

Curriculum Vitae et Studiorum of

Marco Pellegrini

Istituto di Informatica e Telematica del C.N.R.

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MACRO-AREA OF INTEREST

Information and Communication Technology (ICT)

RESEARCH INTERESTS

Design and Analysis of Algorithms, Computational Geometry, Computational Complexity. Applications of Algorithmic Techniques in Computational Biology, Information Retrieval, Computer Graphics, Computational Physics, and Networking.

EDUCATION

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|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1986-1991 | New York University | New York, NY |
| | Ph.D. in Computer Science. February 1991.
Thesis title: "Combinatorial and Algorithmic Analysis of Stabbing and Visibility Problems in 3-Dimensional Space". Subjects: Computational Geometry, Combinatorial Geometry, Analysis of algorithms. Thesis Advisor Prof. Richard Pollack. | |
| 1986-1988 | New York University | New York, NY |
| | M.Sc. in Computer Science. | |
| 1980-1986 | Politecnico of Milano | Milan, Italy |
| | Laurea in Electronic Engineering (Magna cum Laude)
Major Software Engineering. Thesis Advisor Prof. Carlo Ghezzi. | |

CURRENT ACADEMIC/RESEARCH EMPLOYMENT

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|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1999- | C.N.R. | Pisa, Italy |
| | National Research Council (C.N.R.). Senior Researcher. From 1999 to 2002 at the Institute for Computational Mathematics (I.M.C). From 2002 to present at the Institute of Informatics and Telematics (I.I.T.) | |

PAST ACADEMIC/RESEARCH EMPLOYMENT

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|-----------|-------------------------------------------------|--------------|
| 1995-1999 | C.N.R. | Pisa, Italy |
| | National Research Council (C.N.R.), Researcher | |
| 1991-1995 | King's College | London, U.K. |
| | Lecturer in Computer Science | |
| 1991-1992 | International Computer Science Institute | Berkeley, CA |

Post Doctoral Researcher (September 1991-February 1992)

1988-1991 **Courant Institute of Mathematical Sciences** New York, NY
Research Assistant

PROJECT MANAGEMENT

- 2013-2015 **Istituto Toscano Tumori**
Project "The isolation and validation of miRNA/mRNA complexes to identify genes and pathways targeted by tumor suppressor miRNAs in prostate cancer cells". Total Budget 440,000 Euro. Unit PI.
- 2014-2015 **Arisla - Fondazione Italiana di Ricerca per la Sclerosi Laterale Amiotrofica**
Project *Repeatals* - Genome-wide analysis of DNA tandem repeats in ALS: the role of Repeatome. Total Budget 170,000. Unit PI.
- 2012-2015 **MIUR Flag Project InterOmics**
Principal Investigator for the IIT Research unit. Financed by MIUR - Ministry of Education, University and Research. Budget for IIT 300,000 Euro in 2012. Unit PI.
- 2012- **Laboratory LISM (Laboratory for Integrative System Medicine)** Pisa
Joint Laboratory financed by the Istituto di Informatica e Telematica of CNR and by the Istituto di Fisiologia Clinica of CNR (Research Agreement prot. IIT 0001696 of 14-March-2012). Principal Investigator for IIT. Budget 400,000 Euro in 3 years.
- 2010-2012 **Regional Project POR Toscana 'BINET: Business Intelligence through Social Networks'** Pisa
Principal Investigator of the IIT Research Unit. Budget IIT 160,000 Euro.
- 2008-2011 **European Network of Excellence Virtual Physiological Human (VPH)**
Network of Excellence Virtual Physiological Human (VPH), contract n. 223920, VII PQ. Coordinator of the CNR unit in partnership with ERCIM (European Research Consortium for Informatics and Mathematics). Budget for CNR: 37,065 Euro
- 2002-2006 **European Research and Training Network COMBSTRU**
Coordinator of IIT activities in the EU Project COMBSTRU "Combinatorial Structure of Intractable Problems" (EU HPRN-CT-2002-00278). Budget IIT: 125,000 Euro.
- 1998 **CNR Coordinated Projects**
Principal co-Investigator for IMC in the project: "Libreria per applicazioni in modellazione geometrica". Budget IMC: Lire 15,000,000.

1997 **CNR Coordinated Projects**
Principal co-Investigator for IMC in the project: “Modelli multirisoluzione per visualizzazione di campi multidimensionali”. Budget IMC: Lire 5,000,000.

1993-1994 **King’s College Strategy and Equipment Funds**

“Principal co-investigator”. Total Budget 49,000 UK Pounds for the project “Sensor Guided Automated Path Planning for Robot Manipulators”, with Dr. L.D. Seneviratne (Dept. of Mechanical Engineering), Dr. S.A. Velastin and Mr. D.A. Fraser (Dept of Electronic Engineering)

REVISION OF INTERNATIONAL PROJECTS

2009-2014 **European Commission (DG INFSO)** Bruxelles, Belgium
Periodic Review of project progress for several IP and STREP projects of the 7th FP for the years 2009-2014.

2009 **European Commission (DG INFSO)** Bruxelles, Belgium
Review of several STREP project proposals for the 7th FP.

2008 **University of Padova** Padova, Italy
Review of Research Proposals.

2008 **Israel Science Foundation - ISF** Tel Aviv, Israel
Referee of Research proposals

2004-2007 **FWF - Fonds zur Förderung der wissenschaftlichen Forschung** Wien, Austria
Member of the review committee for the project “Industrial Geometry” (2004 and 2007) .

1997 **National Science Foundation USA** Washington DC, USA
Referee of the research proposal “Potential of mean force approach for modelling of protein-protein interactions”.

LEADERSHIP OF RESEARCH GROUPS

2012- **CNR** Pisa
Coordinator of the IIT-CNR unit of LISM (Laboratory for Integrative Systems Biology) in partnership with IFC-CNR.

2008- **IIT-CNR** Pisa
Coordinator of the WebAlgo Group of IIT <http://webalgo.iit.cnr.it/>

2007- **IIT-CNR** Pisa
Coordinator of the BioAlgo Group of IIT. <http://bioalgo.iit.cnr.it/>

2002-2004 **IIT-CNR** Pisa
Coordinator of the Computational Mathematics Research Group of IIT (during Sabbatic of Dr. Bruno Codenotti.)

OTHER MANAGERIAL TASKS

- 2004- **Research Consortium "Gran Sasso"** Gran Sasso, Italy
Representative of C.N.R. in the Technical Scientific Committee.
- 2003- **Consortium DIMATIA (Discrete Mathematics Theoretical Computer Science and Applications)** Prague, Check Rep.
Representative of IIT-CNR in the DIMATIA Consortium.
- 2002- **IIT-CNR** Pisa, Italy
Member of the Institute Management Committee.
- 1995-2002 **IMC-CNR** Pisa, Italy
Member of the Scientific Committee of the Institute for Computational Mathematics of C.N.R.
- 1992-1995 **King's College** London, U.K.
Deputy Director of the Master in Advanced Computing (1992-1992), Member of the Library Committee of the School of Science and Engineering (1993-1994), Member of the Academic Policy Committee of the School of Science and Engineering (1995), Member of the Finance Committee of the school of Science and Engineering (1993-1994).

SERVICE ACTIVITIES

- 2015 **Eurocomb 2015 - European Conference on Combinatorics, Graph Theory and Applications** Bergen, Norway
Member of the Program Committee
- 2015 **BIOINFORMATICS 2015** Lisbon, Portugal
Member of the Program Committee
- 2014 **Frontiers** Lausanne, Switzerland
Guest Editor of Frontiers Research Topic on "Repetitive structures in biological sequences: algorithms and applications"
- 2014 **Tuscany Bioinformatics Days - Bioinformatiha** Pisa
Member of steering committee and local chair
- 2014 **8th International AAAI Conference on Weblogs and Social Media (ICWSM)** Ann Arbor, Michigan
Member of the Program Committee
- 2014 **BIOINFORMATICS 2014** Eseo, France
Member of the Program Committee

2014	WWW2014 (Track on Social Networks and Graph Analysis) Member of the Program Committee	Seoul, South Korea
2013	Eurocomb 2013 - European Conference on Combinatorics, Graph Theory and Applications General Chair and Program Committee co-chair	Pisa
2012	Workshop “Geometry, Structure and Randomness in Combinatorics” September 3-7, 2012 Co-organizer in partnership with “Centro di Ricerca Matematica Ennio De Giorgi” of Scuola Normale Superiore.	Pisa
2012	Workshop BINet 2012: Workshop on Business Intelligence and Network Analysis. 26 January 2012 Co-Chair of the Organizing Committee	Pisa
2012	SPIRE 2012: 19th International Symposium on String Processing and Information Retrieval, 21-25 Ottobre 2012. Member of the Program Committee	Cartagena, Colombia
2011	BITS 2011: 8th Annual Meeting of the Bioinformatics Italian Society. 20-22 Giugno 2011. Co-Chair of the Organizing Committee and Member of the Scientific Committee	Pisa
2011	IC3 2011: 4th International Conference on Contemporary Computing, Jaypee Institute of Information Technology, 6-8 Agosto 2011 Member of the Program Committee	Uttar Pradesh, India
2011	SPIRE 2011: 18th International Symposium on String Processing and Information Retrieval. 17-21 October 2011 Member of the Program Committee	Pisa
2011	Eurocomb 2011: European Conference on Combinatorics, Graph Theory and Applications. 29 August - 2 September 2011 Member of the Program Committee	Budapest, Hungary
2011	Bioinformatics 2011 - International Joint Conference on Biomedical Engineering Systems and Technologies 2011	Roma, Italy

	Chair of the Programme Committee	
2011	Symposium on Theoretical Aspects of Computer Science (STACS 2011) Program committee member.	Dortmund, Germany
2010	Future Media Internet Coordination Action of the 7th FP Member of the Task Force on the Future Media Internet	
2009	European Conference on Combinatorics, Graph Theory and Applications (Eurocomb 09) Program committee member.	Bordeaux, France
2008	Nettab 2008 - Bioinformatics Methods for Biomedical Complex System Applications Member of the Scientific committee .	Varenna, Italy
2008	Ph.D Committee of Libertad Tansini, Chalmers University of Technology Opponent.	Goteborg, Sweden
2007	European Conference on Combinatorics, Graph Theory and Applications (Eurocomb 07) Program committee member.	Seville, Spain
2006	COMBSTRU School in Computational Complexity (CSCC06) Organizer.	Bertinoro, Italy
2006	Workshop on Algorithmic and Numerical Aspects in Web Search (ANAW) Organizer.	Pisa, Italy
2006	Ph.D. Committee of Johan Karlsson at Lulea University Opponent.	Lulea, Sweden
2005	Association for Computing Machinery 21st ACM Annual Symposium on Computational Geometry (ACM SoCG05). Organization Co-Chair.	Pisa, Italy
2005	Workshop Massive 2005 Organizer.	Pisa, Italy
2004	2nd COMBSTRU Workshop on Algorithms and Combinatorics Organization Chair.	Venice, Italy

2000 **European Association for Theoretical Computer Science** Saarbruecken, Germany
European Symposium on Algorithms (ESA2000). Program Committee Member.

1994 **Association for Computing Machinery** Saarbruecken, Germany
12th ACM Annual Symposium on Computational Geometry (ACM SoCG94) . Program Committee Member.

Referee for "Bioinformatics", "ACM Transactions on Computer Graphic", "ACM Transactions on Computer Systems", "Algorithmica", "Applied Mathematics Letters", "Calcolo", "Computational Geometry, Theory and Applications", "Discrete & Computational Geometry", "Information Processing Letters", "Journal of Computational Physics", "Journal of Discrete Algorithms", "Nordic Journal of Computing". "Parallel algorithms and applications", "SIAM Journal on Computing", "The Computer Journal", "Theoretical Computer Science", "Journal of experimental Algorithm", "Computer & Graphics", "International Journal of Computational Geometry and Applications", "IEEE Transactions on Computing", "IEEE Journal on Selected Areas in Communications", "Journal of Computational Biology".

Referee for
ACM SoCG 2001, ACM Solid Modelling 1999, ESA 2002, ESA 2004, ESA 2006, ESA 2007, Eurographics 1999, Eurographics 2002, ICALP 1998, Latin 2004, Pacific Graphics 2001, STACS 1996, STACS 1998, STACS 2004, SWAT 2000, WADS 1997, WADS 2001, WAE 2001, WAOO 2006.

Member of ACM and BITS (Bioinformatics Italian Society).

Member of the Italian Interuniversity Mathematical School (SMI).

TEACHING

2005-2008 **University of Pisa** Pisa, Italy
Dept. of Computer Science. Course in Computational Geometry

2004 **University of Pisa** Pisa, Italy
Graduate Course in "Randomized methods in Computational Geometry".

2004 **University of Parma** Parma, Italy
Undergraduate course in Operating Systems.

2002-2003 **University of Parma** Parma, Italy
Undergraduate Course in Algorithms and Data Structures.

2000 **University of Pisa** Pisa, Italy
Graduate Course in "Randomized methods in Computational Geometry".

1999 **University of Florence** Florence, Italy
Dept. of Mathematics. Course in Computational Geometry

1997-1998	University of Pisa Dept. of Computer Science. Course in Computational Geometry	Pisa, Italy
1996	Cornell University, Department of Computer Science Graduate course in Algorithms and Data Structures	Ithaca, NY
1995	Scuola Matematica Interuniversitaria Summer Post-graduate school on Computational Complexity: Course on randomized methods in computational geometry	Cortona, Italy
1992-1995	King's College Graduate courses in: Computational Geometry, Algorithms for VLSI, Design and Analysis of Algorithms. Undergraduate course in Design and Analysis of Algorithms	London, U.K.

OTHER PROFESSIONAL ACTIVITIES

1987	Enidata Development of a Prolog Interpreter in SETL.	Roma, Italia
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HONORS

1989-1991	Courant Institute Research Assistantship.	New York, USA
1986	IBM-Italia IBM Prize for Best Thesis in the are Software Engineering and Programming Languages.	Roma, Italia
1986-1990	Enidata Ph.D. Fellowship for the New York University.	Milano, Italia

INVITED TALKS AND SEMINARS

VISTO: Visual STORyboard for Web Video Browsing. University of Bologna, Workshop “SGM@BiCI Search goes Mobile” (April 2008). Andorra, Workshop “The future of web search” (April 2008).

Extraction and Classification of Dense Communities in the Web. Pisa, Laboratories Ask Jeeves. (January 2008). University of Bologna, Workshop “The Future of Web Search” (June 2007). Praga, Sixth Czech-Slovak International Symposium on Combinatorics, Graph Theory, Algorithms and Applications (July 2006). Praga, COMBSTRU Spring Workshop (March 2006).

FPF-SB and K-boost: scalable algorithms for high-quality microarray gene expression data clustering. Milan, BioinfoGRID Symposium (December 2007). University of Bologna, ADS 2007 - 3rd Bertinoro Workshop on Algorithms and Data Structures (September 2007). University of Rome “La sapienza” (January 2008).

Meta-searching: fast and accurate clustering of web snippets with Armil. Pisa, Workshop “Algorithmic and Numerical Aspects in Web Search” (ANAW) (February 2006). Lulea University - Sveden (June 2006).

Introduction to proximity problems in high dimensional geometry. University of Siena (March 2005), University of Parma (December 2004) and University of Rome ”La Sapienza” (January 2001).

Fast packet filtering on any number of attributes via point location. University of Bologna, Workshop on Algorithms and Data Structures (June 2003).

Application of Integral Geometry in the Boundary Element Method. University of Parma (May 1998), University of Texas at Austin (September 1998), University of Florence (April 1999) Purdue University (September 1997)

Electrostatics without singularities. AT&T Bell Laboratories (January 1996). New York University (January 1996). MPI Saarbrueken (August 1995).

Fast approximation of form factors. University of Warwick (October 1995), MPI Saarbrueken (August 1995), University of Minnesota (January 1995), New York University (January 1995).

Point location and motion planning among simplices. Polytechnic of Milano (December 1994), I.E.I-C.N.R. Pisa (December 1994), University of Padova (December 1994), University of Rome I, DIS (December 1994), University of Minnesota (May 1994).

Ray shooting and intersection of non convex polyhedra. ICSI Berkeley (June 1993) University of Rome ”La Sapienza” (April 1992). University of L’Aquila (April 1992). I.E.I- C.N.R. Pisa (April 1992). New York University (February 1992). Stanford University (January 1991).

Finding Stabbing lines in 3-space. ICSI, Berkeley (October 1991), AT&T Bell Labs (March 1991).

VISITING POSITIONS

Charles University Prague, Check Rep.
Visiting Scientist (July 2001)

Max Plank Institute fuer Informatik Saarbrueken, Germany
Visiting Scientist (August 1995)(September 2000)

University of Texas at Austin Austin, TX
Visiting scientist (July 1999)

Purdue University West Lafayette, IN
Visiting Scientist, (September 1998)

Cornell University Ithaca, NY
Visiting lecturer (June-July 1997)

Duke University
Visiting Scientist (September 1996)

Durham, NC

International Computer Science Institute
Senior Visiting Scientist (July-August 1993) (August-September 1997) (July-August 1998)

Berkeley, California

PUBLICATIONS

Editorial activities

1. Jaroslav Nesetril, **Marco Pellegrini** (editors). The Seventh European Conference on Combinatorics, Graph Theory and Applications: EuroComb 2013 Publications of the Scuola Normale Superiore / CRM Series. 2013. ISBN-13: 978-8876424748.
2. **M. Pellegrini**, A. L. N. Fred, J. Filipe e H. Gamboa (Editors). BIOINFORMATICS 2011 - Proceedings of the International Conference on Bioinformatics Models, Methods and Algorithms, Rome, Italy, 26-29 January, 2011 SciTePress 2011. ISBN 978-989-8425-36-2.
3. F. Geraci, R. Marangoni, **M. Pellegrini** e M. Elena Renda (Editors). Proceedings of the 8th Annual Meeting of the Bioinformatics Italian Society, BITS 2011, Pisa, Italy. June 2011. ISBN 978-884673069-5.

Book Chapters

4. **M. Pellegrini**. Ray-shooting and Lines in Space. In **The CRC Handbook of Discrete and Computational Geometry - second edition**, editori J. O'Rourke e J. Goodman. CRC Press, Boca Raton, Florida, pp. 839-856, 2004.
5. **M. Pellegrini**. Measuring Lines in Space - a Collection of Results In Homenatge al professor Llus Santal , Carles Barcelo i Vidal (ed). University of Girona, Girona, Spain, pp. 99-111, 2002.
6. **M. Pellegrini**. Ray-shooting and Lines in Space. In **The CRC Handbook of Discrete and Computational Geometry**, editori J. O'Rourke e J. Goodman. CRC Press, Boca Raton, Florida, pp. 599-614, 1997.

International Journals

7. M. Leoncini, M. Montangero, M. Pellegrini, K. P. Tillan, CMStalker: a combinatorial tool for composite motif discovery. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*. In print.

8. Francesco Russo, Sebastiano Di Bella, Vincenzo Bonnici, Alessandro Laganà, Giuseppe Rainaldi, **Marco Pellegrini**, Alfredo Pulvirenti, Rosalba Giugno, Alfredo Ferro. A knowledge base for the discovery of function, diagnostic potential and drug effects on cellular and extracellular miRNAs. *BMC Genomics* 15(Suppl 3), S4, 2014.
9. M. Baglioni, F. Geraci, **M. Pellegrini**, E. Lastres. Fast exact and approximate computation of betweenness centrality in social networks State of the Art Applications of Social Network Analysis. In the series Lecture Notes in Social Networks 2014, pages 53-73, Springer International Publishing.
10. Filippo Geraci, Maurizio Martinelli, **Marco Pellegrini**, Michela Serrecchia. A framework to evaluate information quality in Public Administration websites. *Pacific Asia Journal of the Association for Information Systems*. Vol. 5: Iss. 3, Article 3, 2013.
11. **M. Pellegrini**, M. Elena Renda and A. Vecchio. Tandem Repeats Discovery Service (TReaDS) applied to finding novel Cis-acting factors in Repeat Expansion Diseases. *BMC Bioinformatics* 2012, Vol. 13(Suppl 4):S3, doi:10.1186/1471-2105-13-S4-S3. March 2012.
12. **M. Pellegrini**, M. Elena Renda and A. Vecchio. Ab Initio Detection of Fuzzy Amino Acid Tandem Repeats in Protein Sequences. *BMC Bioinformatics* 2012, Vol. 13(Suppl 3):S8, doi:10.1186/1471-2105-13-S3-S8. March 2012
13. **M. Pellegrini**, M. Elena Renda and A. Vecchio. TRStalker: an Efficient Heuristic for Finding Fuzzy Tandem Repeats *Bioinformatics* 26(12), pp. i358-366, 2010.
14. M. Furini, F. Geraci, M. Montangelo e **M. Pellegrini**, STIMO: STill and MOving Video Storyboard for the Web Scenario, *Multimedia Tools and Applications*. Springer Verlag, New York, NY. On-line preprint, Giugno 2009. DOI 10.1007/s11042-009-0307-7.
15. Y. Dourisboure, F. Geraci e **M. Pellegrini**, Extraction and classification of dense communities in the Web, *ACM Transactions on the WEB*, 3(2), Aprile 2009. Article 7, DOI <http://doi.acm.org/10.1145/1513876.1513879>, Association for Computing Machinery, New York, NY.
16. F. Geraci, M. Leoncini, M. Montangelo, **M. Pellegrini** e M. Elena Renda, *K-Boost: a Scalable Algorithm for High-Quality Clustering of Microarray Gene Expression Data*, *Journal of Computational Biology* 16(6), pp. 859-873, Giugno 2009. Mary Ann Liebert Inc. New Rochelle, NY.
17. L. M. Genovese, F. Geraci e **M. Pellegrini**. SpeedHap: An Accurate Heuristic for the Single Individual SNP Haplotyping Problem with Many Gaps, High Reading Error Rate and Low Coverage *IEEE/ACM Transactions on Computational Biology and Bioinformatics* 30 June 2008. IEEE Computer Society Digital Library. IEEE Computer Society. DOI: <http://doi.ieeeecomputersociety.org/10.1109/TCBB.2008.67>
18. F. Geraci, **M. Pellegrini**, E. Renda. AMIC@: All Microarray Clusterings @ once. *Nucleic Acids Research* , Accepted for publication in the Web Server issue, 2008.

Nucleic Acids Research Advance Access published online May 13, 2008. Vol. 36, Web Server Issue W315W319 doi:10.1093/nar/gkn265.

19. F. Geraci, **M. Pellegrini**, F. Sebastiani and M. Maggini. Cluster Generation and Cluster Labelling for Web Snippets: A Fast and Accurate Hierarchical Solution. *Internet Mathematics*, 3(4) pp. 413-444, 2007. In print.
20. **M. Pellegrini** and G. Fusco. Efficient IP Table Lookup via Adaptive Stratified Trees with Selective Reconstructions. *The ACM Journal of Experimental Algorithmics*. Vol 12, Num 1.4, 2007. ISSN: 1084-6654.
21. G. De Marco, **M. Pellegrini** and G. Sburlati. Faster Deterministic Wakeup in Multiple Access Channels. ***Discrete Applied Mathematics***, 155(8), pp. 898-903, 2007.
22. L. Galluccio, G. Morabito, S. Palazzo, **M. Pellegrini**, M. E. Renda and P. Santi. GEORoy: A Location-Aware Enhancement to Viceroy Peer-to-Peer Algorithm. ***Computer Networks***, 51(8), pp. 1998-2014, 2007.
23. D. Finocchiaro and **M. Pellegrini**. On computing the diameter of a point set in high dimensional Euclidean space. ***Theoretical Computer Science***, 287(2), pp. 501-514, 2002.
24. M. Pellegrini. Electrostatic Fields without Singularities: Theory, Algorithms and Error Analysis. ***Journal of the ACM***, 45(6), pp. 924-964, 1998.
25. D. Finocchiaro, **M. Pellegrini** e P. Bientinesi. On Numerical Approximation of Electrostatic Energy in 3D. ***Journal of Computational Physics*** 146, pp. 707-725, 1998.
26. **M. Pellegrini**. Monte Carlo Approximation of Form Factors with Error Bounded a Priori. ***Discrete & Computational Geometry***, 17 (3), pp. 319-338, 1997.
27. **M. Pellegrini**. On Counting Pairs of Intersecting Segments and Off-line Triangle Range Searching. ***Algorithmica***, 17 (4), pp. 380-398, 1997.
28. **M. Pellegrini**. On Point Location and Motion Planning in Arrangements of Simplices. ***SIAM J. on Computing*** 25(5), pp. 1061-1081, 1996
29. **M. Pellegrini**. Repetitive Hidden Surface Removal for Polyhedra. ***Journal of Algorithms*** 21, pp. 80-101, 1996.
30. **M. Pellegrini**. On Lines Missing Polyhedral Sets in 3-space. ***Discrete & Computational Geometry*** 12, pp. 203-221, 1994.
31. **M. Pellegrini**. On Collision-Free Placements of Simplices and the Closest Pair of Lines in 3-Space. ***SIAM J. on Computing***, 23 (1), 1994.
32. P.K. Agarwal, **M. Pellegrini**, e M. Sharir. Counting Circular Arcs Intersections. ***SIAM J. on Computing***, 22 (4), 1993.

33. B. Aronov, **M. Pellegrini**, e M. Sharir. On the Zone of an Algebraic Surface in a Hyperplane Arrangement. **Discrete & Computational Geometry**, 9 (2), pp. 177-188, 1993.
34. **M. Pellegrini**. Ray-shooting on triangles in 3-dimensional space. **Algorithmica**, 9, pp. 471-494, 1993.
35. **M. Pellegrini**. Lower Bounds for Line Stabbing in 3-Space. **Computational Geometry: Theory and Applications**, 3, pp. 53-58, 1993.
36. **M. Pellegrini** e P. Shor. Finding stabbing lines in 3-space. **Discrete & Computational Geometry**, 8, pp. 191-208, 1992.

National Journals

37. **M. Pellegrini**. Point location and halfspace retrieval. **AICA-Rivista d'informatica**, 20(4):303-344, Ottobre-Dicembre 1990.

International Refereed Conferences

38. M. Leoncini, M. Montangelo, **M. Pellegrini**, K. P. Tillan, CMF: a combinatorial tool to find composite motifs . In Proceedings of the Learning and Intelligent Optimization Conference, LION 7. Lecture Notes in Computer Science, Vol. 7997, pages 196-208. ISBN 978-3-642-44973-4. Catania - Italy, Jan 7-11, 2013.
39. Miriam Baglioni, Stefania Pieroni, Filippo Geraci, Fabio Mariani, Sabrina Molinaro, **Marco Pellegrini**, Ernesto Lastres: A New Framework for Distilling Higher Quality Information from Health Data via Social Network Analysis. ICDM Workshop 2013: 48-55.
40. M. Baglioni, F. Geraci, M. Pellegrini and E. Lastres, Fast exact computation of betweenness centrality in social networks . In Proceedings of the 2012 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2012), Istanbul, Turkey, 26-29 August 2012. In print.
41. M. Pellegrini and M. Elena Renda and A. Vecchio. Detecting Fuzzy Amino Acid Tandem Repeats in Protein Sequences Proceedings of ACM Conference on Bioinformatics, Computational Biology and Biomedicine 2011 (ACM-BCB), Chicago, IL. August 1-3, 2011.
42. M. Budinich, B. Codenotti, F. Geraci and **M. Pellegrini**. On the benefits of keyword spreading in sponsored search auctions: an experimental analysis Proceedings of the 11th International Conference on Electronic Commerce and Web Technologies (EC-Web 2010) Bilbao, Spain, Aug 30 - Sep 3, 2010.

43. F. Geraci and **M. Pellegrini**. ReHap: an Integrated System for the Haplotype Assembly Problem from Shotgun Sequencing Data Proceedings of Bionformatics 2010, INSTICC (Institute for Systems and Technologies of Information, Control and Communication). 2010. Valencia, Spain. 20-23 January 2010.
44. F. Geraci, **M. Pellegrini** e M. Elena Renda, An Efficient Combinatorial Approach for Solving the DNA Motif Finding Problem, *In Proceedings of the 9th International Conference on Intelligent Systems Design and Applications (ISDA)*, IEEE Computer Society. 30 Novembre-2 Dicembre 2009, Pisa. 335-340.
45. F. Geraci and **M. Pellegrini**, Dynamic User-defined Similarity Searching in Semi-structured Text Retrieval. Proceedings of Infoscale 2008, The Third International ICST Conference on Scalable Information Systems. Vico Equense, Napoli, June 4-6, 2008.
46. M. Furini, F. Geraci, M. Montangelo and **M. Pellegrini**. On Using Clustering Algorithms to Produce Video Abstracts for the Web Scenario In Proceedings of IEEE CCNC2008 Fifth IEEE Consumer Communications & Networking Conference, Las Vegas, Nevada, January 10-12, 2008. pages 1112-1116.
47. M. Furini, F. Geraci, M. Montangelo and **M. Pellegrini**. VISTO: Visual STORyboard for Web Video Browsing. In Proceedings of the **ACM International Conference on Image and Video Retrieval (CIVR 2007)**. Amsterdam, The Netherlands, July 9-11, 2007, pages 635 - 642.
48. F. Geraci, M. Leoncini, M. Montangelo, **M. Pellegrini** and M. Elena Renda. PFP-SB: A Scalable Algorithm for Microarray Gene Expression Data Clustering, Proceedings of **HCI International 2007**, Beijing, P.R. China, July 22-27, 2007. Springer Verlag, Lecture Notes in Computer Science 4561, pages 606-615.
49. L. M. Genovese, F. Geraci and **M. Pellegrini**. A Fast and Accurate Heuristic for the Single Individual SNP Haplotyping Problem with Many Gaps, High Reading Error Rate and Low Coverage. In proceedings of the **7th Workshop on Algorithms in Bioinformatics (WABI 2007)**, Philadelphia, PA, September 2007, Springer Verlag, Lecture Notes in Computer Science 4645, pages 49-60
50. Y. Dourisboure, F. Geraci and **M. Pellegrini**. Extraction and classification of dense communities in the Web. Proceedings of the **16th International World Wide Web Conference (WWW2007)**. Banff, Canada. ACM Press pp. 461-470. May 2007.
51. F. Geraci, **M. Pellegrini**, M. Maggini and F. Sebastiani Cluster Generation and Cluster Labelling for Web Snippets: A Fast and Accurate Hierarchical Solution. In Proceedings of the **13th Symposium on String Processing and Information Retrieval (SPIRE 2006)**, pages 25-36, Glasgow, UK. October 2006.
52. F. Geraci, **M. Pellegrini**, F. Sebastiani and P. Pisati. A Scalable Algorithm for High-Quality Clustering of Web Snippets. In Proceedings of the **21st Annual ACM Sym-**

- posium on Applied Computing (SAC 2006)**, pages 1058-1062 Dijon, France. April 2006.
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SOFTWARE AND WEB-BASED SERVICES

AST. A data structure for IP Table lookups.
<http://psp1.iit.cnr.it/~mcsoft/ast/ast.html>

G-filter. A data structure for Internet packet filtering.
<http://psp1.iit.cnr.it/~mcsoft/g-filter/g-filter.html>

AMIC@. A tool for multi-clustering of micorarray gene expression data.
<http://bioalgo.iit.cnr.it/amica>.

TReADS. A tool for meta-searching tandem Repeats in Biological sequences.
<http://bioalgo.iit.cnr.it:8080/TRSearch/index.html>

ReHap. A Web application with a common interface over 5 algorithms for haplotype reconstruction from shotgun sequencing fragments data.
<http://bioalgo.iit.cnr.it/rehap>

Armil. A Tool for meta-searching, clustering and labelling web snippets from Yahoo and Google. <http://armil.iit.cnr.it/>

VISTO. A demonstrative tool for producing on-line static storyboards of short videos. <http://visto.iit.cnr.it/>

Community Watch. A demonstrative tool for analyzing dense components of the Web Graph. <http://comwatch.iit.cnr.it/>

CGTutorial. An on-line java-based demo of several geometric algorithms in 2D and 3D for didactic purposes (Maintained by Massimo Bartoletti)
<http://cgtutorial.sourceforge.net/>.

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