gal, L. Grunske, and M. Weidlich. How Much Event Data Is Enough? A Statistical Framework for Process Model Discovery. *Proceedings of 30th International Conference on Advanced Information Systems Engineering (CAiSE'18)*. Tallinn, Estonia, June 2018 (21% acceptance rate).

104. * Y. Dahari, A. Gal, A. Senderovich, and M. Weidlich. Fusion-Based Process Discovery. *Proceedings of 30th International Conference on Advanced Information Systems Engineering (CAiSE'18)*. Tallinn, Estonia, June 2018 (21% acceptance rate).

105. * S. Keren, A. Gal, and E. Karpas - Strong Stubborn Sets for Efficient Goal Recognition Design. *Proceedings of $28^{t}h$ International Conference on Automated Planning and Scheduling (ICAPS'18)*. Delft, The Netherlands, June 2018 (27% acceptance rate).

106. * R. Shraga, A. Gal, and H. Roitman - What Type of a Matcher Are You? - Human and Algorithmic Matchers Coordination. *Proceedings of the Workshop on Human-In-the-Loop Data Analytics (HILDA)*. Houston, TX, USA, June 2018.

107. * N. Rivetti, N. Zacheilas, A. Gal, and V. Kalogeraki. Probabilistic Management of Events' Late Arrival. *Proceedings of the 12th International Conference on Distributed and Event-Based Systems (DEBS'2018)*. Hamilton, New Zealand, June 2018 (39% acceptance rate).

108. * A. Gal, and H. Roitman, R. Shraga - Heterogeneous Data Integration by Learning to Rerank Schema Matches. *Proceedings of the IEEE International Conference on Data Mining (ICDM'2018)*. Singapore, November 2018 (20% acceptance rate).

109. A. Senderovich, C. Beck, A. Gal, M. Weidlich - Congestion Graphs for Automated Time Predictions. *Proceedings of the 33th AAAI Conference on Artificial Intelligence (AAAI'2019)*. Honolulu, Hawaii, USA, January 2019 (16% acceptance rate).

110. R. Shraga, A. Gal, D. Schumacher, A. Senderovich, M. Weidlich - Inductive Context-aware Process Discovery. *Proceedings of the International Conference on Process Mining (ICPM'2019)*. Aachen, Germany, June 2019.

111. S. Keren, L. Pineda, A. Gal, E. Karpas, S. Zilberstein - Efficient Heuristic Search for Optimal Environment Redesign. *Proceedings of the 29th International Conference on Automated Planning and Scheduling (ICAPS'2019)*. Berkeley, California, USA, July 2019.

112. * R. Ackerman, A. Gal, T. Sagi, R. Shraga - A Cognitive Model of Human Bias in Matching. *Proceedings of the 16th Pacific Rim International Conference on Artificial Intelligence (PRICAI'2019)*. Yanuca Island, Cuvu, Fiji, August 2019.

113. R. Shraga, C. Scharf, R. Ackerman, A. Gal - InCognitoMatch: Cognitive-aware Matching via Crowdsourcing. *Proceedings of the 2020 International Conference on Management of Data (SIGMOD'2020)*, Portland, OR, USA, June 14-19, 2020.

114. S. Keren, A. Gal, E. Karpas - Goal Recognition Design - Survey. *Proceedings of the 29th International Joint Conference on Artificial Intelligence (IJCAI'2020)*, pp. 4847-4853. Yokohama, Japan, July 2020.

115. C. Wayllace, S. Keren, A. Gal, E. Karpas, W. Yeoh, S. Zilberstein - Accounting for Observer's Partial Observability in Stochastic Goal Recognition Design. *Proceedings of the 24th European Conference on Artificial Intelligence (ECAI'2020)*, pp. 2394-2401. Santiago de Compostela, Spain, August 2020.

116. * R. Shraga, A. Gal, H. Roitman - ADnEV: Cross-Domain Schema Matching using Deep Similarity Matrix Adjustment and Evaluation. *Proceedings of the 46th International Conference on Very Large Databases (VLDB'2020)*. Tokyo, Japan, August 2020.

117. * G. Berkenstadt, A. Gal, A. Senderovich, R. Shraga, M. Weidlich - Queueing Inference for Process Performance Analysis with Missing Life-Cycle Data. *Proceedings of the 2nd International Conference on Process Mining (ICPM'2020)*, pp. 57-64. Padua, Italy, October 2020.

118. X. Lu, A. Gal, H.A. Reijers - Discovering Hierarchical Processes Using Flexible Activity Trees for Event Abstraction. *Proceedings of the 2nd International Conference on Process Mining (ICPM'2020)*, pp. 145-152. Padua, Italy, October 2020.

119. * D. Calvanese, A. Gal, D. Lanti, M. Montali, A. Mosca, R. Shraga - Mapping Patterns for Virtual Knowledge Graph. *Proceedings of Description Logics 2020)*. Rhodes, Greece, October 2020.

120. * R. Shraga, O. Amir, A. Gal - Learning to Characterize Matching Experts. *Proceedings of the 37th International Conference on Data Engineering (ICDE'2021)*. Chania, Crete, Greece, April 2021.

121. * D. Calvanese, A. Gal, N. Haba, D. Lanti, M. Montali, A. Mosca, R. Shraga - ADaMaP: Automatic Alignment of Data Sources using Mapping Patterns, *Proceedings of 33th International Conference on Advanced Information Systems Engineering (CAiSE'21)*. Melbourne, Australia, June 2021 (19% acceptance rate).

122. I. Cohen, A. Gal - Uncertain Process Data with Probabilistic Knowledge: Problem Characterization and Challenges. *Proceedings of the International Workshop on BPM Problems to Solve Before We Die (PROBLEMS 2021) co-located with the 19th International Conference on Business Process Management (BPM 2021)*. Rome, Italy September 2021. CEUR Workshop Proceedings 2938, http://ceur-ws.org/Vol-2938/.

123. * R. Shraga, G. Kats, Y. Badian, N. Calderon, A. Gal - From Limited Annotated Raw Material Data to Quality Production Data: A Case Study in the Milk Industry, *Proceedings of 30th ACM International Conference on Information and Knowledge Management (CIKM'21)*. Gold Coast, Queensland, Australia, November 2021 (24% acceptance rate).

124. * E. Bogdanov, I. Cohen, A. Gal - Conformance Checking Over Stochastically Known Logs, *Proceedings of 20th Business Process Management Conference (BPM'22).* Munster, Germany, September 2022 (37% acceptance rate).

125. * B. Genossar, R. Shraga, A. Gal - FlexER: Flexible Entity Resolution for Multiple Intents, *Proceedings of the 2023 ACM SIGMOD/PODS Conference (SIGMOD'2023.* Seattle, Washington, USA, June 2023.

126. * J. Zhao, A. Gal, S. Krishnan - Data Makes Better Data Scientists. *Proceedings of the Workshop on Human-In-the-Loop Data Analytics (HILDA).* Seattle, Washington, USA, June 2023.

Refereed Chapters in Books:

1. O. Etzion, A. Gal, A. Segev - Data-Driven and Temporal Rules in PARDES. *N. Paton, E. Williams (Eds) - Rules in Database Systems,* Springer Verlag, pp. 92-108, 1993.

2. O. Etzion, A. Gal, A. Segev - Extended Update Functionality in Temporal Databases. *E. Etzion, S. Jajodia, and S. Sripada (Eds) - Temporal Databases: Research and Practice,* Springer Verlag, pp. 56-95, 1998.

3. A. Gal — On Transaction Management in Temporal Databases. *O. Etzion, S. Jajodia, and S. Sripada (Eds) - Temporal Databases: Research and Practice,* Springer Verlag, pp. 96-114, 1998.

4. * A. Gal, E. Michailovsky, and M. Golani - Workflow Reconfiguration Using Chains. *R. Meersman, Z. Tari et al (eds.), Lecture Notes in Computer Science 2889,* Springer, pp. 18-19, 2003.

5. A. Gal and P. Shvaiko - Advances in Ontology Matching. In *Advances in Web Semantics I: ontologies, Web Services and Applied Semantic Web, T. S. Dillon, E. Chang, R. Meersman, and K. Sycara (eds.).* Lecture Notes In Computer Science, vol. 4891. Springer-Verlag, Berlin, Heidelberg, pp. 176-198. 2009

6. A. Gal - Ontology Engineering. In *Encyclopedia of Database Systems, Ling Liu and M. Tamer Özsu (eds.).* Springer (US), pp. 1972-1973. 2009

7. A. Gal, E. Hadar - Generic architecture of complex event processing systems. *A. Hinze and A. Buchmann (eds.), Principles and Applications of Distributed Event-Based Systems.* IGI Global, pp. 1-18, 2010.

8. A. Gal - Enhancing the Capabilities of Attribute Correspondences. *Z. Bellahsene, A. Bonifati, and E. Rahm (eds.), Schema Matching and Mapping.* Springer, pp. 53-74, 2011.

9. A. Gal, S. Wasserkrug, O. Etzion - Event Processing over Uncertain Data. *S. Helmer, A. Poulovassilis, and Fatos Xhafa (eds.), Reasoning in Event-based Distributed Systems.* Springer (part of the series "Studies in Computational Intelligence"), 2011

10. A. Gal - Uncertain Schema Matching. In *Encyclopedia of Big Data Technologies*, Springer (US), 2018

11. * N. Rivetti, A. Gal - Uncertainty in Streams. In *Encyclopedia of Big Data Technologies*, Springer (US), 2018

Other Publications:

ISE-TR-92-4: (Technion Technical Report) A. Gal, O. Etzion - Updating Databases with an Invariant Language.

ISE-TR-92-6: (Technion Technical Report) O. Etzion, A. Gal, A. Segev - A Temporal Active Database Model. Also Issued as LBL Technical Report 32587.

ISE-TR-93-4: (Technion Technical Report) O. Etzion, A. Gal, A. Segev - Data-Driven and Temporal Rules in a Database.

ISE-TR-93-5: (Technion Technical Report) O. Etzion, A. Gal, A. Segev - Decision Support in Temporal Active Databases.

ISE-TR-93-6: (Technion Technical Report) A. Gal , O. Etzion - New Perspectives in Temporal Databases.

ISE-TR-93-7: (Technion Technical Report) O. Etzion, A. Gal - TAPUZ: The Design of a Second generation Active Databases.

ISE-TR-93-8: (Technion Technical Report) A. Gal , O. Etzion - High-Level Change Management using Temporal Agents.

ISE-TR-94-1: (Technion Technical Report) A. Gal, O. Etzion, A. Segev - Extended Update Functionality in Temporal Databases.

ISE-TR-94-2: (Technion Technical Report) A. Gal, O. Etzion - A Multi-Agent Update Process in a Database with Temporal Dependencies and Schema Versioning.

A. Gal and J. Mylopoulos - Information Services: Coping with the Information Crisis (Guest Editors' Introduction). *International Journal of Cooperative Information Systems*, 7(2&3):117-122, 1998.

A. Gal - Data Integration in eCommerce: The Good, the Bad, and the Ugly (tutorial description). SIGMOD 2000, Proceedings ACM SIGMOD International Conference on Management of Data, pp. 578, 2000.

RRR 37-2000 (RUTCOR Technical Report) A. Gal and J. Eckstein - Managing Periodically Updated Data in Relational Databases: A Stochastic Modeling Approach.

RRR 25-2001 (RUTCOR Technical Report) A. Gal, J. Eckstein - Scheduling of Data Transcription in Periodically Connected Databases.

A. Gal, V. Atluri and G. Xu: An Authorization System for Temporal Data (demo description). ICDE 2002, Proceedings of the 18th International Conference on Data Engineering, 26 February - 1 March 2002, San Jose, CA, pp. 339-340.

A.Y. Halevy and A. Gal (Program co-Chair introduction). Proceedings of the Next Generation Information Technologies and Systems, 5th International Workshop, NGITS 2002, Caesarea, Israel, June 24-25, 2002.

W.v.d.Aalst, C. Bussler, and A. Gal (Program co-Chair introduction) Proceedings of the Ninth IFCIS Conference on Cooperative Information Systems, CoopIS 2004, Agia Napa, Cyprus, October, 2004.

* A. Segev and A. Gal - eGovernment Policy Evaluation Support using Multilingual Ontologies. *Proceedings of the eGov-Interop'05 Annual Conference.* Geneva, February 23-24, 2005.

ISE-TR-2005-2: (Technion Technical Report) C. Domshlak, A. Gal, H. Roitman - Schema Meta-Matching.

Y. Denekamp and A. Gal - A Clinical Problem-oriented Decision Support Model Based on Extended Temporal Database Functionalities. Poster at the AMIA 2005 Annual Symposium Biomedical and Health Informatics: From Foundations, to Applications to Policy, Washington DC, October 22-26, 2005.

* M. Lincoln and A. Gal - PNav: Process Navigator for the Design of New Business Process Models. Proc. of BPM Demonstration Track 2010, Hoboken, USA, September 14-16, 2010, Vol. 615 CEUR-WS.org. online: http://ceur-ws.org/Vol-615.

* A. Gal and R. Shraga - Humans' Role in-the-Loop. ACM SIGMOD Blog, December 21, 2020. https://wp.sigmod.org/?p=3138

PLENARY AND INVITED TALKS

Since 1995 Avigdor Gal delivered tens of invited talks in many departments and research centers including Stanford, MIT, Berkeley, Cornell, Univ. of Toronto, Columbia, NYU, University of Trento *etc.*

1. XVI Brazilian Symposium on Databases (SBBD'2001), Rio de Janeiro, Brazil, October 2001.

   Plenary speaker of "You've Probably Got Mail: on the use of probabilities in databases and database management systems."

2. IADIS International Conference e-Society 2005, Malta, June 2005.

   Plenary speaker of "eGovernment, eCitizen, and What's in Between."

3. Seventh International Bi-Conference Workshop on Agent-Oriented Information Systems (AOIS-2005), Klagenfurt, Austria, October 2005.

   Plenary speaker of "Agent Oriented Data Integration."

4. Summer Research Institute (EPFL), Lausanne, Switzerland, June 2011.

   Distinguished Speaker of "Uncertain Schema Matching: The Power of not Knowing."

5. The 4th International Conference on Electronics, Communications and Networks (CECNet'2014), Beijing, China, December 2014.

   Plenary Speaker of "Big Data Integration."

6. 12th edition of the annual Symposium of TECHNION FRANCE on the theme "Making Sense of Big Data", Paris, France, December 2014.

   Guest Speaker of "Big Data Integration."

7. 30th Info Annual Conference & Exhibitions, Tel-Aviv, Israel, May 2015.

   Guest Speaker of "Big Data in a Research Environment."

8. Database & Information Retrieval Day, Microsoft R& D Center, Tel-Aviv, Israel, May 2015.

   Guest Speaker of "Uncertain Entity Resolution."

9. Safe & Smart Cities 2015, Tel-Aviv, Israel, May 2015.

   Invited Speaker of "Big Data Make Cities Smart."

10. The 1st Workshop on the Role of Real-world objects in Business Process Management Systems, Stockholm, Sweden, June 2015.

    Keynote Speaker of "When Processes Rule Events."

11. The 9th International Web Rule Symposium (RuleML'2015), Berlin, Germany, August 2015.

    Invited Speaker of "When Processes Rule Events."

12. The International Conference on Open and Big Data (OBD'2015) & The 12th International Conference on Mobile Web and Intelligent Information Systems (MobiWis2015), Rome, Italy, August 2015.

    Joint Keynote Speaker of "Big Data Integration."

13. The 20th East-European Conference on Advances in Databases and Information Systems (ADBIS'2016), Prague, Czech Republic, August 2016.

    Keynote Speaker of "Big Data Integration."

14. The 3rd International Conference and Exhibition on Industrial Engineering, Istanbul, Italy, November 2016. (participation canceled due to change of venue to Dubai).

    Keynote Speaker of "Big Data Integration: a Meeting Point of Healthcare and Data."

15. The 1st International Workshop on Process Querying, Rio de Janeiro, Brazil, September 2016.

    Keynote Speaker of "Process Querying with Uncertainty."

16. The 18th International Conference on Business Process Management, Seville, Spain, September 2020.

    Keynote Speaker of "Process Minding: Closing the Big Data Gap."

17. The 5th International Conference on Process Mining, Rome, Italy, October 2023.

    Keynote Speaker of "Everything there is to Know about Stochastically Known Logs."

PLENARY TUTORIAL TALKS

1. ACM SIGMOD International Conference on Management of Data (SIGMOD'2000), May 16-18, 2000, Dallas, Texas, USA, "Data Management in eCommerce: The Good, the Bad, and the Ugly".

2. 20th ACM Conference on Information and Knowledge Management (CIKM'2011), October 24-28, 2011, Glasgow, Scotland, UK, "Uncertain Schema Matching: The Power of not Knowing".

3. 30th International Conference on Conceptual Modeling (ER 2011), October 31-November 3, 2011, Brussels, Belgium, "Uncertain Schema Matching".

4. 40th International Conference on Very Large Databases (VLDB 2014), September 1-5, 2014, Hangzhou, China, "Uncertain Entity Resolution".

5. 18th International Conference on Extending Database Technology (EDBT'2015), March 23-27, 2015, Brussels, Belgium, "Entity Resolution in the Big Data Era: Probabilistic DB Support to Entity Resolution". (jointly with Benny Kimelfeld).

6. 27th International Conference on Advanced Information Systems Engineering (CAiSE'2015), June 8-12, 2015, Stockholm, Sweden, "Model Matching: Processes and Beyond". (jointly with Matthias Weidlich).

7. 34th IEEE International Conference on Data Engineering (ICDE'2018), "Online Temporal Analysis of Complex Systems using IoT Data Sensing". (jointly with Arik Senderovich and Matthias Weidlich).

8. International Conference on Process Mining (ICPM'2019), "Online Temporal Analysis of Complex Systems using IoT Data Sensing". (jointly with Arik Senderovich and Matthias Weidlich).

9. The 18th International Conference on Business Process Management (BPM'2020), "Queue Mining: Process Mining Meets Queueing Theory". (jointly with Arik Senderovich and Matthias Weidlich).