

CURRICULUM VITAE AND LIST OF PUBLICATIONS

• Personal Details

Name: Daniel Deutch

Date and place of birth: Nov. 9, 1983, Tel Aviv, Israel

• Education

Ph.D. 2006-2010, Tel Aviv University, Computer Science

Advisor: Prof. Tova Milo

Thesis title: **Querying Web-Based Applications Under Models of Uncertainty**

M.Sc. 2003-2006, Tel Aviv University, Computer Science (SUMMA CUM LAUDE)

Advisor: Prof. Tova Milo

Thesis title: **Querying Structural and Behavioral properties of Business Processes**

B.Sc. 1999-2002, Tel Aviv University, Computer Science (CUM LAUDE)

• Employment History

2013- Senior Lecturer (Assistant Professor), Tel Aviv University

2012-2013 Senior Lecturer (Assistant Professor), Ben Gurion University

2011 Postdoctoral researcher at INRIA Saclay, France (on leave from Ben Gurion),
advised by Prof. Serge Abiteboul

2010-2011 Postdoctoral researcher at the University of Pennsylvania, USA
(on leave from Ben Gurion), advised by Prof. Val Tannen

2010-2012 Lecturer (Assistant Professor), Ben Gurion University

2006-2010 Teaching Assistant and lecturer (during PhD studies), Tel Aviv University

• Research Grants

2014-2017 Israeli Science Foundation (ISF): **Declarative Management of Subjective Data in Social Networks**, (sole) PI

2014-2015 Broadcom Foundation: **Provenance-Based Data Authentication in Web Applications**, PI, joint grant with Prof. Tova Milo

2011-2014 Israeli Ministry of Science (Infrastructure): **Infrastructure for Harvesting Information from Crowds**, PI, joint grant with 4 other PIs from TAU and HUJI.

2011-2014 US-Israel Binational Science Foundation (BSF): **Querying Data Intensive E-commerce Applications**, PI, joint grant with Prof. Val Tannen, UPenn

• **Awards and Fellowships**

2013 Yahoo! Early Career Award

2011 ICDT best student paper award

2009-11 Eshkol Scholarship for excellent Phd students, Israel Ministry of Science

2009 Excellence Scholarship, Faculty of Exact Sciences, Tel Aviv University

2009 Tel Aviv University, best teaching assistant award

2008 Tel Aviv University, Deutsch prize for excellent PhD students

2008 Tel Aviv University, The CS Phd posters competition, winner of 3rd place

2002 “Exceptional Student” honor, Tel Aviv University and Ministry of Defense

• **Professional Activities**

Program Committee Member for top conferences (including ICDT 2012, WWW 2012, PODS 2013, VLDB 2014, PODS 2014, SIGMOD 2014, SYSTOR 2014, ICDT 2015, SIGMOD 2015, PODS 2016, VLDB 2016) and workshops

Reviewer for top journals (including VLDB Journal, ACM TODS, Information Systems, JCSS, SIGMOD Record, and others)

• **Teaching**

2013- current Web Data Management, Tel Aviv University

2013- current Extended Introduction to CS, Tel Aviv University

2011-2013 Principles of Programming Languages, Ben Gurion University

2010-2013 Web Data Management, Ben Gurion University

2006-2010 Extended Introduction to CS, Tel Aviv University

• **Graduate Students**

Yuval Moskovitch, Phd

Eleanor Ainy, Msc

Amir Gilad, Msc

Nave Frost, Msc

Yuval Moskovitch, Msc (graduated 2013)

Scientific Publications

1. **Selective Provenance for Datalog Programs Using Top-k Queries,**
D. Deutch, A. Gilad, Y. Moskovitch, PVLDB 2015
2. **Provenance-Based Analysis of Data-Centric Processes,**
D. Deutch, Y. Moskovitch, V. Tannen, accepted to VLDB Journal, 2015
3. **selP: Selective Tracking and Presentation of Data Provenance,**
D. Deutch, A. Gilad, Y. Moskovitch, ICDE 2015
4. **Towards Web Scale How-Provenance,**
D. Deutch, A. Gilad, Y. Moskovitch, ICDE workshops 2015
5. **Approximated Summarization of Data Provenance ,**
E. Ainy, P. Bouhris, S. Davidson, D. Deutch and T. Milo, CIKM 2015
6. **Deduction with Contradictions in Datalog,**
S. Abiteboul, D. Deutch, V. Vianu, ICDT 2014
7. **A Provenance Framework for Data-Dependent Process Analysis,**
D. Deutch, Y. Moskovitch, V. Tannen, PVLDB 7(6), 2014
8. **Optimal Probabilistic Generation of XML Documents ,**
S. Abiteboul, Y. Amsterdamer, D. Deutch, T. Milo, P. Senellart, accepted to Theory of Computing Systems (2014, to appear)
9. **Managing Uncertainty and Conflicts in a Distributed World ,**
S. Abiteboul, D. Deutch, BUDA 2014 (informal proceedings)
10. **Circuits for Datalog Provenance,**
D. Deutch, S. Roy, T. Milo, V. Tannen, ICDT 2014
11. **Approximated Provenance for Complex Applications ,**
E. Ainy, S. Davidson, D. Deutch and T. Milo, Tapp 2014
12. **PROPOLIS: Provisioned Analysis of Data-Centric Processes (Demo),**
D. Deutch, Y. Moskovitch, V. Tannen, VLDB 2013
13. **Querying Probabilistic Business Processes for Sub-Flows,**
D. Deutch, Theory of Computing Systems 52(3), 2013
14. **Top-k Queries Over Web Applications,**
D. Deutch, T. Milo, VLDB Journal 22(4), 2013
15. **Caravan: Provisioning for What-if Analysis,**
D. Deutch, Z. Ives, T. Milo, V. Tannen, CIDR 2013
16. **Deduction in the Presence of Distribution and Contradictions,**
S. Abiteboul, M. Bienvenu, D. Deutch. *WebDB* , 2012
17. **Provenance for Web 2.0 Data ,**
M. Bienvenu, D. Deutch, F. Suchanek. *SDM* , 2012
18. **Dealing with the Deep Web and all its Quirks ,**
M. Bienvenu, D. Deutch, D. Martinenghi, P. Senellart and F. Suchanek *VLDS* , 2012

19. **Business Processes: A Database Perspective (Book)**,
D. Deutch, T. Milo, Morgan-Claypool publishers, 2012.
20. **Finding Optimal Probabilistic Generators for XML Collection**,
S. Abiteboul, Y. Amsterdamer, D. Deutch, T. Milo, P. Senellart, *ICDT* 2012.
21. **Mob Data Sourcing (Tutorial)**,
D. Deutch, T. Milo, *SIGMOD*, 2012
22. **Declarative Platform for Data Sourcing Games**,
D. Deutch, O. Greenshpan, B. Kostenko, T. Milo, *WWW* 2012.
23. **A Structural-Temporal Query Language for Business Processes**,
D. Deutch, T. Milo. *JCSS* 78(2), 2012.
24. **Provenance for Aggregate Queries**,
Y. Amsterdamer, D. Deutch, V. Tannen. *PODS 2011*
25. **On the Limitations of Provenance for Queries With Difference**,
Y. Amsterdamer, D. Deutch, V. Tannen. *TaPP 2011*.
26. **Querying Probabilistic Business Processes for Sub-Flows**,
D. Deutch. *ICDT 2011. Best student paper award*.
27. **Putting Lipstick on a Pig: Enabling Database-Style Workflow provenance**,
Y. Amsterdamer, S. Davidson, D. Deutch, T. Milo, J. Stoyanovitch, V. Tannen. *PVLDB* 5(4), 2011.
28. **Type Inference and Type Checking for Queries on Execution Traces**,
D. Deutch, T. Milo. *VLDB Journal*, 2011.
29. **On Provenance Minimization**,
Y. Amsterdamer, D. Deutch, T. Milo, V. Tannen. *PODS 2011*.
30. **A Quest for Beauty and Wealth
(or, Business Processes for Database Researchers), Tutorial**
D. Deutch, T. Milo. *PODS 2011*.
31. **On the Optimality of Top-k Algorithms for Interactive Web Applications**,
Y. Amsterdamer, D. Deutch, T. Milo. *WebDB 2011*.
32. **Using Markov Chain Monte Carlo to Play Trivia (demo)**,
D. Deutch, O. Greenshpan, B. Kostenko, T. Milo. *ICDE 2011*.
33. **On Models and Query Languages for Probabilistic Processes**,
D. Deutch, T. Milo. *SIGMOD Record* 39(2), 2010.
34. **Optimal Top-K Query Evaluation for Weighted Business Processes**,
D. Deutch, T. Milo, N. Polyzotis, T. Yam. *PVLDB* 3(1), 2010.
35. **Navigating in Complex Mashed-Up Applications**,
D. Deutch, O. Greenshpan, T. Milo. *PVLDB* 3(1), 2010.
36. **On Probabilistic Fixpoint and Markov Chain Query Languages**,
D. Deutch, C. Koch, T. Milo. *PODS 2010*.
37. **Navigating through Mashed-up Applications with COMPASS (demo)**,
D. Deutch, O. Greenshpan, T. Milo. *ICDE 2010*.
38. **Goal-Oriented Web-Site navigation for On-Line Shoppers**,
D. Deutch, T. Milo, T. Yam. *VLDB 2009*.

39. **TOP-K Projection Queries for Probabilistic Business Processes**,
D. Deutch, T. Milo. *ICDT 2009*.
40. **Querying Future and Past in Business Processes**,
D. Deutch, T. Milo. *IEEE Data Engineering Bulletin 32(3), 2009*.
41. **Evaluating TOP-K Queries over Business Processes**,
D. Deutch, T. Milo. *ICDE 2009*.
42. **Type Inference and Type Checking for Queries on Execution Traces**,
D. Deutch, T. Milo. *PVLDB 1(1), 2008*.
43. **Querying and Monitoring Distributed Business Processes (tutorial)**,
D. Deutch, T. Milo. *VLDB 2008*.
44. **Querying Web Applications under Models of Uncertainty**,
D. Deutch, T. Milo. *VLDB Workshops 2008*.
45. **Querying Structural and Behavioral Properties of Business Processes**,
D. Deutch, T. Milo. *DBPL 2007*
46. **An approach to Intelligent Decision Making in Computer Generated Forces**,
D. Deutch, L. Gdaliahu, A. Sirkis. *SIW 2006*.