CURRICULUM VITAE

HAGIT ATTIYA
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1 Personal Data

Date and place of birth: February 16, 1962, Jerusalem, Israel.
Israeli citizenship (I.d. # 5739025-4).
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2 Education

- Ph.D. in Computer Science. Hebrew University, July 1987.

- M.Sc. in Computer Science, *cum laude*. Hebrew University, June 1983.

- B.Sc. in Mathematics (expanded) and Computer Science, *cum laude*. Hebrew University, June 1981.

3 Research Interests

Distributed and parallel computing: synchronization primitives, fault-tolerance, agreement problems, randomization, timing-based algorithms; transactional memory; packet switches; performance analysis of distributed servers.

4 Academic Appointments

October 2015–September 2019: Executive Vice President for Academic Affairs, the Technion.

August 2005–present: Professor, The Harry W. Labov and Charlotte Ullman Labov Academic Chair, Faculty of Computer Science, Technion.

February 1997–July 2005: Associate Professor, Faculty of Computer Science, Technion.

October 1990–February 1997: Senior lecturer (tenure: May 1994), Faculty of Computer Science, Technion.

September 1988–September 1990: Postdoctoral research associate with the Theory of Distributed Systems research group at the Laboratory for Computer Science, M.I.T.

October 1987–August 1988: Instructor, Department of Computer Science, Tel-Aviv University.

October 1983–September 1986: Research assistant, Department of Computer Science, Hebrew University.

October 1981–September 1983: Teaching assistant, Department of Computer Science, Hebrew University.

5   Other Professional Employment

August 2009–August 2010: Visiting professor at the *École Polytechnique Fédérale de Lausanne* (EPFL), Switzerland.

September 2001–September 2002: Research scientist at Dune Semiconductor Ltd. A fabless semiconductor company supplying networking devices for Internet and Storage communication platforms. Verification, by analysis and simulation, of the company's switch architecture and algorithms.

October 1995–July 2001: Consultant on *testing shared-memory multiprocessors*, IBM Haifa Research Center. Specification of the PowerPC shared-memory architecture [J34], and design of algorithms for random test generation.

July/August 1993: Visiting scientist at the Software Principles Research department, AT&T Bell Laboratories, Murray Hill.

August 1991: Visiting scientist, DEC Cambridge Research Laboratory.

6   Teaching Experience at the Technion

Database Systems (1991), Databases (2020–)

File Systems (2004–2007, 2010–2015)

Operating Systems: developed a new course (2003–2004, 2008–2009)

Operating Systems Structure (1997–2001)

Distributed Algorithms B (2006–2015)

Distributed Algorithms (1993–2004, 2019)

Digital Computer Architecture (1992–1995)

Laboratory on Computer Communication (1992–2000)

Time Issues in Distributed Computing (1990, 1995)

7 Technion and Departmental Activities

Senior Staff Promotions Committee (Keva), Senate, Technion, November 2012–2015: member.

Chair, professional ad-hoc committees for promotion and tenure, January 2011–September 2012.

Senior Staff Promotions Preparatory Committee (Mechina), Senate, Technion.
    January 2006–December 2008: member.

Senate, Technion. January 2006–December 2007: (campus-wide elected) member.

Curricula Committee, Computer Science Department, Technion.
    October 2003–November 2005: *Chair*.
    October 1990–September 1991, November 1996–October 1999: member.

Software Technology Laboratory, Computer Science Department, Technion.
    October 2000–November 2001: *Coordinator*.
    November 1998–November 2001: member of the steering committee.

School for Graduate Studies, Technion.
    January 1995–December 1995: Member, advisory forum to the school's dean.
    November 1995–October 1996: Member, loans committee.
    November–December 1995: Member, committee on admissions policy for college graduates.

Graduate Studies Committee, Computer Science Department, Technion.
    January 1994–November 1995: *Chair*.
    October 1991–October 1996: member.

Technion disciplinary panel for academic staff, February 2005–July 2005, July 1994–February 1997.

Computer Science department representative to the Technion Senate, November 1997–October 1999.

8 Editorial

Springer-Verlag's journal *Distributed Computing*.
    Editor-in-chief, 2008–.
    Editorial board member, 2003–.
    Guest editor, special issue celebrating twenty years of PODC, Volume 16, Numbers 2-3, 2003.

Member, Advisory Board, EATCS–Springer book series *Monographs in Theoretical Computer Science and Texts in Theoretical Computer Science*, 2012–.

SIAM Journal on Computing, *Editorial board member*, 2005–2014.

Springer-Verlag's journal *Algorithmica*, *Editorial board member*, 2004–2007.

9 Program Committees for International Conferences

ACM Symposium on Principles of Distributed Computing (PODC).
   Chair, program committee, August 1997 (16th).
   Member, steering committee, August 1996–July 1999.
   Member, program committee, 1992, 1995, 2007, 2009, 2015, 2017, 2019.

International Symposium on Distributed Computing (DISC), formerly *WDAG*.
   Chair, program committee, 2020.
   Member (elected), steering committee, October 2003–2006.
   Member, program committee, 1996, 2001, 2003, 2012, 2014, 2018.

Member, program committee, ACM Symposium on Parallelism in Algorithms and Architectures (SPAA), 2010, 2013, 2019, 2021.

Member, program committee, International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), 2019.

International Colloquium on Automata, Languages and Programming (ICALP).
   Member, program committee, 2009.

International Parallel and Distributed Processing Symposium (IPDPS) sponsored by IEEE / ACM.
   Vice-chair (Algorithms), program committee, 2002.
   Member, program committee, 2004, 2006.

Member, program committee, IEEE International Conference on Distributed Computing Systems (ICDCS), 1990, 1995, 2005, 2006, 2014.

Symposium on Theoretical Aspects of Computer Science (STACS).
   Member, program committee, 2015.

Member, program committee, ACM SIGPLAN Workshop on Transactional Computing (TRANSACT), 2007, 2008, 2013.

International Conference on Distributed Computing and Networking (ICDCN).
   Member, program committee, 2011, 2012.

Colloquia on Structural Information and Communication Complexity (SIROCCO).
   Member, program committee, 2014.

Member, program committee, International Conference on Principles of Distributed Systems (OPODIS), 2006, 2009, 2012.

Member, program committee, *Supercomputing 2004*.

Member, program committee, IFIP Theoretical Computer Science (Foundations of Global Computing), August 2004.

Member, program committee, European Symposium on Algorithms (ESA), 1996, 1999, 2008.

Member, program committee, ACM Symposium on Theory of Computing (STOC), 1995.

Member, program committee, Second International Workshop on Next Generation Information Technologies and Systems (NGITS), 1995.

Member, program committee, Israel Symposium on the Theory of Computing and Systems (ISTCS), 1993.

Member, program committee, Workshop on Algorithms and Data Structures (WADS), 1993.

10   Other Professional Activities

Judge, 2021 *Blavatnik Awards for Young Scientists in Israel*.

Member, *Azrieli Faculty Fellows* committee (https://azrielifoundation.org/fellows/), 2020–.

Jury member, *Sephora Berrebi Scholarship for Women in Advanced Mathematics and Computer Science*, 2020.

Member, evaluation committee, *The Eric and Wendy Schmidt Postdoctoral Award for Women in Mathematical and Computing Sciences*, 2017–.

Member, Israel's ministry of Education 11th *Council of Higher Education* (MALAG), 2010–2012.

Member, ACM Software System Award committee, 2009–2013.

Chair, scientific committee for computer science, *Israel Science Foundation*, three academic years 2001–2004.

Member, Appointments committee, the *Academic College of Tel-Aviv-Yaffo*, May 2006–May 2009.

Member, Exact Sciences Committee, the *Clore Scholars Programme*, Clore Israel Foundation, 2004.

Member, selection committee, ACM Dijkstra prize in distributed computing, 2002, 2007, 2020 (chair).

Member, scientific advisory committee, Ministry of Science and Technology, Israel, 1993.

Reviewer for many scientific journals including *Journal of the ACM*, *SIAM Journal on Computing*, *ACM Transactions on Computer Systems*, *Distributed Computing*, *ACM Transactions on Programming Languages and Systems*, *IEEE/ACM Transactions on Networking*, *IEEE Transactions on Parallel and Distributed Computing*, *Information and Computation*, *Journal of Algorithms*, *SIAM Journal on Discrete Mathematics*.

Reviewer for several research foundations including *the US-Israel Binational Foundation*, *the Israeli Science Foundation*, *the National Science Foundation (USA)*, *NSERC*, and *the Austrian Science Fund*.

11   Awards, Fellowships and Honors

Cooper Prize for Academic Excellence, Technion, 2014.

2011 Edsger W. Dijkstra Prize in Distributed Computing, for [J14].

Michael Bruno memorial award from Yad-Hanadiv, 2011.

ACM fellow (2009), "for contributions to distributed and parallel computing".

Best student paper, PODC 2013 [C82].

Best paper (co-winner), OPODIS 2009 [C67].

Best student paper, PODC 2009 [C65].

Best student paper, DISC 2004 [C47].

Best student paper, DISC 2000 [C39].

The Taub prize, Computer Science, Technion, 1992.

Annenberg Scholar, 1991.

Leibnitz center doctoral fellowship, Hebrew University, 1987.

12 Invited Presentations

Keynote talk, "Specification and complexity of replicated objects,"
> 7th Workshop on Principles and Practice of Consistency for Distributed Data (PaPoC 2020), virtual, April 27, 2020.

Historical perspectives talk, "Agreement, Quorums and the Ordering of Events in a Distributed System,"
> Jerusalem Blockchain Winter School, December 16, 2018.

Invited seminar, "Coordination without Agreement,"
> College de France, Paris, November 2018.

Invited speaker, "Fences and RMRs Required for Synchronization,"
> Ilan Newman 60'th birthday, June 2017.

Keynote speaker, "Specification and Complexity of Replicated Objects,"
> SSS, November 2016.

Invited speaker, "Sitting on a fence: Strong non-commutativity and memory ordering ,"
> Workshop on Randomized Algorithms for Distributed Computing and Networks (RADICON), Rennes (France), July 21, 2014.

Invited speaker, "Go with a free feeling: The utility of operational-combinatorial impossibility proofs,"
> Topology workshop, as part of PODC (Paris), July 15, 2014.

Invited speaker, "A Programming Language Perspective on Transactional Memory Consistency,"
> 5th Workshop on the Theory of Transactional Memory, as part of DISC (Jerusalem), October 14, 2013.

Invited speaker, "Indistinguishability: Friend and Foe of Concurrent Data Structures,"
> Journées d'Informatique Fondamentale de Paris Diderot, April 22-26, 2013.

Invited speaker, "Inherent limitations can facilitate design and verification of concurrent programs,"
Intel and Technion Symposium 2011, September 13, 2011.
HiPEAC web seminar (FORTH, Crete), April 14, 2011.

Keynote speaker, "The Complexity of Transactional Memory and What to Do About It," *International Conference on Distributed Computing and Networking (ICDCN)*, January 2011 (Bangalore).

Keynote speaker, "The Complexity of Transactional Memory and What to Do About It," *ACM Symposium on Principles of Distributed Computing (PODC)*, July 2010 (Zurich).

Invited talk (with Jennifer Welch), "A World of (Im)Possibilities," *Nancy Lynch Celebration: Sixty and Beyond*, in *ACM Symposium on Principles of Distributed Computing (PODC)*, August 2008.

Keynote speaker, "When Parallel Met Distributed," *ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, June 2008 (Germany).

Plenary speaker, "A Mile-High View of Concurrent Algorithms," *Workshop on the Verification of Concurrent Algorithms*, May 2008 (United Kingdom).

Keynote speaker, "Adapting to Point Contention with Long-Lived Safe Agreement," *13th Colloquia on Structural Information and Communication Complexity (SIROCCO)*, July 2006 (United Kingdom).

"The Relative Queuing Delay of Parallel Packet Switches," *National Networking Seminar 2005*, Cisco Systems (Natanya, Israel), February 2005.

"Algorithms that Adapt to Contention," *Distributed Computing Day*, The Interdisciplinary Center (Herzliya, Israel), March 2004.

"Information-Flow Models for Shared Memory," *IBM's annual Verification Seminar*, IBM Haifa Research Labs, September 2002.

"A Closer Look at Models and Algorithms for Multi-Processors," *PODC/SPAA Mini-School on Parallel and Distributed Computing*, Student Chapter of the Mexican Computer Science Society, June 1998.

13   Ph.D. Students Supervised

13.1   Completed Theses

1. Roy Friedman, "Consistency Conditions for Shared-Memory Multiprocessors," graduated: August 1994 (*Direct Ph.D.*).

2. Ophir Rachman, "Resiliency in Distributed Systems," graduated: June 1996.

3. Arie (Leonid) Fouren, "Adaptive Wait-Free Algorithms for Asynchronous Shared-Memory Systems," graduated: September 2001 (*Direct Ph.D.*).

4. Ronit Nossenson (Teplixke), "Stochastic Models for Web Servers," graduated: May 2005.

5. David Hay, "Providing QoS Guarantees in Parallel Packet Switches," graduated: April 2007 (*Direct Ph.D.*).

6. Keren Censor (Censor-Hillel), "Probabilistic Methods in Distributed Algorithms". Graduated: August 2010.

7. Eshcar Hillel, "Methodologies for Highly Concurrent Data Structures," graduated: February 2011 (*Direct Ph.D.*).

8. Sandeep Hans, "Theoretical Foundations of Transactional Memory," graduated: September 2015.

9. Maya Arbel, "Concurrent Search Trees: Theory and Practice," graduated: October 2018 (*Direct Ph.D.*).

10. Ohad Ben-Baruch (secondary supervisor; primary supervisor: Prof. Danny Hendler), "Complexity Bounds on Concurrent Objects in the Crash-fail and Crash-recovery System Models," Ben-Gurion University. Graduated: November 2020.

14 M.Sc. Students Supervised

14.1 Completed Theses

1. Eran Aharonson, "The Structure of Counting Networks," graduated: March 1992.

2. Netta Eizenbud-Reshef (secondary supervisor, with Prof. Shmuel Katz), "Self-Stabilization of Fault-Tolerant Algorithms," graduated: July 1993.

3. Taly Djerassi (Shintel), "Time Bounds for Decision Problems in Semi-Synchronous Systems," graduated: December 1993.

4. Tamar Tamir, "Resource Allocation in Distributed Systems," graduated: November 1994.

5. Rinat Rappoport, "The Level of Handshake Required for Establishing a Connection," graduated: January 1995.

6. Eyal Dagan, "Universal Operations: Unary vs. Binary," graduated: June 1996.

7. Alla Gorbach (primary supervisor, with Prof. Shlomo Moran), "Computing in anonymous asynchronous shared memory," graduated: February 1999.

8. Vita Bortnikov, "Adaptive Algorithms for Mutual Exclusion," graduated: November 2000 (with *high excellence*).

9. Zvi Avidor, "n-Set Consensus when Inputs are Restricted," graduated: February 2004.

10. Idan Zach, "Long-lived and Adaptive Shared-Memory Algorithms," graduated: August 2004.

11. Yaniv Kaplan, "Lower Bounds for Adaptive Collect and Related Objects," graduated: September 2004.

12. Alex Kogan, "Efficient Fault-Tolerant Resource Allocation in Mobile Ad-Hoc Networks", graduated: May 2008.

13. Ami Paz, "Counting-Based Impossibility Proofs for Distributed Tasks," graduated: May 2013.

14. Gili Yavneh, "Remote Memory References at Block Granularity," graduated: April 2017.

15 Sponsored Long-Term Visitors and Post-Docs

1. Dr. Gal Oren, Israel Atomic Energy Commission, 2020–.

2. Dr. Archit Somani, IIT-Hyderabad, 2019-2020.

3. Dr. Sweta Kumari, IIT-Hyderabad, 2019-2020 (Technion post-doc fellowship).

4. Dr. Trevor Brown, University of Toronto, 2017.

5. Dr. Matthieu Perrin, University of Nantes, 2016.

6. Dr. Adam Morrison, Tel-Aviv University, 2013–2016 (Ali Kaufman post-doc fellowship).

7. Prof. Faith Ellen, University of Toronto, 2013 (Lady Davis Fellow).

8. Dr. Armando Castañeda, 2012–2014 (Ali Kaufman post-doc fellowship).

9. Prof. Maurice Herlihy, Brown University, 2010-2011 (distinguished Fulbright scholar).

10. Prof. Liuba Shrira, Brandeis University, 2010-2011 (Lady Davis Fellow).

11. Prof. Faith Ellen (Fich), University of Toronto, 2006 (Lady Davis Fellow).

12. Dr. Alessia Milani, University of Rome (La Sapienza), 2008-9 (Lady Davis post-doc).

13. Dr. Corentin Travers, University of Rennes, 2008-9 (Ali Kaufman post-doc fellowship).

16 Research Grants

"Foundations and Algorithms for Nonvolatile Shared Memory" *Israel Science Foundation*, four year period starting October 2018. Joint with Dr. Hendler (Ben-Gurion University). Technion part: 135,000 Israeli shekels per year.

"Scalable Synchronization for Relaxed Memory Models" *Israel Science Foundation*, four year period starting October 2014. Joint with Dr. Hendler (Ben-Gurion University). Technion part: 130,000 Israeli shekels per year.

Yad-Hanadiv grant, three years from Autumn 2011, $120,000 (total).

"Building Blocks for Scalable Synchronization of Multiprocessor Computers" *Israel Science Foundation*, four year period starting October 2010. Joint with Dr. Hendler (Ben-Gurion University). Technion part: 110,000 Israeli shekels per year.

"TransForm: Theoretical Foundations of Transactional Memory," *Marie Curie Initial Training Network* (European FP-7), November 2009–October 2013. Technion part: Euro 440,000 (total).

"Scalable Computing: Software and Architecture," Hasso Platner Center (HPC). Joint with Y. Birk, I. Cidon, I. Keidar, R. Friedman, R. Ginosar, I. Keslassy, A. Kolodny, A. Schuster, and U. Weiser.

"Highly-concurrent software transactional memory," Intel Corporation, one year period starting October 2007, $20,000.

"Synchronization Concerns in the Lock-Free Implementation of Concurrent Data Structures," *Israel Science Foundation*, four year period starting October 2006, $38,000 per year.

"Load Balancing in Distributed Web Servers," *Israel Science Foundation*, two year period starting October 2001, $30,000 per year.

"Highly-Available Services on Fast Networks," *Israeli Ministry of Science and Arts*, three year period starting October 1995. Joint with Yehuda Afek, Reuven Cohen, Danny Dolev and Yishay Mansour. Total grant $200,000 per year, Technion part $50,000 per year.

"Time in Distributed Computing," *US-Israel Binational Foundation*, joint with Nancy Lynch (MIT) and Jennifer Welch (Texas A&M). Three year period starting October 1993. Technion part: $21,000 per year.

17 List of Publications

17.1 Original Papers in Refereed Journals

[J1] H. Attiya and Y. Mansour, "Language Complexity on the Synchronous Anonymous Ring," *Theoretical Computer Science,* Vol. 53, No. 3 (1987), pp. 167–185.

[J2] H. Attiya, M. Snir and M. K. Warmuth, "Computing on an Anonymous Ring," *Journal of the ACM,* Vol. 35, No. 4 (October 1988), pp. 845–875.

[J3] H. Attiya, N. Santoro, J. van Leeuwen and S. Zaks, "Elections in Chordal Graphs," *Algorithmica,* Vol. 4, No. 3 (1989), pp. 437–446.

[J4] H. Attiya, A. Bar-Noy, D. Dolev, D. Peleg and R. Reischuk, "Renaming in an Asynchronous Environment," *Journal of the ACM,* Vol. 37, No. 3 (July 1990), pp. 524–548.

[J5] H. Attiya and M. Snir, "Better Computing on the Anonymous Ring," *Journal of Algorithms,* Vol. 12 (June 1991), pp. 204–238.

[J6] N. A. Lynch and H. Attiya, "Using Mappings to Prove Timing Properties," *Distributed Computing*, Vol. 6, No. 2 (1992), pp. 121–139.

[J7] Y. Afek, H. Attiya, D. Dolev, E. Gafni, M. Merritt and N. Shavit, "Atomic Snapshots of Shared Memory," *Journal of the ACM,* Vol. 40, No. 4 (September 1993), pp. 873–890.

[J8] H. Attiya, C. Dwork, N. A. Lynch and L. J. Stockmeyer, "Bounds on the Time to Reach Agreement in the Presence of Timing Uncertainty," *Journal of the ACM*, Vol. 41, No. 1 (January 1994), pp. 122–152.

[J9] H. Attiya and N. A. Lynch, "Time Bounds for Real-Time Process Control in the Presence of Timing Uncertainty," *Information and Computation*, Vol. 110, No. 1 (April 1994), pp. 183–232.

[J10] H. Attiya and J. L. Welch, "Sequential Consistency versus Linearizability," *ACM Trans. on Computer Systems*, Vol. 12, No. 2 (May 1994), pp. 99–122.

[J11] H. Attiya, N. Lynch and N. Shavit, "Are Wait-Free Algorithms Fast?" *Journal of the ACM*, Vol. 41, No. 4 (July 1994), pp. 725–763.

[J12] Y. Afek, H. Attiya, A. Fekete, M. J. Fischer, N. A. Lynch, Y. Mansour, D. Wang and L. D. Zuck, "Reliable Communication Over Unreliable Channels," *Journal of the ACM*, Vol. 41, No. 6 (November 1994), pp. 1267–1297.

[J13] H. Attiya and M. Mavronicolas, "Efficiency of Semi-Synchronous versus Asynchronous Networks," *Mathematical Systems Theory*, Vol. 27 (1994), pp. 547–571.

[J14] H. Attiya, A. Bar-Noy and D. Dolev, "Sharing Memory Robustly in Message-Passing Systems," *Journal of the ACM*, Vol. 42, No. 1 (January 1995), pp. 124–142.

[J15] H. Attiya, S. Dolev and J. L. Welch, "Connection Management without Retaining Information," *Information and Computation*, Vol. 123, No. 2 (December 1995), pp. 155–171.

[J16] H. Attiya, M. Herlihy and O. Rachman, "Atomic Snapshots Using Lattice Agreement," *Distributed Computing*, Vol. 8 (1995), No. 3, pp. 121–132.

[J17] E. Aharonson and H. Attiya, "Counting Networks with Arbitrary Fan-Out," *Distributed Computing*, Vol. 8 (1995), No. 4, pp. 163–169.

[J18] H. Attiya, A. Herzberg and S. Rajsbaum, "Clock Synchronization Under Different Delay Assumptions," *SIAM Journal on Computing*, Vol. 25, No. 2 (April 1996), pp. 369–389.

[J19] H. Attiya and R. Friedman, "Limitations of Local Consistency Conditions for Distributed Shared Memories," *Information Processing Letters*, Vol. 57, No. 5, pp. 243–248 (1996).

[J20] R. Alur, H. Attiya and G. Taubenfeld, "Time-Adaptive Algorithms for Synchronization," *SIAM Journal on Computing*, Vol. 26, No. 2 (April 1997), pp. 539–556.

[J21] H. Attiya and R. Rappoport, "The Level of Handshake Required for Managing a Connection," *Distributed Computing*, Vol. 11, No. 1 (November 1997), pp. 41–57.

[J22] H. Attiya, S. Chaudhuri, R. Friedman and J. L. Welch, "Shared Memory Consistency Conditions for Non-Sequential Execution: Definitions and Programming Strategies," *SIAM Journal on Computing*, Vol. 27, No. 1 (February 1998), pp. 65–89.

[J23] H. Attiya and O. Rachman, "Atomic Snapshots in $O(n \log n)$ Operations," *SIAM Journal on Computing*, Vol. 27, No. 2 (April 1998), pp. 319–340.

[J24] H. Attiya and R. Friedman, "A Correctness Condition for High-Performance Multiprocessors," *SIAM Journal on Computing*, Vol. 27, No. 6 (1998), pp. 1617–1636.

[J25] H. Attiya, H. Shachnai and T. Tamir, "Local Labelling and Resource Allocation Using Preprocessing," *SIAM Journal on Computing*, Vol. 28, No. 4 (1999), pp. 1397–1414.

[J26] H. Attiya, "Efficient and Robust Sharing of Memory in Message-Passing Systems," *Journal of Algorithms*, Vol. 34, No. 1 (January 2000), pp. 109–127.

[J27] H. Attiya and A. Fouren, "Adaptive and Efficient Algorithms for Lattice Agreement and Renaming," *SIAM Journal on Computing*, Vol. 31, No. 2 (2001), pp. 642–664.

[J28] H. Attiya and T. Djerassi-Shintel, "Time Bounds for Decision Problems in the Presence of Timing Uncertainties and Failures," *Journal of Parallel and Distributed Computing*, Vol. 61, No. 8 (August 2001), pp. 1096–1109.

[J29] H. Attiya and E. Dagan, "Improved Implementations of Binary Universal Operations," *Journal of the ACM*, Vol. 48, No. 5 (September 2001), pp. 1013–1037.

[J30] H. Attiya A. Fouren and E. Gafni, "An Adaptive Collect Algorithm with Applications," *Distributed Computing*, Vol. 15, No. 2 (2002), pp. 87–96.

[J31] H. Attiya, A. Gorbach and S. Moran, "Computing in Totally Anonymous Asynchronous Shared Memory Systems," *Information and Computation*, No. 173 (2002), pp. 1-22.

[J32] H. Attiya and V. Bortnikov, "Adaptive and Efficient Mutual Exclusion," *Distributed Computing*, Vol. 15, No. 3 (2002), pp. 177–189.

[J33] H. Attiya and S. Rajsbaum, "The Combinatorial Structure of Wait-Free Solvable Tasks," *SIAM Journal on Computing*, Vol. 31, No. 4 (2002), pp. 1286–1313.

12

[J34] A. Adir, H. Attiya and G. Shurek, "Information-Flow Models for Shared Memory with an Application to the PowerPC Architecture," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 14, No. 5 (May 2003), pp. 502–515.

[J35] H. Attiya and A. Fouren, "Algorithms Adapting to Point Contention," *Journal of the ACM*, Vol. 50, No. 4 (July 2003), pp. 444–468.

[J36] A. Agbaria, H. Attiya, R. Friedman and R. Vitenberg, "Quantifying Rollback Propagation in Distributed Checkpointing," *Journal on Parallel and Distributed Computing*, Vol. 64, No. 3 (March 2004), dpp. 370–384.

[J37] H. Attiya and H. Shachnai, "Tight bounds for FEC-Based Reliable Multicast," *Information and Computation*, Vol. 190, No. 2 (May 2004), pp. 117–135.

[J38] R. Nossenson and H. Attiya, "The Distribution of File Transmission Duration in the Web," *International Journal of Communication Systems*, Vol. 17, No. 5 (June 2004), pp. 407–419.

[J39] H. Attiya, F. Kuhn, G. Plaxton, M. Wattenhofer and R. Wattenhofer, "Efficient Adaptive Collect using Randomization," *Distributed Computing*, Vol. 18, No. 3 (February 2006), pp. 179–189, special issue of papers from *DISC 2004*.

[J40] H. Attiya and D. Hay, "The Inherent Queuing Delay of Parallel Packet Switches," *IEEE Transactions on Parallel and Distributed Systems* Vol. 17, No. 9 (September 2006), pp. 1048–1056.

[J41] H. Attiya and A. Bar-Or, "Sharing Memory with semi-Byzantine Clients and Faulty Storage Servers," *Parallel Processing Letters*, Vol. 16, No. 4 (December 2006), pp. 419–428.

[J42] H. Attiya and D. Hay, "Randomization does not Reduce the Average Delay in Parallel Packet Switches," *SIAM Journal on Computing*. Vol. 37, No. 5 (January 2008), pp. 1613–1636.

[J43] H. Attiya and K. Censor, "Tight Bounds for Asynchronous Randomized Consensus," *Journal of the ACM*, Vol. 55, No. 5 (October 2008), Article 20.

[J44] H. Attiya, R. Guerraoui, D. Hendler and P. Kouznetsov, "The Cost of Obstruction-Freedom," *Journal of the ACM*, Vol. 56, No. 4 (June 2009), Article 24.

[J45] H. Attiya and D. Hendler, "Time and Space Lower Bounds for Implementations Using k-CAS," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 21, No. 2 (February 2010), pp. 162–173.

[J46] J. Aspnes, H. Attiya and K. Censor, "Combining Shared Coin Algorithms," *Journal of Parallel and Distributed Computing*, Vol. 70 (March 2010), pp. 317–322.

[J47] H. Attiya, A. Kogan and J. Welch, "Efficient and Fault-Tolerant Local Mutual Exclusion in Mobile Ad-Hoc Networks," *IEEE Transactions on Mobile Computing*, Vol. 9, No. 3 (March 2010), pp. 361–375.

[J48] H. Attiya, L. Epstein, H. Shachnai and T. Tamir, "Transactional Contention Management as a Non-Clairvoyant Scheduling Problem," *Algorithmica*, Vol. 57, No. 1 (May 2010), pp. 44–61.

[J49] H. Attiya and K. Censor, "Lower Bounds for Randomized Consensus under a Weak Adversary," *SIAM Journal on Computing*, Vol. 39, No. 8 (December 2010), pp. 3885–3904.

[J50] H. Attiya, D. Hay and I. Keslassy, "Packet-Mode Emulation of Output-Queued Switches," *IEEE Transactions on Computers*, Vol. 59, No. 10 (2010), pp. 1378–1391.

[J51] H. Attiya and E. Hillel, "Highly-Concurrent Multi-Word Synchronization," *Theoretical Computer Science*, Vol. 412, Nos. 12-14 (2011), pp. 1243–1262 (special issue of papers from ICDCN 2008, by invitation).

[J52] H. Attiya, E. Hillel and A. Milani, "Inherent Limitations on Disjoint-Access Parallel Implementations of Transactional Memory," *Theory of Computing Systems*, Vol. 49, No. 4 (November 2011), pp. 698–719 (special issue of papers from SPAA 2009, by invitation).

[J53] H. Attiya, F. Ellen and P. Fatourou, "The Complexity of Updating Multi-Writer Snapshot Objects," *Journal of Parallel and Distributed Computing*, Vol. 71, No. 12 (2011), pp. 1570-1577.

[J54] J. Aspnes, H. Attiya and K. Censor-Hillel, "Polylogarithmic concurrent data structures from monotone circuits," *Journal of the ACM*, Vol. 59, No. 1 (February 2012), Article 2.

[J55] H. Attiya and E. Hillel, "A Single-Version STM that is Multi-Versioned Permissive," *Theory of Computing Systems*, Vol. 51, No. 4 (2012), pp. 425–446. (Special issue of papers from ICDCN 2011, by invitation.)

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