

**CURRICULUM VITAE  
AND LIST OF PUBLICATIONS**  
April 2017

**Personal Details:**

Name: Shlomi (Shlomo) Dolev

Date and place of birth: 5/12/58, Israel.

Regular military service: From 13/2/77 until 12/8/80 (Captain).

Address and telephone number at work: Department of Computer Science, Ben-Gurion University of the Negev, Beer-Sheva 84105, Israel, Tel: 08-6472718, Fax: 08-6477650, Email: dolev@cs.bgu.ac.il.

Parent of: Noa, Yorai, Hagar and Eden.

**Short Biography:**

Shlomi Dolev received his B.Sc. in Engineering and B.A. in Computer Science in 1984 and 1985, and his M.Sc. and D.Sc. in computer Science in 1990 and 1992 from the Technion Israel Institute of Technology. From 1992 to 1995 he was at Texas A&M University as a visiting research specialist. In 1995 he joined the Department of Mathematics and Computer Science at Ben-Gurion University. Shlomi is the founder and the first department head of the Computer Science Department at Ben-Gurion University, established in 2000. After just 15 years, the department has been ranked among the first 150 best departments in the world.

He is the author of a book entitled *Self-Stabilization* published by MIT Press in 2000. His publications, more than three hundred conferences, journals and patents, include papers in *JACM*, *SIAM journal on computing*, *Nature Photonics*, *Nature Communications*, *Physical Review*, *Journal of the Optical Society of America A*, *Distributed Computing*, *IEEE/ACM Trans. on Networking*, *ACM Trans. on Information and System Security*, *Journal of Cryptology*, *Journal of Computer and System Sciences*, *ACM Trans. on Knowledge Discovery from Data*, *ACM Trans. on Sensor Networks*, *ACM TOPLAS*, *Neural Computation*, *Neural Networks* and alike. The publications are mostly in the area of distributed computing and communication networks; in particular the self-stabilization property of such systems, cryptography, security, brain science and optical computing. Several agencies and companies support his research including ISF, NSF, IBM (faculty awards), EMC, Intel, Orange France, Deutsche Telekom, Israeli Ministries of Science, Economy and Defense and the European Union in the sum of several millions of dollars.

During his stay at Ben-Gurion University Shlomi had visiting positions in several institutions including MIT, Paris 11, Paris 6 and DIMACS. He served in more than a hundred program committees, chairing several including the two leading conferences in distributed computing, DISC 2006, and PODC 2014. Shlomi served and serves as an Associate Editor in several international journals including the *IEEE Transactions on Computers*. His research students more than ten PostDocs, over fifteen PhD students and twenty MSc students, are positioned in Hi-Tech companies, including IBM, Microsoft, Google and Academia.

Prof. Dolev is the head of the Frankel Center for Computer Science and holds the Ben-Gurion University Rita Altura trust chair in Computer Sciences. From 2011 to 2014, Prof. Dolev served as the Dean of the Natural Sciences Faculty at Ben-Gurion University of the Negev. From 2010 he has served for six years, as the Head of the Inter University Computation Center of Israel. He is a co-founder, board member and CSO of *Secret Double Octopus* Ltd. 2015. He is also a co-founder of *SecretSkyDB* Ltd. 2016. In 2015 Shlomi was appointed as the steering committee head of the computer science discipline of the Ministry of Education of Israel.

## **Education:**

Technion, Israel Institute of Technology, Haifa, Israel.

B.Sc. (Cum Laude), Civil Engineering, 1984.

B.A. (Cum Laude), Computer Science, 1985.

Received the Annual president's list award given for academic achievement, 1982,84.

Received the Annual dean's list award given for academic achievement 1981,83,85.

Accepted for M.Sc. degree by the graduate schools of the Technion and MIT.

M.Sc., Computer Science, 1990.

Advisors: Dr. Amos Israeli and Prof. Shlomo Moran.

Title of thesis: "Self Stabilization of Dynamic Systems Assuming Read Write Atomicity".

Received the Miriam and Aaron Gutwirth scholarship for M.Sc. studies, 1989.

Accepted for Ph.D. degree by the graduate schools of the Technion and Stanford University.

D.Sc., Computer Science, 1992.

Advisors: Prof. Shlomo Moran and Dr. Amos Israeli.

Title of thesis: "Self Stabilization of Distributed Dynamic Systems".

## **Employment History (and visiting positions):**

2005- present: Tenured Professor, Ben-Gurion University of the Negev.

2000- (October) 2005: Tenured Associate Professor, Ben-Gurion University of the Negev.

1998-(April) 2000: Tenured Senior Lecturer, Ben-Gurion University of the Negev.

1997-(April) 1998: Senior Lecturer, Ben-Gurion University of the Negev.

1995-(April) 1997: Lecturer, Ben-Gurion University of the Negev.

February 2017: Visiting researcher, Computer Science Lab (CSL) of Stanford Research Institute (SRI) international, visiting Dr. Karim ElDefrawy.

March 2016: Visiting researcher, the Security and Privacy Research Department of Yahoo Labs, visiting Dr. Juan Garay.

Summer 2014: Visiting professor, Université Paris-sud, Paris 11, visiting Prof. Sylvie Delaet.

July 2011: Visiting professor, Université Paris-sud, Paris 11, visiting Prof. Joffroy Beauquier.

June 2009: Visiting Professor, LIP6, Paris 6, visiting Prof. Maria Gradinariu Potop-Butucaru.

April 2008: DIMACS Center for Discrete Mathematics & Theoretical Computer Science, visiting Dr. Juan Garay from Bell-Labs.

Summer 2005: Visiting scientist, MIT, with Prof. Nancy Lynch.

January 2005: Visiting scientist, Texas A&M University, visiting Prof. Jennifer Welch.

Summer 2004: Visiting scientist, MIT, with Prof. Nancy Lynch.

Summer 2003: Visiting scientist, MIT, with Prof. Nancy Lynch.

February 2003: Visiting Associate Professor, University of Texas, visiting Prof. Mohamed Gouda.

Summer 2002: Visiting Associate Professor, University of Iowa, visiting Prof. Ted Herman.

Summer 2002: Visiting scientist, Texas A&M University, with Prof. Jennifer Welch.

Summer 2000: Visiting scientist, MIT, with Prof. Nancy Lynch.

Summer 1999: Visiting scientist, Institute de Mathmatics, UNAM, with Prof. Sergio Rajksbaum.

Summer 1997: Visiting scientist, MIT, with Prof. Nancy Lynch.

Summer 1997: Visiting professor, Université Paris-sud, Paris 11, Laboratoire de Recherche en

Informatique d'Orsay, visiting Prof. Joffroy Beauquier.  
Summer 1996: DIMACS Center for Discrete Mathematics & Theoretical Computer Science, visiting Dr. Rafail Ostrovsky from Bellcore.  
Summers 1994, 1995: Visiting research specialist with Prof. Evangelos Kranakis and Prof. Danny Krizanc, School of Computer Science, Carleton University.  
1992-1995: Visiting research specialist, Post-Doc of Prof. Jennifer L. Welch, Department of Computer Science, Texas A&M University.  
1987-1992: Research Assistant, Computer Science Department, Technion, Israel.  
1985-1987: Software Engineer, Texel-Electronic Ltd., Tel-Aviv, Israel.

### **Industrial Experience:**

2015-present: **Secret Double Octopus Ltd.**, co-Founder, Board Member, Chief Scientist Officer. Next generation secure communication.  
2016: **SecretSkyDB Ltd.**, co-Founder. Next generation secure and private data-base.  
2016-present: **Basecamp** Advisory Board member.

### **Professional Activities:**

#### **(a) Positions in academic administration:**

1998-2000: Computer Science Coordinator and then the **head of the Computer Science Department**, Ben-Gurion University  
2000-2001: Head of the interfaculty school for computers and communication, Ben-Gurion Univ.  
2000-present: Head of the Hi-Tech Building Design Team  
2000-2006, 2015-Present: Appointment Committee, Department of Computer Science  
2001-2005: Appointment Committee, Faculty of Natural Sciences  
2002-2004: University Computing Policy Committee  
2002-present: University Distance Learning Committee  
2004-2008: Academic Israeli GRID, Steering Committee  
2004-2007: Israel Council for Higher Education, Teleprocessing Committee  
2004-2014, 2016-Present: Ben Gurion University Senate Member  
2004-2010: Ben Gurion University Senate Executive Committee  
2006-2008: Ben Gurion University, Head of the Computing Salary Increase Committee for the Managing and the Technical Staff  
2006-2012, 2014-present: Head of the Lynne and William Frankel Center for Computer Science  
2010-2015 (six years): **Chairman of the Inter University Computation Center of Israel**  
2011-2014: **Dean of the Faculty of Natural Sciences**  
2014-Present: Israel Council for Higher Education, Professor Highest Appointment Committee in Exact Sciences and Engineering  
2015-Present: **Steering Committee Head of the Computer Science Discipline of the Israeli Ministry of Education**  
2016-Present: Supreme Appointment Committee, Ben-Gurion University

#### **(b) Editor of scientific professional journal:**

*Chicago Journal of Theoretical Computer Science*, Guest Editor, MIT Press, Special issue on Self-Stabilization, 1996.

*Journal of Aerospace Computing, Information, and Communication*, Associate Editor, American Institute of Aeronautics and Astronautics (AIAA), 2003-2012.

*Distributed Computing Journal*, Guest Editor, Special issue for DISC 2006.

*IEEE Transactions on Computers*, Associate Editor, 2007-2015.

*Theoretical Computer Science*, Guest Editor, Special issue on Stabilization, Safety and Security, 2008.

*Applied Optics and the Journal of the Optical Society of America A (JOSA A)*, Guest Editor, special feature on Optical High-Performance Computing, 2008.

*International Journal of Distributed Sensor Networks*, Taylor & Francis, Associate Editor, 2009-2010.

*Theoretical Computer Science*, Guest Editor, Special issue for Algosensors 2009.

*Wireless Networks*, (WINET), Associate Editor, 2010-present.

*Information and Computation*, Guest Editor, Special issue on Stabilization, Safety and Security, 2010.

*Journal on Self Computing*, World Scientific, Associate Editor, 2012-2013.

Moderator of the Distributed and Parallel Computing area in CoRR, the *Computing Research Repository* arXiv. 2014-present.

*PeerJ Computer Science*, 2015-present.

### **(c) Membership in professional/scientific societies:**

1996-present, member, the Association for Computing Machinery

1997-present, senior member, the Institute of Electrical and Electronics Engineers

2003-present, member, American Institute of Aeronautics and Astronautics (AIAA)

### **Educational activities:**

#### **(a) Course Taught:**

**Ben-Gurion University:** Communication Networks and Distributed Systems (mandatory for master studies), Data Structures (using a new book), Data Structures (using Cormen, Leiserson and Rivest), Introduction to Computer Science (first course that used Java), System Programming (videotaped), Self-Stabilizing Distributed Algorithms, Mathematical Models in Distributed Systems, Network Security, Graduate Seminar, Final Projects.

**Texas A&M University** 1993-4: Analysis of Algorithms, Structured Programming in Pascal.

**Technion:** Logic Design Laboratory, Logic Design course (1991, single lecturer, 100 students).

#### **4th, 5th and 6th International Summer Schools on Distributed Computing,**

Courses on self-stabilization (invited),

Sienna, Italy, June 1997, June 1999 and June 2001.

**MIT and Yale**, replaced Prof. Nancy Lynch and Prof. Michael Fischer (for two and one lectures, respectively) October 2003.

**DYNAMO, 2nd Training School on Algorithmic Aspects of Dynamic Networks**, Iceland, July 2008.

**Summer School on Distributed Computing and Cryptography** in the *17th International Symposium on Stabilization, Safety, and Security* (SSS 2015).

## **(b) Research Students and Visitors:**

Post Docs:

PstD1. Dr. Diab Abuaiadh (PhD from University of Sydney, Australia), 1995.

PstD2. Dr. Stephane Messika (PhD from Ecole Normal Supérieure de Cachan, France), 2005.

PstD3. Dr. Guy Leshem (PhD from Hebrew University), 2007.

PstD4. Dr. Olivier Peres (PhD from LRI Paris 11, France), 2008.

PstD5. Dr. Niv Gilboa, (PhD from Technion), 2009-11.

PstD6. Dr. Andrei Dolgin (with Michael Segal and Ohad Ben-Shahar, PhD from Technion), PhD Technion, 2009.

PstD7. Dr. Ximing Li (PhD from South China Agricultural University, China), 2012-3.

PstD8. Dr. Shimrit Tzur (PhD from Hebrew University), 2013-5.

PstD9. Dr. Alexander Binun (PhD Friedrich-Wilhelm University of Bonn), 2013-present.

PstD10. Dr. Hillel Avni (PhD from Tel-Aviv University), 2014.

PstD11. Dr. Yin Li (PhD Shanghai Jiaotong University), 2014-2015.

PstD12. Dr. Muni Venkateswarlu K. (PhD National Institute of Technology Karnataka), 2015-present.

PhD Students:

PhD1. Elad Schiller, Ph.D., (M.Sc. and Ph.D. candidacy exam, 2001) “Self-Stabilizing Group Communication,” (published 3 articles for the PhD), received Kreitman and The Council for Higher Education fellowships, submitted thesis August 2004. Post doc with Nancy Lynch, Paul Spirakis, Sándor Fekete from September 2004. Now faculty member in the Computer Science and Engineering Department of Chalmers University, Sweden.

PhD2. Yinnon A. Haviv, Ph.D., “Self-Stabilizing Embedded Systems,” (published 3 articles for the PhD), received Intel award, best teaching awards, and The Council for Higher Education fellowship, submitted thesis October 2006. Now with Google.

PhD3. Ronen Kat, Ph.D., “Self-Stabilizing Distributed Storage Systems,” (published 3 articles for the PhD), received Intel award, submitted thesis March 2007. Now with IBM research center.

PhD4. Reuven Yagel, Ph.D., (Ph.D. candidacy exam, May 2004) “Self-Stabilizing Operating Systems,” supported by Microsoft (published 4 articles for the PhD), submitted thesis September 2007.

Now with Jerusalem College of Engineering.

PhD5. Limor Lahiani, Ph.D, “Polygon Based Schemes for Sensor Networks,” received Intel award, (published 3 articles for the PhD), submitted thesis April 2008. Now with Microsoft research.

PhD6. Nir Tzachar, Ph.D, “Self-Stabilizing and Self-Organizing Distributed Algorithms,” received support from Israeli Grid organization and received Intel award (published 3 articles submitted 1 article for the PhD), submitted thesis 2008. Now with computer science industry.

PhD7. Olga Brukman, Ph.D., “Autonomic Recoverer,” (published 3 articles for the PhD), received EuroSys support, 2005, and SOSP support 2007, submitted thesis 2008. Now with computer science industry.

PhD8. Rami Puzis, “Optimization of Deployment Strategy for Distributed Electronic Threat Detection and Prevention Systems,” (together with Yuval Elovici, published 5 articles for the PhD), supported by Deutsche Telekom, submitted thesis, July 2009, now a faculty member at Ben-Gurion University.

PhD9. Ofer Hermoni, (Ph.D candidacy exam, June 2008) “Anonymous Communication Networks,” (together with Eyal Felstaine/Yuval Elovici, published 3 articles for the PhD), got Intel and Eshkol fellowships, submitted thesis, December 2013, now in computer science industry.

PhD10. Polina Zilberman, “Securing an Organization from External and Internal Cyber Attacks,” (together with Yuval Elovici, published 4 article), supported by Deutsche Telekom, submitted thesis November 2014, now in computer science industry.

PhD11. Eyal Cohen “Nanotechnology Based Optical Computing,” (published 3 papers) submitted thesis May 2015. Supported by the Ministry of Science.

PhD12. Ariel Hanemann “Synthesized Holographic “Brain” Memory,” (published 3 papers for the PhD, submitted 1) submitted thesis November 2015, now in computer science industry. Supported by Kreitman scholarship for excellent PhD students.

PhD13. Hadassa Daltrophe (with Zvi Lotker) “Big Data Abstraction: Exploration, Interpolation and Extrapolation,” (published 3 papers for the PhD) submitted thesis November 2015, now postdoc at BGU. Partially supported by ISF and Ministry of Economy.

PhD14. Shantanu Sharma “Replication Aspects in Distributed Computing,” (Published 5 papers for the PhD) submitted thesis February 2016, now postdoc at UC Irvine. Partially supported by Kreitman scholarship and EMC.

PhD15. Nisha Panwar (with Michael Segal) “Security Aspects in Vehicle Networks,” (Published 5 papers for the PhD) submitted thesis September 2016. Partially supported by the Israeli Ministry of Economy.

MSc Students:

MSc1. Dmitry Yukelson, M.Sc. “Guessing Games for Saving Energy in Mobile Environment,” January 1998. (published 1 article) Received Intel award, Now in Computer Science Industry.

- MSc2. Alexander Kesselman, M.Sc. “Non-Preemptive Real-Time Scheduling of Multimedia Tasks,” (published 2 articles) May 1998. Received Intel award. PhD in Computer Science from Tel-Aviv University, post-doc Max-Planck, and Industry.
- MSc3. Olga Tubman , M.Sc. “Smooth and Adaptive Forward Erasure Correcting,” (published 1 article) July 2000. Now in Computer Science Industry.
- MSc4. Galit Uzan, M.Sc. Internship, (ESIM), Ecole Superieure des Ingenieurs de Marseilles and Luminy Technologies and Sciences University, “Magnifying Computing Gaps,” (published 1 article), 2003.
- MSc5. Lior Davidovitch, M.Sc., “Stability of Multi-value Long Lived Consensus,” (published 1 article), May 2004. PhD in Mechanical Engineering, Technion.
- MSc6. Ori Gersten, M.Sc., “Self-Stabilizing Active Tier Systems,” (published 1 article), January 2005. Now in Computer Science Industry.
- MSc7. Noam Singer, (with Amos Beimel), “Real-Time Oblivious Forward Erasure Correcting,” (published 1 article), May 2005. Now in Computer Science Industry.
- MSc8. Ronen Kat, (M.Sc. and Ph.D. candidacy exam, 2002) “Self-Stabilizing Distributed Storage Systems,” received Intel award, 2002.
- MSc9. Marina Sadetsky, “Approximation Certificates for Hurestics,” (published one article), June 2007. Now in Computer Science Industry.
- MSc10. Hen Fitoussi, “Optical Solutions for Bounded NP Problems,” (published 1 article), received support from the Summer School on Algorithmic Data Analysis, November 2007. Now with Microsoft.
- MSc11. Limor Lahiani, (M.Sc. and Ph.D. candidacy exam, June 2004), “Polygon Based Schemes for Sensor Networks,” received Intel award.
- MSc12. Nir Tzachar, (M.Sc. and Ph.D. candidacy exam, December 2005) “Self-Stabilizing and Self-Organizing Distributed Algorithms,” received support from Israeli Grid organization.
- MSc13. Olga Brukman, (M.Sc and Ph.D. candidacy exam, March 2004) “Autonomic Recoverer,” received support from Deutsche Telekom.
- MSc14. Rami Puzis, “Optimization of Deployment Strategy for Distributed Electronic Threat Detection and Prevention Systems,” (M.Sc and Ph.D. candidacy exam, September 2007) received support from Deutsche Telekom.
- MSc15. Jonathan Goldfeld, “Efficient On Line Detection of Temporal Patterns,” July 2012, (published 1 article), received support from Deutsche Telekom.
- MSc16. Nova Fandina, “Beyond NP Hard on Average Instances and their Optical Solutions,”

(published 3 articles) MSc exam February 2012, supported by the Ministry of Science.

MSc17. Polina Zilberman, “User Defined Firewall Filtering,” (together with Yuval Elovici, published 1 article until exam), MSc and PhD candidacy exam March 2010, supported by Deutsche Telekom.

MSc18. Martin Kahil, “Stateless Stabilization Bootstrap,” (Published 2 articles), MSc exam February 2015, Supported by Orange France.

MSc19. Dan Brownstein (with Niv Gilboa) “Security Techniques for Online and Broadcast Services,” (published 1 article until exam), MSc and PhD candidacy exam June 2015, supported by Ministry of Science.

MSc20. Amir Anter, “Optical Energy Efficient Asynchronous Automata and Circuits,” (published 2 articles), MSc exam July 2016.

MSc21. Dor Bitan (with Dani Berend) “Statistically Secure Additions and Restricted Multiplications of Secret Shares,” (Presented 1 article in a conference until the exam) MSc and PhD candidacy exam March 2017.

Current Students:

PhD. Dan Brownstein (with Niv Gilboa) “Security Techniques for Online and Broadcast Services,” (published 1 article until exam), PhD candidacy exam June 2015, supported by ministry of Science.

PhD. Marina Sadetsky (with Danny Hendler) “Paging for Multi-Server Multi-Level Shared Caches,” candidacy exam July 2015, supported by EMC.

PhD. Daniel Khankin “Algorithms, Techniques and Applications for Virtual Networks,” candidacy exam March 2017, supported by ministry of economy.

PhD. Philip Derbeko (with Ehud Gudes) “Concise Essence-Preserving Big Data Representations,” candidacy exam March 2017.

PhD. Dor Bitan (with Dani Berend) “Statistically Secure Additions and Restricted Multiplications of Secret Shares,” (Presented 1 article in a conference until the exam) PhD candidacy exam March 2017, supported by ministry of science.

PhD. Ram Prasad Narayanan “Energy Harvesting Nano Technology for Cancer Detection and Treatment” (Published 1 article in a conference until the exam) PhD candidacy exam April 2017.

MSc. Omri Liba

MSc. Amit Rokach



MSc. Amitay Shaer

MSc. Mohammad Ghanayim

MSc. Yuval Poleg

### **Awards, Citations, Honors, Fellowships:**

Miriam and Aaron Gutwirth scholarship for M.Sc. studies, 1989.

Toman Foundation for Academic Excellence, \$7.3K, 1996.

Rita Altura Trust Chair in Computer Sciences, 2001-current.

IBM Faculty Award, \$20K 2001, \$20K 2002, \$10K 2003.

Consulting Prof. Jeffrey and Holly Ullman for establishing the Martha and Solomon Scharf Prize and research support of \$200K for BGU, 2006.

Teaching excellence award, Faculty of Natural Sciences, BGU, 2007.

Research excellence award, Faculty of Natural Sciences, BGU, \$10K, 2009.

Consulting Prof. Jeffrey Ullman for establishing support of \$50K for graduate international students at the Computer Science Department of BGU, 2013.

High quality paper award, for five papers in IEEE-NCA 2014 and 2015, Cambridge MA.

Research excellence award, Faculty of Natural Sciences, BGU, 2015.

### **Scientific Publications:**

#### **(a) Authored book**

b1. Dolev, S., *Self-Stabilization*, the MIT Press, 208 pages, March 2000, ISBN 0-262-04178-2.

#### **Book chapters**

bc1. Dolev, S., Kopeetsky, M., Clouser, T., and Nesterenko, M., "Low Overhead RFID Security," *RFID Handbook: Applications, Technology, Security and Privacy*, CRC Press, 2007.

bc2. Dolev, S., and Tzachar, N., "Self-Stabilizing and Self-Organizing Virtual Infrastructures for Mobile Networks," *Theoretical Aspects of Distributed Computing in Sensor Networks*, Springer, 2010.

bc3. Altshuler, Y., Dolev, S., and Elovici, Y., "TTLed Random Walks for Collaborative Monitoring in Mobile and Social Networks," *Handbook of Optimization in Complex Networks*, Springer, 2011.

bc4. Amaxilatis, D., Dolev, S. and Koninis, C., "Adaptable Network Infrastructure," *Distributed Self-organized Societies of Tiny Artefacts: Design & Implementation*, Lulu Publishers, ISBN 5800059245538, 2011.

bc5. Avni, H., Dolev, S., and Kosmas, E., “Proactive Contention Avoidance,” *Transactional Memory: Foundations, Algorithms, Tools and Applications-COST Action Euro-TM IC1001*, 2014.

## (b) Edited volumes

e1. Dolev, S., *The Second Workshop on Self-Stabilizing Systems (WSS95)* 1995.

e2. Dolev, S., *The 20th International Symposium on Distributed Computing (DISC)*, September 18-20 2006, Springer LNCS 4167.

e3. Dolev, S., Haist, T., Oltean, M., *The First International Workshop on Optical Supercomputing (OSC)*, August 2008, Springer LNCS 5172.

e4. Dolev, S., *The Fifth International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS)*, July 2009, Springer LNCS 5804.

e5. Dolev, S., Oltean, M., *The Second International Workshop on Optical Supercomputing, (OSC)* November 2009, Springer LNCS 5882.

e6. Dolev, S., Cobb, J., Fischer, M., Yung, M., *The 12th International Symposium on Stabilization, Safety and Security, (SSS)* September 2010, Springer LNCS 6366.

e7. Dolev, S., Oltean, M., *The Third International Workshop on Optical Supercomputing, (OSC 2010)*, Springer LNCS 6748.

e8. Dolev, S., Oltean, M., *The Fourth International Workshop on Optical Supercomputing, (OSC 2012)*, Springer LNCS 7715.

e9. Halldorsson, M. M., (general chair) Dolev, S., (program chair) *The 33rd Annual ACM Symp. on Principles of Distributed Computing, (PODC 2014)*, July 15-18.

## (c) Chapters in collective volumes — Refereed conference proceedings

c1. Dolev, S., Israeli, A., and Moran, S., “Self Stabilization of Dynamic Systems,” *Proc. of the MCC Workshop on Self-Stabilizing Systems, Microelectronics and Computer Technology Corporation*, Technical Report Number STP-379-89, Austin, 1989. Also in the *Proc. of the IEEE 16th Conference of Electrical and Electronics Engineers in Israel*, 1989.

c2. Dolev, S., Israeli, A., and Moran, S., “Self Stabilization of Dynamic Systems Assuming Only Read/Write Atomicity,” *Proc. of the 9th Annual ACM Symp. on Principles of Distributed Computing, (PODC 1990)*, pp. 103-117, 1990.

c3. Dolev, S., Israeli, A., and Moran, S., “Resource Bounds for Self Stabilizing Message Driven Protocols,” *Proc. of the 10th Annual ACM Symp. on Principles of Distributed Computing, (PODC 1991)*, pp. 281-293, 1991.

- c4. Arora, A., Dolev, S., and Gouda, G. M., "Maintaining Digital Clocks in Step," *Proc. of the 5th International Workshop on Distributed Algorithms*, Springer-Verlag LNCS:579, (WDAG 1991), pp. 71-79, 1991.
- c5. Dolev, S., Israeli, A., and Moran, S., "Uniform Dynamic Self Stabilizing Leader Election," *Proc. of the 5th International Workshop on Distributed Algorithms*, Springer-Verlag LNCS:579, (WDAG 1991), pp. 167-180, 1991.
- c6. Dolev, S. and Welch, L. J., "Wait-Free Clock Synchronization," *Proc. of the 12th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 1993), pp. 97-108, 1993.
- c7. Dolev, S., and Welch, L. J., "Crash Resilient Communication in Dynamic Networks," *Proc. of the 7th International Workshop on Distributed Algorithms*, Springer-Verlag LNCS:725, (WDAG 1993), pp. 129-144, 1993.
- c8. Dolev, S., "Optimal Time Self Stabilization in Dynamic Systems," *Proc. of the 7th International Workshop on Distributed Algorithms*, Springer-Verlag LNCS:725, (WDAG 1993), pp. 160-173, 1993.
- c9. Abu-Amara, H., Coan, B., Dolev, S., Kanevsky, A. and Welch, L. J., "A Fault-Tolerant Layered Approach to Fiber-Optic Networks," *High-Speed Networking and Multimedia Computing*, Arturo A. Rodriguez, Mon-Song Chen, Jacek Maitan, Editors, Proc. SPIE 2188 pp. 380-390, 1994.
- c10. Aabello, J. and Dolev, S., "On the Computational Power of Self-Stabilizing Systems," *Journal of Computing and Information*, Vol. 1, No. 1, Special issue: *Proceedings of the 6th International Conference on Computing and Information*, pp. 585-603 (B10), 1994.
- c11. Awerbuch, B., Patt-Shamir, B., Varghese, G., and Dolev, S., "Self-Stabilization by Local Checking and Global Reset," *Proc. of the 8th International Workshop on Distributed Algorithms*, Springer-Verlag LNCS:857, (WDAG 1994), pp. 326-339, 1994.
- c12. Dolev, S., "Optimal Time Self-Stabilization in Uniform Dynamic Systems," *Proc. of the 6th IASTED/ISMM International Conference on Parallel and Distributed Computing and Systems*, pp. 25-28, 1994.
- c13. Attiya, H., Dolev, S. and Welch, L. J., "Connection Management Without Retaining Information," *28th Hawaii International Conference on System Science* pp. 622-631 1995.
- c14. Dolev, S., and Pradhan, D. K., Welch, L. J., "Modified Tree Structure for Location Management in Mobile Environments," *Fourteenth Annual Joint Conference of IEEE Computer and Communications Societies*, (INFOCOM 1995), Vol. 2, pp. 530-537, 1995.
- c15. Dolev, S., Kate, M., and Welch, L. J., "A Competitive Analysis for Retransmission Timeout," *15th International Conference on Distributed Computing Systems*, (ICDCS 1995), pp. 450-455, 1995.

- c16. Dolev, S. and Welch, L. J., “Self-Stabilizing Clock Synchronization in the Presence of Byzantine Faults,” *Proc. of the Second Workshop on Self-Stabilizing Systems*, (WSS 1995), pp. 9.1-9.12, 1995. Brief announcement in *Proc. of the 14th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 1995), pp. 256, 1995.
- c17. Dolev, S., and Herman, T., “SuperStabilizing Protocols for Dynamic Distributed Systems,” *Proc. of the Second Workshop on Self-Stabilizing Systems*, (WSS 1995), pp. 3.1-3.15, 1995. Brief announcement in *Proc. of the 14th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 1995), pp. 255, 1995.
- c18. Dolev, S., Kranakis, E., Krizanc, D., and Peleg, D., “Bubbles: Adaptive Routing Scheme for High-Speed Dynamic Networks,” *Proc. of the 27th ACM Symposium on Theory of Computing*, (STOC 1995) pp. 528-537, 1995.
- c19. Dolev, S., Gouda, G. M., and Schneider, M., “Memory Requirements for Silent Stabilization,” *Proc. of the 15th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 1996), pp. 27-34, 1996.
- c20. Dolev, S., Kranakis, E., and Krizanc, D., “Baked Potato Routing,” *Proc. of the 4th Israeli Symposium on Theory of Computing and Systems*, (ISTCS 1996), pp. 27-36, 1996. Brief announcement in *Proc. of the 15th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 1996), pp. 210, 1996.
- c21. Afek, Y., and Dolev, S., “Local Stabilizer,” *Proc. of the 5th Israeli Symposium on Theory of Computing and Systems*, (ISTCS 1997), pp. 74-84, 1997. Brief announcement in *Proc. of the 16th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 1997), pp. 287, 1997.
- c22. Dolev, S., and Ostrovsky, R., “Efficient Anonymous Multicast and Reception,” *Proc. of the Seventeenth Annual IACR Crypto Conference*, Springer-Verlag LNCS:1294, (CRYPTO 1997), pp. 395-409, 1997.
- c23. Abraham, U., Dolev, S., Herman, T., and Koll, I., “Self-Stabilizing  $\ell$ -exclusion,” *Proc. of the 3rd Workshop on Self-Stabilizing Systems*, Carleton University Press, *International Informatics Series 7*, (WSS 1997), pp. 48-63, 1997.
- c24. Dolev, S., Kesselman, A., “Non-Preemptive Real-Time Scheduling of Multimedia Tasks,” *Proc. of the 3rd IEEE Symposium on Computers and Communications*, pp. 652-656, 1998.
- c25. Beauquier, J., Delaet, S., Dolev, S., and Tixeuil, S., “Transient Fault Detectors”, *Proc. of the 12th International Symposium on Distributed Computing*, Springer-Verlag LNCS:1499, (DISC 1998), pp. 62-74, 1998.
- c26. Dolev, S., Korach, E., and Yukelson, D., “The Sound of Silence: Guessing Games for Saving Energy in Mobile Environment,” *Eighteenth Annual Joint Conference of IEEE Computer and Communications Societies*, (INFOCOM 1999), pp. 768-775, 1999.
- c27. Dolev, S., Herman, T., “Parallel Composition of Stabilizing Algorithms,” *Proc. of the 4th Workshop on Self-Stabilizing Systems*, (WSS 1999), pp. 25-33, 1999.

- c28. Dolev, S., Kesselman, A., “Bounded Latency Scheduling Scheme for ATM Cells,” *Proc. of the 4th IEEE Symposium on Computers and Communications*, pp. 273-277, 1999.
- c29. Dolev, S., Segala, R., and Shvartsman, A., “Dynamic Load Balancing with Group Communication,” *Proc. of the 6th International Colloquium on Structural Information and Communication Complexity*, (SIROCCO 1999), pp. 111-125, 1999.
- c30. Dolev, S., Fitingof, B., Melkman, A., and Tubman, O., “Smooth and Adaptive Forward Erasure Correcting,” *Proc. of the 21th Conference of Electrical and Electronics Engineers in Israel*, pp. 483-486, 2000.
- c31. Dolev, S., Rajsbaum, S., “Stability of Long-lived Consensus,” *Proc. of the 19th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 2000), pp. 309-318, 2000.
- c32. Dolev, S., Stomp, F., “Safety Assurance via On-Line Monitoring,” *Proc. of the 5th IEEE International Symposium on Autonomous Decentralized Systems* (ISADS 2001) pp. 101-108 2001.
- c33. Beimel, A., Dolev, S., “Buses for Anonymous Message Delivery,” *2nd International Conference on FUN with Algorithms*, Carleton University Press, (FUN 2001), pp. 1-13, 2001.
- c34. Dolev, S., Schiller, E., “Communication Adaptive Self-Stabilizing Group Membership Service,” *Proc. of the 5th Workshop on Self-Stabilizing Systems*, LNCS:2194, (WSS 2001), pp. 81-97, 2001.
- c35. Dolev, S., Herman, T., “Dijkstra’s Self-Stabilizing Algorithm in Unsupportive Environments,” *Proc. of the 5th Workshop on Self-Stabilizing Systems*, LNCS:2194, (WSS 2001), pp. 67-81, 2001.
- c36. Dolev, S., Schiller, E., Welch, L. J., “Random Walk for Self-Stabilizing Group Communication in Ad-Hoc Networks,” *Proc. of the 21st IEEE Symposium on Reliable Distributed Systems* (SRDS 2002), pp. 70-79, 2002. Brief Announcement in the *Proc. of the 21st Annual ACM Symp. on Principles of Distributed Computing*, (PODC 2002), pp. 259, 2002.
- c37. Dolev, S., Kat, R., “Self-Stabilizing Distributed File Systems,” *International Workshop on Self-Repairing and Self-Configurable Distributed Systems*, (RCDS 2002), *Proc. of the 21st IEEE Symposium on Reliable Distributed Systems* (SRDS 2002), pp. 384-389, 2002. Also presented at the *IBM’s Storage Systems Technology Workshop*, IBM Haifa Labs, November 2002.
- c38. Dolev, S., Schiller, E., “Self-Stabilizing Group Communication in Directed Networks,” *Proc. of the 6th International Symposium on Self-Stabilizing Systems*, Springer-Verlag LNCS 2704, (SSS 2003), pp. 61-76, 2003 and *Supplemental Volume of the 2003 International Conference on Dependable Systems and Networks*, *IEEE Computer Society*, (DSN 2003), pp. W-155, 2003.
- c39. Dolev, S., and Haviv, Y. “Self-Stabilizing Microprocessor, Analyzing and Overcoming Soft-Errors,” *17th International Conference on Architecture of Computing Systems* Springer-Verlag LNCS 2981, (ARCS 2004), pp. 31-46, 2004. also in *Supplemental Volume of the 2003 International Conference on Dependable Systems and Networks*, *IEEE Computer Society*, (DSN 2003), pp. B-18, B-19, 2003. Also presented at the *IBM’s Compiler and Architecture Seminar*, IBM Haifa Labs, November 2002.

- c40. Dolev, S., Gilbert, S., Lynch, N. A., Shvartsman, A., Welch, J., “GeoQuorum: Implementing Atomic Memory in Ad Hoc Networks,” *17th International Conference on Principles of Distributed Computing*, Springer-Verlag LNCS 2848, (DISC 2003), pp. 306-320, 2003.
- c41. Brukman, O., Dolev, S. and Kolodner, H., “Self-Stabilizing Autonomic Recoverer for Eventual Byzantine Software,” *IEEE International Conference on Software-Science, Technology & Engineering*, (SwSTE03), pp. 20-29, Herzelia, 2003. Also in the *Proc. of Workshop on Adaptive Distributed Systems* (WADiS03), Sorrento, Italy, 2003.
- c42. Dolev, S. and Yagel, R., “Toward Self-Stabilizing Operating Systems,” *2nd International Workshop on Self-Adaptive and Autonomic Computing Systems* (SAACS04), pp. 684-688, 2004. *IEEE International Conference on Software-Science, Technology & Engineering*, Industrial Track, Doctoral Symposium, Posters, (SwSTE03), Herzelia, November 2003.
- c43. Dolev, S., Herman, T., and Lahiani, L., “Polygonal Broadcast, Secret Maturity and the Firing Sensors,” *Third International Conference on Fun with Algorithms* (FUN2004), pp. 41-52, May 2004. Also in the *Proc. of the 2nd IEEE Upstate New York Workshop on Sensor Networks*, October, 2003. Also brief announcement in *Proc. of the 23th Annual ACM Symp. on Principles of Distributed Computing*, pp. 391, (PODC 2004), 2004.
- c44. Dolev, S., Gilbert, S., Lynch, A. N., Schiller, E., Shvartsman, A., and Welch, J. “Virtual Mobile Nodes for Mobile Ad Hoc Networks,” *International Conference on Principles of Distributed Computing*, (DISC 2004), pp. 230-244, 2004. Also brief announcement in *Proc. of the 23th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 2004), pp. 385, 2004.
- c45. Dolev, S., and Kat, R. I., “HyperTree for Self-Stabilizing Peer-to-Peer Systems,” *3rd IEEE International Symp. on Network Computing and Applications* (IEEE NCA04), pp. 25-32, 2004.
- c46. Beimel, A., Dolev, S., and Singer, N., “RT oblivious erasure correcting,” *IEEE Information Theory Workshop*, San Antonio, 2004. Presented in the *Fourth Haifa Workshop on Interdisciplinary Applications of Graph Theory, Combinatorics and Algorithms*, May 2004. Also brief announcement in *Proc. of the 23th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 2004), pp. 393, 2004.
- c47. Davidovitch, L., Dolev, S., and Rajsbaum, S., “Consensus Continue? Stability of Multi-Valued Continuous Consensus!,” *Proc. of the sixth workshop on Geometric and Topological Methods in Concurrency and Distributed Computing*, (GETCO 2004), pp. 21-24, BRICS Notes Series NS-04-2, ISSN 0909-3206, September 2004. Presented in the *Fourth Haifa Workshop on Interdisciplinary Applications of Graph Theory, Combinatorics and Algorithms*, May 2004. Also in *Electronic Notes in Theoretical Computer Science*, (ENTCS) 230, pp. 23-38, 2009.
- c48. Dolev, S. and Gersten, O., “Robust Active SuperTier Systems,” *IEEE International Conference on Software-Science, Technology & Engineering*, (SwSTE05), pp. 23-33, 2005.
- c49. Dolev, S., Gilbert, S., Lahiani, L., Lynch, N., and Nolte, T., “Timed Virtual Stationary Automata for Mobile Networks,” *Proc. of the 2005 International Conference On Principles Of Distributed Systems*, (OPODIS), pp. 130-145, LNCS, 2005. Also **invited paper** in *Forty-Third*

*Annual Allerton Conference on Communication, Control, and Computing*. Also, brief announcement in *Proc. of the 24th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 2005), pp. 323, 2005. Technical Report MIT-LCS-TR-979, Massachusetts Institute of Technology, 2005.

c50. Dolev, S., Gilbert, S., Schiller, E., Shvartsman, A., and Welch, J. “Autonomous Virtual Mobile Nodes,” *Third ACM/SIGMOBILE Workshop on Foundations of Mobile Computing*, (DIALM/POMC), pp. 62-69, 2005. Brief announcement in *Proc. of the 17th International Conference on Parallelism in Algorithms and Architectures*, (SPAA 2005), pp. 215, 2005. Technical Report MIT-LCS-TR-992, Massachusetts Institute of Technology, 2005.

c51. Dolev, S., Haviv, Y., and Sagiv, M., “Self-Stabilization Preserving Compiler,” *Proc. of the 7th International Symposium on Self-Stabilizing Systems*, (SSS 2005), LNCS 3764, pp. 81-95, 2005.

c52. Dolev, S., and Yagel, R., “Memory Management for Self-Stabilizing Operating Systems,” *Proc. of the 7th International Symposium on Self-Stabilizing Systems*, (SSS 2005), LNCS 3764, pp. 113-127, 2005. Also a poster in the *ACM 20th Symposium on Operating Systems Principles*, (SOSP) 2005, and at the *1st EuroSys Doctoral Workshop* (SOSP 2005).

c53. Dolev, S., Lahiani, L., Lynch, N., and Nolte, T., “Self-Stabilizing Mobile Location Management and Message Routing,” *Proc. of the 7th International Symposium on Self-Stabilizing Systems*, (SSS 2005), LNCS 3764, pp. 96-112, 2005. Also Technical Report MIT-LCS-TR-999, Massachusetts Institute of Technology, 2005.

c54. Brukman, O., and Dolev, S., “Recovery Oriented Programming,” *Proc. of the 8th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS 2006), LNCS 4280, pp. 152-168, 2006. Also a poster (with Shiman, M.) in the *ACM 20th Symposium on Operating Systems Principles*, (SOSP), 2005.

c55. Shaked, N., Rosen, Y., Messika, S., Dolev, S., “Optical Implementation of Combinatorial Processor,” A poster in the *Bi-National (Israeli-Italian) Workshop on Optronics (Il-It-Opt)*, November 2005. Also in Shaked, N., Simon, G., Tabib, T., Mesika, S., Dolev, S., Rosen, J., “Optical processor for solving the traveling salesman problem (TSP),” *Proc. of SPIE Symposium on Optics & Photonics the Optical Information Systems IV Conference*, Vol. 63110G-1, Aug. 2006, San Diego.

c56. Dolev, S., and Yagel, R., “Self-Stabilizing Device Drivers,” *Proc. of the 8th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS 2006), LNCS 4280, pp. 276-289, November, 2006.

c57. Dolev, S., and Kopeetsky, M., “Secure Communication for RFIDs Proactive Information Security within Computational Security,” *Proc. of the 8th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS 2006), LNCS 4280, pp. 290-303, November, 2006.

c58. Kat, R., Kedar, D., Dolev, S., Arnon, S., “Searching a Lion in the Desert Acquisition Algorithms for Networks of Sensors,” *Proc. of the 24th IEEE Conference of Electrical and Electronics Engineers in Israel*, November, 2006.

- c59. Dolev, S., and Tzachar, N., “Empire of Colonies: Self-Stabilizing and Self-Organizing Distributed Algorithms,” *Proc. of the 2006 International Conference On Principles Of Distributed Systems*, (OPODIS), pp. 230-243, LNCS 4305, December, 2006.
- c60. Dolev, S., Kat, R., and Schiller, E., “When Consensus Meets Self-Stabilization, Self-Stabilizing Failure-Detector, Consensus and Replicated State-Machine,” *Proc. of the 2006 International Conference On Principles Of Distributed Systems*, (OPODIS), pp. 45-63, LNCS 4305, December, 2006.
- c61. Brukman, O., Dolev, S., Haviv, Y., Yagel, R., “Self-Stabilization as a Foundation for Autonomous Computing,” *Proc. of the Second IEEE International Conference on Availability, Reliability and Security (ARES07), Workshop on Foundation of Fault-tolerance Distributed Computing*, (FOFDC 2007), April, pp. 991-998, 2007.
- c62. Dolev, S., Fitoussi, H., Leshem, I., Shapira, S., Shaked, N., “Optical Implementation of a Micro-Processor for Solving the Hamiltonian-Path Problem,” *Proc. of the 11th IEEE Meeting on Optical Engineering and Science in Israel*, (1st OASIS), March, 2007.
- c63. Dolev, S., Fitoussi, H., “The Traveling Beams, Optical Solutions for Bounded NP-Complete Problems,” *Fourth International Conference on Fun with Algorithms (FUN2007)*, LNCS 4475, pp. 120-134, June 2007.
- c64. Dolev, S., Gilbert, S., Guerraoui, R., Newport, C., “Gossiping in a Multi-Channel Radio Network,” *International Conference on Principles of Distributed Computing*, (DISC 2007), pp. 208-222, September, 2007.
- c65. Dolev, S., Korach, E., and Uzan, G., “Magnifying Computing Gaps, Establishing Encrypted Communication Over Unidirectional Channels,” *Proc. of the 9th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2007)*, pp. 253-265, November 2007.
- c66. Dolev, S., Yagel, R., “Stabilizing Trust and Reputation for Self-Stabilizing Efficient Hosts in spite of Byzantine Guests,” *Proc. of the 9th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2007)*, pp. 266-280, November 2007. Also in SYSTOR, IBM Haifa Systems & Storage Conference, Virtualization Workshop, October 2007.
- c67. Dolev, S., Lahiani, L., Yung, M., “Secret Swarm Unit, Reactive k-Secret Sharing,” *Proc. of the 8th International Conference on Cryptology in India*, LNCS 4859, (INDOCRYPT 2007), pp. 123-137, December 2007.
- c68. Brukman, O., Dolev, S., “Self-\* Programming Run-Time Parallel Control Search for Reflection-Box,” *Proc. of the 6th NASA Langley Formal Methods Workshop*, April 2008. A poster in the *Second IEEE International Conference on Self-Adaptive and Self-Organizing Systems*, (SASO) 2008, and in *Automata: from Mathematics to Applications*, (AutoMathA) 2009.
- c69. Dolev, S., Gilbert, S., Guerraoui, R., Newport, C., “Secure Communication over Radio Channels,” *Proc. of the 27th Annual ACM Symp. on Principles of Distributed Computing*, (PODC), pp. 105-114, 2008.



- c70. Dolev, S., Hendler, D., Suissa, A., “CAR-STM: Scheduling-Based Collision Avoidance and Resolution for Software Transactional Memory,” *Proc. of the 27th Annual ACM Symp. on Principles of Distributed Computing*, (PODC), pp. 125-134, 2008.
- c71. Puzis, R., Klippel, M., D., Elovici, Y., Dolev, S., “Optimization of NIDS placement for protection of intercommunicating critical infrastructures,” *First European Conference on Intelligence and Security Informatics* (EuroISI), pp. 191-203, 2008.
- c72. Moskovitch, R., Feher, C., Tzachar, N., Berger, E., Gittleman, M., Dolev, S., Elovici, E., “Unknown Malcode Detection Using OPCODE Representation,” *First European Conference on Intelligence and Security Informatics* (EuroISI), pp. 204-215, 2008.
- c73. Tamir, D., Shaked, N., Wilson, P., Dolev, S., “Electro-Optical DSP of Tera Operations per Second and Beyond,” *Proc. of the First International Workshop on Optical Super Computing* (OSC), LNCS 5172, pp. 56-69, 2008.
- c74. Anter, A., Dolev, S., “Optical Solution for Hard in Average #P-Complete Instances (Using Exponential Space for Solving Instances of the Permanent),” *Proc. of the 12th IEEE Meeting on Optical Engineering and Science in Israel*, (2nd OASIS), March, 2009.
- c75. Dolev, S., Frenkel, S., “Extending the Scope of Self-Correcting,” *13th International Conference Applied Stochastic Models and Data Analysis*, (ASMDA), pp. 458-462, Vilnius, June 2009. Also in “Probabilistic Approaches for Amplifying Error Correction of Computing Devices, State-of-the Art and Ways for Improvement,” *Proc. of the XXIX International Seminar on Stability Problems for Stochastic Models*, pp. 72-73, Svetlogorsk, Russia, 2011.
- c76. Dolev, S., Gilbert, S., Guerraoui, R., Kuhan, F., Newport, C., “The Wireless Synchronization Problem,” *Proc. of the 28th Annual ACM Symp. on Principles of Distributed Computing*, (PODC), 2009.
- c77. Dolev, S., and Kopeetsky, M., “Anonymous Transactions in Computer Networks,” *Proc. of the 11th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS) 2009.
- c78. Dolev, S., Elovici, Y., Kesselman, A., and Zilberman, P., “Trawling Traffic under Attack, Overcoming DDoS Attacks by Target-Controlled Traffic Filtering,” *Proc. of the 2nd IEEE International Workshop on Reliability, Availability, and Security* (PDCAT-WRAS) 2009.
- c79. Dolev, S., and Sadetsky, M., “Heuristic Certificates via Approximations,” *Proc. of the 2nd IEEE International Workshop on Reliability, Availability, and Security* (PDCAT-WRAS) 2009.
- c80. Delaet, S., Dolev, S., and Peres, O., “Safe and Eventually Safe: Comparing Stabilizing Algorithms and non-Stabilizing Algorithms on a Common Ground,” *Proc. of the 2009 International Conference On Principles Of Distributed Systems*, (OPODIS), December, pp. 315-329, 2009. Also brief announcement at SSS 2009.
- c81. Dieudonné, Y., Dolev, S., Petit, F., Segal, M., “Deaf, Dumb, and Chatting Asynchronous Robots, Enabling Distributed Computation and Fault-Tolerance Among Stigmergic Robots,” *Proc.*

of the 2009 International Conference On Principles Of Distributed Systems, (OPODIS), December, pp. 71-85, 2009. Also brief Announcement PODC 2009.

c82. Dolev, S. and Nir, Y., “Optical Designs for Non-deterministic Turing Machine,” *Second International Workshop on Optical Supercomputing (OSC)*, pp. 47-55, 2009.

c83. Tamir, D., Shaked, N. T., Geerts, W. J., Dolev, S., “Combinatorial Optimization Using Electro-Optical Vector by Matrix Multiplication Architecture,” *Second International Workshop on Optical Supercomputing (OSC)*, pp. 130-143, 2009.

c84. Chatzigiannalis, I., Dolev, S., Fekete, P. S., Michail, O., and Spirakis, G. P., “Not All Fair Probabilistic Schedulers are Equivalent,” *Proc. of the 2009 International Conference On Principles Of Distributed Systems*, (OPODIS), December, pp. 33-47, 2009.

c85. Dolev, S., Gilboa, N., and Kopeetsky, M., “Computing Trust Anonymously in the Presence of Curious Users,” *Proc. of the 2010 International Symposium on Stochastic Models Reliability Engineering, Life Science and Operations Management*, (SMRL10), 2010. Also additional results in, *Proc. of the 25th ACM Symposium on Applied Computing (SAC-TRECK)*, pp. 1460-1465, 2010.

c86. Dolev, S., and Tzachar, N., “Spanders: Distributed Spanning Expanders,” *Proc. of the 25th ACM Symposium on Applied Computing (SAC-SCS)*, pp. 1309-1314, 2010. Selected as one of the best papers to be invited to a journal special issue.

c87. Altshuler, Y., Dolev, S., Elovici, Y., and Aharony, N., “TTLed Random Walks for Collaborative Monitoring,” *Second IEEE International Workshop on Network Science For Communication Networks*, (NetSciCom), 2010. Also presented in NetMob 2010.

c88. Dolev, S., Segal, M., and Shpungin, H., “Bounded-Hop Strong Connectivity for Flocking Swarms,” *8th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks*, (WiOpt) pp. 177-185, 2010.

c89. Dolev, S., Mendelson, A., and Shilman, I., “Semantical Cognitive Scheduling,” *International Workshop on Software Knowledge*, (SKY) 2010.

c90. Dolev, S., Leshem, G., and Yagel, R., “Purifying Data by Machine Learning with Certainty Levels,” *3rd ACM Workshop on Reliability, Availability and Security*, (WRAS) 2010. Also presented at BISFAI 2009.

c91. Blin, L., Dolev, S., Gradinariu Potop-Butucaru, M., and Rovedakis, S., “Fast Self-Stabilizing Minimum Spanning Tree Construction,” *International Conference on Principles of Distributed Computing*, (DISC 2010), pp. 480-494, 2010. Also in *AlgoTel*, 2011.

c92. Ben-Shahar, O., Dolev, S., Dolgin, A., and Segal, M., “Direction Election in Flocking Swarms,” *6th ACM/SIGMOBILE Workshop on Foundations of Mobile Computing*, (DIALM/POMC), pp. 73-80, 2010.

- c93. Dolev, S., Gilboa, N., Kopeetsky, M., Persiano, G., and Spirakis, P., “Information Security for Sensors by Overwhelming Random Sequences and Permutations,” *6th ACM/SIGMOBILE Workshop on Foundations of Mobile Computing, (DIALM/POMC)*, pp. 43-48, 2010. Poster in the *Proc. of the 17th ACM Conference on Computer and Communications Security, (CCS)*, pp. 669-671, 2010.
- c94. Dolev, S., Frenkel, S., “Multiplication Free Holographic Coding,” *Proc. of the IEEE 26th Convention of Electrical and Electronics Engineers in Israel*, 2010.
- c95. Bouzid, Z., Dolev, S., Gradinariu Potop-Butucaru, M., Tixeuil, S., “RoboCast: Asynchronous Communication in Robot Networks,” *Proc. of the International Conference On Principles Of Distributed Systems, (OPODIS)*, pp. 16-31, December, 2010.
- c96. Dolev, S., Garay, J., Gilboa, N., Kolesnikov, V., “Secret Sharing Krohn-Rhodes: Private and Perennial Distributed Computation,” *Innovations in Computer Science, (ICS)*, January, 2011. Also “Private and Perennial Distributed Computation”, in *Workshop on Cryptography and Security in Clouds (CSC)* 2011.
- c97. Dolev, S., Dubois, S., Potop-Butucaru, M., and Tixeuil, S., “Communication over Unreliable non-FIFO Channels: Stabilizing Optimal Solution,” *AlgoTel*, 2011.
- c98. Tamir, D., Shaked, N., Geerts, W., and Dolev, S., “Compressive Sensing of Object Signature,” *Proc. of the Third International Workshop on Optical Supercomputing (OSC)*, 2010.
- c99. Cohen, E., Dolev, S., Frenkel, S., Puzis, R., and Rosenblit, M., “Nanotechnology Based Optical Solution for NP-Hard Problems,” *Proc. of the Third International Workshop on Optical Supercomputing (OSC)*, 2011.
- c100. Dolev, S., Fandina, N., and Rosen, J., “Holographic Computation of Succinct ExpTime Complete Problems,” *Proc. of the Third International Workshop on Optical Supercomputing (OSC)*, 2011.
- c101. Zilberman, P., Katz, G., and Elovici, Y., Shabtai, A., Dolev, S. “Analyzing Group Communication for Preventing Data Leakage via Email,” *IEEE Intelligence and Security Informatics (ISI)* 2011.
- c102. Barenboim, L., Dolev, S., and Ostrovsky, R., “Deterministic and Energy-Optimal Wireless Synchronization,” *25th International Conference on Principles of Distributed Computing, (DISC 2011)*, 2011.
- c103. Dolev, S., Gilbert, S., Khabbazian, M., and Newport, C., “Leveraging Channel Diversity to Gain Efficiency and Robustness for Wireless Broadcast,” *25th International Conference on Principles of Distributed Computing, (DISC 2011)*, 2011.
- c104. Alon, N., Attiya, H., Dolev, S., Dubois, S., Gradinariu, M., Tixeuil, S., “Pragmatic Self-Stabilization of Atomic Memory in Message Passing Systems,” *Proc. of the 13th International*

*Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2011. Also brief announcement in International Conference on Principles of Distributed Computing, (DISC) pp. 525-527, 2010.*

c105. Hermoni, O., Gilboa, N., Felstaine, E., Elovici, Y and Dolev, S., “Rendezvous Tunnel for Anonymous Publishing,” *Proc. of the 13th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2011. Poster in Proc. of the 17th ACM Conference on Computer and Communications Security, (CCS), pp. 690-692, 2010.*

c106. Amaxilatis, D., Chatzigannakis, I., Dolev, S., Koninis, C., Pyrgelis, A., and Spirakis, P., “Adaptive Hierarchical Network Structures for Wireless Sensor Networks,” *Third International ICST Conference on Ad Hoc Networks, (ADHOCNETS) 2011.*

c107. Cohen, A., Dolev, S., Leshem, G., “Sensor Fusion: from Dependence Analysis Via Matroid Bases to Online Synthesis,” *Seventh International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS), July 2011.*

c108. Dolev, S., Hanemann, A., Schiller, M. E., Sharma, S., “Self-Stabilizing End-to-End Communication in Bounded Capacity, Omitting, Duplicating and non-FIFO Dynamic Networks,” *Proc. of the 14th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2012.*

c109. Puzis, R., Zilberman, P., Elovici, Y., Dolev, S., and Brandes, U., “Heuristics for Speeding up Betweenness Centrality Computation,” *SocialCom, 2012.*

c110. Anter, A., Dolev, S., and Shamir, J., “Optical Energy Efficient Asynchronous Automata and Circuit,” *Proc. of the Fourth International Workshop on Optical Supercomputing (OSC), pp. 92-104, 2012.*

c111. Tamir, J., Tamir, D., and Dolev, S., “Object Signature Acquisition through Compressive Scanning,” *Proc. of the Fourth International Workshop on Optical Supercomputing (OSC), pp. 105-116, 2012.*

c112. Daltrophe, H., Dolev, S., Lotker, Z., “Big Data Interpolation An Efficient Sampling Alternative for Sensor Data Aggregation,” *Eighth International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS), 2012. Also accepted as the base for invitation to participate in the World Summit on Big Data and Organization Design, Paris, May 2013.*

c113. Dolev, S., Frenkel, S., Tamir, D., “Preserving Hamming Distance in Arithmetical and Logical Operations,” *Proc. of the IEEE 27th Convention of Electrical and Electronics Engineers in Israel, 2012.*

c114. Dolev, S., Frenkel, S., Hanemann, A., “Towards Holographic “Brain” Memory Based on Randomization and Walsh-Hadamard Transformation,” *Proc. of the 12 Granada Seminar on Statistical and Computational Physics, Physics, Computation, and the Mind, American Institute of Physics (AIP), 2012. Also presented in the 12th Bar-Ilan Symposium on the Foundations of Artificial Intelligence, BISFAI 2013.*

- c115. Dolev, S., Dubios, S., Gradinariu, M., Tixeuil, S., “Fail-stop Resilient and Pseudo-Stabilizing Atomic Registers,” *Proc. of the International Conference On Principles Of Distributed Systems*, (OPODIS), December, 2012.
- c116. Dolev, S., Fandina, N., Ximing, L., “Nested Merkle’s Puzzles Against Sampling Attacks,” *8th China International Conference on Information Security and Cryptology* (Inscrypt), Nov. 2012.
- c117. Dolev, S., Gilboa, N., Kopeetsky, M., “Permanent Revocation in Attribute Based Broadcast Encryption,” *ASE International Conference on Cyber Security*, Dec. 2012. Poster in *Proc. of the 17th ACM Conference on Computer and Communications Security*, (CCS), pp. 757-760, 2011.
- c118. Dolev, S., Fandina, N., Gutfreund, D., “Succinct Permanent is NEXP-hard with Many Hard Instances,” *8th International Conference on Algorithms and Complexity* (CIAC) 2013. Also in *Electronic Colloquium on Computational Complexity* 19:86 (ECCC) 2012.
- c119. Dolev, S., Fatourou, P., Kosmas, E., “Abort Free Semantic<sup>TM</sup> by Dependency Aware Scheduling of Transactional Instructions,” *8th Workshop on Transactional Computing* (TRANS-ACT), also presented in *Euro-TM Workshop on Transactional Memory* (WTM), 2013 and in *5th Workshop on the Theory of Transactional Memory*, and with Avni, H., in *International Conference on NETworked sYStems*, (NETYS) 2014.
- c120. Liba, O., Dolev, S., Schiller, E., “Self-Stabilizing Byzantine Resilient Topology Discovery and Message Delivery,” *The International Conference on NETworked sYStems* (NETYS) 2013. Also brief announcement in *Proc. of the 15th International Symposium on Stabilization, Safety, and Security of Distributed Systems*, (SSS) 2013.
- c121. Dolev, S., Garay, J., Gilboa, N., Kolesnikov, V., Yuditsky, L., “Towards Efficient Private Distributed Computation on Unbounded Input Streams,” *11th International Conference on Applied Cryptography and Network Security* (ACNS) 2013. Also brief announcement in the *International Symposium on Distributed Computing* (DISC) pp. 431-432, 2012.
- c122. Daltrophe, H., Dolev, S., Lotker, Z., “Probabilistic Connectivity Threshold for Directional Antenna Widths,” *Proc. of the 20th International Colloquium on Structural Information and Communication Complexity*, (SIROCCO), 2013.
- c123. Messalem, G., Mimran, D., Dolev, S., Heimlich, I., Kopeetsky, M., Shapira, B., Elovici, Y., “Exploiting Simultaneous Usage of Different Wireless Interfaces for Security and Mobility,” *Proc. of the 2nd IEEE International Conference on Future Generation Communication Technologies*, (FGCT), 2013.
- c124. Blanchard, P., Dolev, S., Beauquier, J., and Delaet, S., “Practically Self-Stabilizing Paxos Replicated State-Machine,” *International Conference on NETworked sYStems*, (NETYS) 2014.
- c125. Binun, A., Bloch, M., Dolev, S., Kahil, M.R., Menuhin, B., Yagel, R., Coupaye, T., Lacoste, M., Wailly, A., “Self-Stabilizing Virtual Machine Hypervisor Architecture for Resilient Cloud,” *IEEE International Workshop on Dependable and Secure Services*, (DSS) 2014. Also a poster in ACM SYSTOR 2014.

- c126. Dolev, S., Kahil, M.R., and Yagel, R., “Stateless Stabilization Bootstrap,” *Proc. of the 16th International Symposium on Stabilization, Safety, and Security of Distributed Systems*, (SSS 2014) 2014.
- c127. Dolev, S., Krzwiecki, L., Panwar, N., and Segal, M., “Dynamic Attribute Based Vehicle Authentication,” *Proc. of the 13th IEEE International Symposium on Network Computing and Applications*, (IEEE NCA) 2014.
- c128. Dolev, S., Tzur-David, S., “SDN-Based Private Interconnection,” *Proc. of the 13th IEEE International Symposium on Network Computing and Applications*, (IEEE NCA) 2014.
- c129. Dolev, S., Kopeetsky, M., and Frenkel, S., “Entropy Adaptive On-Line Compression,” *Proc. of the 13th IEEE International Symposium on Network Computing and Applications*, (IEEE NCA) 2014. Also brief announcement in SSS 2014.
- c130. Afrati, F., Dolev, S., Sharma, S., and Ullman, J. “Bounds for Overlapping Interval Join on MapReduce,” *Algorithms and Systems for MapReduce and Beyond Workshop*, (BeyondMR) 2015.
- c131. Afrati, F., Dolev, S., Korach, E., Sharma, S., and Ullman, J. “Assignment Problems of Different-Sized Inputs in MapReduce,” *Algorithms and Systems for MapReduce and Beyond Workshop*, (BeyondMR) 2015. Also brief announcement in DISC 2014.
- c132. Dolev, S., Gilboa, N., Li, X. “Accumulating Automata and Cascaded Equations Automata for Communicationless Information Theoretically Secure Multi-Party Computation,” *ASIACCS Security in Cloud Computing (SCC) Workshop*, 2015.
- c133. Bonomi, S., Dolev, S., Potop-Butucaru, M., Raynal, M., “Stabilizing Server-Based Storage in Byzantine Asynchronous Message-Passing Systems,” *Proc. of the 34th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 2015), 2015.
- c134. Dolev, S., Georgiou, C., Marcoullis, I. and Schiller, E., “Self-Stabilizing Virtual Synchrony,” *Proc. of the 17th International Symposium on Stabilization, Safety, and Security of Distributed Systems*, (SSS 2015) 2015. Brief announcement DISC 2015.
- c135. Brownstein, D., Dolev, S., and Gilboa, N., “Functional Encryption for Cascade Automata,” *Proc. of the 17th International Symposium on Stabilization, Safety, and Security of Distributed Systems*, (SSS 2015) 2015.
- c136. Dolev, S., and Li, Y., “Secret Shared Random Access Machine,” *Proc. of the International Workshop on Algorithmic Aspects of Cloud Computing* (ALGO CLOUD 2015).
- c137. Avni, H., Dolev, S., Gilboa, N., and Li, X., “SSSDB: Database with Private Information Search,” *Proc. of the International Workshop on Algorithmic Aspects of Cloud Computing* (ALGO CLOUD 2015).
- c138. Mattetti, M., Shulman-Peleg, A., Allouche, Y., Corradi, A., Dolev, S., Foschini, L., “Securing the infrastructure and the workloads of linux containers,” *Proc. of the 1st IEEE Workshop on Security and Privacy in the Cloud* (SPC 2015).

- c139. Dolev, S., Hanemann, A., and Puzis, R., “Brain inspired automatic directory,” *Proc. of the International Symposium on Stochastic Models in Reliability Engineering, Life Science and Operations Managemen*, (SMRLO 2016).
- c140. Delaet, S., Dolev, S., Khankin, D., Tzur-David, S., and Godinger, T., “Seemless SDN Route Updates,” *Proc. of the 14th IEEE International Symposium on Network Computing and Applications*, (IEEE NCA) 2015.
- c141. Dolev, S., Krzwiecki, L., Panwar, N., and Segal, M., “Optical PUF for Non-Forwardable Vehicle Authentication,” *Proc. of the 14th IEEE International Symposium on Network Computing and Applications*, (IEEE NCA) 2015.
- c142. Binun, A., Dolev, S., Li, Y., “Archiving Programs for the Future,” *Proc. of the 6th International Workshop on Software Knowledge (SKY)* 2015.
- c143. Dolev, S., Li, Y., Sharma, S., “Private and Secure Secret Shared MapReduce,” *Proc. of the 30th IFIP WG 11.3 Working Conference on Data and Applications Security and Privacy*, (DBSec) 2016.
- c144. Dolev, S., EIDefrawy, K., Lampkins, J., Ostrovsky, R., Yung, M., “Proactive Secret Sharing with a Dishonest Majority,” *10th International Conference, Security and Cryptography for Networks*, SCN 2016. Brief announcement in *Proc. of the 35th Annual ACM Symp. on Principles of Distributed Computing*, (PODC 2016), 2016.
- c145. Daltrophe, H., Dolev, S., Lotker, Z., “Mending the Big-Data Missing Information,” *Proc. of the International Conference on the Science of Electrical Engineering (ICSEE)*, 2016. Brief announcement in *International Symposium on Distributed Computing (DISC)* 2016.
- c146. Dolev, S., Frenkel, S., Rosenblit, M., Narayanan, R., P., Venkateswarlu, K., M. “In-Vivo Energy Harvesting Nano Robots,” *Proc. of the International Conference on the Science of Electrical Engineering (ICSEE)*, 2016. Poster in the *4th Workshop on Biological Algorithms (BDA)* 2016).
- c147. Derbeko, P., Dolev, S., Gudes, E., and Ullman, J., “Concise Essence-Preserving Big Data Representation,” *3rd International Workshop on Privacy and Security of Big Data (PSBD)* 2016), in conjunction with *2016 IEEE International Conference on Big Data (IEEE BigData)* 2016).
- c148. Dolev, S., Georgiou, C., Marcoullis, I. and Schiller, E., “Self-Stabilizing Reconfiguration,” *International Conference on NETWORKED sYSTEMS*, (NETYS) 2017.
- c149. Dolev, S., and Khankin, D., “Monitorability Bounds via Expander, Sparsifier and Random Walks. The Interplay Between On-Demand Monitoring and Anonymity,” *International Conference on NETWORKED sYSTEMS*, (NETYS) 2017.

**(d) Refereed articles in scientific journals:**

- j1. Arora, A., Dolev, S., and Gouda, G. M., "Maintaining Digital Clocks in Step," *Parallel Processing Letters*, Vol. 1, No. 1, pp. 11-18, 1991.
- j2. Dolev, S., Israeli, A., and Moran, S., "Self Stabilization of Dynamic Systems Assuming Only Read Write Atomicity," *Distributed Computing*, special issue on self-stabilization, Vol. 7, pp. 3-16, 1993.
- j3. Collin, Z., and Dolev, S., "Self-Stabilizing Depth First Search," *Information Processing Letters*, Vol. 49, pp. 297-301, 1994.
- j4. Dolev, S., Israeli, A., and Moran, S., "Analyzing Expected Time by Scheduler-Luck Games," *IEEE Transactions on Software Engineering*, Vol. 21, No. 5, pp. 429-439, May 1995.
- j5. Attiya, H., Dolev, S. and Welch, L. J., "Connection Management Without Retaining Information," *Information and Computation*, Vol. 123, No. 2, pp. 155-171, Dec. 1995.
- j6. Dolev, S., and Pradhan, D. K., Welch, L. J., "Modified Tree Structure for Location Management in Mobile Environments," *Computer Communications*, special issue on mobile computing, Vol. 19, No. 4, pp. 335-345, April 1996.
- j7. Abu-Amara, H., Coan, B., Dolev, S., Kanevsky, A. and Welch, L. J., "Self-Stabilizing Topology Maintenance Protocols for High-Speed Networks," *IEEE/ACM Transactions on Networking*, Vol. 4, No. 6, pp. 902-912, December 1996.
- j8. Abello, J. and Dolev, S., "On the Computational Power of Self-Stabilizing Systems," *Theoretical Computer Science*, Vol. 182, pp. 159-170, 1997.
- j9. Dolev, S., and Welch, L. J., "Crash Resilient Communication in Dynamic Networks," *IEEE Transactions on Computers*, Vol. 46, No. 1, pp. 14-26, January 1997.
- j10. Dolev, S., "Possible and Impossible Self-Stabilizing Digital Clock Synchronization in General Graphs," *Journal of Real-Time Systems*, special issue on Global Time in Large Scale Distributed Real-Time Systems, Vol. 12, No. 1, pp. 95-107, January 1997.
- j11. Dolev, S., Israeli, A. and Moran, S., "Resource Bounds for Self Stabilizing Message Driven Protocols," *SIAM Journal on Computing*, Vol. 26, No. 1, pp. 273-290, February 1997.
- j12. Dolev, S. and Welch, L. J., "Wait-Free Clock Synchronization," *Algorithmica*, Vol. 18, pp. 486-511, 1997.
- j13. Dolev, S., Israeli, A., and Moran, S., "Uniform Dynamic Self-Stabilizing Leader Election," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 8 No. 4, pp. 424-440, April 1997.



- j14. Dolev, S., “Self-Stabilizing Routing and Related Protocols,”  
*Journal of Parallel and Distributed Computing*, Vol. 42, pp. 122-127, May 1997.
- j15. Dolev, S., and Herman, T., “SuperStabilizing Protocols for Dynamic Distributed Systems,”  
*Chicago Journal of Theoretical Computer Science*, 3(4) special issue on self-stabilization, 1997.
- j16. Dolev, S., “Optimal Time Self-Stabilization in Uniform Dynamic Systems,”  
*Parallel Processing Letters*, Vol. 8 No. 1, pp. 7-18, 1998.
- j17. Dolev, S., Kranakis, E., Krizanc, D., and Peleg, D., “Bubbles: Adaptive Routing Scheme for High-Speed Dynamic Networks,”  
*SIAM Journal on Computing*, Vol. 29 No. 3, pp. 804-833, 1999.
- j18. Dolev, S., Kate, M., and Welch, L. J., “A Competitive Analysis for Retransmission Timeout,”  
*Networks*, Vol. 34 No.1, pp. 73-80, 1999.
- j19. Dolev, S., Kranakis, E., and Krizanc, D., “Baked Potato Routing,”  
*Journal of Algorithms*, 30, pp. 379-399, 1999.
- j20. Dolev, S., Kesselman, A., “Non-Preemptive Real-Time Scheduling of Multimedia Tasks,”  
*Journal of Real-Time Systems*, Volume 17, Issue 1, pp. 23-39, July 1999.
- j21. Dolev, S., Gouda, G. M., and Schneider, M., “Memory Requirements for Silent Stabilization,”  
*Acta Informatica*, 36 447-462, 1999.
- j22. Dolev, S., Kesselman, A., “Bounded Latency Scheduling Scheme for ATM Cells,”  
*Journal of Computer Networks and ISDN Systems*, pp. 325-331 vol. 32 (3) (2000).
- j23. Dolev, S., Ostrovsky, R., “Xor-Trees for Efficient Anonymous Multicast and Reception,”  
*ACM Transactions on Information and System Security*, Vol. 3, No. 2, May 2000 pp. 63-84.
- j24. Dolev, S., Korach, E., and Yukelson, D., “The Sound of Silence: Guessing Games for Saving Energy in Mobile Environment,”  
*Journal of Parallel and Distributed Computing*, Vol. 61, No. 7, pp. 868-883 (July 2001), special issue on wireless networks.
- j25. Abraham, U., Dolev, S., Herman, T., and Koll, I., “Self-Stabilizing  $\ell$ -exclusion,”  
*Theoretical Computer Science*, Vol. 266/1-2, pp. 653-692, Sept. 2001.
- j26. Dolev, S., Fitingof, B., Melkman, A., and Tubman, O., “Smooth and Adaptive Forward Erasure Correcting,”  
*Computer Networks Journal*, special edition on Overlay Networks, Vol. 36, Issue 2-3, (July 2001) 343-355.
- j27. Afek, Y., and Dolev, S., “Local Stabilizer,”  
*Journal of Parallel and Distributed Computing*, special issue on self-stabilizing distributed systems, Vol. 62, No. 5, pp. 745-765 (May 2002).

- j28. Beimel, A., Dolev, S., “Buses for Anonymous Message Delivery,”  
*Journal of Cryptology*, 16(1):25–39, 2003.
- j29. Dolev, S., and Rajsbaum, S., “Stability of Long-lived Consensus,”  
*Journal of Computer and System Sciences*, Vol. 67, Issue 1, pp. 26-45, August 2003.
- j30. Dolev, S., Segala, R., and Shvartsman, A., “Dynamic Load Balancing with Group Communication,”  
*Theoretical Computer Science*, Vol. 369, Number 1-3, pp. 348-360, 2006.
- j31. Dolev, S., Stomp, F., “Safety Assurance via On-Line Monitoring,”  
*Distributed Computing*, Volume 16, Number 4, pp. 269-277, December 2003.
- j32. Dolev, S., Schiller, E., “Communication Adaptive Self-Stabilizing Group Membership Service,”  
*IEEE Transactions on Parallel and Distributed Systems*, Vol. 14, No. 7, July 2003, pp. 709-720.
- j33. Dolev, S. and Welch, L. J., “Self-Stabilizing Clock Synchronization in the Presence of Byzantine Faults,”  
*Journal of the ACM*, Vol. 51, No. 5, pp. 780-799, September 2004.
- j34. Dolev, S., Schiller, E., “Self-Stabilizing Group Communication in Directed Networks,”  
*Acta Informatica*, Vol. 40, Number 9, pp. 609-639, 2004.
- j35. Dolev, S., Kat, R., “Self-Stabilizing Distributed File Systems,”  
*Journal of High Speed Networks*, special issue on self-stabilizing systems, Volume 14, Number 2, pp. 135-153, 2005.
- j36. Carmi, P., Dolev, S., Har-Peled, S., Katz, M., Segal, M., “Geographic Quorum Systems Approximations,”  
*Algorithmica*, 41 (4):233-244, 2005.
- j37. Dolev, S., Gilbert, S., Lynch, N. A., Shvartsman, A., Welch, J., “GeoQuorum: Implementing Atomic Memory in Ad Hoc Networks,”  
*Distributed Computing*, special issue of selected papers from DISC 2003, Volume 18, Number 2, pp. 125-155, November 2005.
- j38. Dolev, S., Herman, T., and Lahiani, L., “Polygonal Broadcast, Secret Maturity and the Firing Sensors,”  
*Ad Hoc Networks Journal*, Volume 4, Issue 4, pp. 447-486, July 2006.
- j39. Dolev, S., Schiller, E., Welch, L. J., “Random Walk for Self-Stabilizing Group Communication in Ad-Hoc Networks,”  
*IEEE Transactions on Mobile Computing*, Vol. 5, No. 7, pp. 893-905, July 2006.
- j40. Dolev, S., and Haviv, Y. “Self-Stabilizing Microprocessor, Analyzing and Overcoming Soft-Errors,”  
*IEEE Transactions on Computers*, Vol. 55, No. 4, pp. 385-399, April 2006.

- j41. Dolev, S., and Yagel, R., “Memory Management for Self-Stabilizing Operating Systems,” *AIAA Journal of Aerospace Computing, Information, and Communication (JACIC)*, special issue on self-stabilization, vol. 3 No. 6 June 2006.
- j42. Beimel, A., Dolev, S., and Singer, N., “RT oblivious erasure correcting,” *IEEE/ACM Transactions on Networking*, Vol. 15 No. 6, pp. 1321-1332, December 2007.
- j43. Shaked, T., N., Messika, S., Dolev, S., and Rosen, Y., “Optical Solution for Bounded NP-Complete Problems,” *Journal of Applied Optics*, Vol. 46, Issue 5, pp. 711-724, February 2007.
- j44. Davidovitch, L., Dolev, S., and Rajsbaum, S. “Stability of Multi-value Long Lived Consensus,” *SIAM Journal on Computing*, Vol. 37, No. 4, pp. 1057-1076, 2007.
- j45. Beauquier, J., Delaet, S., Dolev, S., and Tixeuil, S., “Transient Fault Detectors,” *Distributed Computing*, special issue on self-stabilization, Volume 20, Number 1, pp. 39-52, July 2007.
- j46. Dolev, S., Herman, T., “Parallel Composition of Stabilizing Algorithms,” *Distributed Computing*, special issue on self-stabilization, Volume 20, Number 1, pp. 29-38, July 2007.
- j47. Puzis, R., Elovici, Y., and Dolev, S., “Fast algorithm for successive group betweenness centrality computation,” *AI Communications Journal*, special issue on “Network Analysis in Natural Sciences and Engineering,” 20(4) pp. 287-296, 2007.
- j48. Shaked, T. S., Tabib, T., Simon, G., Messika, S., Dolev, S., and Rosen, J., “Optical Binary-Matrix Synthesis for Solving Bounded NP-complete Combinatorial Problems,” *Optical Engineering*, Vol. 46, No. 10, (108201) October 2007.
- j49. Dolev, S., and Kat, R. I., “HyperTree for Self-Stabilizing Peer-to-Peer Systems,” *Distributed Computing*, Vol. 20, No. 5, pp. 375-388, 2008.
- j50. Puzis, R., Elovici, Y., and Dolev, S., “Finding the most Prominent Group in Complex Networks,” *Physical Review E*, Vol. 76, No. 5, Nov. 2007.
- j51. Dolev, S., and Tzachar, N., “Empire of Colonies: Self-Stabilizing and Self-Organizing Distributed Algorithms,” *Theoretical Computer Science*, Vol. 410 (6-7) pp. 514-532, Special issue of OPODIS06, 2009.
- j52. Brukman, O., Dolev, S. and Kolodner, E., “Self-Stabilizing Autonomic Recoverer for Eventual Byzantine Software,” *Journal of Systems and Software*, 81, pp. 2315-2327, 2008.

- j53. Dolev, S. and Yagel, R., “Toward Self-Stabilizing Operating Systems,”  
*IEEE Transactions on Software Engineering*, 34(4) 564-576, 2008.
- j54. Arnon, S., Dolev, S., Kat, R., Kedar, D., “Searching for a Loin in the Desert, Optics-based Acquisition Algorithms for Wireless Sensor Networks,”  
*ACM Sigmobile Mobile Computing and Communication Review*, Vol. 12, Number 4, 2008.
- j55. Dolev, S., and Yagel, R., “Self-Stabilizing Device Drivers,”  
*ACM Transactions on Autonomous and Adaptive Systems (TAAS)*, 3(4) pp. 17:1-17:29, 2008.
- j56. Dolev, S. and Gersten, O., “A Framework for Robust Active SuperTier Systems,”  
*STTT International Journal on Software Tools for Technology*, Vol. 12, No. 1, pp. 53-67, Feb. 2010.
- j57. Dolev, S., Schiller, E. M., Spirakis, P., Tsigas, P., “Strategies for Repeated Games with Subsystem Takeovers Implementable by Deterministic and Self Stabilizing Automata,”  
*International Journal on Autonomous and Adaptive Communications Systems (IJAACS)*, special issue with selected papers from Autonomics 2008, 4(1) pp. 4-38, 2011.
- j58. Dolev, S., Haviv, Y., and Sagiv, M., “Self-Stabilization Preserving Compiler,”  
*ACM Transactions on Programming Languages and Systems (TOPLAS)*, Vol. 31, Issue 6, No. 22, August 2009.
- j59. Dolev, S., Haviv, Y., “Stabilization Enabling Technology,”  
*IEEE Transactions on Dependable and Secure Computing (TDSC)*, 9(2), pp. 275-288, 2012.
- j60. Dolev, S., Elovici, Y., Puzis, R., and Zilberman. P., “Incremental Deployment of Network Monitors Based on Group Betweenness Centrality,”  
*Information Processing Letters*, 109(20), pp. 1172-1176, 2009.
- j61. Dolev, S., Fitoussi, H., “Masking Traveling Beams, Optical Solutions for Bounded NP-Complete Problems,”  
*Theoretical Computer Science*, 411(6), pp. 637-853, 2010.
- j62. Tamir, D., Shaked, N., Wilson, P., Dolev, S., “High-speed and low-power electro-optical DSP coprocessor,”  
*Journal of the Optical Society of America A (JOSA)*, special feature on Optical High-Performance Computing, Vol. 26, No. 8, August 2009.
- j63. Dolev, S., Kopeetsky, M., Shamir, A., “RFID Authentication, Efficient Proactive Information Security within Computational Security,”  
*Theory of Computing Systems*, 48(1) pp. 132-149, 2011.
- j64. Anter, A., Dolev, S., “Optical Solution for Hard in Average #P-Complete Instances (Using Exponential Space for Solving Instances of the Permanent),”  
*Natural Computing*, 9(4), pp. 891-902, special issue on Optical SuperComputing, 2010.

- j65. Dolev, S., Elovici, Y., Puzis, R., “Routing Betweenness Centrality,”  
*Journal of the ACM* 57(4), 2010.
- j66. Dolev, S., Schiller, E., Spirakis, P., Tsigas, P., “Game Authority for Robust and Scalable Distributed Selfish-Computer Systems,”  
*Theoretical Computer Science*, 411 (26-28), pp. 2459-2466, 2010.
- j67. Caulfield, H. J., and Dolev, S., “Why the future of supercomputing requires optics,”  
*Nature Photonics*, Commentary, Vol. 4, pp. 261-263, May 2010. Also Correspondence, Vol. 4, pp. 406-407, July 2010.
- j68. Dolev, S., Kat, R., and Schiller, E., “When Consensus Meets Self-Stabilization,”  
*Journal of Computer and Systems Science*, 76(8) pp. 884-900, 2010.
- j69. Dolev, S., and Yagel, R., “Stabilizing Trust and Reputation for Self-Stabilizing Efficient Hosts in Spite of Byzantine Guests,”  
*ACM SIGOPS Operating Systems Review*, 44(3) pp. 65-74, 2010.
- j70. Shabtai, A., Fledel, Y., Elovici, Y., Dolev, S., and Glezer, C., “Google Android: Comprehensive Security Assessment,”  
*IEEE Security and Privacy Magazine*, 8(2) pp. 35-44, 2010.
- j71. Dolev, S., and Tzachar, N., “Randomization Adaptive Self-Stabilization,”  
*Acta Informatica*, 47(5-6), pp. 313-323, June 2010.
- j72. Dolev, S., Elovici, Y., Kesselman, A., and Zilberman. P., “Trawling Traffic under Attack, Overcoming DDoS Attacks by Target-Controlled Traffic Filtering,”  
*Journal of Foundations of Computer Science*, 22(5), pp. 1073-1098, 2011.
- j73. Tamir, D., Shaked, N., Geerts, W., and Dolev, S., “Parallel Decomposition of Combinatorial Optimization Problems Using Electro-Optical Vector by Matrix Multiplication Architecture,”  
*Journal of Supercomputing*, 62(2): 633-655 (2012).
- j74. Dolev, S., and Kopeetsky, M., “Anonymous Transactions in Computer Networks,”  
*ACM Transactions on Autonomous and Adaptive Systems (TAAS)*, 7(2):26 2012.
- j75. Brukman, O., and Dolev, S., “Recovery Oriented Programming: Runtime Monitoring of Safety and Liveness,”  
*STTT International Journal on Software Tools for Technology*, 13(4), pp. 377-395, 2011.
- j76. Puzis, R., Tubi, M., Elovici, Y., Glezer, C., and Dolev, S., “A Decision Support System for Placement of Intrusion Detection and Prevention Devices in Large-Scale Networks,”  
*ACM Transactions on Modeling and Computer Simulations*, 22(1), 5, 2011.
- j77. Dolev, S., Dubios, S., Potop-Butucaru, M., and Tixeuil, S., “Stabilizing Data-link Over Non-FIFO Channels with Optimal Fault-resilience”,  
*Information Processing Letters*, 111 (18): 912-920, July 2011.

- j78. Kedar, D., Dolev, S., Arnon, S., “Energy-efficient optical acquisition schemes in wireless sensor networks,”  
*Wireless Networks*, 17(8), 1809-1819, 2011.
- j79. Dolev, S., Gilboa, N., Kopeetsky, M., Persiano, G., and Spirakis, P., “Information Security for Sensors by Overwhelming Random Sequences and Permutations,”  
*Ad Hoc Networks Journal*, special issue of DIALM/POMC 2010, 12:193-200, 2014.
- j80. Shabtai, A., Moskovitch, R., Feher, C., Dolev, S., Elovici, Y., “Detecting Unknown Malicious Code by Applying Classification Techniques on OPCODs Patterns,”  
*Security Informatics*, (related to patent 8), 1(1): 1 (2012).
- j81. Dolev, S., Segal, M., and Shpungin, H., “Bounded-Hop Energy Efficient Liveness of Flocking Swarms,”  
*IEEE Transactions on Mobile Computing*, 12(3):516-528, 2013.
- j82. Dolev, S., Lahiani, L., Yung, M., “Secret Swarm Unit, Reactive  $k$ -Secret Sharing,”  
*Ad Hoc Networks Journal*, 10(7), pp. 1291-1305, 2012.
- j83. Ben-Shahar, O., Dolev, S., Dolgin, A., and Segal, M., “Direction Election in Flocking Swarms,”  
*Ad Hoc Networks Journal*, special issue of DIALM/POMC 2010, 12:250-258, 2014.
- j84. Dolev, S., and Tzachar, N., “Spanders: Distributed Spanning Expanders,”  
*Science of Computer Programming*, Elsevier, special issue on self organized coordination of computer programming, 78(5):544-555, 2013.
- j85. Cohen, A., Dolev, S., and Tzachar, N., “Efficient and Universal Corruption Resilient Fountain Codes,”  
*IEEE Transactions on Communication*, 61(10): 4058-4066, 2013.
- j86. Dolev, S., Frenkel, S., and Cohen, A., “Holographic Coding by Walsh-Hadamard Transformation of Randomized Permuted Data,”  
*Informatics and Application*, Russian Academy of Science, 2012.
- j87. Dolev, S., Lahiani, L., and Haviv, Y., “Unique Permutation Hashing,”  
*Theoretical Computer Science*, 475:59-65, 2013.
- j88. Cohen, E., Dolev, S., Frenkel, S., Kryzhanovsky, B., Palagushkin, A., Rosenblit, M., Zakharov, V., “Optical Solver of Combinatorial Problems: Nano-Technological Approach,”  
*Journal of the Optical Society of America A (JOSA)*, Vol. 30 Issue 9, pp. 1845-1853,, 2013.
- j89. Brukman, O., Dolev, S., Weinstock, M., Weiss, G., “Self-\* Programming: Run-Time Parallel Control Search for Reflection Box Evolving Systems,”  
*Evolving Systems*, accepted, August 2013.
- j90. Dolev, S., Frenkel, S., Tamir, D., “Computation Protection Based on Hamming Distance Preserving in Arithmetic and Logical Operations,”  
*Journal of Electronic Testing: Theory and Applications*, 29(6):903-907, 2013.

- j91. Dolev, S., Frenkel, S., and Tamir, D., “Probabilistic Methods for Self-Correcting Hardware Design,”  
*Informatics and Application*, Russian Academy of Science, 2013.
- j92. Barenboim, L., Dolev, S., and Ostrovsky, R., “Deterministic and Energy Optimal Wireless Synchronization,”  
*ACM Transactions on Sensor Networks*, 11(1):13, 2014.
- j93. Dolev, S., Gilboa, N., Kopeetsky, M., “Efficient Private Multi-Party Computations of Trust in the Presence of Curious and Malicious Users,”  
*Journal of Trust Management*, accepted, January. 2014.
- j94. Hermoni, O., Gilboa, N., Felstaine, E., Dolev, S., “Rendezvous Tunnel for Anonymous Publishing,”  
*Peer-to-Peer Networking and Applications*, 8(3): 352-366, 2015.
- j95. Puzis, R., Zilberman, P., Elovici, Y., Dolev, S., and Brandes, U., “Topology Manipulations for Speeding Betweenness Centrality Computation,”  
*Journal of Complex Networks*, accepted, April 2014.
- j96. Cohen, E., Dolev, S., and Rosenblit, M., “Optical State Machine and Nano Spheres,”  
*Asian Journal of Physics* accepted, 2014.
- j97. Dolev, S., Fandina, N., and Rosen, J., “Holographic Parallel Processor for Calculating Kronecker Product,”  
*Natural Computing*, 14(3): 433-436, 2015.
- j98. Cohen, A., Dolev, S., Leshem, G., “Sensor Networks: from Dependence Analysis Via Matroid Bases to Online Synthesis,”  
*Theoretical Computer Science*, special issue for ALGOSENSORS 2011, 553:2-17, 2014.
- j99. Berend, D., Dolev, S., Hanemann, A., “Graph Degree Sequence Solely Determines the Expected Hopfield Network Pattern Stability,”  
*Neural Computation*, 27(1): 202-210, 2015.
- j100. Tamir, J., Tamir, D., Geerts, W., and Dolev, S., “Compressive Scanning of an Object Signature,”  
*Natural Computing*, 14(3): 457-467, 2015.
- j101. Alon, N., Attiya, H., Dolev, S., Dubios, S., Gradinariu, M., Tixeul, S., “Practically Stabilizing SWMR Atomic Memory in Message Passing Systems,”  
*Journal of Computer and System Sciences*, 81(4): 692-701, 2015.
- j102. Dolev, S., Garay, J., Gilboa, N., Kolesnikov, V., Yuditsky, L., “Towards Efficient Private Distributed Computation on Unbounded Input Streams,”  
*Journal of Mathematical Cryptology*, 9(2):79-94, 2015.

- j103. Daltrophe, H., Dolev, S., Lotker, Z., “Probabilistic Connectivity Threshold for Directional Antenna Widths,”  
*Theoretical Computer Science*, 584: 103-114, 2015.
- j104. Dolev, S., and Sadetsky, M., “Heuristic Certificates via Approximations,”  
*Informatics and Application*, Russian Academy of Science, Vol 9, Iss. 1, pp. 16-28, 2015.
- j105. Dolev, S., Krzwiecki, L., Panwar, N., and Segal, M., “Vehicle Authentication via Monolithically Certified Public Key and Attributes,”  
*Wireless Networks*, 22(3): 879-896, 2016.
- j106. Dolev, S., Krzwiecki, L., Panwar, N., and Segal, M., “Dynamic Attribute Based Vehicle Authentication,”  
*Wireless Networks*, accepted, Jan. 2016.
- j107. Berend, D., Dolev, S., Frenkel, S., Hanemann, A., “Towards Holographic “Brain” Memory Based on Randomization and Walsh-Hadamard Transformation,”  
*Neural Networks*, 77: 87-94, 2016.
- j108. Cohen, E., Dolev, S., and Rosenblit, M., “All-Optical Design for Inherently Energy Conserving Reversible Gates and Circuits,”  
*Nature Communications*, accepted, March 2016.
- j109. Dolev, S., Goldfeld, J., Puzis, R., Venkateswarlu, K. M., “Efficient On-line Detection of Temporal Patterns,”  
*PeerJ Computer Science*, 2: e53, 2016.
- j110. Dolev, S., Korach, E., Li, X., Uzan, G., and Yin, L., “Magnifying Computing Gaps: Establishing Encrypted Communication Over Unidirectional Channels,”  
*Theoretical Computer Science*, 636: 17-26, 2016.
- j111. Derbeko, P., Dolev, S., Gudes, E., Sharma, S., “Security and Privacy Aspects in MapReduce on Clouds: A Survey,”  
*Computer Science Review*, 20: 1-28, 2016.
- j112. Dolev, S., Kopeetsky, M., and Frenkel, S., “Improving Entropy Adaptive On-Line Compression,”  
*Wireless Networks*, accepted, May 2016.
- j113. Dolev, S., Krzwiecki, L., Panwar, N., and Segal, M., “Optical PUF for Non-Forwardable Vehicle Authentication,”  
*Computer Communications*, accepted, May 2016.
- j114. Afrati, F., Dolev, S., Korach, E., Sharma, S., and Ullman, J. “Assignment Problems of Different-Sized Inputs in MapReduce,”  
*ACM Transactions on Knowledge and Data Discovery*, accepted, August 2016.



j115. Brownstein, D., Dolev, S., and Gilboa, N., “Functional Encryption for Cascade Automata,” *Information and Computation*, (special issue of selected papers from SSS 2015), accepted, August 2016.

j116. Daltrophe, H., Dolev, S., Lotker, Z., “Big Data Interpolation using Functional Representation,” *Acta Informatica*, accepted, November 2016.

**(e) Unrefereed professional articles and review publications:**

u1. Dolev, S., “Workshop Report, Second Workshop on Self-Stabilizing Systems,” *SIGACT news*, Vol. 26 No. 3, Sept. 1995, pp. 74-76.

u2. Dolev, S., **Invited Paper**, “Stabilizing in the Presence of Faults, the Digital Clock Synchronization Case,” *Proc. of the 1997 International Conference On Principles Of Distributed Systems, OPODIS’97*, Dec. 1997, pp. 285-291.

u3. Dolev, S., “Self Stabilization,” editorial, *AIAA Journal of Aerospace Computing, Information, and Communication (JACIC)*, Vol. 1, pp. 253-255, June 2004.

u4. Aspnes, J., Busch, C., Dolev, S., Fatourou, P., Georgiou, C., Shvartsman, S., Spirakis, P., Wattenhofer, R., “Eight Open Problems in Distributed Computing,” *Distributed Computing Column of EATCS Bulletin*, Edited by Mario Mavronicolas, September 2006.

u5. Dolev, S., Haviv, Y., **Invited Paper**, “Stabilization Enabling Technology,” *Proc. of the 8th International Symposium on Stabilization, Safety, and Security of Distributed Systems, (SSS 2006)*, LNCS 4280, pp. 1-15, 2006.

u6. Dolev, S., “A Review of the DISC 2006 Conference,” *SIGACT news*, Vol. 38 No. 1, March. 2007, pp. 46-48.

u7. Brukman, O., Dolev, S., Haviv, Y., Lahiani, L., Kat, R., Schiller, E., Tzachar, N., Yagel, R., “Self-Stabilization from Theory to Practice,” *Distributed Computing Column of EATCS Bulletin*, Edited by Mario Mavronicolas, February 2008.

u8. Dolev, S., **Invited Paper**, “Self-Stabilizing and Self-Organizing Mobile Networks,” *5th ACM/SIGMOBILE Workshop on Foundations of Mobile Computing, (DIALM/POMC)*, pp. 25-26, 2008.

u9. Dolev, S., Schiller, E., Spirakis, P., Tsigas, P., **Invited Paper**, “Strategies for Repeated Games with Subsystem Takeovers, Implementable by Deterministic and Self-Stabilizing Automata,” *8th MiNEMA Workshop*, 2008.

u10. Dolev, S., Gilbert, S., Guerraoui, R., Kowalski, D., Newport, C., Kohn, F., Lynch, N., “Reliable Distributed Computing on Unreliable Radio Channels,” *Proc. of MobiHoc S<sup>3</sup> Workshop*, pp. 1-4, 2009.

- u11. Dolev, S., Garay, J., Gilboa, N., Kolesnikov, V. **Invited Paper**, “Swarming Secrets,” *47th Annual Allerton Conference on Communication, Control, and Computing*, pp. 1438-1445, 2009. Also brief announcement in PODC pp. 231-232, 2010.
- u12. Dolev, S., Haist, T., Oltean, M., “Introduction to special issue on Optical SuperComputing,” *Natural Computing* 9(4): pp. 889-890, 2010.
- u13. Dolev, S., Schiller, E., Spirakis, P., and Tsigas, P., “Robust and Scalable Middleware for Selfish-Computer Systems,” *Computer Science Review*, 5(1), pp. 69-84, 2011. Special issue on Foundations of Adaptive Networked Societies of Tiny Artifacts, Elsevier.
- u14. Blundo, C., De Caro, A., Dolev, S., Gilboa, N., Kopeetsky, M., Persiano, G. and Spirakis, P., “Innovative Approaches for Security of Small Artifacts,” *Computer Science Review*, 5(1), pp. 47-55, 2011. Special issue on Foundations of Adaptive Networked Societies of Tiny Artifacts, Elsevier.
- u15. Dolev, S., “Dynamic Multi-Party Computation Forever for Swarm & Cloud Computing & Code Obfuscation (Keynote Abstract),” *Seventh International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS)*, July 2011.
- u16. Dolev, S., Krzwiecki, L., Panwar, N., and Segal, M., “Certificating Vehicle Public Key with Vehicle Attributes: A (periodical) Licensing Routine, Against Man-in-the-Middle Attacks and Beyond,” *Workshop on Architecting Safety in Collaborative Mobile Systems (ASCoMS)*, 2013.
- u17. Dolev, S., “Practically Stabilizing and Secure Replicated State Machines,” *Proc. of the 15th International Symposium on Stabilization, Safety, and Security of Distributed Systems*, (SSS 2013), 2013.
- u18. Dolev, S., Hanemann, A., “Holographic “Brain” Memory and Computation,” *Proc. of the OSA Latin America Optics & Photonics Conference (LAOP)*, Nov. 2014.
- u19. Dolev, S., Rahav, A., and Tzur-David, S., “The Need for Next Generation Secure Communication,” *Cyber Security Review*, pp. 54-60, Oct. 2015.

### **Patents:**

- p1. Dolev, S., and Nir, Y., “Optical Implementation of Bounded Non-Deterministic Turing Machines,” Israeli patent application No. 155994, filed 19 May, 2003.  
US Patent No. 7,130,093 B2, October, 2006.
- p2. Dolev, S., Korach, E., and Uzan, G., “A Method for Encryption and Decryption of Messages,” US Patent 20090296931, 2009.
- p3. Dolev, S., Haviv, Y., “Apparatus and Methods for Stabilization of Processors, Operating Systems and Other Hardware and/or Software Configurations,” US patent application, US 2008/0098205 A1, September 2007.

- p4. Dolev, S., Kopeetsky, M., Shamir, A., "Method, Apparatus and Product for RFID Authentication," US20090225985, 2009.
- p5. Puzis, R., Elovici, Y., Dolev, S., "Process for Finding the Most Prominent Group of Vertices in Complex Networks," European Patent EP1887744, 2010, application, P07015351.5-1249, 16.4.07.
- p6. Puzis, R., Elovici, Y., Dolev, S., "Optimal Deployment of Infection Detection Systems over a Data Network," European Patent application, 10.8.06.
- p7. Dolev, S., "Dynamic Firewall for NSP Networks," USA Patent, 7,808,911 B2, Oct. 5 2010. EP1959630, 2008, US 2008/0212481 A1, Sep. 4, 2008.
- p8. Dolev, S., Tzachar, N., "Malware Signature Builder and Detection for Executable Code," European patent EP2189920, 2010, application 09014289.4 priority, 17.11.08.
- p9. Dolev, S., Kopeetsky, M., "Anonymous Transactions in Computer Networks," EP 2 271 044 A3, priority 2009, publication 2011.
- p10. Dolev, S., Frenkel, S., "A Way of Encoding and Decoding of Digital Data Based on Digital Holography Principles," Priority number 2010145892, 11.11 2010 Russian Federal Service of Intellectual Properties and Patents.
- p11. Altshuler, Y., Elovici, Y., Dolev, S., Shabtai, A., Fledel, Y., "Collaborative System for Protecting Against the Propagation of Malwares in a Network," US 2011/0113491 A1, May 12, 2011.
- p12. Dolev, S., Kopeetsky, M., Mimran, D., "Avatar Process for Mobile Devices," Israeli patent application, EP 2696608 A2, Priority 2012, Publication 2014.
- p13. Dolev, S., Gilboa, N., Kopeetsky, M., "A method for attribute based broadcast encryption with permanent revocation," WO 2013027206 A1, priority Aug. 2011.
- p14. Dolev, S., Gilboa, N., Hermomy, O., "Digital Arbitration," U.S. Patent Application No. 13/648,787.
- p15. Dolev, S., Gilboa, N., Li, X., "Accumulating Automata and Cascaded Equations Automata," WO 31085-WO-13.
- p16. Dolev, S., Tzur-David, S., "A Method for Establishing a Secure Private Interconnection over a Multipath Network," International application No. PCT/IL2015/050528 WO 2015177789A8.
- p17. Dolev, S., Panwar, N., Segal, M., Krzywiecki, L., "Certificating Vehicle Public Key with Vehicle Attributes," Patent application 20150052352.

p18. Dolev, S., Tsetlem, C., and Tzur-David, S., “Method and System for Authenticating and Preserving the Integrity of Communication, Secured by Secret Sharing,” PCT International application, PCT/IL2016/050209, priority Feb. 2015.

p19. Dolev, S., and Li, Y., “Secret Shared Random Access Machine,” PCT International application, PCT/IL2016/050044, priority January 2015.

## **Lectures and Presentations at Meetings and Invited Seminars:**

### **Invited Plenary Lectures at Conference Meetings**

Workshop on Parallel Algorithms **Presentation of a Survey**, May 1996.

*17th International Conference on Architecture of Computing Systems (ARCS04)*, **Tutorial on Self-Stabilization**, 2004.

*8th Symposium on Self-Stabilizing Systems*, **Keynote Speaker**, November 2006.

*AutoMathA: from Mathematics to Applications*, Plenary Conference, Université of Liège, **Invited Lecturer**, June 2009.

*From Computer Science Research Frontiers*, **Plenary Talk for Computer Science Educators**, December 2009.

Jerusalem Symposium Software Engineering 2011, Jerusalem College of Engineering, **Plenary Guest Lecture**, August 2011.

*Seventh International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS)*, **Keynote Speaker**, September 2011.

*Proc. of the IEEE 27th Convention of Electrical and Electronics Engineers in Israel*, **Invited Lecturer**, November 2012.

TRANSFORM Summer School on Research Directions in Distributed Computing, **Invited Lecturer**, SRDC, June 2013.

*15th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2013)* **Tutorial on Practically Stabilizing and Secure Replicated State Machines**, 2013.

*6th Workshop on the Theory of Transactional Memory*, TransForm/EuroTM, WTTM, **Keynote Speaker**, July 2014.

*19th European Symposium on Research in Computer Security*, (ESORICS), **Invited Talk**, September 2014.

Academia and Industry Research Challenges for Network Virtualization Ecosystem, January 2016.

ALGO 2015, Special Event Honoring Paul Spirakis **Keynote Speaker**, September 2015.

Security and Privacy in a Data Driven World, **talk and panel**, The Hive, RSA San-Francisco, March 2016.

*21st IEEE Workshop on Dependable Parallel, Distributed and Network-Centric Systems*, **Keynote Speaker**, May 2016.

### **Lectures in Conferences:**

The *sixteenth Conference of Electrical and Electronics Engineers in Israel*, 1989.

The *9th Annual ACM Symp. on Principles of Distributed Computing*, 1990.

The *10th Annual ACM Symp. on Principles of Distributed Computing*, 1991.

The *5th International Workshop on Distributed Algorithms*, 1991.

The *12th Annual ACM Symp. on Principles of Distributed Computing*, 1993.  
 The *7th International Workshop on Distributed Algorithms*, 1993.  
*SPIE Conference on High-Speed Networking and Multimedia Computing*, 1994.  
 The *28th Hawaii International Conference on System Science*, 1995.  
 The *14th Annual ACM Symp. on Principles of Distributed Computing*, 1995.  
 The *Second Workshop on Self-Stabilizing Systems*, 1995.  
 The *27th ACM Symposium on Theory of Computing*, 1995.  
 The *15th Annual ACM Symp. on Principles of Distributed Computing*, 1996.  
 The *4th Israeli Symposium on Theory of Computing and Systems*, 1996.  
 The *16th Annual ACM Symp. on Principles of Distributed Computing*, 1997.  
 The *5th Israeli Symposium on Theory of Computing and Systems*, 1997.  
 The *3rd Workshop on Self-Stabilization, WSS'97*, 1997.  
 The *12th International Symposium on Distributed Computing*, 1998.  
*Eighteenth Annual Joint Conference of IEEE Computer and Communications Societies (IEEE INFOCOM'99)*, 1999.  
 The *19th Annual ACM Symp. on Principles of Distributed Computing*, 2000.  
 Dagstuhl-Seminar on Self-Stabilization, October, 2000.  
 The *5th workshop on Self-Stabilization, WSS'01*, 2001.  
 The *21st IEEE Symposium on Reliable Distributed Systems (SRDS 2002)*, 2002.  
*Journées Internationales sur l'auto-stabilization, Centre International de Rencontres Mathématiques, CIRM, Luminy, France, October, 2002.*  
 The *Second Jerusalem Parallel Distributed Programming Symposium (JPDPS) 2002*, Bar-Ilan University, October 2002.  
 Security 2003, Network and Access, Kfar Maccabiah Convention Center, December 2003.  
*Third International Conference on Fun with Algorithms (FUN2004)*, May 2004.  
*Banff International Research Station, Seminar on Self-Stabilizing Distributed Systems*, Oct. 2004.  
 Dagstuhl-Seminar on Anonymous Communication and its Applications, October 2005.  
 Second Seminar Artzi in Networking, April 2006.  
*8th Symposium on Self-Stabilizing Systems*, November 2006.  
*8th Symposium on Self-Stabilizing Systems, Panel member*, November 2006.  
*11th IEEE Meeting on Optical Engineering and Science in Israel*, March 2007.  
*6th NASA Langley Formal Methods Workshop, (LFM)* April 2008.  
*5th ACM/SIGMOBILE Workshop on Foundations of Mobile Computing, (DIALM/POMC)*, August, 2008.  
*First International Workshop on Optical Supercomputing*, August 2008.  
 Dagstuhl-Seminar on Fault-Tolerant Distributed Algorithms on VLSI Chips, September 2008.  
 The *Annual ACM Symp. on Principles of Distributed Computing*, 2009.  
*47th Annual Allerton Conference on Communication, Control, and Computing*, 2009.  
*Second International Workshop on Optical Supercomputing*, November 2009.  
 The *Annual ACM Symp. on Principles of Distributed Computing*, 2010.  
 The *24th International Symposium on Distributed Computing, (DISC)* 2010.  
*6th ACM/SIGMOBILE Workshop on Foundations of Mobile Computing, (DIALM/POMC)*, September, 2010.  
*Mobile Security Conference (MobSec)*, Herzliya, November 2010.  
 PerAda Security, *Trust and Privacy Workshop*, Rome, November 2010.  
*Trends in Theoretical Cryptography (TTC)*, Beijing, January 2011.  
 Fourth Seminar Artzi in Networking, March 2011.  
*14th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*,

October 2012.

The *26th International Symposium on Distributed Computing*, (DISC) 2012.

*5th Workshop on the Theory of Transactional Memory*, TransForm/EuroTM, WTTM 2013.

*15th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS), October 2013.

The Taiwan-Israel Symposium on Information Security, Jerusalem, July 2014.

Distributed Software-Defined Networks Workshop, DSDN, July 2014.

Three papers at the *13th IEEE International Symposium on Network Computing and Applications* (IEEE NCA14), August 2014.

*16th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS), October 2014.

*17th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS), August 2015.

Award talk *14th IEEE International Symposium on Network Computing and Applications* (IEEE NCA), 2015.

Innovex2016, February 2016.

SMRLO2016, February 2016.

DevelopEx, September 2016.

Amdocs, Advisory meeting with academia on security challenges, September 2016.

6th Research Meeting on Distributed Computing by Mobile Robots, September 2016.

### **Invited Seminars:**

IBM Watson, host Dr. Shay Kutten, August 1990.

MIT, host Prof. Baruch Awerbuch, August 1990.

IBM Almaden, host Dr. Yaron Wolfstahl, August 1990.

AT&T Bell Labs, host Dr. Gadi Taubenfeld, August 1991.

DEC Systems Research Center, host Dr. Leslie Lamport, August 1991.

University of Texas at Austin, host Prof. Mohamed Gouda, February 1993.

University of Nevada Las Vegas, host Prof. Ajoy Kumar Datta, June 1993.

IBM Watson, host Dr. Amir Herzberg, August 1993.

Bell Core, host Dr. Brian Coan, August 1993.

University of Chicago, host Prof. Janos Simon, August 1993.

University of California Los Angeles, host Prof. Eli Gafni, February 1994.

University of Chicago, host Prof. Janos Simon, March 1994.

Carleton University, host Prof. Evangelos Kranakis, August 1994.

University of Texas at Austin, host Prof. Mohamed Gouda, September 1994.

University of Houston, host Prof. Farokh B. Bastani, February 1995.

Université de Paris-sud — Paris 11, LRI, Laboratoire de Recherche en Informatique d'Orsay, host Prof. Joffroy Beauquier, March 1996.

Dagstuhl-Seminar on Time Services, March 1996.

Tel-Aviv University, host Dr. Yishay Mansour, May 1996.

Texas A&M University, host Prof. Jennifer Welch, May 1996.

MIT, host Prof. Ron Rivest, April 1997.

4th International Summer School on Distributed Computing, Siena, Italy, June 1997.

The 1997 International Conference On Principles Of Distributed Systems, December 1997.

Dagstuhl-Seminar on Self-Stabilization, August 1998.

University of Connecticut, host Prof. Alex Shvartsman, September 1998.

5th International Summer School on Distributed Computing, Siena, Italy, June 1999.  
 Institute de Mathmatics, UNAM, host Prof. Sergio Rajsbaum, Mexico, August 1999.  
 New York University, host Prof. Zvi M. Kedem, September 1999.  
 Wayne State University, host Prof. Frank Stomp, January 2000.  
 Compaq Research Laboratory, host Dr. Mark Tuttle, January 2000.  
 MIT, host Prof. Nancy Lynch, September 2000.  
 Dagstuhl-Seminar on self-stabilization, October 2000.  
 IBM Research Laboratory, Haifa, Host Dr. Ealan A. Henis, December 2000.  
 IBM Research Laboratory, Haifa, Seminar on Active Technologies and Systems, organized by Dr. Opher Etzion, June 2002.  
 University of Iowa, host Prof. Ted Herman, October 2002.  
 University of California Berkeley, host Prof. Kathy Yelick, October 2002.  
 Hong Kong University of Science and Technology, host Prof. Mordacai J. Golin, October 2002.  
 New York University, host Prof. Zvi M. Kedem, February 2003.  
 University of Texas at Austin, host Prof. Mohamed Gouda, February 2003.  
 MIT, host Prof. Nancy Lynch, February 2003.  
 Hebrew University, host Prof. Danny Dolev, April 2003.  
 Jerusalem College of Engineering, host Dr. Iaakov Exman, May 2003.  
 Texas A&M University, host Prof. Jennifer Welch, June 2003.  
 MIT, host Prof. Nancy Lynch, October 2003.  
 Yale, host Prof. Michael Fischer and Prof. James Aspens, October 2003.  
 Ben-Gurion University, a ceremony in memory of Naftali Elkin, December 2003.  
 Technion, ClubNet, March 2003.  
 Université de Paris-sud — Paris 11, LRI, Laboratoire de Recherche en Informatique d'Orsay, host Prof. Joffroy Beauquier, March 2003.  
 Cornell, host Prof. Robbert Van Renesse, September 2004.  
 Tel-Aviv University, host Prof. Yossi Azar and Prof. Amos Fiat, December 2004.  
 Chalmers University of Technology, Sweden, host Prof. Marina Papatrifiantafidou, January, 2005.  
 Texas A&M University, host Prof. Jennifer Welch, January 2005.  
 IBM Research Laboratory, Haifa, host Dr. Hillel Kolodner, April 2005.  
 Microsoft Research Cambridge UK, host Prof. Maurice Herlihy, July 2005.  
 Technical University Berlin, host Prof. Dr. Hans-Ulrich HeiB, September 2005.  
 Intel Research, Berkeley, host Dr. Petros Maniatis, August 2007.  
 Google Research, Mountain View, host Dr. Doug Orr, August 2007.  
 IIT Bombay, host Prof. Varsha Apte, December 2007.  
 HP Labs India, host Geetha Manjunath, December 2007.  
 HP India Bangalore, host Ramamurthy Badrinath, December 2007.  
 Bar-Ilan University, host Prof. Doron Peled, February 2008.  
 Hebrew University, hosts Dr. Sara Cohen and Prof. Dror Feitelson, February 2008.  
 CTI, host Prof. Paul Spirakis, FRONTS, March 2008.  
 BGU Communication Systems Engineering, host Dr. Rachel Ben-Eliyahu-Zohary, March 2008.  
 MIT, host Prof. Nancy Lynch, April 2008.  
 Dagstuhl-Seminar on Fault-Tolerant Distributed Algorithms on VLSI Chips, September 2008.  
 Technion, ClubNet, December 2008.  
 Bertinoro, FRONTS, January 2009.  
 Ben-Gurion University, Alternative Computing Day, February 2009.  
 Google Zurich EMEA Faculty Summit, February 2009.  
 MIT, host Prof. Nancy Lynch, September 2009.

Bertinoro, November 2009.  
 High-School Computer Science Teachers Assembly at BGU, December 2009.  
 Universitat Politecnica de Catalunya (UPC), FRONTS, February 2010.  
 Bar-Ilan University, Engineering Faculty, April 2010.  
 Université de Paris-sud — Paris 11, LRI, Laboratoire de Recherche en Informatique d’Orsay, host Prof. Sylvie Delaet, July 2011.  
 Verisign Research Grant Symposium, October 2011.  
 Sapienza Università di Roma, host Andrea Vitaletti, November 2011.  
 Technion, ceClub, December 2011.  
 IBM Research Laboratory, Tel-Aviv branch of Haifa, host Dr. Ronen Kat, July 2012.  
 Scientist Night, Ben-Gurion University, September 2012.  
 EFI 2012, 3rd European Forum for Innovation, Lowering Barriers to Innovation: a Contribution from the “Start-up Nation”, December 2012.  
 New-Tech Exhibition, May 2013.  
 Center for Security Science and Technology (CSST), Technion, July 2013.  
 Technion, ceClub, March 2014.  
 Tel-Aviv University, EE Netalgs and GTACS Seminar, May 2014.  
 University of Chicago and Argonne National Laboratory, October 2015.  
 Computer Science and Robotics Conference, Inguration of the Israeli elementary school computer science program, March 2017.

### **Research Grants:**

- g1. (\*\*) Grant from the Ministry of Science, “Monitoring and Repairing in Distributed Systems,” \$40K, 1995-1998.
  
- g2. Intel Academic Grant, “Multiprocessor Network Interface for High-Speed Networks,” \$15K, 1996 \$15K in 1997 and \$25K in 1998.
  
- g3. Intel, equipment for research and projects laboratory, \$25K, 1996. (with Klara Kedem, Michael Elhadad and Michael Codish).
  
- g4. Wideband Communication MAGNET Consortium, “Content Description in High-Speed Network,” \$40K, 1997 (with Michael Elhadad).
  
- g5. (\*\*) Infrastructure Grant from the Ministry of Science, “Tbit/sec Optical ATM Communications Networks: Dynamic WDM Technology and Devices,” 47K, 100K, 40K Shekels, in 1997-8-9, respectively (with Dan Sadot, Moshe Tur, Amotz Bar Noy, Shay Kutten, Yaron Silberberg).
  
- g6. (\*\*) Grant from the Ministry of Science, Israel-India scientific cooperation, “Adaptive Correcting Codes for Multimedia Over ATM,” \$45K, 1998-1999 (with Kamala Krithivasan, Avraham Melkman, C. Pandu Rangan).
  
- g7. Ben-Gurion University, Seed grant, 20K Shekels, 1999.
  
- g8. IBM Faculty Award, “Data Sharing Facility, Serverless Network File System,” \$40K, 2001-2003. “Self-Stabilizing Autonomic Recoverer,” \$10K, 2003-2004.



- g9. (\*\*) NSF CCR-0098305, “Self-Stabilizing Group Communication for Mobile Environments,” consultant \$33K, 2001-2005 (with Jennifer Welch and Nancy Lynch).
- g10. Israeli Defense Secretary (MAFAT), “Optical Solutions for TSP and Related Problems,” \$75K, 2002 (with Ephraim Korach and Joseph Rosen).
- g11. STRIMM MAGNET Consortium, \$150K 2001-2003, (with Amos Beimel).
- g12. Intel Academic Grant, “Optical Implementation of Combinatorial Bounded Non-Deterministic Turing Machines,” \$20K, 2004 (with Joseph Rosen).
- g13. Deutsche Telekom, “Security for Information and Communication Technologies,” \$175K, 2004 (with Yuval Elovici and Ehud Gudes), \$100K, January 2005, \$125, March 2005.
- g14. (\*\*) Ministry of Science and Technology, “Network of sensors based on “smart dust” concept,” 380K Shekels, May 2005-8 (with Shlomi Arnon and Yael Nemirovsky).
- g15. Deutsche Telekom, “Netshield and Netprotect,” **3.6 Million Dollars**, June 2005 (with Yuval Elovici, Ehud Gudes and Yuval Shahar).
- g16. Intel, “Multi-Core research and study,” \$10K, October 2006 (with Uri Abraham and Danny Hendler).
- g17. Deutsche Telekom, “AAA,” \$120K, October 2006 (with Ehud Gudes and others).
- g18. Nato Science for Peace and Security Programme, Collaboration Linkage Grant, \$25.9K for many (also non Israeli) partners (with Guy Tel-Zur, and Hugo Guterman).
- g19. (\*\*) 7<sup>th</sup> Framework Program – Information Communication Technologies (ICT) EC Ref. 215270, FRONTS, 200K Euro, 2007-2010.
- g20. Intel, “Multi-Core lab,” \$20K, with Danny Hendler, November 2007.
- g21. “Self-Stabilizing and Efficient Robust Uncertainty Management,” US Air-Force, (Grant 083029 with Michael Segal and Ohad Ben-Shahar), \$35K 2008, \$55K 2009, \$55K 2010.
- g22. “PC-Health,” \$15K, Microsoft, March 2009.
- g23. (\*\*) “Transactional Memories: Foundations, Algorithms, Tools, and Applications,” (Euro-TM) EU Cost, April 2010.
- g24. Deutsche Telekom, “Customer Data Leakage Prevention,” (with Yuval Elovici and others), 2008-2011.
- g25. Deutsche Telekom, “Privacy Keeper,” (with Bracha Shapira and others), 2008-2010.

- g26. Israeli Defense Secretary (MAFAT), “Sensor-data fusion,” \$55K, 2010 (with Asaf Choen and Guy Leshem).
- g27. Verisign 25th Anniversary of .COM grant, “Techniques for Achieving Positive Anonymity,” \$75K (one of four across the world) 2011.
- g28. (\*\*) Grant from the Ministry of Science bi-national Russia Israel, “Nanotechnology Based Optical Computing,” 144K Shekels, 2011-2013.
- g29. (\*\*) Israel Science Foundation (ISF), “Virtual Automata for Swarm Computing,” 187K Shekels, 2011-2015.
- g30. Deutsche Telekom, “BizDroid,” (with Bracha Shapira and others), 2011-2012.
- g31. Cabarnit Cyber security MAGNET Consortium, 252K Shekels, (with Asaf Cohen and Niv Gilboa) 2012-2014.
- g32. The Technion’s Institute for Future Defense Technologies Research named for the Medvedi, Shwartzman and Gensler families, “Deterring attacks against critical IT infrastructure,” 80K Shekels, (with Niv Gilboa), 2012-2014.
- g33. Israeli Internet Association, “Deterring Attacks and Fraud in the Digital World,” 296K Shekels, (with Asaf Cohen and Niv Gilboa), 2012-2015.
- g34. EMC, “Adaptive techniques for efficient flash-based distributed storage,” (with Danny Hendler), 2013-present.
- g35. Orange France (France Telecom), “Self-Stabilizing Cloud Infrastructure,” 360k Euro, 2013-present.
- g36. (\*\*) Ministry of Science and Technology, Infrastructure Research in the Field of Advanced Computing and Cyber Security, “Dynamic Content Protection,” 600k Shekels, (with Niv Gilboa) 2013-present.
- g37. KAMIN, MAGNET, Ministry of Economy, “Private and Secure Storage in the Cloud,” 396k Shekels, (with Niv Gilboa), 2014-present.
- g38. Neptune MAGNET Consortium, (with Yefim Dinitz, Marina Kopeetsky and Shimrit Tzur-David) 2014-present.
- g39. EMC, World Wide Hadoop Research, (with Ehud Gudes, Amnon Meiseles, Michal Ziv-Ukelson) 2014-present.
- g40. IBM, Analysis of Container Security, 120k Shekels, 2015-present.
- g41. Israel Prime Minister Office, BGU Cyber Center, “Security and Privacy for Perennial Cloud Computing,” (with Amos Beimel and Niv Gilboa), 600k Shekels, 2015-present.

g42. Israeli-Italian Scientific & Technological Cooperation, EURASIA: “Ensuring Continuity of Replicated Software Services Under Cyber Attacks,” (with Roberto Baldoni), 2015-present.

g43. Israel-Taiwan Scientific Research Cooperation, “Runtime Execution Introspection for Security Protection in Virtualized Cloud,” (with Yeali Sun), 2015-present.

### **Additional Information:**

#### **Reviewer:**

*Clore Israel Foundation,*  
*NSERC Natural Sciences and Engineering Research Council of Canada,*  
*IEEE Transactions on Information Theory,*  
*Ministry of Science and Technology Proposals,*  
*Mathematical Reviews,*  
*Journal of Aerospace Computing, Information, and Communication,*  
*Journal of High Speed Networks,*  
*Research Grants Council of Hong Kong,*  
*BSF Proposal,*  
*Acta Informatica,*  
*ACM Transactions on Computer Systems,*  
*Telecommunications Systems Journal,*  
*IEEE Transactions on Computers,*  
*The Israel Science Foundation,*  
*Journal of Computer and Systems Science,*  
*SIAM Journal on Computing,*  
*SIAM Journal on Discrete Mathematics,*  
*IEEE Transactions on Parallel and Distributed Systems,*  
*Information and Computation,*  
*Mathematical Systems Theory,*  
*Parallel Processing Letters,*  
*Chicago Journal of Theoretical Computer Science,*  
*Distributed Computing,*  
*Journal of Algorithms,*  
*Journal of Parallel and Distributed Systems,*  
*IEEE/ACM Transactions on Networking,*  
*IEEE Transactions on Software Engineering,*  
*Information Processing Letters,*  
*Theoretical Computer Science Award,*  
*Artificial Intelligence Journal,*  
*University Research Chair (URC) program Award,*  
*ACM Transactions on Algorithms,*  
*Reviewer for several conferences including PODC, WDAG/DISC, SSS, STOC, FOCS.*

#### **Scientific Committees at Conferences:**

sc1. *Symposium on Self-Stabilizing Systems*, **Steering committee** (1995-present), **chair 2012-2015**.

- sc2. *Second Workshop on Self-Stabilizing Systems* (WSS 1995), University of Nevada, Las Vegas, May 1995, **Program Chair**.
- sc3. *Seminar Artzi* — program and organization, December 1995.
- sc4. *5th Israeli Symposium on Theory of Computing and Systems*, Program committee member, (ISTCS 1997), June 1997.
- sc5. *16th Annual ACM Symp. on Principles of Distributed Computing*, Program committee member, (PODC 1997), August 1997.
- sc6. *3rd workshop on Self-Stabilizing Systems*, Program committee member, (WSS 1997), August 1997.
- sc7. *International Conference On Principles Of DIStributed Systems*, Program committee member, (OPODIS 1997), December 1997.
- sc8. *Dagstuhl-Seminar on Self-Stabilization*, program and organization, August 17-21, 1998.
- sc9. *International Conference on Principles Of DIStributed Systems*, Program committee member, (OPODIS 1998), December 1998.
- sc10. *4th workshop on Self-Stabilizing Systems*, Program committee member, (WSS 1999), 1999.
- sc11. *13th International Symposium on DIStributed Computing*, Program committee member, (DISC 1999), 1999.
- sc12. *Nineteenth Annual Joint Conference of IEEE Computer and Communications Societies* (INFOCOM 2000), Program committee member, 2000.
- sc13. *Opening ceremony of the Computer Science Department* — scientific program organization, March 2000.
- sc14. *7th International Colloquium on Structural Information and Communication Complexity* (SIROCCO 2000), Program committee member, 2000.
- sc15. *Dagstuhl-Seminar on Self-Stabilization*, program and organization, October 21-27, 2000.
- sc16. *21st International Conference on Distributed Computing Systems*, Program committee member, (ICDCS 2001), 2001.
- sc17. *Workshop on Algorithms and Data Structures* (WADS 2001), Program committee member, 2001.
- sc18. *5th workshop on Self-Stabilizing Systems*, Program committee member, (WSS 2001), 2001.
- sc19. *15th International Symposium on DIStributed Computing*, Program committee member, (DISC 2001), 2001.
- sc20. *21st Annual ACM Symp. on Principles of Distributed Computing*, Program committee member, (PODC 2002), August 2002.
- sc21. *9th International Conference on Parallel and Distributed Systems*, (ICPADS 2002), Vice PC Chair Distributed Systems, December 2002.

- sc22. *23rd International Conference on Distributed Computing Systems*, Program committee member, (ICDCS 2003), 2003.
- sc23. *6th International Symposium on Self-Stabilizing Systems*, Program committee member, (SSS 2003), 2003.
- sc24. *18th International Symposium on DIStributed Computing*, Program committee member, (DISC 2004), 2004.
- sc25. *25th International Conference on Distributed Computing Systems*, Program committee member, (ICDCS 2005), 2005.
- sc26. *24st Annual ACM Symp. on Principles of Distributed Computing*, Program committee member, (PODC 2005), August 2005.
- sc27. *5th IEEE International Workshop on Algorithms for Wireless Mobile Ad Hoc and Sensor Networks*, Program committee member, (WMAN 2005), April 2005.
- sc28. *The 6th International Workshop on Information Security Applications*, Program committee member, (WISA 2005), August 2005.
- sc29. *Dagstuhl-Seminar on Anonymous Communication and its Applications*, program and organization, October 9-14, 2005.
- sc30. *Israeli Conference on Software Engineering and Management*, Program committee member, (ICSEM 2005), June 9, 2005.
- sc31. *International Conference on Autonomous and Autonomic Systems*, (ICAS2005) Technical program committee member.
- sc32. *International Conference on Principles Of DIStributed Systems*, Program committee member, (OPODIS 2005), 2005.
- sc33. *12th International Colloquium on Structural Information and Communication Complexity*, (SIROCCO 2006) Program committee member, 2006.
- sc34. *26th International Conference on Distributed Computing Systems*, Program committee member, (ICDCS 2006), 2006.
- sc35. *20th International Symposium on DIStributed Computing*, (DISC 2006), **Program Chair**.
- sc36. *Second International Conference on Distributed Computing in Sensor Systems* (DCOSS 2006), 2006.
- sc37. *International Conference on Autonomous and Autonomic Systems*, (ICAS2006) Technical program committee member.
- sc38. *ALGOSENSORS*, Program committee member, 2006.
- sc39. *4th IEEE International Conference on Information Technology: Research and Education* (ITRE), Program committee member, 2006.
- sc40. *8th International Symposium on Stabilization, Safety, and Security of Distributed Systems* Program committee member, (SSS 2006), 2006.

- sc41. *International Symposium on DIStributed Computing*, **Steering committee** (2006-2009) **member at large** (2011-2013) **Vice chair** (2013-2015) **Chair** 2015-present.
- sc42. *27th International Conference on Distributed Computing Systems*, Program committee member, (ICDCS 2007), 2007.
- sc43. *Seminar Artzi in distributed computing at BGU* — program and organization, December 2006.
- sc44. *Haifa Systems & Storage Workshop*, SyStor 2207, IBM and the Technion Program committee member, October 2007.
- sc45. *9th International Symposium on Stabilization, Safety, and Security of Distributed Systems* Program committee member, (SSS 2007), 2007.
- sc46. *Dagstuhl-Seminar on Fault-Tolerant Distributed Algorithms on VLSI Chips*, program and organization, September 7-12, 2008.
- sc47. *ALGOSENSORS*, Program committee member, 2008.
- sc48. *Networking Seminar Artzi 2008*, Cisco, Netanya, Program committee co-chair with Idit Keidar, May 2008.
- sc49. *First PerAda Workshop (SASO 2008)*, Program committee member, October 2008.
- sc50. *International Workshop on Optical SuperComputing, 2008 (OSC08)*, Program committee chair, August 2008.
- sc51. *10th International Symposium on Stabilization, Safety, and Security of Distributed Systems* Program committee member, (SSS 2008), 2008.
- sc52. *12th International Conference on Principles Of DIStributed Systems*, Program committee member, (OPODIS 2008), 2008.
- sc53. *23rd IEEE International Parallel and Distributed Processing Symposium*, (IPDPS), 2009.
- sc54. *ALGOSENSORS*, **Program committee chair**, 2009.
- sc55. *SYSTOR, the Israeli Experimental Systems Conference*, 2009.
- sc56. *International Conference on Security and Cryptography*, SECRIPT 2009.
- sc57. *11th International Symposium on Stabilization, Safety, and Security of Distributed Systems* Program committee member, (SSS 2009), 2009.
- sc58. *30th International Conference on Distributed Computing Systems*, Program committee member, (ICDCS 2010), 2010.
- sc59. *International Workshop on Optical SuperComputing, 2009 (OSC09)*, **Program committee chair**, November 2009.
- sc60. *11th International Conference on Distributed Computing and Networking (ICDCN10)*, Program committee member, January 2010.
- sc61. *SYSTOR, the Israeli Experimental Systems Conference*, Program committee member, 2010.

- sc62. *30th International Conference on Distributed Computing Systems*, Program committee member, (ICDCS 2010), 2010.
- sc63. *The 10<sup>th</sup> Haifa Workshop on Interdisciplinary Applications of Graphs, Combinatorics and Algorithms*, Program committee member, 2010.
- sc64. *12th International Symposium on Stabilization, Safety, and Security of Distributed Systems* **General Chair**, (SSS 2010), 2010.
- sc65. *International Workshop on Optical SuperComputing*, 2010 (OSC10), **Program committee chair**, 2010.
- sc66. *25th IEEE International Parallel and Distributed Processing Symposium*, (IPDPS), 2011.
- sc67. *SYSTOR, the Israeli Experimental Systems Conference*, 2011.
- sc68. *4th International Workshop on Physics and Computation*, 2011.
- sc69. *3rd Annual Workshop on Simplifying Complex Networks for Practitioners (Simplex)* 2011.
- sc70. *13th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS 2011), Track chair, 2011.
- sc71. *Spatial Computing Workshop*, 2011.
- sc72. *International Workshop on Software Knowledge*, (SKY) 2011.
- sc73. *ALGOSENSORS*, Program committee member, 2011.
- sc74. *Seventh ACM SIGACT/SIGMOBILE International Workshop on Foundations of Mobile Computing*, (FOMC), Program committee member, 2011.
- sc75. *26th IEEE International Parallel and Distributed Processing Symposium*, (IPDPS), Program committee member, 2012.
- sc76. *13th International Conference on Distributed Computing and Networking* (ICDCN12), Program committee member, January 2012.
- sc77. *SYSTOR, the Israeli Experimental Systems Conference*, Program committee member, 2012.
- sc78. *14th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS 2012), Program committee member, 2012.
- sc79. *26th International Symposium on Distributed Computing*, Program committee member, (DISC), 2012.
- sc80. *Spatial Computing Workshop*, 2012.
- sc81. *Sixth International Conference on FUN with Algorithms*, Program committee member, (FUN), 2012.
- sc82. *Eight ACM SIGACT/SIGMOBILE International Workshop on Foundations of Mobile Computing*, Program committee member, (FOMC), 2012.
- sc83. *ChipEx 2012*, Technical program committee member, 2012.

- sc84. *4th International Conference on Adaptive and Self-Adaptive Systems and Applications*, Technical program committee member, 2012.
- sc85. *14th International Conference on Distributed Computing and Networking (ICDCN13)*, Program committee member, January 2013.
- sc86. *8th International Conference on Algorithms and Complexity (CIAC 2013)* Program committee member, 2013.
- sc87. *ALGOSENSORS*, Program committee member, 2012.
- sc88. *16th International Conference on Principles Of Distributed Systems*, Program committee member, (OPODIS 2012), 2012.
- sc89. *8th International Conference on Information Security and Cryptology (Inscrypt)*, Program committee member, 2012.
- sc90. *32nd Annual ACM Symp. on Principles of Distributed Computing*, Program committee member, (PODC 2013), August 2013.
- sc91. *Algorithms and Data Structures Symposium (WADS 2013)*, Program committee member, 2013.
- sc92. *International Symposium on Algorithms and Experiments for Sensor Systems, Wireless Networks and Distributed Robotics*, ALGOSENSORS, Program committee member, 2013.
- sc93. *International Symposium on Algorithms and Experiments for Sensor Systems, Wireless Networks and Distributed Robotics*, **Steering Committee**, ALGOSENSORS, 2013-2014.
- sc94. *9th International Conference on Information Security and Cryptology (Inscrypt)*, Program committee member, 2013.
- sc95. *5th International Conference on Runtime Verification, (RV'14)*, Program committee member, 2014.
- sc96. *33th Annual ACM Symp. on Principles of Distributed Computing*, **Program Committee Chair**, (PODC 2014), August 2014.
- sc97. *3rd International Symposium on Privacy and Security in Cloud and Big Data*, Program committee member, (PriSec 2014), December 2014.
- sc98. *IEEE International Conference on Software Science, Technology and Engineering (SWSTE)*, Doctoral Symposium Chairman, June 2014.
- sc99. *1st International Conference on Information Systems Security and Privacy*, Program committee member, (ICISSP) 2015.
- sc100. *34th Annual ACM Symp. on Principles of Distributed Computing*, Program committee member, (PODC 2015), August 2015.
- sc101. *29th IEEE International Parallel and Distributed Processing Symposium, (IPDPS)*, Program committee member, 2015.
- sc102. *35th International Conference on Distributed Computing Systems*, Program committee member, (ICDCS 2015), 2015.



- sc103. *3rd International Workshop on Security in Cloud Computing*, (AsiaCCS-SCC 2015), 2015.
- sc104. *17th International Symposium on Stabilization, Safety, and Security of Distributed Systems* (SSS 2015), Program committee member, 2015.
- sc105. *19th International Conference on Principles Of DIStributed Systems*, Program committee member, (OPODIS 2015), 2015.
- sc106. *17th International Conference on Distributed Computing and Networking* (ICDCN16), Program committee member, January 2016.
- sc107. *30th IEEE International Parallel and Distributed Processing Symposium*, (IPDPS), Program committee member, 2016.
- sc108. *IEEE International Conference on Software Science, Technology and Engineering* (SWSTE), **Program Committee co-Chair**, June 2016.
- sc109. *18th International Conference on Distributed Computing and Networking* (ICDCN17), Program committee member, January 2017.
- sc110. *International Workshop on Inference and Private Hyperconnected World* (INFER16), Program committee member, July 2016.
- sc111. *36th Annual ACM Symp. on Principles of Distributed Computing*, Program committee member, (PODC 2017), August 2017.
- sc112. *International Symposium on Cyber Security Cryptography and Machine Learning* (CSCML17) **Steering Committee Chair and Program Committee co-Chair**, June 2017.

#### **Industrial Committees:**

- in1. *Committee for the selection of the best Israeli Hi Tech CEOs for 2010.*
- in2. *Committee for the Israeli mobile challenge 2011.*
- in3. *Committee of iNNOVEX 2015.*
- in4. *Committee of ChipEx 2013.*
- in5. *Committee of iNNOVEX 2014.*
- in6. *Committee of ChipEx 2014.*
- in7. *Software Steering Committee at ILTAM – Israeli Users’ Association of Advanced Technologies in Hi-Tech Integrated Systems*, 2014.
- in8. *Committee of iNNOVEX 2016.*
- in9. *Committee of ChipEx 2016.*
- in10. *Committee of iNNOVEX 2017.*

#### **Member in graduate student committees:**

- Chensdian Lin, Ph.D., Univ. of Chicago, June 1995.
- Anat Bremler, M.Sc., Tel-Aviv Univ., Oct. 1996.
- Itai Zilbershtein, M.Sc., EE Dept. Ben-Gurion Univ., Dec. 1997.

Igal Roytblat, M.Sc., EE Dept. Ben-Gurion Univ., Feb. 1998.  
 Zvi Ostfeld, Ph.D., Tel-Aviv Univ., Apr. 1998.  
 Arnon Levy, M.Sc. IE Dept. Ben-Gurion Univ., Nov. 1998.  
 Rony Ohayon, Ph.D. candidate, CSE Dept. Ben-Gurion Univ., Sept. 1999.  
 Yariv Cohen, M.Sc., IE Dept. Ben-Gurion Univ., Jan. 2000.  
 Nikolai Berezansky, M.Sc., CS Dept. Ben-Gurion Univ., May 2001.  
 Alex Gontmakher, Ph.D. candidate, CS Dept. Technion, June 2001.  
 Emanuel Dar, Ph.D., BIU, Feb. 2002.  
 Rami Rashkovits, Ph.D. candidate, IE Dept. Technion, June 2002.  
 Roni Ram, M.Sc., Technion, Sept. 2002.  
 Yoav Stahl, M.Sc., CS Dept. Ben-Gurion Univ., Oct. 2002.  
 Dudu Amzallag, IE Dept. Ben-Gurion Univ., Dec. 2002.  
 Dganit Miron Ali-Raz, ECE Dept. Ben-Gurion Univ., May 2003.  
 Tamar Pinhas, M.Sc., CS Dept. Ben-Gurion Univ., May. 2003.  
 Rony Ohayon, Ph.D., IE Dept. Ben-Gurion Univ., July 2003.  
 Itamar Elhannany, Ph.D, EE Dept. Ben-Gurion Univ., July 2003.  
 Shirlee Megidish, M.Sc., CS Dept. Ben-Gurion Univ., Nov. 2003.  
 Gregory V. Chockler, Ph.D., CS Hebrew University, Dec. 2003.  
 Dean H. Lorenz, Ph.D., EE Dept. Technion, March 2004.  
 Liran Liss, Ph.D. candidate, EE Dept. Technion, June 2004.  
 Svetlana Daichman, M.Sc., IE Dept. Ben-Gurion Univ., Dec. 2004.  
 Roi Zivan, Ph.D. candidate, CS Dept. Ben-Gurion Univ., Jan. 2005.  
 Itsik Kitroser, M.Sc., CS Dept. Ben-Gurion Univ., Jan. 2005.  
 Amit Dvir, M.Sc., CSE Dept. Ben-Gurion Univ., Jan. 2005.  
 Anders Gidenstam, Ph.D. candidate, Chalmers University of Technology, Sweden, Jan. 2005.  
 Judit Hasson, M.Sc., CS Dept. Ben-Gurion Univ., March 2005.  
 Ilanit Moodahi, M.Sc., CS Dept. Ben-Gurion Univ., April 2005.  
 Nir Levin, M.Sc., CS Dept. Ben-Gurion Univ., June 2005.  
 Alon Kama, Ph.D. candidate, CS Dept. Technion, July 2005.  
 Tina Nolte, Ph.D. reader, Dept. of EE and CS, MIT, July 2005.  
 Shira Zuker, Ph.D. candidate, CS Dept. Ben-Gurion, August 2005.  
 Dana Yagil, M.Sc., IE Dept. Ben-Gurion, September 2005.  
 Ariel Daliot, Ph.D. candidate, CS Dept. Hebrew University, November 2005.  
 Naama Ben-Mordechai, M.Sc., CS Dept. Ben-Gurion Univ., November 2005.  
 Nati Shaked, Ph.D. candidate, ECE Dept. Ben-Gurion Univ., Jan. 2006.  
 Michael Okun, Ph.D., CS Hebrew University, March 2006.  
 Amit Dvir, Ph.D. candidate, CSE Dept. Ben-Gurion Univ., April 2006.  
 Itsik Kitroser, Ph.D. candidate, CSE Dept, Ben-Gurion Univ., May 2006.  
 Anders Gidenstam, Ph.D. dissertation, Chalmers University of Technology, Sweden, Sept. 2006.  
 Gabi Kliot, Ph.D. candidate, CS Dept. Technion, Janaury 2007.  
 Enav Weinreb, Ph.D. dissertation, CS Dept. Ben-Gurion Univ., February 2007.  
 Ezra Hoch, Ph.D. candidate, CS Dept. Hebrew University, January 2008.  
 Alex Kogan, M.Sc., CS Dept. Technion, April 2008.  
 Olivier Peres, Ph.D. dissertation, LRI, Paris 11, September 2008.  
 Tina Nolte, Ph.D. dissertation, MIT, October 2008.  
 Gabi Kliot, Ph.D. dissertation, CS Dept. Technion, February 2009.  
 Dov Shirtz, Ph.D. candidate, ISE Dept. BGU, February 2010.  
 Arye Zahavi, Ph.D. candidate, CS Dept. BGU, March 2010.

Yuval Fledel, M.Sc., ISE Dept. BGU, April 2010.  
Ido Ben-Zion, M.Sc., CSE Dept. BGU, May 2010.  
Adi Suisa, Ph.D. candidate, CS Dept. BGU, June 2010.  
Robert Moskovitch, Ph.D. dissertation, ISE Dept. BGU, November 2010.  
Tomer Heber, M.Sc. dissertation, CS Dept. BGU, November 2010.  
Yair Allouch, Ph.D. candidate, CSE Dept, BGU, January 2011.  
Ezra Hoch, Ph.D., CS Dept. Hebrew University, March 2011.  
Gal Bar-Nissan, M.Sc. dissertation, December 2011.  
Moshe Ivry-Zazon, Ph.D. candidate, CS Dept. BGU, December 2011.  
Dimitri Bykhovsky, Ph.D. candidate, ECE Dept. BGU, January 2012.

**Member in tenure and promotion committee:**

Tenure committee, BGU, July 2001.  
Promotion to Senior Lecturer committee, BGU, August 2001.  
Tenure Track and Promotion Committee, Netanya Academic College, September 2001, May 2002.  
Tenure committee, BGU, January 2002.  
Tenure committee, BGU, March 2003.  
Promotion to lecturer committee, BIU, April 2004, June 2004, January 2007, May 2007.  
Tenure committee, BGU, June 2004.  
Tenure committee, BGU, March 2005.  
Tenure committee, BGU, May 2006.  
Promotion committee, Université de Paris-sud — Paris 11, LRI, Habilitation Exam of Sebastien Tixeuil, May 2006.  
Promotion to Senior Lecturer committee, BGU, December 2006.  
Promotion to Associate Professor and Tenure, BIU, January 2007.  
Promotion committee, Université de Paris-sud — Paris 11, LRI, Habilitation Exam of Colette Johnen, Nov. 2007.  
Tenure committee, BGU, February 2009.  
Promotion committee, Université Pierre & Marie Curie, Paris 6, Habilitation Exam of Maria Potop-Butucaru (Gradinariu), Dec. 2010.  
Promotion to Senior Lecturer committee, BGU, December 2010.  
Promotion to Senior Lecturer committee, BGU, January 2011.  
Promotion to Full Professor committee, TAU, April 2012.  
Promotion committee, Université de Paris-sud — Paris 11, LRI, Habilitation Exam of Sylvie Delaet, November 2013.