VALERIE KING
DEPARTMENT OF COMPUTER SCIENCE
UNIVERSITY OF VICTORIA
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RESEARCH INTERESTS Randomized algorithms, data structures, distributed computing, lower bounds.

EDUCATION

- Ph.D., 1988, Computer Science, University of California, Berkeley. Thesis: "Lower Bounds on the Complexity of Graph Properties," supervised by Richard Karp.

- J.D., 1983, UC Berkeley School of Law, Berkeley.

- A.B., 1977, Mathematics, Princeton University, Princeton, NJ.

PROFESSIONAL EXPERIENCE

- *4-5/18* Visiting Scientist, Realtime Decision-making, Simons Institute, Berkeley, CA

- *9-12/17* Visiting Professor, Department of Computer Science, University of Toronto.

- *5-6/14*: Invited Professor, ENS and Henri Poincare Institute, Paris

- *1/14-4/14*: Member, Institute for Advanced Study, Princeton, NJ

- *9/14-12/14*: Visiting Scientist, Theoretical Foundations of Big Data Analysis, Simons Institute, Berkeley, CA

- *2003-present*: Professor, Department of Computer Science, University of Victoria

- *2006-7*: Visiting Researcher, Microsoft Research Silicon Valley Center, Mountain View, CA.

- *2001-02*: Senior member of the technical staff, Systems Research Center, HP Labs, formerly, Compaq, Palo Alto, CA.

- *6/97-03* : Associate Professor, Department of Computer Science, University of Victoria.

- *1/99-6/99* : Visiting Scholar, Computer Science Department, U.C. Berkeley and ICSI.

- *1/99-6/99* : Visiting Professor, Computer Science Department, Hebrew University

- *7/98-9/98* : Visiting Associate Professor, DIKU, University of Copenhagen

- *7/92-97* : Assistant Professor, Department of Computer Science, University of Victoria.

- *9/90-6/92*: Research Scientist, NECI, Princeton, NJ.

- *1/89-8/90*: Postdoctoral Fellow, University of Toronto, Department of Computer Science.

- *2/90* : Visiting Scientist, University of Bonn, W. Germany.

- *9/88-12/88* : Postdoctoral Fellow, Princeton University, Department of Computer Science.

PROFESSIONAL MEMBERSHIPS

- California State Bar

- ACM

MAJOR RESEARCH GRANTS

- Natural Sciences and Engineering Research Council (NSERC) Accelerator Grant
  Amount per year: $40,000. Years of tenure: 2016-2018.

- Natural Sciences and Engineering Research Council (NSERC) of Canada Discovery Grant
  Amount per year: $54,000. Years of tenure: 2016-2020.
  Title: "Algorithm Design for Large Graphs and Communication Networks"

- Google Faculty Research Award $41,000. Year of tenure, 2014.

- Pacific Institute of Mathematical Science (PIMS) Collaborative Research Group (CRG) Algorithmic Theory of Networks: 2012-2015
  Principal Investigators: Petra Berinbrink, Funda Ergun, and Valerie King
  Total amount: $160,000

- Natural Sciences and Engineering Research Council (NSERC) of Canada Discovery Grant
  Amount per year: $29,000. Years of tenure: 2011-2015.
  Title: "Network Algorithms"

- Natural Sciences and Engineering Research Council (NSERC) of Canada Research Grant.
  Amount per year: $48,000. Years of tenure: 2006-2010.
  Title: "Algortihms and Data Structures for Networks"

- Natural Sciences and Engineering Research Council (NSERC) of Canada Research Grant.
  Amount per year: $49,000. Years of tenure: 2001-2005.
  Title: "Dynamic Data Structures."

- Nortel Networks
  Principal investigators: Eric Manning and Ali Shoja.
  Amount: $58,000. Year received: 1999-2000.
  "A Predictor and an Optimizer for the Network Organizer."

- Natural Sciences and Engineering Research Council (NSERC) of Canada Research Grant.
  Amount per year (currently): $43,800. Years of tenure: 1997-2001.
  Title: "Randomization and Dynamic Data Structures."

- Natural Sciences and Engineering Research Council (NSERC) of Canada Research Grant.
  Amount per year: $22,000. Years of tenure: 1992-1997.
  Title: "Randomized and Deterministic Data Structures."

- Natural Sciences and Engineering Research Council (NSERC) of Canada Equipment Grant.
  Principal investigator: Mike Fellows.
  Amount: $20,742. Year received: 1997.
  Title: "Implementation of Bounded Width Algorithmics for Applications in Biology."

AWARDS
ACM Fellow (2014)
Best Paper Awards: DISC (2018); SODA (2013), PODC (2010), SOCIALCOM(2009);
Best Poster Award: WWW (2008), SIGGRAPH MIG (2014);
ACM Service Award (2008, 2017).

PUBLICATIONS

Papers in Refereed Journals

1. Valerie King, Jared Saia: Byzantine Agreement in Expected Polynomial Time. *J. ACM* 63(2): 13:1-13:21 (2016)

2. Varsha Dani, Valerie King, Mahnush Movahedi, Jared Saia, Mahdi Zamani: Secure multi-party computation in large networks.*Distributed Computing* 30(3): 193-229 (2017)

3. Zahed Rahmati, Mohammad Ali Abam, Valerie King, Sue Whitesides, Alireza Zarei: A simple, faster method for kinetic proximity problems. *Computational Geometry* 48(4): 342-359 (2015)

4. Kazem Jahanbakhsh, Valerie King, Gholamali C. Shoja: Predicting missing contacts in mobile social networks. *Pervasive and Mobile Computing* 8(5): 698-716 (2012)

5. Valerie King, Jared Saia: Breaking the $O(n^2)$ bit barrier: Scalable byzantine agreement with an adaptive adversary. *Journal of the ACM* 58(4): 18 (2011)

6. Louis Lei Yu, Valerie King: The evolution of friendships in Chinese online social networks.*IJSCCPS* 1(2): 180-205 (2011)

7. Valerie King, Cynthia A. Phillips, Jared Saia, Maxwell Young: Sleeping on the Job: Energy-Efficient and Robust Broadcast for Radio Networks. *Algorithmica* 61(3): 518-554 (2011).

8. B. M. Kapron, D. Kempe, V. King, J. Saia, V. Sanwalani: Fast Asynchronous Byzantine Agreement and Leader Election with Full Information. (Special issue of SODA 2008 papers) *ACM Transactions on Algorithms* 6(4) (2010).

9. D. Holtby, B. M. Kapron, V. King: Lower bound for Scalable Byzantine Agreement. *Distributed Computing* 21(4): 239-248 (2008)

10. Valerie King, Scott Lewis, and Jared Saia, "Simple and Efficient Algorithms for Choosing a Random Peer," *Algorithmica* 49 (2) pp. 147-169 (2007).

11. Valerie King and Garry Sagert, "A Fully Dynamic Algorithm for Maintaining the Transitive Closure", *Journal of Comput. Systems Science* 65(1) (2002) pp. 150-167.

12. Moniker Henzinger and Valerie King, "Maintaining minimum spanning forests in dynamic graphs" *SIAM J. of Computing*, vol. 31, no.2, pp. 364-374 (2001).

13. Monika Henzinger and Valerie King, "Randomized Dynamic Algorithms with Polylogarithmic Time per Operation," *Journal of the ACM*, Vol. 46 No. 4 (1999) pp.502-516.

14. M. Henzinger, V. King and T. Warnow "Constructing a Tree from Homeomorphic Subtrees with Applications to Computational Biology," *Algorithmica*, vol. 24, no.1 (1999) pp.1-13.

15. V. King, C. K. Poon, V. Ramachandran, and S. Sinha"An Optimal EREW algorithm for minimum spanning tree verification", *Information Processing Letters*, 62(3) (1997) pp.153-159.

16. Valerie King, "A Simpler Linear Time Algorithm for Minimum Spanning Tree Verification." *Algorithmica*, 18 (1997) pp.263-270.

17. F. Fich, R. Impagliazzo, B. Kapron, V. King, and M. Kutyłowski"Limits on the power of parallel random access machines with weak forms of write conflict resolution" *Journal of Computer and System Sciences* 53 (1996) pp.104-111.

18. V. King, S. Rao and R. Tarjan, "A Faster Deterministic Maximum Flow Algorithm," *Journal of Algorithms*, vol. 17. no. 3 (1994) pp.447-474.

19. Claire. Kenyon and Valerie King, "On Boolean Decision Trees with Noisy Nodes," *Random Structures and Algorithms*, vol.5 no.3 (1994), pp. 453-464.

20. Wayne Goddard, Claire Kenyon, Valerie King, and Leonard Schulman"Optimal Randomized Algorithms for Local Sorting and Set-Maxima," *SIAM Journal of Computing*, 22(2) (1993), pp. 272-285.

21. Valerie King, "A Lower Bound for the Recognition of Digraph Properties," *Combinatorica*, 10(1) (1990) pp.53-59.

22. Valerie King, 'An $\Omega(n^{5/4})$ Lower Bound on the Randomized Complexity of Graph Properties," in *Combinatorica*, 11(1) (1991), pp.23-32.

Papers in Refereed Conferences

23. Udit Agarwal, Vijaya Ramachandran, Valerie King, Matteo Pontecorvi: A Deterministic Distributed Algorithm for Exact Weighted All-Pairs Shortest Paths in (n 3/2) Rounds. PODC 2018: 199-205

24. Ali Mashreghi, Valerie King: Time-communication trade-offs for minimum spanning tree construction. ICDCN 2017: 8

25. Ariel Webster, Bruce M. Kapron, Valerie King: Stability of certainty and opinion in influence networks. ASONAM 2016: 1309-1320

26. Russell Impagliazzo, Ragesh Jaiswal, Valentine Kabanets, Bruce M. Kapron, Valerie King, Stefano Tessaro: Simultaneous Secrecy and Reliability Amplification for a General Channel Model. TCC (B1) 2016: 235-261

27. Valerie King, Shay Kutten, Mikkel Thorup: Construction and Impromptu Repair of an MST in a Distributed Network with o(m) Communication. PODC 2015: 71-80

28. Varsha Dani, Valerie King, Mahnush Movahedi, Jared Saia: Quorums Quicken Queries: Efficient Asynchronous Secure Multiparty Computation. ICDCN 2014: 242-256

29. Valerie King, Jared Saia: Faster Agreement via a Spectral Method for Detecting Malicious Behavior. SODA 2014: 785-800

30. Seth Gilbert, Valerie King, Seth Pettie, Ely Porat, Jared Saia, Maxwell Young: (Near) optimal resource-competitive broadcast with jamming. SPAA 2014: 257-266

31. Dan Alistarh, James Aspnes, Valerie King, Jared Saia: Communication-Efficient Randomized Consensus. DISC 2014: 61-75

32. Zahed Rahmati, Valerie King, and Sue Whitesides: (Reverse) k-Nearest Neighbors for Moving Objects (Poster) . SIGGRAPH MIG 2014: 187-187.

33. Zahed Rahmati, Valerie King, and Sue Whitesides: Kinetic Reverse k-Nearest Neighbor Problem. IWOCA 2014.

34. Zahed Rahmati, M. A. Abam, Valerie King, and Sue Whitesides: Kinetic Data Structures for the Semi-Yao Graph and All Nearest Neighbors in R^d. CCCG 2014.

35. Zahed Rahmati, Valerie King, Sue Whitesides: Kinetic data structures for all nearest neighbors and closest pair in the plane. Symposium on Computational Geometry 2013: 137-144

36. Valerie King, Jared Saia: Brief announcement: byzantine agreement with a strong adversary in polynomial expected time. PODC 2013: 187-189

37. Valerie King and Jared Saia: Byzantine Agreement in Expected Polynomial Time. STOC 2013: 401-410.

38. Bruce Kapron, Valerie King, Ben Mountjoy: Dynamic Graph Connectivity in Polylogarithmic Worst Case Time. SODA 2013

39. Zahed Rahmati, Sue Whitesides, Valerie King: Kinetic and Stationary Point-Set Embeddability for Plane Graphs. Graph Drawing 2012: 279-290

40. Seth Gilbert, Jared Saia, Valerie King, Maxwell Young: Resource-competitive analysis: a new perspective on attack-resistant distributed computing. FOMC 2012: 1

41. Varsha Dani, Valerie King, Mahnush Movahedi, Jared Saia: Brief announcement: breaking the O(nm) bit barrier, secure multiparty computation with a static adversary. PODC 2012: 227-228

42. Valerie King, Jared Saia, Maxwell Young: Conflict on a communication channel. ACM Principles of Distributed Computing. (PODC) 2011: 277-286.

43. K. Jahanbakhsh, V. King, A. Shoja: Predicting missing contacts in mobile social networks. 12th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WOWMOM) 2011:1-9.

44. Kazem Jahanbakhsh, Valerie King, Gholamali C. Shoja: Empirical Comparison of Information Spreading Algorithms in the Presence of 1-Whiskers. SocialCom/PASSAT 2011: 489-492

45. V. King, S. Lonergan, J. Saia, Amitabh Trehan: Quorums: Achieving Load Balanced Byzantine Agreement: Int'l Conf. on Distributed Computing and Networking (ICDCN) 2011: 203-214.

46. L. Yu, V. King, The Evolution of Friendships in Chinese Online Social Networks: IEEE international Conference on Social Computing (SocialCom/PASSAT), 2010

47. V. King and J. Saia: Breaking the O(n^2) Bit Barrier: Scalable Byzantine Agreement with an Adaptive Adversary. ACM Principles of Distributed Computing (PODC) 2010: 420-429 *Best Paper Award.*

48. B. Wu, V. King and J. Saia: Attack-Resistant Frequency Counting. IEEE International Parallel and Distributed Processing Symposium (IPDPS) 2010: 1-10.

49. O. Oluwasanmi, V. King and J. Saia. An Empirical Study of a Scalable Byzantine Agreement Algorithm. Heterogeneity in Computing Workshop (HWC 2010): 1-10.

50. K. Jahanbakhsh, A. Shoja, and V. King. Social-Greedy: A Socially-Based Greedy Routing Algorithm for Delay Tolerant Networks (poster)(MobiOpp) 2010.

51. V. King, L.Yu, Y. Zhuang: Guanxi in the Chinese Web. IEEE international Conference on Social Computing (SocialCom) (4) 2009: 9-17 *Best Paper Award.*

52. V. King, J. Saia: From Almost Everywhere to Everywhere: Byzantine Agreement with $\tilde{}(n^{3/2})$ Bits. International Symposium on Distributed Computing (DISC) 2009: 464-478.

53. Valerie King, Cynthia Phillips, Jared Saia, Maxwell Young, "Sleeping on the Job: Energy Efficient Broadcast for Radio Networks," to appear in *ACM Principles of Distributed Computing (PODC)* (2008).

54. Valerie King, Louis Lei Yu, Yan Zhuang, "Guanxi in the Chinese Web - a Study of Mutual Linking. Best Poster Award. *International World Wide Web Conference (WWW)* (2008) pp. 1161-1162 *Best Poster Award.*

55. Bruce M. Kapron, David Kempe, Valerie King, Jared Saia, Vishal Sanwalani, "Fast Asynchronous Byzantine Agreement and Leader Election with Full Information. *ACM SIAM Symp. on Discrete Algorithms (SODA)* (2008). pp. 1038-1047.

56. V. King, J.Saia, V. Sanwalani, E. Vee'"Towards Secure and Scalable Computation in Peer-to-Peer Networks," *IEEE Foundations of Computer Science (FOCS)* (2006) pp.87-98.

57. D. Holtby, B. Kapron, V. King, "Lower Bounds for Scalable Byzantine Agreement" with D. Holtby and B. Kapron, *ACM Principles of Distributed Computing (PODC)* (2006) pp.285-291.

58. Valerie King, Jared Saia,Vishal Sanwalani, Erik Vee. "Scalable Leader Election, *ACM SIAM Symp. on Discrete Algorithms (SODA)* (2006) pp.990-999.

59. Chong Liu, Kui Wu, Valerie King, "Very low cost sensor localization for hostile environments," IEEE Int. Conf. on Communications (ICC) (2005).

60. Chong Liu, Kui Wu, Valerie King: Randomized Coverage-Preserving Scheduling Schemes for Wireless Sensor Networks. *NETWORKING* (2005) pp.956-967.

61. Sarah Carruthers, Valerie King. "Connectivity of Wireless Sensor Networks with Constant Density. *ADHOC-NOW* (2004) pp. 149-157.

62. Dennis Dreef, Sanaz Ahari, Kui Wu, Valerie King. "Utilizing the Uncertainty of Intrusion Detection to Strengthen Security for Ad Hoc Networks," *ADHOC-NOW* (2004) pp. 82-95.

63. Valerie King, Jared Saia. Choosing a random peer. *ACM SIGACT-SIGOPS Symp. on Principles of Distributed Computing (PODC)* (2004) pp. 125-130.

64. Valerie King, Li Zhang, and Yunhang Zhou, "On the Complexity of Distance-based Tree Reconstruction Methods," *ACM-IEEE SODA '03*.

65. Valerie King and Mikkel Thorup, "Space-saving Trick for Maintaining Shortest Paths and Transitive Closure," *Proceedings of the 7th Annual International Conference COCOON in LNCS 2108* (August, 2001) pp. 268-277.

66. Valerie King, Orna Kupferman, Moshe Y. Vardi. "On the Complexity of Parity Word Automata" *Foundations of Software Sci. and Computation Structures (FoSSaCS)* (2001) pp. 276-286.

67. Valerie King, "Fully Dynamic Algorithms for Maintaining All-Pairs Shortest Paths and Transitive Closure in Digraphs." *40th Symposium on Foundations of Computer Science (FOCS)* (October, 1999).

68. Valerie King and Garry Sagert, "A Fully Dynamic Algorithm for Maintaining the Transitive Closure", *31st ACM Annual Symposium on Theory of Computing (STOC)* (May 1999).

69. Monika Henzinger and Valerie King, "Maintaining a minimum spanning tree in a dynamic graph" *24th International Colloquium of Automata, Languages and Programming (ICALP)* (July 1997).

70. Monika Henzinger, Valerie King, and Tandy Warnow, "Constructing a Tree from Homeomorphic Subtrees with Applications to Computational Biology," with *7th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)* (January, 1996).

71. Monika Henzinger and Valerie King, "Fully Dynamic Biconnectivity and Transitive Closure," *36th Symposium on Foundations of Computer Science (FOCS)* (October, 1995), pp. 664-72.

72. Valerie King "A Simpler Linear Time Algorithm for Minimum Spanning Tree Verification." *Fourth Workshop on Algorithms and Data Structures (WADS)* (August 1995).

73. Monika Henzinger and Valerie King "Randomized Dynamic Algorithms with Polylogarithmic Time per Operation " *27th ACM Annual Symposium on Theory of Computing (STOC)* (May 1995).

74. F. Fich, R. Impagliazzo, B. Kapron, V. King, and M. Kutyłowski. "Limits on the power of parallel random access machines with weak forms of write conflict resolution" *10th Symposium on Theoretical Aspects of Computer Science (STACS)* (February 1993).

75. V. King, S. Rao and R. Tarjan, "A Faster Deterministic Maximum Flow Algorithm," *Third Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)* (January 1992) pp.157-64.

76. C. Kenyon and V. King "On Boolean Decision Trees with Noisy Nodes," *Israel Symposium on Theory of Computing and Systems*, (May 1992), pp.24-31.

77. Wayne Goddard, Valerie King, and Leonard Schulman, "Optimal Randomized Algorithms for Local Sorting and Set-Maxima" *22nd ACM Annual Symposium on Theory of Computing (STOC)* (May 1990) pp.45-53.

78. C. Kenyon-Mathieu and V. King, "Verifying Partial Orders," *Proceedings of the 21st ACM Annual Symposium on Theory of Computing (STOC)* (May 1989) pp. 367-74.

79. Valerie King, "Lower Bounds on the Complexity of Graph Properties," *20st ACM Annual Symposium on Theory of Computing (STOC)* (May 1988), pp. 468-74.

Books, book chapters and unrefereed articles

80. Hamed Hatami, Pierre McKenzie, Valerie King (Eds): *Proceedings of the 49th Annual ACM SIGACT Symposium on Theory of Computing*, STOC 2017, Montreal, QC, Canada, June 19-23, 2017. ACM 2017, ISBN 978-1-4503-4528-6

81. Keren Censor-Hillel, Valerie King (Eds.): Proceedings Ninth International Workshop on Foundations of Mobile Computing, FOMC 2013, Jerusalem, Israel, October 17-18, 2013. EPTCS 132, 2013

82. Keith Archer, Kosta Beznosov, Lee-Ann Crane, Valerie King, George Morfitt: Independent Panel on Internet Voting: Recommendations Report to Legislative Assembly of BC. (2014)

83. Valerie King, Jared Saia: Scalable Byzantine Agreement. *ACM SIGACT News:* 41(3): 89-107 (2010)

84. "Dynamic graph connectivity," in *Encylopedia of Algorithms*, ed. Ming Kao, Springer (2008, 2016).

85. "Dynamic Transitive Closure," in *Encylopedia of Algorithms*, ed. Ming Kao, Springer (2008, 2016).

GRADUATE STUDENTS and POSTDOCs who have completed their studies

- Peter Yan, M.Sc. 1997. Thesis title: "Coloring Random k-Colorable Graphs."

- Torrey Hoffman, M.Sc. 1998. Thesis title: A Cache Scheduling Problem.

- Garry Sagert, M.Sc. 2000. Thesis Title: Dynamic Transitive Closure Algorithms.

- Lou Ibarra, Ph.D. 2001: Thesis title: Dynamic Chordal and Interval Graph Algorithms.

- Peter Hollemans, M.Sc., 2003. Thesis title: Minimal Energy Broadcasting Networks

- Dan Holtby, MSc. 2006. Thesis title: Lower bounds for Scalable Byzantine Agreement.

- Vishal Sanwalani postdoctoral fellow, 2006. Research Topic: Byzantine Agreement.

- Gordon Brown, Ph.D. 2008. Thesis title: An Analysis of Salmonid RNA Sequences and Implications for Salmonid Evolution."

- Yan Zhuang, MSc. 2009 Thesis Topic: Efficient Modeling of the WWW

- Warren Sheckenfelder, MSc. 2009. Thesis Topic: Learning Bisimulation

- Louis Yu, Ph.D. 2010. Thesis Title: Patterns, Formation and Properties of Social Networks in the Chinese Web

- Amitabh Trehan, postdoctoral fellow 2006. . Research topic: Byzantine Agreement

- Kazem Jahanbakhsh, Ph.D. 2012. Thesis Title: Contact Prediction, Routing and Fast Information Spreading in Social Networks

- Ben Mountjoy, MS. 2013 Thesis Title: Applications of a Novel Sampling Technique to Fully Dynamic Graph Algorithms

- Zahed Rahmati, Ph.D. 2014 Thesis Title: Simple Faster Kinetic Data Structure

- Ariel Webster, MS. 2016 Thesis Title: Stability of Certainty and Opinion on Influence Networks

External examiner for:

- Eva Rotenberg, Ph.D., University of Copenhagen (2017)

- Kasper Greene Larsen, Ph.D., University of Aarhus (2013)

- O. Oluwasanmi, MSc., University of New Mexico (2011).

- Liam Roditty, Ph.D. candidate, University of Tel Aviv (2006).

- Camil Demestrescu, Ph.D. candidate at University of Rome, "La Sapienza" (2000) ;

- Stephen Alstrup, Ph.D. University of Copenhagen (DIKU) (1999);

OTHER TECHNICAL CONTRIBUTIONS

Member of Editorial Board, *Journal of Discrete Algorithms*, Jan. 2015–2018
I served on the technical committees for the following conferences:

- 2018 SOSA

- 2018 HALG

- 2018 SSS

- 2017 STOC (chair)

- 2016 ITCS

- 2014 SIROCCO

- 2014 FOCS

- 2013 STOC

- 2013 ICALP

- 2012 ACM Symposium on Principles of Distributed Computing (PODC)

- 2012 International Colloquium on Automata, Languages and Programming (ICALP)

- 2011 Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM)

- 2010 ACM-SIAM Symposium on Discrete Algorithms (SODA) 2010

- Scandanavian Workshop on Algorithmic Theory (SWAT)

- 2010 Latin American Theoretical Informatics Symp. (LATIN)

- 2008 IEEE Foundations of Computing (FOCS)

- 2007 13th Annual International Computing and Combinatorics Conference (COCOON)

- 2007 39h ACM Annual Symposium on Theory of Computing (STOC)

- 2005 Workshop on Algorithms and Data Structures (WADS)

- 2004 Latin American Theoretical Informatics Symp. (LATIN)

- 2002 ACM-SIAM Symposium on Discrete Algorithms (SODA).

- 1999 RANDOM.

- 1999 ACM-SIAM Symposium on Discrete Algorithms (SODA).

- 1998 Scandanavian Workshop on Algorithmic Theory (SWAT).

- 1997 29th ACM Annual Symposium on Theory of Computing (STOC).

- 1993 ACM-SIAM Symposium on Discrete Algorithms (SODA).

Organizer or co-organizer of the following workshops:

- 2015 BIRS Workshop: Towards a Unified Treatment of Dynamic Graphs

- 2013 ACM Foundations of Mobile Computing, Jerusalem

- 2013 Northwest Theory Day in Victoria

- 2017, 2015, 2013, 2011, 2009 Algorithms and Data Structure Workshop ADS in Bertinoro

- 2009 BIRS Workshop on Lower Bounds in Distributed Computing.

- 2008: Workshop in Honor of Bob Tarjan's 60th Birthday Birthday in Princeton, NJ.

- 2004 ALADDIN workshop on dynamic algorithms and applications

- 2001 CAIMS (Canadian industrial and applied mathematics) workshop on computational biology

- 2000 PIMS (Pacific institute of mathematical sciences) workshop on dynamic graphs

Other professional activities:

- 2014: Chair, Search committee for Editor-In-Chief, ACM *Transactions on Algorithms*

- 2008: Local Arrangements Co-chair of the ACM STOC in Victoria, Canada.

- 2007-: Member of the College of Reviewers for Canada Research Chairs Program.

- 2000, 2007, 2010, 2012: Reviewer for the Israel Science Foundation

- 2000: Reviewer for the Danish National Council (Science Research Project Grant Assessment

- 2001-4: Member of the NSERC Discovery Grant Panel

- 1998: Member of the NSF Theory Panel

RECENT INVITED TALKS

- Broadcasting with $o(m)$ bits: AmosFest, University of Tel Aviv (2017)

- LMS Keynote speaker in Discrete Maths, BCTC, Queen's University, Belfast (2016)

- Keynote talk, Dynamic Connectivity, ICALP (2015)

- Distributed MST: Shonan Village Workshop on Algorithms for Large Scale Graphs; ICERM workshop, Brown University, Princeton U. (2014)

- Panel member at Election Verification Network meeting, San Diego (2014)

- Byzantine Agreement in Expected Polynomial Time: IAS Princeton (2014), MIT and Calgary (2013)

- Dynamic Connectivity in Polylogarithmic Worst Case Time: MIT, McGill, U. Washington, and Calgary (2013)

- Dynamic Graph Algorithms for Maintaining Connectivity: Women in Theory, Princeton (2012).

- Open problems in Byzantine agreement: BIRS workshop on probabilistic vs. deterministic techniques for shared memory computation. (2012)

- Conflict on a communication channel: Workshop on Algorithms and Data Structures, Bertinoro (2011).

COMMUNITY/UNIVERSITY-WIDE ACTIVITIES:

- Member of the Faculty Association ADRC committee (2018-)

- Member of Elections BC Panel on Internet Voting (2012-4)

- Head of the Alan Turing Celebration Committee at University of Victoria (2012)

- President of the Jewish Community Centre of Victoria (2006–2010).

- Member of the Board of the Academic Women's Caucus of the University of Victoria (2007–2010)