

Curriculum Vitae

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Work Experience

- 10/77-present The Blavatnik School of Computer Science *Tel-Aviv University*. Professor since 1/97.
- 10/08-9/11 Chairman, The Blavatnik School of Computer Science *Tel-Aviv University*. (Served as CS department chair, before it became a separate School, during 10/82-9/83, 9/85-8/87 and 7/92-6/94)
- 8/00-7/03 Vice President for Academic Affairs and Head of the CS Program, *The Academic College of Tel-Aviv Yafo*.
- 7/90-9/90 Visiting Research Professor, Computer Science Department, *Naval Postgraduate School, Monterey, California*.
- 9/88-8/89 Visiting Research Associate, Computer Science Department and Institute for Advanced Computer Studies (UMIACS), *University of Maryland, College Park*.
- 6/88-8/88 Visiting Computer Scientist, *GMD, Bonn*.
- 6/84-8/84 Visiting Associate Computer Scientist, Computer Science Division, *University of California, Berkeley*.
- 10/83-6/84 Visiting Associate Professor, Computer Science Department, *University of California, Los-Angeles*.
- 6/80-8/80 Visiting Lecturer, Computer Science Department, *University of California, Berkeley*.
- 10/78-6/80 Adjunct Lecturer, Department of Computer Science, *Technion, Israel Institute of Technology*.

Education

- 12/77 Ph.D. in Computer Science from *University of California at Berkeley*, Thesis: On the complexity of grammar and language problems. Advisor : Prof. Michael A. Harrison.
- 6/74 M.S. in Computer Science from *University of California at Berkeley*.
- 8/73 B.Sc. in Electrical Engineering (with honors) from the *Technion, Israel Institute of Technology*.

Research Grants

Principal investigator in Research Grants from :

Israel Ministry of Defense (1/10/1982 – 30/9/1987)

Israel Science Foundation (1/10/1993 – 30/9/1996, \$72,000)

German-Israel Fund (with R. Budde, 1/1/1995 – 31/12/1998, DM 270,000),

Israel Ministry of Sciences (with 4 others PIs, 1/9/1995-31/12/1998 NIS 600,000 each year).

Israel Science Foundation (with Y. Feldman 1/10/2004 – 30/9/2007, \$110,000)

IBM Faculty Award, 2009, \$6,000

Microsoft Research Grant, 2011 \$15,000

Israel Science Foundation (1/10/2011 – 30/9/2015, \$52,000 each year)

German-Israel Fund (with B. Beckert and S. Tyszberowicz, 1/1/2013 – 31/12/2015, Euro 180,000).

Teaching

Taught at *Tel-Aviv University* , *The Academic College of Tel Aviv Yafo*, *Technion* , *University of California, Berkeley* and *University of California, Los-Angeles*. Usually very good teacher evaluation.

Required courses taught: Data Structures, Models of Computation, Introduction to Computer Science (latest version based on SICP), Discrete mathematics, Software construction with Java, Programming Style.

Elective and advanced courses taught include: Programming Languages, Software Engineering, Compiler Construction, Concurrent Programming, Formal Languages, Parsing Theory, Object Oriented Programming, Seminars on Formal Languages, Software Methodology, the ADA programming language, Object Oriented Programming, seminar on Aspect Oriented Programming, seminar on Human Aspects in Software Engineering, and a workshop in Software Engineering.

Awards

Honorable Mention, IEEE Computer Society Gordon Bell award for Compiler Parallelization – Parallelizing Pascal Compiler (with Eran Gabber, and Amir Averbuch).

Awarded Rector's citation for Teaching excellence for the year 2007/08, Tel Aviv University.

The ASE 2011 Most Influential paper, selected from papers that appeared in the KBSE/ASE conferences in the years 1995-97 – Precise specification and automatic application of design patterns (with Amnon H. Eden, and Joseph Gil), ASE 1997

Public Committees - partial list

Chairman, Education Ministry's Committee on Computer Science Education, 1990-1999.

Member, National Committee for Information Technology and Infrastructure, 1994-2001.

Member, Academic Committee of Open University, 1997-2000 and 2003-2009.

Member, Academic Council and Board of Governors, The Academic College of Tel-Aviv Yafo, 2003-present.

Member, subcommittee on Computing of the Council for Higher Education(CHE)'s Planning and Budgeting Committee(PBC), 1994-2002.

Member, CHE's Computer Science quality evaluation committee, 2005.

Member, Israel Communication and Informatics Committee for UNESCO, 2002-2012

Member, governing board, Minerva Center for the Verification of Reactive Systems at the Weizmann Institute

Israeli representative in the European Commission's Telematics Applications Program committee (1996/97).

PhD students supervised

1. Yair Itzhaik, Equivalence and subclass containment problems for deterministic pushdown automata, (Technion), 1982.
2. Yael Maon, Decision problems concerning equivalence of transductions on languages, 1985.
3. Shmuel Tyszberowicz, OBSERV – A Prototyping Language and Environment, 1991.
4. Yair Aviv, An arithmetic probabilistic logic for a continuous computer program correctness measure, (with Y. Hirshfeld), 1991.
5. Eran Gabber, A Portable and Efficient Programming Environment for Multiprocessors, (with A. Averbuch), 1993.
6. Yariv Aridor, An efficient software environment for implicit parallel programming with a multi-paradigm language, (with S. Cohen), 1996.
7. Vered Gafni, MASS/PLOT, A Specification Framework for Real-Time Systems, (with Y. Feldman), 1998.
8. Amnon Eden, Precise Specification of Design Patterns and Tool Support in their Application, (with Y. Gil, Technion), 2000.
9. Doron Friedman, Knowledge-Based Formalization of Cinematic Expression and its Application to Animation (with Dr. Y. Feldman), 2004.
10. Oded Koren, The bazaar model: The evolution of the Linux kernel-from pure volunteer spirit to the involvement of large corporations (1983-2001), (with L. Cory), 2010.
11. Ohad Barzilay, Example Embedding: On the Diversity of Example Usage in Professional Software Development, (with O. Hazzan, Technion), 2012.
12. Mati Shomrat, (with Dr. Y. Feldman) in progress.
13. Aharon Abadi, (with Dr. Y. Feldman) in progress.

MS students supervised

1. Yael Krevner, An iteration theorem for simple precedence languages, 1981.
2. Ram Mittelman, On the adequacy of languages for parallel architectures, 1986.
3. Eran Gabber, Deducing Type Information from context in Ada based PDLs, 1987.
4. Eli Shagam, A method for analysis and design of complex systems (software), Hierarchical Client-Server, (with S. Koenig), 1987.
5. Yaron Klein, PMetal, An extended pascal for synchronized parallel algorithms, 1987.
6. Ofra Shay, Evolutionary development of software product, 1987.
7. Gil Barequet, A system for automatic construction of demonstrations for concurrent graphical systems, 1987.
8. Tal Dayan, Management of Object Memory, 1987.
9. Iddo Carmon, Multiple processor systems, 1987.
10. Eran Gluska, Graphical presentation of program data during execution, 1987.
11. Moshe Sipper, Program verification using logic with a continuous measure, 1988.
12. Eran Kessler, Rapid prototyping for embedded computer systems, (with P. Gartenberg), 1988.
13. Daniel Reisfeld, Generation of Optimal code for ada programs, 1988.
14. Eran Bahat, A development environment for the PSPC programming language, 1988.
15. Ayellet Tal, A system for translating a design into a parallel design, 1988.
16. Amnon Lotem, Translator generator between programming languages and its application to robotic languages, 1989.
17. Tamar Benaya, An application generator for a family of real-time monitor and control systems, 1989.
18. Aviv Cohen, CRUISE, Creative User Interface for Software Engineering, 1990.
19. Eytan Ruppim, Cognitive evaluation functions and diagnosis within the framework of a formal classification, 1990.
20. Ronie Rokach, RTDA - Design method for real time system , 1990.
21. Adi Sapir, Assert, methodology, language and tools for system specification development, 1992.
22. Talila Weiden-Millman , Message Definition Language, 1992.
23. Yael Weissenberg, LCM, a law control mechanism for easy system adaptation, 1992.
24. Shaul Simhi, Reflection in a Concurrent Object-Oriented Environment using Finite State Diagrams, 1992

25. Eran Flom, From specification language to programming language – a semi-automatic translation, 1992.
26. Yoad Winter, About natural language "but" within a formal framework – connectives of contrast in natural and formal languages, (with M. Rimón), 1993.
27. Gil Zehavi, Specification and Implementation of Robotic Applications using MASS, 1993.
28. Eliezer Lubitch, Runtime Consistency Checking of Program's Assertions, 1993.
29. Boaz Sapir, Reflection in a Concurrent Object-Oriented Environment using Finite State Diagrams, 1994.
30. Eran Brezner, Object-Oriented Extensions of a Specification Language for Reactive Systems, 1995.
31. Ziad Hanna, Cave - computer aided verification environment, 1995.
32. Yaron Telem, Profile-based object assignment in fine-grained parallel object-oriented environments, 1996.
33. Rani Nelken, Natural Language Specifications of Software and Hardware systems and their Automatic Verification, (with N. Francez), 1996.
34. Gideon Cohen, Tort - A Task Oriented Real-Time Language and Semantics, 1997.
35. Ron Perry, The Displayer/Data Pattern-Language: A Software Engineering Technique for GUI/Application Decoupling, 1997.
36. Ety Meiri, Automatic Expanding of Semantic Dictionaries for Disambiguation, (with Y. Choueka), 1997.
37. Gil Freundlich, Using and enforcing social law in open multi-agent systems, 1999.
38. Yakov Persky, SimAda Concurrency Simulator, (with M. Ben-Ari), 1999.
39. Guy Halman, Dynamic aspects of design and analysis for real-time systems , (with M. Winokur), 1998.
40. Mati Shomrat, Obvious or not? regulating architectural decisions using aspect-oriented programming, 2001.
41. Naomi Sapir, An aspect oriented methodology with usage constraints, (with Shmuel Tyszberowicz), 2002.
42. Boris Litvak, Behavioral consistency validation of UML diagrams, (with S. Tyszberowicz), 2003.
43. Ohad Barzilay, Expressing design by contract principles using aspects, (with S. Tyszberowicz and Y. Feldman), 2004.
44. Shay Raz, A Set of Tools to Solve NMS Scaling Using Aspects, 2005.
45. Itay Leshem, Imparting Fundamental Principles By Separating Theoretical and Applicative Content in "Introduction to Computer Science" Course, (with D. Ginat), 2005.

46. Leonid Gendler, DISCERN: Towards the automatic discovery of software contracts, (with Y. Feldman), 2005.
47. Michael Kleyman, Refactoring Aspects into Java Code, (with S. Tyszberowicz), 2005.
48. Avi Jencman, Fortified Web Services Contracts for Trusted Components, 2006.
49. Maayan Goldstein, Refactoring with Contracts, (with Dr. S. Tyszberowicz and Dr. Y. Feldman), 2007.
50. Stella Levin, Evolutionary Testing: A case study, 2007.
51. Benny Pasternak, GenUTest: A Unit Test and Mock Aspect Generation Tool,(with S. Tyszberowicz), 2008.
52. Dor Nir, Locating Regression Bugs, (with S. Tyszberowicz), 2008.
53. Yuri Greiberg (Phink), Virtual Machine support for Stateful Aspects, 2008.
54. Hagai Cibulski, Regression Test Selection Techniques for Test-Driven Development, 2011.
55. Igor Gelfgat, Granulated Code Generation Of Interfering Functionalities, (with S. Tyszberowicz), 2011.
56. Mille Gandelsman, Tiesto - Source Code and Binary Preserving Unit-Tests Framework for C++, 2012.
57. Moria Abadi, Supporting Change in Statechart-Based Software Development (with Y. Feldman), 2012.
58. Stanislav Levin, Synchronous Software Development, 2013.
59. Alexey Zagalsky, Example Overflow: Using Social Media for Code Recommendation, in progress.
60. Evgeny Vainer, Deterministic Definition of Concurrent Behavior for Unit Testing Purposes, in progress.
61. Dekel Cohen, in progress.

Conference organization

Member, Program Committee of CompEuro 88.
 Member, Program Committee of the 1st, 2nd and 8th ICCSSE (86,87,97).
 Chairman, Program Committee of the 3rd ICCSSE (88).
 Member, Organizing Committee of CompEuro 90.
 Conference chairman of the 5th ICCSSE (91).
 Member, Program Committee of the 1st ISTCS (92). Member, Organizing Committee of the 7th ICCSSE (96).
 Member, Program Committee of the Tools USA 98 conference (98).
 Member, Program Committee of ECBS 98.
 Member, Organizing Committee of the Academia 2010 conference (99).
 Member, Program Committee of the SwSTE conference (03).

Conference chairman of SwSTE 07.
Member, Program Committee of TOOLS Europe (07,08,09,12).
Member, Program Committee of OOPSLA (07).
Member, Program committee of MODULARITY AOSD 2013.
Member, Program committee of MODELSWARD 2013.
Member, Program committee of HVC 2013.
Member, Steering Committee of SwSTE conference series.

Other Activities

Member of the Board, Sela group, 2000-2006.

Consulting Experience during the past 35 years includes the following organizations: *Trivnet, Algorithmic Research, Mercury Interactive, Ampal, Aitech Software Engineering, National Semiconductors Israel, Open University, M.G. Electronics Israel.*

Professional training courses and lectures in *EL-AL Israel, Tadiran, Electronic industry association, Digital, ECI, Applied Materials.*