

PAOLO TIERI, PhD

CURRICULUM VITÆ ET STUDIORUM

CNR Consiglio Nazionale delle Ricerche
IAC Istituto per le Applicazioni del Calcolo
Roma IT

EDUCATION

- **Università di Bologna, Italy, 2006-2009** *Philosophiæ Doctor* in Systems Biology & Experimental Pathology
- **Università di Bologna, Italy, 1999** *Laurea magistralis* (4-yrs M.Sc. equiv.) in Physics, final thesis in Biomedical Physics

PROFESSIONAL ACTIVITIES

- **Sapienza University, Data Science program, Rome, Italy, 2017-now**
<http://datascience.i3s.uniroma1.it/it> Adjunct Professor, Bioinformatics & Network Biology
- **CNR National Research Council IAC Institute for Computing Applications Rome, Italy, 2011-now**
<http://www.iac.cnr.it> Staff Scientist, Computational Biology, Network Biology, Systems Biology
- **PICB CAS-MPG Partner Institute for Computational Biology Shanghai, China, Mar-Sep 2012**
<http://www.picb.ac.cn> Visiting Scientist, Network Biology of Rheumatoid Arthritis (CAS-Awarded)
- **Harvard Medical School, Dana Farber Cancer Institute, Vidal Lab, Boston, USA, Oct 2005-Feb 2006**
<http://ccsb.dfci.harvard.edu/> Visiting Research Fellow, mathematical models for protein-protein interaction networks
- **Università di Bologna, Italy, 2003-2011**
<http://www.dimes.unibo.it/> Research fellowship, Systems Biology & Systems immunology; lecturing activity for the Biotechnology M.Sc. courses at UNIBO
- **ENEA National Research Agency, Bologna, Italy, 2000-2002**
<http://www.enea.it/> Technology Transfer Specialist, EU-funded Tech-Transfer Project Manager
- **“Mario Negri Sud” Research Institute S. Maria Imbaro, Italy, 1998**
<http://tinyurl.com/negrisud-2006> Trainee in the Radiation protection Unit, Dept. Cell Biology and Oncology

POSTGRADUATE COURSES

- **2006, Gulbenkian Inst.** Lisboa (PT), course “Aging Research with Bioinformatic Methods”
- **2005, Biocomputing Lab, Bologna Univ.** (I), 6th Winter school “How complex is functional genomics?”
- **2004, Biocomputing Lab, Bologna Univ.** (I), 5th Winter school “State of the art of protein-protein interaction: the role of *in silico* approach”
- **2003, Biocomputing Lab, Bologna Univ.** (I), 4th Winter school “Hot topics in structural genomics”
- **2003, Dept. Mathematics, Firenze Univ.** (I), School of mathematical modelling for biology
- **2002, Inst. Theor. Biol., Humboldt Univ.** Berlin (D), Autumn school of theoretical biology
- **2000, CINECA supercomputing center,** Bologna (I), Summer school in Parallel Computing

MAIN PROJECTS AND GRANTS as Proposer/Principal Investigator/co-PI



- **INMC, International Network Medicine Consortium,** 2019, *member of Scientific Committee*, <https://www.intnm.org>
- **IMI2 project, ERA4TB,** European Accelerator of Tuberculosis Regime, 2020-2025, *researcher*, <https://era4tb.org>
- **EU H2020, iPC,** individualized Paediatric Cure, **2019-2022**, H2020-ICT-2018-2 Project no. 826121, *researcher*, <https://ipc-project.eu>
- **COST Cooperation in Science and Technology, 2016-2020,** Action **CA 15120 OpenMultiMed** Open Multiscale Systems Medicine science network, management committee member, *scientific missions coordinator* http://www.cost.eu/COST_Actions/ca/CA15120
- **European Union FP7, 2013-2015, MISSION-T2D** Multiscale Immune System Simulator for the ONset of Type 2 Diabetes integrating genetic, metabolic and nutritional data, *Work Package Leader* for WP6 Model Integration <http://www.mission-t2d.eu/>
- **CAS Chinese Academy of Sciences, 2012, Visiting Fellowship Award**, in collaboration with Prof C Nardini group, *P.I.* network biology approach in rheumatoid arthritis
- **EU FP7, 2012-2014, KEPAMOD** Knowledge exchange in processing and analysis of multi-omic data, Marie Curie Action, grant no. 294935, *co-P.I.*

PUBLICATIONS

- Zanin M, Aitya NAA, Basilio J, Baumbach J, Benis A, Behera CK, Bucholc M, Castiglione F, Chouvarda I, Comte B, Dao TT, Ding X, Pujos-Guillot E, Filipovic N, Finn DP, Glass DH, Harel N, Iesmantas T, Ivanoska I, Joshi A, Boudjeltia KZ, Kaoui B, Kaur D, Maguire LP, McClean PL, McCombe N, de Miranda JL, Moisescu MA, Pappalardo F, Polster A, Prasad G, Rozman D, Sacala I, Sanchez-Bornot JM, Schmid JA, Sharp T, Solé-Casals J, Spiwok V, Spyrou GM, Stalidzans E, Stres B, Sustersic T, Symeonidis I, **Tieri P**, Todd S, Van Steen K, Veneva M, Wang DH, Wang H, Wang H, Watterson S, Wong-Lin K, Yang S, Zou X, Schmidt HHHW. An Early Stage Researcher's Primer on Systems Medicine Terminology. *Netw Syst Med.* **2021** Feb 25;4(1):2-50. doi: 10.1089/nsm.2020.0003. PMID: 33659919; PMCID: PMC7919422.
- Lazareva O, Canzar S, Yuan K, Baumbach J, Blumenthal DB, **Tieri P**, Kacprowski T, List M. BiCoN: Network-constrained biclustering of patients and omics data. *Bioinformatics.* **2020** Dec 26;btaa1076. doi: 10.1093/bioinformatics/btaa1076. Epub ahead of print. PMID: 33367514.
- Stolfi P, Valentini I, Palumbo MC, **Tieri P**, Grignolio A, Castiglione F. Potential predictors of type-2 diabetes risk: machine learning, synthetic data and wearable health devices. *BMC Bioinformatics.* **2020** Dec 14;21(Suppl 17):508. doi: 10.1186/s12859-020-03763-4. PMID: 33308172; PMCID: PMC7733701.

- Vasconcelos MH, Alcaro S, Arechavala-Gomez V, Baumbach J, Borges F, Brevini TAL, Rivas JL, Devaux Y, Hozak P, Keinänen-Toivola MM, Lattanzi G, Mohr T, Murovska M, Prusty BK, Quinlan RA, Pérez-Sala D, Scheibenbogen C, Schmidt HHHW, Silveira I, **Tieri P**, Tolios A, Riganti C. Joining European Scientific Forces to Face Pandemics. *Trends Microbiol.* **2021** Feb;29(2):92-97. doi: 10.1016/j.tim.2020.10.008. Epub 2020 Dec 4. PMID: 33288385; PMCID: PMC7716745.
- Wang H, Pujos-Guillot E, Comte B, de Miranda JL, Spiwok V, Chorbev I, Castiglione F, **Tieri P**, Watterson S, McAllister R, de Melo Malaquias T, Zanin M, Rai TS, Zheng H. Deep learning in systems medicine. *Brief Bioinform.* **2021** Mar 22;22(2):1543-1559. doi: 10.1093/bib/bbaa237. PMID: 33197934.
- Stolfi P, Manni L, Soligo M, Vergni D, **Tieri P**. Designing a Network Proximity-Based Drug Repurposing Strategy for COVID-19. *Front Cell Dev Biol.* **2020** Oct 6;8:545089. doi: 10.3389/fcell.2020.545089. PMID: 33123533; PMCID: PMC7573309.
- Comte B, Baumbach J, Benis A, Basílio J, Debeljak N, Flobak Å, Franken C, Harel N, He F, Kuiper M, Méndez Pérez JA, Pujos-Guillot E, Režen T, Rozman D, Schmid JA, Scerri J, **Tieri P**, Van Steen K, Vasudevan S, Watterson S, Schmidt HHHW (2020). Network and Systems Medicine: Position Paper of the European Collaboration on Science and Technology Action on Open Multiscale Systems Medicine. *Netw Syst Med.* **2020** Jul 6;3(1):67-90. doi: 10.1089/nsm.2020.0004. PMID: 32954378; PMCID: PMC7500076.
- Ortona E, Gagliardi MC, **Tieri P**, Ruggieri A. (2020) ACE2 expression and sex disparity in COVID19. *Cell Death Discovery*, in press
- Manni L, **Tieri P**, Soligo M. (2020). A contribution to the hypothesis of nicotinic challenge as therapeutic option for COVID-19 patients. *Qeios*. doi:10.32388/UJX3KN.3. (preprint)
- Silverman EK, Schmidt HHHW, Anastasiadou E, Altucci L, Angelini M, Badimon L, Balligand JL, Benincasa G, Capasso G, Conte F, Di Costanzo A, Farina L, Fiscon G, Gatto L, Gentili M, Loscalzo J, Marchese C, Napoli C, Paci P, Petti M, Quackenbush J, **Tieri P**, Viggiano D, Vilahur G, Glass K, Baumbach J. (2020) Molecular networks in Network Medicine: Development and applications. *Wiley Interdiscip Rev Syst Biol Med.* 2020 Apr 19:e1489. doi: 10.1002/wsbm.1489. PMID: 32307915.
- Blumenthal DB, Viola L, List M, Baumbach J, **Tieri P**, Kacprowski T (2020). EpiGEN: an epistasis simulation pipeline. *Bioinformatics.* 2020 Apr 14. pii: btaa245. doi:10.1093/bioinformatics/btaa245. PMID: 32289146.
- Celestini A, Cianfriglia M, Mastrostefano E, Palma A, Castiglione, **Tieri P** (2019) Critical nodes reveal peculiar features of human essential genes and protein interactome. 2019 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), San Diego, CA, USA, 2019, pp. 2121-2128, doi: 10.1109/BIBM47256.2019.8983221.
- Matarrese P, **Tieri P**, Anticoli S, Ascione B, Conte M, Franceschi C, Malorni W, Salvioli S, Ruggieri A (2019) *X-chromosome-linked miR548am-5p is a key regulator of sex disparity in the susceptibility to mitochondria-mediated apoptosis.* *Cell Death Dis*, 10(9):673. doi: 10.1038/s41419-019-1888-3
- Prana V, **Tieri P**, Palumbo MC, Mancini E, Castiglione F (2019) *Modeling the Effect of High Calorie Diet on the Interplay between Adipose Tissue, Inflammation, and Diabetes.* *Comput Math Methods Med*, 7525834. doi: 10.1155/2019/7525834
- De Assis Ribeiro HAL, Maioli TU, De Freitas LM, **Tieri P**, Castiglione F (2019) *A mathematical model of murine macrophage infected with Leishmania sp.* *Proceedings BIBM 2018 IEEE International Conference on Bioinformatics and Biomedicine*, 8621351, pp. 1425-1430
- De Freitas LM, Maioli TU, De Assis Ribeiro HAL, **Tieri P**, Castiglione F (2019) *A mathematical model of Chagas disease infection predicts inhibition of the immune system.* *Proceedings BIBM 2018 IEEE International Conference on Bioinformatics and Biomedicine*, 8621389, pp. 1374-1379
- Palma A, Jarrah AS, **Tieri P**, Cesareni G, Castiglione F (2018) *Gene Regulatory Network Modeling of Macrophage Differentiation Corroborates the Continuum Hypothesis of Polarization States.* *Front Physiol.* 9:1659. doi: 10.3389/fphys.2018.01659. PMID: 30546316

- Palumbo MC, Morettini M, **Tieri P**, Diele F, Sacchetti M, Castiglione F (2018) *Personalizing physical exercise in a computational model of fuel homeostasis*, PLoS Comput. Biol., 14(4), e1006073. doi:10.1371/journal.pcbi.1006073
- **Tieri P**, Farina L, Petti M, Astolfi L, Paci P, Castiglione F (2018) *Network inference and reconstruction in Bioinformatics*, in Encyclopedia of Bioinformatics and Computational Biology, 1st Ed., Editors-in-Chiefs: Ranganathan S, Nakai K, Schonbach C, in press
- Zanin M, Chorbev I, Stres B, Stalidzans E, Vera J, **Tieri P**, Castiglione F, Groen D, Zheng H, Baumbach J, Schmid JA, Basilio J, Klimek P, Debeljak N, Rozman D, Schmidt HHHW (2017) *Community effort endorsing multiscale modelling, multiscale data science and multiscale computing for systems medicine*. Brief Bioinform. doi: 10.1093/bib/bbx160
- Ribeiro H, Maioli TU, de Freitas LM, **Tieri P**, Castiglione F. (2017) *Modeling immune response to leishmania species indicates adenosine as an important inhibitor of Tb-Cell activation*. Frontiers in Cell and Infect Microbiol, doi:10.3389/fcimb.2017.00309
- Moreau JF, Pradeu T, Grignolio A, Nardini C, Castiglione F, **Tieri P**, Capri M, Salvioli S, Taupin JL, Garagnani P, Franceschi C. (2016) *The emerging role of ECM crosslinking in T cell mobility as a hallmark of immunosenescence in humans*. Ageing Research Reviews, 35:322-335, doi:10.1016/j.arr.2016.11.005
- Mendez T, Castiglione F, **Tieri P**, Felicori L. (2016) *Systems and Synthetic Biology applied to Health*, Curr Dev Biotech Bioeng, Elsevier, doi:10.1016/B978-0-444-63660-7.00009-7
- Castiglione F, **Tieri P**, Palma A, Jarrah AS. (2016) *Statistical ensemble of gene regulatory networks of macrophage differentiation*. BMC Bioinformatics, 17:506, doi:10.1186/s12859-016-1363-4
- Bartoletti-Stella A, Chiaro G, Calandra-Buonaura G, Contin M, Scaglione C, Barletta G, Cecere A, Garagnani P, **Tieri P**, Ferrarini A, Piras S, Franceschi C, Delledonne M, Cortelli P, Capellari S. (2015) *A patient with PMP22-related hereditary neuropathy and DBH-gene-related dysautonomia*. J Neurol. 262:2373-81, doi: 10.1007/s00415-015-7896-z
- **Tieri P**, Nardini C, Dent JE, eds (2015) *Multi-omic Data Integration* (ebook), Publisher: Frontiers Media SA, ISBN: 978-2-88919-648-7
- Nardini C, Dent J, **Tieri P** (2015). *Editorial: Multi-omic Data Integration*. Front. Cell Dev. Biol. 3:46. doi: 10.3389/fcell.2015.00046
- Cappuccio A, **Tieri P**, Castiglione F. (2015) *Multi-scale modeling in immunology, a review*. Brief Bioinform. 10.1093/bib/bbv012
- **Tieri P**, Prana V, Colombo T, Santoni D, Castiglione F. (2014) *Multi-scale Simulation of T Helper Lymphocyte Differentiation*. In: Campos S, editor. Advances in Bioinformatics and Computational Biology. Lecture Notes in Computer Science. 8826: Springer International Publishing; p. 123-34 doi: 10.1007/978-3-319-12418-6_16
- **Tieri P**, Zhou XY, Zhu L, Nardini C. (2014) *Multi-omic landscape of rheumatoid arthritis: re-evaluation of drug adverse effects*. Front. Cell Dev. Biol. , 2:59. doi: 10.3389/fcell.2014.00059
- Grignolio A, Mishto M, Faria AMC, Garagnani P, Franceschi C, **Tieri P** (2014) *Towards a liquid self: how time, geography, and life experiences reshape the biological identity*. Front. Immunol. 5:153. doi: 10.3389/fimmu.2014.00153
- Castiglione F, **Tieri P**, De Graaf A, Franceschi C, Liò P, Van Ommen B, Mazzà C, Tüchel A, Bernaschi M, Samson C, Colombo T, Castellani GC, Capri M, Garagnani P, Salvioli S, Nguyen VA, Bobeldijk-Pastorova I, Krishnan S, Cappozzo A, Sacchetti M, Morettini M, Ernst M (2013) *The onset of type 2 diabetes: proposal for a multi-scale model*. JMIR Res Protoc. 2(2):e44. doi: 10.2196/resprot.2854
- **Tieri P**, Nardini C (2013) *Signalling Pathway Database Usability: Lessons Learned*. Mol Biosystems 9(10), 2401-7. doi: 10.1039/c3mb70242a
- Garagnani P, Giuliani C, Pirazzini C, Olivieri F, Bacalini MG, Ostan R, Mari D, Passarino G, Monti D, Bonfigli AR, Boemi M, Ceriello A, Genovese S, Sevini F, Luiselli D, **Tieri P**, Capri M, Salvioli S, Vijg J, Suh Y, Delledonne M, Testa R, Franceschi C (2013) *Centenarians as super-controls to assess the biological relevance of genetic risk factors for common age-related diseases: A proof of principle on type 2 diabetes*. Aging 5(5), 373-85

- **Tieri P**, Bellavista E, Termanini A, Salvioli S, Capri M, Franceschi C (2012) *Charting the NF- κ B interactome map*. PLoS ONE 7(3): e32678. doi:10.1371/journal.pone.0032678
- **Tieri P**, de la Fuente A, Termanini A, Franceschi C (2011) *Integrating omics data for signaling pathways, interactome reconstruction, and functional analysis*. Methods Mol. Biol. 719, 415-33 **rated "must read" by**  FACULTY of 1000
- **Tieri P**, Grignolio A, Zaikin A, Mishto M, Remondini D, Castellani GC, Franceschi C (2010) *Network, degeneracy and bow tie: integrating paradigms and architectures to grasp the complexity of the immune system*. Theoretical Biology and Medical Modelling, 7, 32
- Termanini A, **Tieri P**, Franceschi C (2010) *Encoding the states of interacting proteins to facilitate biological pathways reconstruction*. Biology Direct, 5, 52 
- Grignolio A, **Tieri P**, Castellani GC (2010) *Networks, Degeneracy and Bow ties: A Unifying Perspective of Immunological Paradigms and Architectures*, in: Immunology Today - Three Historical Perspectives under Three Theoretical Horizons, Grignolio A Ed., Bononia University Press, *Quaderni del CIG* series, 2, 53-68
- Cevenini E, Bellavista E, **Tieri P**, Castellani G, Lescai F, Francesconi M, Mishto M, Santoro A, Valensin S, Salvioli S, Capri M, Zaikin A, Monti D, de Magalhães JP, Franceschi C (2010) *Systems Biology and Longevity: an emerging approach to identify innovative anti-aging targets and strategies*, Curr. Pharm. Des., 16, 802-813
- **Tieri P**, Grignolio A, (2009) *Paradigms and architectures in the immune system: from degeneracy to bow ties*, in: ACUME2 Living Texts conference series proceedings, PNW Polish Scientific Publishers, 57-70
- Capri M, Salvioli S, Cevenini E, Celani L, Sevini F, Bellavista E, Lanzarini C, Lukas S, Lescai F, **Tieri P**, Monti D, Franceschi C (2009) *Aging and Longevity in Animal Models and Humans*, in: Life-Span Extension, Aging Medicine, Sell C et al. eds., Springer/Humana Press, DOI: 10.1007/978-1-60327-507-1_11, 175-191
- **Tieri P** (2008) *The immune system: look who's talking*, in: Biocomplexity at the cutting edge of Physics, Systems Biology and Humanities, Bononia University Press, *Quaderni del CIG* series, 1, 145-154
- Cevenini E, Invidia L, Lescai F, Salvioli S, **Tieri P**, Castellani GC, Franceschi C (2008) *Human models of aging and longevity*. Expert Opin. Biol. Ther. 8 (9), 1393-1405
- Salvioli S, Capri M, **Tieri P**, Laroni J, Barbi C, Invidia L, Altilia S, Santoro A, Pirazzini C, Pierini M, Bellavista E, Alberghina L, Franceschi C (2008) *Different types of cell death in organismal aging and longevity: state of the art and possible systems biology approach*, Curr. Pharm. Des., 14, 226-236
- Salvioli S, **Tieri P**, Castellani GC, Capri M, Barbi C, Santoro A, Altilia S, Invidia L, Pierini M, Bellavista E, Monti D, Franceschi C (2007) *Longevity genes across species: conservation versus evolvability*, Inv. Surviv. J., 4, 112-118
- Remondini D, Neretti N, Sedivy JM, Franceschi C, Milanesi L, **Tieri P**, Castellani GC (2007) *Networks from gene expression time series: characterization of correlation patterns*, Int. J. Bifurcat. Chaos, 17 (7), 2477-2483
- **Tieri P**, Castellani GC, Remondini D, Valensin S, Laroni J, Salvioli S, Franceschi C (2007) *Capturing Degeneracy in the Immune System*, in: In silico Immunology, D. Flower and J. Timmis Eds., Springer Verlag, New York, ISBN 9780387392387, pp 109-118
- Remondini D, **Tieri P**, Valensin S, Verondini E, Franceschi C, Bersani F, Castellani GC (2006) *A general learning rule for network modeling of neuroimmune interactome*, in: Neural Nets, WIRN/NAIS 2005 Proceedings, Lecture Notes in Computer Science, Springer Verlag, 3931, pp 286-292
- Salvioli S, Capri M, Valensin S, **Tieri P**, Monti D, Ottaviani E, Franceschi C (2006) *Inflamm-aging, Cytokines and Aging: state of the art, new hypotheses on the role of mitochondria and new perspectives from systems biology*, Curr. Pharm. Des., 12, 3161-71
- **Tieri P**, Valensin S, Lator V, Castellani GC, Marchiori M, Remondini D, Franceschi C (2005) *Quantifying the relevance of different mediators in the human immune cell network*, Bioinformatics, 21, 1639-1643
- **Tieri P**, Valensin S, Franceschi C, Morandi C, Castellani GC (2003) *Memory and selectivity in evolving scale-free immune networks*, in Artificial Immune Systems, ICARIS 2003 Proceedings, Lecture Notes in Computer Science, Springer-Verlag, 2787, pp.93-101

PRESENTATIONS, TALKS AND CONFERENCES

- *The 3rd Intl. Conference on Mathematics and Statistics*, 6-9 February 2020, American University of Sharjah, UAE, talk “Critical nodes reveal remarkable features of human essential genes and protein interactome”
- *First International Conference in Systems and Network Medicine*, 11-13 Sept. 2019, Washington, USA, poster title “Critical nodes discovery in pathophysiological signaling pathways”
- *European Association of Systems Medicine Conference*, 8 Nov. 2018, Utrecht, NL, talk title “Multiscale computational immunology”
- *Garuda Workshop: Re-imagining Connectivity in Biology and Medicine*, 15-16 May 2017, Data Science course, Sapienza University, organizer.
- *The “omic” era: dalla ricerca di base alla medicina personalizzata*, 26 May 2016, Accademia Medica di Roma, Italy, talk “Integrazione di dati multi-omici e systems medicine”.
- *MMH2015 1st International Conference on Computational Modeling of Metabolic Health, Inflammation and Diabetes*, 6-7 October 2015, Computer Laboratory, University of Cambridge, UK, co-organizer.
- *Nautilus, the storytelling of science*, RAI Italian national public broadcasting company, Rome, May 2015, TV episode “I nemici della rete”, <http://tinyurl.com/nautilus-p-tieri>
- *The 2nd Intl. Conference on Mathematics and Statistics*, 2-5 April 2015, American University of Sharjah, UAE, talk “The multi-omic landscape of rheumatoid arthritis”.
- *Network Biology, a short course 2015*, Universidade Federal de Minas Gerais, 9-13 Feb 2015, Belo Horizonte, Brazil.
- *Seminars at PICB 2012*, Partner Institute for Computational Biology, Shanghai, 21 Mar 2012, talk title “Network Immunology”.
- *SBH SysBioHealth Symposium 2011*, Univ Bologna, IT, 14-15 Dec 2011, talk title “The immunological Self: a reappraisal”.
- *Network Biology, a short course 2010*, Univ Univ Bologna, IT, June 2011.
- *RecombSat 2010*, Columbia Univ, NYC, USA, 15-20 Nov. 2010, poster “Charting the NF-kB pathway interactome map”.
- *NetSci 2010*, MIT Boston, USA, 12-14 May 2010, talk title “Charting the NF-kB pathway interactome map”.
- *SBH SysBioHealth Symposium 2009*, Univ Milano Bicocca, Milan, IT, 25-27 November 2009, **talk** title “Reconstruction and analysis of the NF-kB pathway interactome”.
- *ICMSB'09, 11th International Conference on Molecular Systems Biology*, CAS-MPG PICB, Shanghai, China, 21-25 June 2009, talk title “Reconstruction of the NF-kB Interactome”.
- *SBH 2008, SysBioHealth Symposium 2008*, 'Galvani' Center, Univ Bologna, IT, 24-25 November 2008, **keynote lecture** “A systemic and evolutionary approach to immune responses”.
- *Living texts: interdisciplinary approaches and methodological commonalities in biology and textual analysis*, E-Science Institute, Edinburgh, UK, 16-17 Oct 2008, **invited talk** “Protocols, bow ties and the immune system”.
- *Biophys 08, Biology and Beyond 2008*, Arcidosso, IT, 10-12 Sept 2008, **invited talk** “Degeneracy in complex systems: a biological point of view”.
- *Immunology Day*, Institute of Advanced Studies & Academy of Sciences, Bologna, 7 May 2008, **talk** “Degeneracy and Complexity in the Immune System”.
- *SBH 2007, SysBioHealth Symposium 2007*, Univ Milano Bicocca, Milan, IT, 16-19 October 2007, **poster** and **talk** title “Towards an unifying perspective of the fundamental properties and structural principles governing the immune system”.
- *ARBM 2006, Aging Research with Bioinformatic Methods*, Gulbenkian Inst., Lisboa, PT, 6-9 November 2006, **talk** title “Network approaches in gene expression data & systems biology”.

- **ECI 2006, 1st Joint Meeting of European National Societies of Immunology**, Paris, F, 6-9 September 2006, **poster** title “Modeling of immune networks”.
- **SIMAI 2006, VII International conference of the Italian Society for Applied Mathematics**, Baia Samuele, Ragusa, IT, 22-26 May 2006, **chair** of the session “*Mathematical and Computational Modeling in Bioinformatics and Systems Biology*”.
- **BITS Italian Bioinformatics Society, Annual meeting**, Bologna, IT, 28-29 April 2006, **talk** title “Quantifying the relevance of different mediators in the human immune cell network”.
- **FGA 2006 Functional Genomics of Aging**, Palermo, IT, 29 March-2 April 2006, **poster** “Modeling and quantification of mediator relevance in immune cell network”.
- **Biocomplexity, a paradigm useful for other disciplines?** International Italo-Canadian workshop, Bologna, IT, 13-15 July 2005, **talk** title “Cytokine network modeling”.
- **ISMB2005 Intelligent Systems for Molecular Biology**, ISCB conference, Detroit, USA, 25-29 June 2005, **poster** “Quantifying the relevance of different mediators in the human immune cell network”.

OTHER PROFESSIONAL ACTIVITIES

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| ● Frontiers in Cell and Developmental Biology; Systems Biology; BMC Systems Biology; Systems Medicine | Editor, Review Editor |
| ● RAI Radio3, Italian National Radio & Television Broadcasting Company | Author of Politics of Science & Research radiodocumentary programs |
| ● Il Domani di Bologna, daily newspaper, Bologna, Italy, 2003 | Popular science writer |
| ● M.A.D. Environmental Dynamic Monitoring, Bologna, Italy, 2003 | Winner of an <i>Emilia Romagna Region</i> -funded 1-yr bursary for a spin-off company study |