Curriculum Vitae et Studiorum of

Marco Pellegrini
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MACRO-AREA OF INTEREST

Information and Communication Technology (ICT)

RESEARCH INTERESTS

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

EDUCATION

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

2021-present **C.N.R.** Pisa, Italy
National Research Council (C.N.R.). Director of Research

PAST ACADEMIC/RESEARCH EMPLOYMENT

1999-2020 **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.)

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

2017-2019 **MIUR - Ministero dell'Istruzione, dell'Università e della Ricerca**
Project: "The role of tandem repeats in neurodegenerativediseases: a genomic and proteomic approach". Total Budget 300,000 Euro. Unit PI. (call PRIN - Research Projects of National Relevance)

2017-2020 **Istituto Toscano Tumori**
Project "Eligibility of miRNAs modified by docetaxel in prostate cancer cells to plasma biomarkers in patients responsive and no more responsive to docetaxel". Total Budget 245,000 Euro. Unit PI.

2013-2016 **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.

2014-2016 **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.

2012-2016 **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. Initial Endowment 350,000 Euro.

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. (PI CNR Dr. Bruno Codenotti)

1998 **CNR Coordinated Projects**
Principal co-Investigator for IMC in the project: "Libreria per applicazioni in modellazione geometrica". Budget IMC: Lire 15,000,000. (equiv. 7,500 Euro)

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. (equiv. 2,500 Euro)

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 AND NATIONAL PROJECTS

2015-2016 **MISE - Italian Ministry for Economic Development** Rome, Italy
Project reviewer for the "Italian Digital Agenda" Programme

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 Medicine) 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/

2005-2014 **IIT-CNR** Pisa
Leader of the Activity: INT.P02.003.003 Algoritmica per Bioinformatica.

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

OTHER MANAGERIAL TASKS

2004-2010 **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

2020	**1st International Applied Bioinformatics Conference (iABC20), October 1 - 3, 2020** Member of the Program Committee.	Istanbul, Turkey
2020	**The Web Conference 2020 (Track on Social Networks and Graph Analysis) April 20-22, 2020** Member of the Program Committee.	Taipei, Taiwan
2020	**BIOINFORMATICS 2020. Feb 24-26, 2020.** Member of the Program Committee.	Valletta, Malta
2019	**Social Informatics 2019. No 18-21, 2019.** Senior Member of the Program Committee	Doha, Qatar
2019	**European Conference on Combinatorics, Graph Theory and Applications - EUROCOMB 2019. Aug 26-30, 2019.** Member of the Program Committee.	Bratislava, Slovakia
2018	**The Web Conference 2019 - WWW2019** Member of the Program Committee (Track on Social Networks and Graph Analysis)	San Francisco, CA
2018	**BIOINFORMATICS 2019** Member of the Program Committee	Prague, Czech Republic
2018-	**BioMed Central - Springer Nature** Associated Editor for BMC Cancer	London, UK
2018-	**Frontiers** Guest Editor of Frontiers Research Topic on "Network Bioscience"	Lausanne, Switzerland
2018	**The Tenth International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies BIOTECHNO 2018** Member of the Program Committee	Nice, France
2018	**The 12th International AAAI Conference on Web and Social Media - ICWSM 2018** Member of the Program Committee	Stanford, CA
2017	**The 11th International AAAI Conference on Web and Social Media - ICWSM 2017** Member of the Program Committee	Montreal Canada
2017	**European Conference on Combinatorics, Graph Theory and Applications - EUROCOMB 2017** Member of the Program Committee	Vienna, Austria

2017	**BIOINFORMATICS 2017** Member of the Program Committee	Porto, Portugal
2016-2018	**BITS Società Italiana di Bioinformatica** Member of the Steering Committee	Rome, Italy
2016	**BIOINFORMATICS 2016** Member of the Program Committee	Rome, Italy
2015	**Frontiers** Associated Editor for "Frontiers in Bioinformatics and Computational Biology"	Lausanne, Switzerland
2015	**WWW2015 - 24th International World Wide Web Conference** Member of the Local Organizing Committee	Firenze, Italy
2015	**Eurocomb 2015 - European Conference on Combinatorics, Graph Theory and Applications** Member of the Program Committee	Bergen, Norway
2015	**BIOINFORMATICS 2015** Member of the Program Committee	Lisbon, Portugal
2014	**Frontiers** Guest Editor of Frontiers Research Topic on "Repetitive structures in biological sequences: algorithms and applications"	Lausanne, Switzerland
2014-	**Tuscany Bioinformatics Days - Bioinformatiha** Member of steering committee. Local chair in 2014.	Pisa
2014	**8th International AAAI Conference on Weblogs and Social Media (ICWSM)** Member of the Program Committee	Ann Arbor, Michigan
2014	**BIOINFORMATICS 2014** Member of the Program Committee	Eseo, France
2014	**WWW2014 (Track on Social Networks and Graph Analysis)** Member of the Program Committee	Seoul, South Korea
2014	**Ph.D Committee of Beatrice Donati, Université Claude Bernard Lyon 1.** Member	Lyon, France
2013	**Eurocomb 2013 - European Conference on Combinatorics, Graph Theory and Applications**	Pisa

General Chair and Program Committee co-chair

2012 **Workshop "Geometry, Structure and Randomness in Combinatorics" September 3-7, 2012** — Pisa

Co-organizer in partnership with "Centro di Ricerca Matematica Ennio De Giorgi" of Scuola Normale Superiore.

2012 **Workshop BINet 2012: Workshop on Business Intelligence and Network Analysis. 26 January 2012** — Pisa

Co-Chair of the Organizing Committee

2012 **SPIRE 2012: 19th International Symposium on String Processing and Information Retrieval, 21-25 Ottobre 2012.** — Cartagena, Colombia

Member of the Program Committee

2011 **BITS 2011: 8th Annual Meeting of the Bioinformatics Italian Society. 20-22 Giugno 2011.** — Pisa

Co-Chair of the Organizing Committee and Member of the Scientific Committee

2011 **IC3 2011: 4th International Conference on Contemporary Computing, Jaypee Institute of Information Technology, 6-8 Agosto 2011** — Uttar Pradesh, India

Member of the Program Committee

2011 **SPIRE 2011: 18th International Symposium on String Processing and Information Retrieval. 17-21 October 2011** — Pisa

Member of the Program Committee

2011 **Eurocomb 2011: European Conference on Combinatorics, Graph Theory and Applications. 29 August - 2 September 2011** — Budapest, Hungary

Member of the Program Committee

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)** — Dortmund, Germany

Program committee member.

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)** Bordeaux, France
Program committee member.

2008 **Nettab 2008 - Bioinformatics Methods for Biomedical Complex System Applications** Varenna, Italy
Member of the Scientific committee .

2008 **Ph.D Committee of Libertad Tansini, Chalmers University of Technology** Goteborg, Sweden
Opponent.

2007 **European Conference on Combinatorics, Graph Theory and Applications (Eurocomb 07)** Seville, Spain
Program committee member.

2006 **COMBSTRU School in Computational Complexity (CSCC06)** Bertinoro, Italy
Organizer.

2006 **Workshop on Algorithmic and Numerical Aspects in Web Search (ANAW)** Pisa, Italy
Organizer.

2006 **Ph.D. Committee of Johan Karlsson at Lulea University** Lulea, Sweden
Opponent.

2005 **Association for Computing Machinery** Pisa, Italy
21st ACM Annual Symposium on Computational Geometry (ACM SoCG05).
Organization Co-Chair.

2005 **Workshop Massive 2005** Pisa, Italy
Organizer.

2004 **2nd COMBSTRU Workshop on Algorithms and Combinatorics** Venice, Italy
Organization Chair.

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 "Plos One", "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, WOAO 2006.

Member of ACM and BITS (Bioinformatics Italian Society).

Member of the Italian Interuniversity Mathematical School (SMI).

TEACHING

2005-2008	**University of Pisa** Dept. of Computer Science. Course in Computational Geometry	Pisa, Italy
2004	**University of Pisa** Graduate Course in "Randomized methods in Computational Geometry".	Pisa, Italy
2004	**University of Parma** Undergraduate course in Operating Systems.	Parma, Italy
2002-2003	**University of Parma** Undergraduate Course in Algorithms and Data Structures.	Parma, Italy
2000	**University of Pisa** Graduate Course in "Randomized methods in Computational Geometry".	Pisa, Italy
1999	**University of Florence** Dept. of Mathematics. Course in Computational Geometry	Florence, Italy
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**	Cortona, Italy

Summer Post-graduate school on Computational Complexity: Course on randomized methods in computational geometry

1992-1995 **King's College** London, U.K.
Graduate courses in: Computational Geometry, Algorithms for VLSI, Design and Analysis of Algorithms. Undergraduate course in Design and Analysis of Algorithms

OTHER PROFESSIONAL ACTIVITIES

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

HONORS

1989-1991 **Courant Institute** New York, USA
Research Assistantship.

1986 **IBM-Italia** Roma, Italia
IBM Prize for Best Thesis in the are Software Engineering and Programming Languages.

1986-1990 **Enidata** Milano, Italia
Ph.D. Fellowship for the New York University.

INVITED TALKS AND SEMINARS

VISTO: VIsual STOryboard for Web Video Browsing. Universiy of Bologna, Workshop "SGM@BiCI Search goes Mobile" (April 2008). Andorra, Workshop "The future of web search" (April 2008).

Extraction and Classification of Dense Communitites 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 Durham, NC
Visiting Scientist (September 1996)

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

PUBLICATIONS

Editorial activities

1. **Pellegrini, M.**, Antoniotti, M., Mishra, B., eds. (2020). Network Bioscience. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88963-289-3
2. Marco Antoniotti , Bud (Bhubaneswar) Mishra and **Marco Pellegrini** Editorial: Network Bioscience. Front. Genet. doi: 10.3389/fgene.2019.00858, 2019.
3. **Marco Pellegrini**, Alberto Magi, Costas Iliopoulos (eds.) Repetitive Structures in Biological Sequences: Algorithms and Applications. Lausanne: Frontiers Media. doi: 10.3389/978-2-88945-018-3, 2016. ISBN: 9782889450183
4. **Marco Pellegrini**, Alberto Magi, Costas Iliopoulos. Repetitive structures in biological sequences: open challenges. Front. Bioeng. Biotechnol. 4:66, July 2016. doi: 10.3389/fbioe.2016.00066
5. Jaroslav Nesetril, **Marco Pellegrini** (eds). Selected papers of Eurocomb 2013 Special Issue of the European Journal of Combinatorics. Volume 48, August 2015, pp 1-234. Elsevier. ISSN 0195-6698.
6. Jiri Matousek, Jaroslav Nesetril, **Marco Pellegrini** (eds). Geometry, Structure and Randomness in Combinatorics Publications of the Scuola Normale Superiore / CRM Series vol 18. 2015. ISBN-13: 9788876425240
7. Jaroslav Nesetril, **Marco Pellegrini** (eds). 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.
8. **M. Pellegrini**, A. L. N. Fred, J. Filipe e H. Gamboa (eds). 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.
9. F. Geraci, R. Marangoni, **M. Pellegrini** e M. Elena Renda (eds). Proceedings of the 8th Annual Meeting of the Bioinformatics Italian Society, BITS 2011, Pisa, Italy. June 2011. ISBN 978-884673069-5.

Book Chapters

10. Fiscon G., Conte F., Farina L., **Pellegrini M.**, Russo F., Paci P. Identification of DiseasemiRNA Networks Across Different Cancer Types Using SWIM. In: Lagan A. (eds) MicroRNA Target Identification. Methods in Molecular Biology. vol 1970, (2019), pp 169-181, Humana Press, New York, NY. ISBN 978-1-4939-9206-5.

11. Francesco Russo, Giulia Fiscon, Federica Conte, Milena Rizzo, Paola Paci, and **Marco Pellegrini**. Interplay between long non-coding RNAs and microRNAs in cancer. In Computational Cell Biology, Methods and Protocols, von Stechow, Louise, Santos Delgado, Alberto (Eds.) Humana Press, Springer-Nature, 2018, ISBN 978-1-4939-8617-0

12. **M. Pellegrini**. Community Detection in Biological Networks. In Encyclopedia of Bioinformatics and Computational Biology Elsevier, 2018, DOI: 10.1016/B978-0-12-809633-8.20428-7.

13. Francesco Russo, Kirstine Belling, Anders Boeck Jensen, Flavia Scoyni, Sren Brunak, **Marco Pellegrini** MicroRNAs, Regulatory Networks, and Comorbidities: Decoding Complex Systems In MicroRNA Detection and Target Identification: Methods and Protocols, 2017, Springer New York, ISBN 978-1-4939-6866-4

14. **M. Pellegrini**. Ray shooting and lines in space In Handbook of Discrete and Computational Geometry - third edition Csaba D. Toth, Jacob E. Goodman and Joseph O'Rourke (eds.). Chapman & Hall/CRC Press, Boca Raton, Florida. ISBN 9781498711395. 2017.

15. Francesco Russo, Flavia Scoyni, Alessandro Fatica, **Marco Pellegrini**, Alfredo Ferro, Alfredo Pulvirenti and Rosalba Giugno. Circulating Non-Coding RNAs as Clinical Biomarkers In **Epigenetic Biomarkers and Diagnostics** , Elsevier, 2015, ISBN 9780128018996

16. **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.

17. **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.

18. **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

19. M. Lucchetta , **M. Pellegrini** Drug Repositioning by Merging Active Subnetworks Validated in Cancer and COVID-19. Sci Rep 11, 19839 (2021). https://doi.org/10.1038/s41598-021-99399-2
    Preprint May 2021 medRxiv https://doi.org/10.1101/2021.05.13.21257140

20. **M. Pellegrini** Accurate Prediction of Breast Cancer Survival through Coherent Voting Networks with Gene Expression Profilin. Sci Rep 11, 14645 (2021).

https://doi.org/10.1038/s41598-021-94243-z Preprint October 2020. medRxiv 2020.10.28.20221671; doi: https://doi.org/10.1101/2020.10.28.20221671

21. M. Lucchetta , **M. Pellegrini** Finding disease modules for cancer and COVID-19 in gene co-expression networks with the Core&Peel method. Sci Rep 10, 17628 (2020). https://doi.org/10.1038/s41598-020-74705-6

22. Fazio, S.; Berti, G.; Russo, F.; Evangelista, M.; DAurizio, R.; Mercatanti, A.; **Pellegrini, M.**; Rizzo, M. The miR-28-5p Targetome Discovery Identified SREBF2 as One of the Mediators of the miR-28-5p Tumor Suppressor Activity in Prostate Cancer Cells. Cells 2020, 9, 354. https://doi.org/10.3390/cells9020354, MDPI.

23. Elena Guzzolino, Mario Pellegrino, Neha Ahuja, Deborah Garrity, Romina DAurizio, Marco Groth, Mario Baumgart, Cathy J Hatcher, Alberto Mercatanti, Monica Evangelista, Chiara Ippolito, Elisabetta Tognoni, Ryuichi Fukuda, Vincenzo Lionetti, **Marco Pellegrini**, Federico Cremisi, Letizia Pitto. miR-182-5p is an evolutionarily conserved Tbx5 effector that impacts cardiac development and electrical activity in zebrafish Cell. Mol. Life Sci. (2019). https://doi.org/10.1007/s00018-019-03343-7. Springer Verlag.

24. Andrea Marranci, Romina DAurizio, Sebastian Vencken, Serena Mero, Elena Guzzolino, Milena Rizzo, Letizia Pitto, **Marco Pellegrini**, Giovanna Chiorino, Catherine M. Greene and Laura Poliseno. Systematic evaluation of the microRNAome through miR-CATCHv2.0 identifies positive and negative regulators of BRAF-X1 mRNA, RNA Biology (2019), doi: 10.1080/15476286.2019.1600934. Taylor & Francis Group.

25. Guzzardi M., Ait Ali L., DAurizio R., Rizzo F., Saggese P., Sanguinetti E., Weisz, A., **Pellegrini M.**, Iozzo P., Fetal cardiac growth is associated with in utero gut colonization, Nutrition, Metabolism and Cardiovascular Diseases (2018), doi: https://doi.org/10.1016/j.numecd.2018.10.005

26. Loredana M. Genovese, Marco M. Mosca, **Marco Pellegrini**, Filippo Geraci. Dot2dot: Accurate Whole-Genome Tandem Repeats Discovery. Bioinformatics, Oxford University Press, 27 Aug 2018.
DOI: https://doi.org/10.1093/bioinformatics/bty747,

27. Genovese L.M., Geraci F., Corrado L., Mangano E., D'Aurizio R., Bordoni R., Severgnini M., Manzini G., De Bellis G., D'Alfonso S. and **Pellegrini M.** A Census of Tandemly Repeated Polymorphic Loci in Genic Regions Through the Comparative Integration of Human Genome Assemblies. Front. Genet. (2018) 9:155. doi: 10.3389/fgene.2018.00155

28. Francesco Russo, Sebastiano Di Bella, Federica Vannini, Gabriele Berti, Flavia Scoyni, Helen V. Cook, Alberto Santos, Giovanni Nigita, Vincenzo Bonnici, Alessandro Lagan, Filippo Geraci, Alfredo Pulvirenti, Rosalba Giugno, Federico De Masi, Kirstine Belling, Lars J. Jensen, Sren Brunak, **Marco Pellegrini**, Alfredo Ferro. miRandola 2017: a curated knowledge base of non-invasive biomarkers. Nucleic Acids Research. Volume 46, Issue D1, Pages D354-359. Database issue 2018. doi.org/10.1093/nar/gkx854

29. Gabriele Berti, Francesco Russo, Milena Rizzo, Giuseppe Rainaldi, Monica Evangelista, **Marco Pellegrini**. The miRNA pull out assay as a method to validate the miR-28-5p targets identified in other tumor contexts in prostate cancer. International Journal of Genomics. 2017, volume 2107, article ID 5214806, Hindawi.

30. Milena Rizzo, Gabriele Berti, Francesco Russo, Sofia Fazio, Monica Evangelista, Romina D'Aurizio, **Marco Pellegrini**, Giuseppe Rainaldi. Discovering the miR-26a-5p Targetome in Prostate Cancer Cells. Journal of Cancer. 2017; 8(14): 2729-2739. doi: 10.7150/jca.18396

31. Lorenzo Bascetta, Arianna Oliviero, Romina D'Aurizio, Monica Evangelista, Alberto Mercatanti, **Marco Pellegrini**, Francesca Marrocolo, Sergio Bracarda, Milena Rizzo. The Prostate Cancer Cells Resistant to Docetaxel as in vitro Model for Discovering MicroRNAs Predictive of the Onset of Docetaxel Resistance. Int. J. Mol. Sci. 2017, 18(7), 1512; doi:10.3390/ijms18071512.

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G-filter. A data structure for Internet packet filtering.
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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/.

Place and date: Pisa, 12/04/2022 Signature: Marco Pellegrini