

Giuseppe F. Italiano

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RESEARCH INTERESTS

My interests are in the design, analysis, implementation and experimental evaluation of algorithms and data structures. My research areas include algorithm engineering, combinatorial algorithms, dynamic graph algorithms, distributed and parallel computations, network architectures, and string algorithms.

PERSONAL

Born on March 16, 1961 in Italy. Italian Citizen. Married plus four. Enjoy running.

EDUCATION

- 1988 - 91 Ph.D. in Computer Science. Columbia University, New York, NY. Thesis Advisor: Prof. Zvi Galil. Thesis Title: “Dynamic data structures for graphs”.
- 1987 - 88 M.S. in Computer Science. Columbia University, New York, NY.
- 1979 - 85 *Laurea* in Electrical Engineering. University of Rome “La Sapienza”, Roma, Italy. Thesis Advisor: Prof. Giorgio Ausiello.

PROFESSIONAL EXPERIENCE

- 2009 - *Member of the Advisory Board.* MADALGO - Center for MAssive Data ALGORithmics, Aarhus, Denmark.
- 2006 - *Member of the Council.* European Association for Theoretical Computer Science.
- 2004 - *Chair of the Department of Computer Science, Systems and Production.* University of Rome “Tor Vergata”.
- 2002 - 08 *Head of the Evaluation Committee.* University of Rome “Tor Vergata”.
- 2002 - 08 *Member of the Council.* European Association for Theoretical Computer Science, Italian Chapter.
- 2001 - 07 *Member of the Board of Directors.* Roma Ricerche Consortium.
- 2000 *Visiting Professor.* Department of Computer Science, Columbia University.
- 1998 - *Professor of Computer Science.* Dipartimento di Informatica, Sistemi e Produzione, University of Rome “Tor Vergata”, Italy.
- 1998 *Visiting Professor.* Department of Computer Science, The Hong Kong University of Science & Technology.
- 1997 *Distinguished Visiting Professor.* Max-Planck-Institut für Informatik, Saarbrücken, Germany.
- 1995 - 98 *Professor of Computer Science.* Dipartimento di Matematica Applicata ed Informatica, University of Venice “Ca’ Foscari”, Italy.
- 1994 - 95 *Professor of Computer Science.* Dipartimento di Informatica ed Applicazioni, University of Salerno, Italy.
- 1991 - 95 *Research Staff Member.* IBM Research Division, T.J. Watson Research Center, *Communication Systems Department.* Research in graph algorithms, distributed algorithms, and network architectures.

- 1989 - 94 *Assistant Professor*. Dipartimento di Informatica e Sistemistica, University of Rome “La Sapienza”, Italy.
- 1987 - 91 *Research Assistant*. Department of Computer Science, Columbia University.
- 1990 *Summer Intern*. IBM Research Division, T.J. Watson Research Center. Research in persistent data structures under the supervision of Dr. Neil Sarnak.

PROFESSIONAL ACTIVITIES

Journal Editorial Boards

- 2008– Editor-in-Chief, *ACM Journal on Experimental Algorithmics*
- 2008– Associate Editor, *Journal of Discrete Algorithms*
- 2007– Associate Editor, *Algorithmica*
- 2002– Associate Editor, *Theoretical Computer Science*, Track A
- 1999–2008 Editor-in-Chief, *Journal of Discrete Algorithms*
- 1999–2008 Associate Editor, *ACM Journal on Experimental Algorithmics*
- 1995–2007 Associate Editor, *Journal of Complexity*
- 1997–2003 Associate Editor, *Discrete Mathematics and Theoretical Computer Science*
- 1995–2003 Associate Editor, *Journal of Computing and Information*

Journal Guest Editor

1. *Journal of Discrete Algorithms*. Special issue on the 6th Int. Conf. on Algorithms and Complexity.
2. *Theoretical Computer Science*, vol. 380 (1–2), 2007. Special issue on the 32nd Int. Coll. on Automata, Languages and Programming.
3. *ACM Journal on Experimental Algorithmics*. Special issue on the 6th Workshop on Algorithm Engineering and Experimentation.
4. *Journal of Discrete Algorithms*, Special Issue, vol. 4 (3), September 2006.
5. *Journal of Algorithms*, 49, 1 (2003). Special Issue on the European Symposium on Algorithms 98.
6. *Algorithmica* vol. 30 (4), 2001, Special issue on Algorithm Engineering.
7. *Journal on Complexity* 15 (1), 1999. Festschrift for Zvi Galil.
8. *ACM Journal on Experimental Algorithmics* 3 (1998). Special Issue on the Workshop on Algorithm Engineering 1997.
9. *Theoretical Computer Science* 130 (1), 1994. Special Issue on Dynamic and On-line Algorithms.

Invited Speaker

1. *12th International Conference on Principles and Practice of Constraint Programming* (CP 2006), September 25-29, 2006, Nantes, France.
2. *ALGO 2005* (Joint Symposium and Workshops: ESA 2005, WABI 2005, WAOA 2005, ATMOS 2005), 3-7 October 2005, Palma de Mallorca, Spain.
3. *3rd Workshop on Experimental Algorithms* (WEA 04), May 25–28 2004, Angra dos Reis, Brazil.
4. *11th International Symposium on Graph Drawing* (GD 2003), September 21–24 2003, Perugia, Italy.
5. *14th Australasian Workshop on Combinatorial Algorithms* (AWOCA 2003), July 13–16 2003, Seoul, Korea.
6. “Silver Jubilee”, *25th International Symposium on Mathematical Foundations of Computer Science* (MFCS 2000), August 28 – September 1, 2000, Bratislava, Slovakia.
7. Workshop on Advances in Data Structures, December 11–12 1999, Chennai, India.

8. Workshop on Dynamic Graph Problems, *Thematic Programme on Graph Theory and Combinatorial Optimization*, June 5–9, 2000, Victoria, Canada.
9. “Fundamentals” Track (Foundations of Computer Science), *15th IFIP World Computer Congress* (IFIP 98), August 31 – September 4, 1998, Vienna (Austria), 1998.
10. *1st South American Workshop on String Processing* (WSP 93), 13-15 September 1993, Belo Horizonte, Brazil, 1993.
11. *20th Theory Day* at Columbia University, New York, U.S.A., 1992.

Conference Steering Committees

1. Steering Committee Member of the European Symposium on Algorithms (ESA), 1997–2000, 2007–2011.
2. Steering Committee Member of the Workshop on Experimental Algorithms (WEA), 2005–2008.
3. Steering Committee Member of the Workshop on Algorithm Engineering and Experimentation (ALENEX), 2004–2007.
4. Steering Committee Member of the Workshop on Algorithm Engineering (WAE), 1997–2000.

Conference Program Committees

1. *37th International Colloquium on Automata, Languages, and Programming* (ICALP 10), Track A, Bordeaux, France, 5-12 July, 2010.
2. *12th Workshop on Algorithm Engineering and Experimentation* (ALENEX 10) Austin, Texas, January 2010.
3. *17th Annual European Symposium on Algorithms*, (ESA 09), Copenhagen, Denmark, 7–9 September, 2009.
4. *34th International Symposium on Mathematical Foundations of Computer Science*, (MFCS 09), Novy Smokovec, High Tatras, Slovakia, August 24–28, 2009
5. *5th IEEE Conf. on Next Generation Internet Networks* (NGI 09), Aveiro, Portugal, 22–24 June 2009.
6. *8th International Symposium on Experimental Algorithms*, (SEA 09), Dortmund, Germany, June 3-6, 2009.
7. *3rd International Workshop on Algorithms and Complexity*, (WALCOM 09), Kolkata, India, 18-20 February, 2009.
8. *35th International Conference on Current Trends in Theory and Practice of Computer Science* (SOFSEM 09), Spindleruv mlyn, Czech Republic, January 24-30, 2009.
9. *5th IFIP International Conference on Theoretical Computer Science* (TCS 08), Track A, Milano, Italy, 8-10 September, 2008.
10. *35th International Colloquium on Automata, Languages, and Programming* (ICALP 08), Track A, Reykjavik, Iceland, 7-11 July, 2008.
11. *4th IEEE Conf. on Next Generation Internet Networks* (NGI 08), Kraków, Poland, 28–30 April 2008.
12. **Program Co-Chair**, *10th Italian Conference on Theoretical Computer Science*, (ICTCS 07), Rome, Italy, 3–6 October, 2007.
13. *32nd International Symposium on Mathematical Foundations of Computer Science* (MFCS 07), Cesky Krumlov, Czech Republic, 27–31 August, 2007.
14. *6th Workshop on Experimental Algorithms* (WEA 07), Rome, Italy, 6–9 June, 2007.
15. *3rd Int. Conference on Algorithmic Aspects in Information and Management* (AAIM’07), Portland, USA, 6–8 June, 2007.
16. *3rd IEEE Conf. on Next Generation Internet Networks – Traffic Engineering* (NGI 07), Tondheim, Norway, 23–25 May 2007.
17. **Program Chair**, *33rd International Conference on Current Trends in Theory and Practice of Computer Science*, (SOFSEM 07), Track “Foundations of Computer Science”, Harrachov, Czech Republic, January 20-26, 2007.

18. *25th Int. Conference on Foundations of Software Technology and Theoretical Computer Science* (FSTTCS 06), Calcutta, India, 13–15 December 2006.
19. *2nd Int. Conference on Algorithmic Aspects in Information and Management* (AAIM'06), Hong Kong, 20–22 June 2006.
20. **Program Chair**, *6th Int. Conference on Algorithms and Complexity* (CIAC 06), Rome, Italy, 29–31 May 2006.
21. *IEEE Conf. on Next Generation Internet Networks – Traffic Engineering* (NGI 06), Valencia, Spain, April 2006.
22. **Program Chair**, *32nd International Colloquium on Automata, Languages, and Programming*, (ICALP 05), Track A, Lisbon, Portugal, 11–15 July 2005.
23. *4th Workshop on Efficient and Experimental Algorithms* (WEA 05), Santorini, Greece, May 10–13, 2005.
24. *IEEE Conf. on Next Generation Internet Networks – Traffic Engineering* (NGI 05), Rome, Italy, April 18–20, 2005.
25. *16th ACM-SIAM Symposium on Discrete Algorithms* (SODA 05), Vancouver, Canada, January 23–35, 2005.
26. *45th IEEE Symposium on Foundations of Computer Science*, (FOCS 04), Rome, Italy, 17–19 October 2004.
27. *12th European Symposium on Algorithms*, (ESA 2004), Engineering and Application Track, Bergen, Norway, September 13–18 2004.
28. *31st International Colloquium on Automata, Languages, and Programming*, (ICALP 04), Turku, Finland, July 2004.
29. **Program Co-Chair**, *6th Workshop on Algorithm Engineering and Experimentation* (ALENEX 04) New Orleans, LA, January 2004.
30. *8th Workshop on Algorithms and Data Structures* (WADS 2003), Carleton, Canada, July 30 - August 1, 2003.
31. 8th Scandinavian Workshop on Algorithm Theory (SWAT 2002), Turku, Finland, 3–5 July 2002.
32. 7th Italian Conference on Theoretical Computer Science (ICTCS 2001), Torino, Italy, 4-6 October 2001.
33. 5th International Workshop on Discrete Algorithms and Methods for Mobile Computing and Communication (DIALM 2001), Rome Italy, 26 July 2001.
34. 28th International Colloquium on Automata, Languages, and Programming (ICALP 01), Crete, Greece, 8–12 July 2001.
35. 11th Annual International Symposium on Algorithms and Computation (ISAAC 2000), Academia Sinica, Taiwan, 18–20 December 2000.
36. 4th Italian Conference on Algorithms and Complexity (CIAC 2000), Rome, Italy, 1–2 March 2000.
37. 3rd Workshop on Algorithm Engineering (WAE 99), London, UK, 19–21 July 1999.
38. 7th European Symposium on Algorithms (ESA 99), Prague, Czech Republic, July 1999.
39. 1st Workshop on Algorithm Engineering and Experimentation (ALENEX 99) Baltimore, MD, January 15-16, 1999.
40. 6th Italian Conference on Theoretical Computer Science (ICTCS 98), Prato, Italy, 9–11 November 1998.
41. **Program Co-Chair**, *6th European Symposium on Algorithms* (ESA 98), Venice, Italy, 24–26 August 1998.
42. Electronic commerce for Small and Medium Enterprises (CABOTO 98), Venice, Italy, 26–27 February 1998.
43. 15th Symposium on Theoretical Aspects of Computer Science (STACS 98), Paris, France, 25–27 February 1998.

44. **Program Chair**, *1st Workshop on Algorithm Engineering* (WAE 97), Venice, Italy, 11–13 September 1997.
45. 5th Israeli Symposium on Theory of Computing and Systems (ISTCS 97), Ramat-Gan, Israel, 17–19 June 1997.
46. 3rd Italian Conference on Algorithms and Complexity (CIAC 97), Rome, Italy, 12–14 March 1997.
47. 3rd European Symposium on Algorithms (ESA 95), Corfu, Greece, 25–27 September 1995.
48. 4th Scandinavian Workshop on Algorithm Theory (SWAT 94), Aarhus, Denmark, 7–9 July 1994.

Organizing Committee Chair

1. *45th Annual Symposium on Foundations of Computer Science* (FOCS 2004), Rome, Italy, October 2004.
2. 6th European Symposium on Algorithms (ESA 98), Venice, Italy, 24–26 August 1998.

Other Workshops and Schools Organized

1. “Algorithm Engineering”, Workshop, Schloß Dagstuhl, Germany, June 27 – July 2, 2010 Co-organized with David Johnson, Petra Mutzel, Peter Sanders.
2. 4th Workshop on “Algorithm and Data Structures”, June 7–12, 2009, Bertinoro, Italy. Co-organized with Andrew Goldberg, Valerie King, Robert E. Tarjan.
3. “School on Graph Theory, Algorithms and Applications”, Center “Ettore Majorana” for Scientific Culture, Erice (Italy), 8–16 September, 2008. Co-organized with Raffaele Cerulli, Andrew Goldberg, Robert E. Tarjan.
4. “Algorithm Engineering”, Mathematisches Forschungsinstitut Oberwolfach (Germany), 6–12 May 2007 (Oberwolfach Workshop). Co-organized with Petra Mutzel, Peter Sanders, Martin Skutella.
5. Second Workshop on “Algorithm and Data Structures”, May 29 - June 4, 2005, Bertinoro, Italy. Co-organized with Andrew Goldberg.
6. Workshop on “Algorithm and Data Structures”, June 23–28, 2003, Bertinoro, Italy. Co-organized with Camil Demetrescu.
7. “Summer School on Algorithm Engineering”, Rome, Italy, September 10–12, 2001 Co-organized with Giovanni Rinaldi.
8. “Efficient Algorithms”, Mathematisches Forschungsinstitut Oberwolfach (Germany), 6–12 August 2000 (Oberwolfach Workshop). Co-organized with Susanne Albers, Torben Hagerup, Kurt Mehlhorn

Habilitation Committees

- 1998 Dr. Karsten Weihe, Faculty of Mathematics and Computer Science, University of Konstanz, Germany.

Ph.D. Awards Committees

- 2000 Member of the EATCS Doctoral Dissertation Thesis Award Committee, EATCS Italian Chapter

Ph.D. Thesis Committees

- 2008 “Streaming Algorithms for Graph Problems” Andrea Ribichini, Department of Computer and System Science, University of Rome “La Sapienza”, Italy.
- 2007 “Contraintes de Partitionnement de Graphs”, Xavier Lorca, Ecole Nationale Supérieure des Techniques Industrielles et des Mines de Nantes, Nantes, France.
- 2007 “Hardware-Aware Algorithms and Data Structures”, Gabriel Moruz, BRICS, Department of Computer Science, University of Aarhus, Denmark.
- 2006 “Dynamic and Static Graph Algorithms”, Liam Roditty, School of Computer Science, Tel Aviv University, Israel.

- 2005 “Experimental Analysis of Graph Algorithms”, Pompeo Faruolo, Department of Computer Science, University of Salerno, Italy.
- 2000 “Tracking Causality in Distributed Computations”, Giovanna Melideo, Department of Computer and System Science, University of Rome “La Sapienza”, Italy.
- 1999 “Computing with Trees”, Stephen Alstrup, Department of Computer Science, University of Copenhagen, Denmark.
- 1997 “Designing Efficient Parallel Algorithms of Graph Problems”, Weifa Liang, Department of Computer Science, Australian National University, Australia.
- 1997 “Dynamic computation”, Thore Husfeldt, Department of Computer Science, University of Aarhus, Denmark.
- 1997 “Does the cubicity help to solve problems?”, Tiziana Calamoneri, Department of Computer Science, University of Rome “La Sapienza”, Italy.

Reviewer

Funding Agencies: *National Science Foundation, Danish Research Councils, Israel Science Foundation.*

Journals: Acta Informatica, Algorithmica, Discrete Mathematics, IEEE/ACM Transactions on Networking, IEEE Transactions on Computers, Information Processing Letters, Journal of Algorithms, Journal of ACM, Journal of Complexity, Journal of Logic Programming, Mathematical Systems Theory, SIAM Journal on Computing, SIAM Journal on Discrete Mathematics, Theoretical Computer Science.

Conferences: ACM-SIAM Symposium on Discrete Algorithms, ACM Symposium on Theory of Computing, European Symposium on Algorithms, International Colloquium on Automata, Languages and Programming, IEEE Symposium on Foundations of Computer Science, Symposium on Principles of Distributed Computing, Symposium on Theoretical Aspects of Computer Science.

PATENTS

“Restoration for Virtual Private Networks”. United States Patent 20040255049. Inventors: Giuseppe F. Italiano (Rome, IT), Rajeev Rastogi (New Providence, NJ, US), Bülent Yener (Chatham, NY, US). Italiano 1-50-10. Filed in the US on June 13, 2003, assigned Serial No. 10/462215.

RESEARCH FUNDING

- 2008-09 Elettronica S.p.A., Research Grant on Benchmarking for Single Board Computers (Principal Investigator).
- 2008-09 Biofly S.r.l., Research Grant on Security for Adhoc Networks (Principal Investigator).
- 2007-08 Spike Replay S.r.l., Research Grant on Digital Signatures for SMS on smart phones (Principal Investigator).
- 2007-08 Telefono Azzurro Onlus, Research Grant on Web Security (Principal Investigator).
- 2007-09 Italian Ministry of Education, University and Research, Project MAINSTREAM: Algorithms for Massive Information Structures and Data Streams (Principal Co-Investigator).
- 2006-08 European Union, Network of Excellence EuroFGI: Design and Engineering the Future Generation Internet - Towards convergent multi-service networks.
- 2005-06 FILAS S.p.A., Finanziaria Laziale di Sviluppo, Project WEPSS: Web Platform for Secure Sharing of Data and Applications (Principal Investigator).
- 2004-06 Italian Ministry of Education, University and Research, Project ALGO-NEXT: Algorithms for Next Generation Internet and Web (Principal Co-Investigator).
- 2004 Land, an Italian SME: Grant on “Security issues for paper documents” (Principal Investigator).

- 2003-06 European Union, Network of Excellence EuroNGI: Design and Engineering the Next Generation Internet.
- 2002-04 Italian Ministry of Education, University and Research, Project on Algorithms for Internet and Web (Principal Co-Investigator).
- 2001-02 CNR, Italian National Research Council, Contract n. 01.00690.CT26 (Principal Investigator).
- 2001-02 Special Research Grant from University of Rome “Tor Vergata” on Algorithmic software for timetabling (Principal Co-Investigator).
- 2001-02 ENEA, Italian Agency for New Technologies, Energy and Environment, Grant on “Design and Simulation of Innovative Transportation Systems” (Principal Investigator).
- 2000-03 IST Programme of the European Union, Contract n. IST-1999-14.186 (Project AlcomFT)
- 2000-01 CNR, Italian National Research Council, Contract n. 00.00346.CT26 (Principal Investigator).
- 2000-01 CNR, Italian National Research Council, Contract n. 99.00602.CT12 (Principal Investigator).
- 2000-01 Italian Ministry of University and Scientific Research, Grant on “Algorithms for Large Data Sets: Science and Engineering”, (Principal Co-investigator).

Total grant income in the last three years (2006–2008) was approximately EUR 220,000.

OTHER FUNDING

- 2001-04 Appointed by University of Rome “Tor Vergata” as responsible for the *Campus One* infrastructural grant: total funding was approximately US \$ 3,000,000.

AWARDS AND HONORS

- IBM Graduate Fellowship, 1988-89, 1989-90, and 1990-91.
- Italian National Research Council Fellowship, 1986-87.

TALKS AND SEMINARS

Some universities and research institutions in which I have given talks (most of them more than once):

Hong Kong University of Science and Technology, Max-Planck Institute für Informatik, Polytechnic of Milan, University of Copenhagen, University of Aarhus, ETH Zurich, Cornell University, University of Trento, IASI-CNR Rome, University of Pisa, IBM ECSEC Rome, University of Palermo, Columbia University, University of Padova, Yale University, University of Salerno, Brown University, University of Maryland, University of Rochester, AT&T Bell Labs, University of California at Santa Barbara, University of Illinois at Chicago, Brooklyn Polytechnic, IBM T.J. Watson Research Center, University of Rome “La Sapienza”, Universität Bonn, Universität des Saarlandes, University of L’Aquila.

PUBLICATIONS

Books and Conference Proceedings

- [1] G. F. Italiano, E. Moggi, L. Laura (Eds.) *Theoretical Computer Science, 10th Italian Conference*, Proceedings, World Scientific 2007.
- [2] C. Demetrescu, U. Ferraro Petrillo, I. Finocchi e G. F. Italiano. *Progetto di Algoritmi e Strutture Dati in Java*. ISBN 978-88-386-6374-1. McGraw-Hill, 2007 (in Italian).
- [3] J. van Leeuwen, G. F. Italiano, W. van der Hoek, C. Meinel, H. Sack, F. Plásil (Eds.) *Theory and Practice of Computer Science*, Proceedings, vol. 1. *Lecture Notes in Computer Science vol. 4362*, Springer-Verlag 2007.
- [4] J. van Leeuwen, G. F. Italiano, W. van der Hoek, C. Meinel, H. Sack, F. Plásil (Eds.) *Theory and Practice of Computer Science*, Proceedings, vol. 2. Institute of Computer Science AS CR, Prague 2007, ISBN 80-903298-9-6.
- [5] T. Calamoneri, I. Finocchi, G. F. Italiano (Eds.) *Algorithms and Complexity*, Proceedings. *Lecture Notes in Computer Science vol. 3998*, Springer-Verlag 2006.
- [6] L. Caires, G. F. Italiano, L. Monteiro, C. Palamidessi, M. Yung (Eds.) *Automata, Languages and Programming*, Proceedings. *Lecture Notes in Computer Science vol. 3580*, Springer-Verlag 2005.
- [7] C. Demetrescu, I. Finocchi e G. F. Italiano. *Algoritmi e Strutture Dati*. ISBN 88-386-6161-8. McGraw-Hill, 2004 (in Italian).
- [8] L. Arge, G. F. Italiano, R. Sedgewick, *6th Workshop on Algorithm Engineering and Experimentation and 1st Workshop on Analytic Algorithmics and Combinatorics*, SIAM Proceedings, 2004.
- [9] G. Bilardi, G. F. Italiano, A. Pietracaprina, G. Pucci (Eds.) *Algorithms – ESA ’98*, Proceedings. *Lecture Notes in Computer Science vol. 1461*, Springer-Verlag 1998.
- [10] G. F. Italiano, S. Orlando, *Algorithm Engineering: WAE ’97*, Proceedings, 1997.

Journal Special Issues

- [11] G. F. Italiano, R. Petreschi, *Special issue on the 6th Int. Conf. on Algorithms and Complexity*, *Journal of Discrete Algorithms*, to appear.
- [12] G. F. Italiano, C. Palamidessi, *Special issue on the 32nd Int. Coll. on Automata, Languages and Programming, Theoretical Computer Science*, vol. 380, 1–2 (2007).
- [13] L. Arge, G. F. Italiano, *Special issue on the 6th Workshop on Algorithm Engineering and Experimentation*, *ACM Journal on Experimental Algorithmics* vol. 12, 2007.
- [14] G. F. Italiano, A. Marchetti-Spaccamela, *Special Issue in honour of Giorgio Ausiello*, *Journal of Discrete Algorithms*, vol. 4 (3), September 2006.
- [15] G. Bilardi, G. F. Italiano, *Special issue on the 6th European Symposium on Algorithms*, *Journal of Algorithms*, 49, 1 (2003).
- [16] G. F. Italiano, *Special issue on Algorithm Engineering*, *Algorithmica* 30, 4 (2001).
- [17] D. Eppstein, G. F. Italiano, *Festschrift for Zvi Galil*, *Journal on Complexity* 15 (1999).
- [18] A. Goldberg, G. F. Italiano, *Special issue on the Workshop on Algorithm Engineering 1997*, *ACM Journal on Experimental Algorithmics* 3 (1998),
- [19] G. Ausiello, G. F. Italiano, *Special issue on Dynamic and On-line Algorithms*, *Theoretical Computer Science* 130 (1), 1994.

Refereed Encyclopedia and Handbook Chapters

- [20] C. Demetrescu, D. Eppstein, Z. Galil, G. F. Italiano, “Dynamic graph algorithms”, Chapter 8, *Algorithms and Theory of Computation Handbook*, 2nd Edition (Mikhail J. Atallah and Marina Blanton Eds.), CRC Press, to appear in 2008.

- [21] C. Demetrescu, G. F. Italiano, “Decremental All-Pairs Shortest Paths”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 244–246.
- [22] C. Demetrescu, G. F. Italiano, “Fully Dynamic All-Pairs Shortest Paths”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 348–350.
- [23] G. F. Italiano, “Fully Dynamic Connectivity”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 351–353.
- [24] G. F. Italiano, “Fully Dynamic Higher Connectivity”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 355–357.
- [25] G. F. Italiano, “Fully Dynamic Higher Connectivity for Planar Graphs”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 357–359.
- [26] G. F. Italiano, “Fully Dynamic Minimum Spanning Trees”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 359–361.
- [27] G. F. Italiano, “Fully Dynamic Planarity Testing”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 361–363.
- [28] C. Demetrescu, G. F. Italiano, “Single-Source Fully Dynamic Reachability”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 878–879.
- [29] C. Demetrescu, G. F. Italiano, “Trade-offs for Dynamic Graph Problems”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 994–997.
- [30] C. Demetrescu, G. F. Italiano, “Visualization Techniques for Algorithm Engineering”, *Encyclopedia of Algorithms*, (Ming Yang Kao Ed.), Springer, 2008, pp. 1036–1039.
- [31] C. Demetrescu, I. Finocchi, G. F. Italiano, “Dynamic Trees”, Chapter 21, *Handbook of Data Structures and Applications*, (Dinesh P. Mehta and Sartaj Sahni Eds.), CRC Press, 2004.
- [32] C. Demetrescu, I. Finocchi, G. F. Italiano, “Dynamic Graphs”, Chapter 22, *Handbook of Data Structures and Applications*, (Dinesh P. Mehta and Sartaj Sahni Eds.), CRC Press, 2004.
- [33] C. Demetrescu, I. Finocchi, G. F. Italiano, “Dynamic Graphs”, Chapter 10.2, *Handbook of Graph Theory*, (Jonathan Gross and Jay Yellen Eds.), CRC Press, 2003, 985–1014.
- [34] G. F. Italiano, R. Raman, “Topics in data structures”, Chapter 5, *Algorithms and Theory of Computation Handbook*, (Mikhail J. Atallah Ed.), CRC Press, 1999.
- [35] D. Eppstein, Z. Galil, G. F. Italiano, “Dynamic graph algorithms”, Chapter 8, *Algorithms and Theory of Computation Handbook*, (Mikhail J. Atallah Ed.), CRC Press, 1999.
- [36] A. Apostolico, G. F. Italiano, “Backtracking”, *Wiley Encyclopedia of Electrical and Electronics Engineering*, John Wiley & Sons, vol. 2, 1999, 187–197.

Journal Publications

- [37] G. Cattaneo, P. Faruolo, U. Ferraro Petrillo, G. F. Italiano, “Maintaining Dynamic Minimum Spanning Trees: An Experimental Study”, *Discrete Applied Mathematics*, to appear.
- [38] M. Naldi, G. D’Acquisto, G. F. Italiano, “The value of location in keyword auctions”, *Electronic Commerce Research and Applications*, to appear.
- [39] I. Finocchi, F. Grandoni, G. F. Italiano, “Resilient Search Trees”, *ACM Transactions on Algorithms*, to appear.
- [40] G. Ausiello, P. G. Franciosa, G. F. Italiano, “Small stretch (α, β) -spanners in the streaming model”, *Theoretical Computer Science*, to appear.
- [41] I. Finocchi, F. Grandoni, G. F. Italiano, “Optimal Resilient Sorting and Searching in the presence of Dynamic Memory Faults”, *Theoretical Computer Science*, Special Issue of ICALP’06, to appear.
- [42] U. Ferraro Petrillo, I. Finocchi, G. F. Italiano, “The Price of Resiliency: A Case Study on Sorting with Memory Faults”, *Algorithmica*, vol. 53, no 4, 597–620, 2009.
- [43] G. Ausiello, C. Demetrescu, P. G. Franciosa, G. F. Italiano, A. Ribichini, “Graph Spanners in the Streaming Model: an Experimental Study”, *Algorithmica*, vol. 55, no. 2, 346–374, 2009.

- [44] I. Finocchi, G. F. Italiano, “Sorting and searching in faulty memories”, *Algorithmica*, vol. 52, no. 3, pp. 309–332, 2008.
- [45] C. Demetrescu, G. F. Italiano, “Maintaining Dynamic Matrices for Fully Dynamic Transitive Closure”, *Algorithmica*, vol. 51, no. 4, pp. 387–427, 2008.
- [46] M. Caramia, P. Dell’Olmo, G. F. Italiano, “New Algorithms for Examination Timetabling”, *INFORMS Journal on Computing*, vol. 20, no. 1, pp. 86–99, 2008.
- [47] I. Finocchi, F. Grandoni, G. F. Italiano, “Designing Reliable Algorithms in Unreliable Memories”, *Computer Science Review*, vol. 1, no. 2, pp. 77–87, 2007.
- [48] G. Ausiello, P. G. Franciosa, G. F. Italiano, “Small stretch spanners on dynamic graphs”, *Journal of Graph Algorithms and Applications*, vol. 10, no. 2, 365–385, 2006.
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- [50] C. Demetrescu, G. F. Italiano, “Experimental Analysis of Dynamic All Pairs Shortest Path Algorithms” *ACM Transactions on Algorithms* vol. 2 (4), October 2006, 578–601. Special Issue of SODA 2004.
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