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Chemistry Department of University “Aldo Moro” Bari Italy

Contact Information

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Personal Details

Date of Birth 26th of January 1965

Place of Birth: Bari

Sex: Male

Nationality: Italian

Status: Married.

Education

2003 - PhD in Natural Science from the Technische Hochschule ETH Zürich, Switzerland

1997 - PhD in Chemistry from the University of Bari, Italy.

1993 - Degree in Chemistry from University of Bari, Italy

Positions held

1997-1998 Postdoctoral Fellow, Dept. of Chemistry, University of Bari, Bari, Italy

1998-2000 Senior programmer at the Englishear Systems Company (Siena–Italy,  
[www.voicebook.com](http://www.voicebook.com)).

2000- Position at Chemistry Department of the University of Bari as Researcher assistant and aggregate professor.

Memberships

2012-2015 – Member of the Academic Senate of University “Aldo Moro” Bari, elected as the representative of Chemical Science researchers.

2013-2017 – Member Committee of the EU-COST Action CM1304: “Emergence and Evolution of Complex Chemical Systems ”

2014- Member of the American Chemical Society.

2015- Delegate of the Chemistry Department of the University of Bari to EChemTest+ project of the Chemistry Thematic Network Association.

2016- – Member of the Academic Senate of University “Aldo Moro” Bari, elected as the representative of Chemical Science researchers.

## Research Projects and Grants

2003-2004 – *Inter and Intra Molecular Interaction in Porphirin photosynthetic systems*. Principal Investigator: Prof. A. Agostiano, grant from the Italian Minister of University and Research and the University of Bari (PRIN 2002), participation as member.

2003-2006 – Action D27: Prebiotic Chemistry and Early Evolution, Chair of Action Prof. G. Von Kiedrowski, grant from COST EU, participation as leader of the team 6 in working group D27/0007/03: Functionalized Self-Reproducing Vesicles as precursors for Early Cells.

2006-2008 – *SYNthesis of novel oRGanic materials and supramolecular architectures for high efficiency optoelectronic and photonic systems*. Principal Investigator: Prof. F. Naso, grant from the Italian Minister of University (FIRB 2003), participation as member.

2007-2010 – Computational and Simulative Methods suitable for studying chemical physic properties of materials and complex systems dynamics. Group Leader Fabio Mavelli, grant from Bari University, participation as group leader.

2010-2012 – *Experimental and theoretical approaches to the construction of semi-synthetic minimal cells*. Principal Investigator: Prof. P.L. Luisi, financed by the Italian Minister of University and Research (PRIN 2008), participation as Local Unit Leader.

2010-2011 - Parallelization of the software platform ENVIRONMENT suitable for simulations of artificial minimal cells, Scientific Leader Fabio Mavelli, grant ISCRA-C from CINECA (HP10CVJLGZ).

2011-2012 - *Implementation of a sweep parameters procedure in the ENVIRONMENT platform*, Scientific Leader Fabio Mavelli, grant ISCRA-C from CINECA (HP10CR2XF8).

2010-2012 - Team Leader of the University of Bari Unit in the Working group 3: *Integration of metabolic and compartmentalization subsystems*, coordinated by Peter Walde in COST Project CM0703 *Systems Chemistry*.

2012-2015 – “Laboratorio per lo Sviluppo Integrato delle Scienze e delle TECnologie dei Materiali Avanzati e per dispositivi innovativi (SISTEMA)”. Grant PON R&C (PONa3\_00369), Leader of research unit.

2013-2016 – *Soft Matter Nanostrutturata: dall'indagine chimico-fisica allo sviluppo di applicazioni innovative*. Principal Investigator: Dr. D. Berti, grant (PRIN 2010-11) from the Italian Minister of University and Research, participation as Local Unit Member (2010BJ23MN\_003).

2013-2017 – UE-COST Action CM1304: “Emergence and Evolution of Complex Chemical Systems ”, member of the Management Committee and team leader.

## Computational Stages

1994: 3rd Summer school for parallel computing, CINECA, Bologna, Italy.

1996: Parallel Programming and High Performance Computing Course at the European Molecular Biology Laboratory, Heidelberg, Germany.

2003: Clusters Linux Laboratory, CINECA, Bologna, Italy.

2003: National School on Multiscale Simulations Applied to Material Science, University of Modena.  
2004: Message Passing and OpenMP Parallel Coding Paradigms, CINECA, Bologna, Italy.  
2004: Debugging and Optimization and Scientific Codes, CINECA, Bologna, Italy.  
2008: DEISA Training Session presso High Performance Computing Center –HLRS, Stoccarda  
2010: HPC User Day, CINECA, Bologna, Italy.  
2010: Elementi di amministrazione di un sistema Windows Server, CASPUR, Roma Italy  
2011: Data Mining, CASPUR, Roma Italy  
2011: 7<sup>th</sup> Advanced School of Parallel Computing, CINECA, Bologna Italy.

## Research Stages

09/1993-01/1994: Research Activity on the "autopoietic micelles project" in the group of Prof. P.L. Luisi at ETH-Zurich  
10/1994-05/1995: Research Activity on the "autopoietic vesicles project" in the group of Prof. P.L. Luisi at ETH-Zurich .  
10/1997-05/1998: Research Activity on the "autopoietic vesicles project" in the group of Prof. P.L. Luisi at ETH-Zurich  
08/2002-31.09.2002: Research Activity on the "matrix effect project" in the group of Prof. P.L. Luisi at ETH-Zurich  
02/2005-03/2005 Research Stage in the group of Prof. F.Sagues at Department of Chemical-Physics, University of Barcelona, thanks to a grant of the HPC-Europa Transnational Access program.  
11/2011-12/2011 - Research Stage in the group of Prof. P.Walde at Institut fuer Polymere, ETH Zentrum of Zurich, thanks to COST Project CM0703 *Systems Chemistry*.

## Teaching Courses at Bari University

Chemical Kinetics and Molecular Dynamics (Master Degree in Chemistry) from 2000 to 2006  
Informatics (Bachelor Degree in Chemistry) from 2002 to 2007  
Nano Materials – Module on Modelling (Master Degree in Chemical Science and Tecnology) from 2004 to 2011  
Computational Quantum Chemistry (Master Degree in Chemical Science and Tecnology) from 2007 to 2009  
Modelling of Biological Systems (Master Degree in Biotechnology) from 2008 up to now.  
Chemical Physics (Bachelor Degree in Material Science) from 2010 up to now.

## Papers on Scientific Journals

1. **Küchler A., Yoshimoto M., Luginbühl S., Mavelli F., Walde P.**, *Enzymatic Reactions in Confined Environments*, Nature Nanotechnology 11, 409–420 (2016).
2. **Mavelli F., Altamura E., Stano P.**, *Giant vesicles as compartmentalized bio-reactors: a 3D modelling approach*, in Rossi F., Mavelli F., Stano P., Caivano D. Eds.: “Advances in Artificial Life and Evolutionary Computation”, in book series: Communications in Computer and Information Science, Vol. 587, 184-196, (2016).

3. **Giorgio G., Colafemmina G., Mavelli F., Murgia S., Palazzo G.,** *The impact of alkanes on the morphology of Triton X100 micelles.* RCS Advances 6, (2016) 825 - 836
4. **Mavelli F., Stano P.,** Experiments and numerical modelling on the capture and concentration of transcription-translation machinery inside vesicles. *Artificial Life* 21 (2015) 1–19
5. **Mavelli F., Marangoni, R., Stano, P.,** *A Simple Protein Synthesis Model for the PURE System Operation.* *Bulletin of Mathematical Biology* 77 (6), (2015), 1185-1212
6. **Altamura E., Stano P., Walde P. and Mavelli F.,** *Giant Vesicles as Micro-Sized Enzymatic Reactors: Perspectives and Recent Experimental Advancements.* *International Journal Of Unconventional Computing* 11(1), 2015, 5-21.
7. **D'Aguanno E., Altamura E., Mavelli F., Fahr A., Stano P., Luisi P.L.,** *Physical routes to primitive cells: An experimental model based on the spontaneous entrapment of enzymes inside Micrometer-Sized liposomes.* *Life* 5(1), (2015), 969-996.
8. **Stano P., de Souza Pereira T.; Carrara P., Altamura E., D'Aguanno E. , Caputo M., Luisi P.L., Mavelli F.,** *Recent Biophysical Issues About the Preparation of Solute-Filled Lipid Vesicles.* *Mechanics Of Advanced Materials And Structures* 22 (2015) 748-759.
9. **Rampioni G., Mavelli F., Damiano L., D'Angelo F., Messina M., Leoni L., Stano P.,** *A synthetic biology approach to bio-chem-ICT: first moves towards chemical communication between synthetic and natural cells,* *Natural Computing* 13(3), (2014), 333-349, DOI: 10.1007/s11047-014-9425-x.
10. **Shirt-Ediss B., Ruiz-Mirazo K., Mavelli F., Sole RV.,** *Modelling Lipid Competition Dynamics in Heterogeneous Protocell Populations,* *Scientific Reports* 4, (2014), Article Number: 5675, DOI: 10.1038/srep05675.
11. **Mavelli F., Trotta M.; Ciriaco F.; Agostiano A., Giotta L., Italiano F., Milano F.,** *The binding of quinone to the photosynthetic reaction centers: kinetics and thermodynamics of reactions occurring at the Q(B)-site in zwitterionic and anionic liposomes.* *European Biophysics Journal With Biophysics Letters* 43(6-7), (2014), 301-315, DOI: 10.1007/s00249-014-0963-z.
12. **Mavelli F., Altamura E., Cassidei L., Stano P.,** *Recent Theoretical Approaches to Minimal Artificial Cells.* *Entropy* 16(5), (2014), 2488-2511, DOI: 10.3390/e16052488
13. **Walde P., Umakoshi H., Stano P., Mavelli F.,** Emergent properties arising from the assembly of amphiphiles. *Artificial vesicle membranes as reaction promoters and regulators.* *Chemical Communications* 50(71) (2014) 10177-10197, DOI: 10.1039/c4cc02812k
14. **Calviello L., Stano P., Mavelli F., Luisi P.L., Marangoni R.,** *Quasi-cellular systems: stochastic simulation analysis at nanoscale range,* *BMC Bioinformatics* 14(7), (2013) S7, DOI: 10.1186/1471-2105-14-S7-S7.
15. **Grotzky, A., Atamura, E., Adamcik, J.; Carrara, P., Stano, P., Mavelli, F. Nauser, T., Mezzenga, R., Schluter, A.D., Walde, P.,** *Structure and Enzymatic Properties of Molecular Dendronized Polymer–Enzyme Conjugates and Their Entrapment inside Giant Vesicles.* *Langmuir* 29, (2013) 10831-10840
16. **Ciriaco, F., Mavelli, F., Cassidei, L.,** Benchmark calculations of density functionals for organothiol adsorption on gold surfaces. *Comp. Theo. Chem.* 1009, (2013) 60-60.
17. **Mavelli F., Ruiz-Mirazo K.,** Theoretical conditions for the stationary reproduction of model protocells. *Integrative Biology* 5, (2013) 324-341.
18. **Mavelli F.,** Stochastic simulations of minimal cells: the Ribocell model, *BMC Bioinformatics* 13(4), (2012) S10.

19. **Losito I., Mavelli F., Demarinis Loiotile A., Palmisano F.,** A support for the identification of non-tryptic peptides based on low resolution MS/MS and MS3 data: the INSPIRE software, *Analytica Chimica Acta* 718, (2012) 70-77.
20. **F. Mavelli, K. Ruiz-Mirazo** (2010) ENVIRONMENT: a computational platform to stochastically simulate reacting and self reproducing compartments, *Physical Biology* 3, 36002.
21. **F. Mavelli, P. Della Gatta, L. Cassidei, P.L. Luisi** (2010) *Could the Ribocell be a feasible proto-cell model?* *Origins Of Life And Evolution of The Biosphere* 40, 459-464.
22. **G. Bruno, F. Babudri, A. Operamolla, G.V. Bianco, Losurdo M., M.M. Giangregorio, O. Hassan, F. Mavelli, G.M. Farinola, C. Pio, F. Naso** (2010) *Tailoring Density, Optical and Thermal Behavior of Gold Surfaces and Nanoparticles Exploiting Aromatic Dithiols*, *Langmuir* 6, 8430-8440.
23. **S. Laricchia, F. Ciriaco, L. Cassidei, F. Mavelli** (2010) *DFT study of 1,3-benzenedimethanethiol adsorption on Au(111)*. *Sensor Letters* (in press: June special issue).
24. **F. Mavelli, P. Stano,** (2010) Kinetic models for autopoietic chemical systems: role of fluctuations in homeostatic regime. *Physical Biology* 7, doi:10.1088/1478-3975/7/1/016010.
25. **F. Mavelli** (2009). *La ricerca che si è fatta in tre*. *Sapere* 5, 12-20, ISSN: 0036-4681
26. **E. Bianchino, S. Piotto, F. Mavelli, M. L. Curri, M. Striccoli,** (2009) DPD simulations of PMMA-Oleic Acid Mixture behaviour in organic capped nanoparticle based polymer nanocomposite. *Macromolecular Symposia* 286, 156-163.
27. **S. Piotto, S. Concilio, F. Mavelli, P. Iannelli,** (2009) *Computer Simulations of Natural and Synthetic Polymers in Confined Systems*. *Macromolecular Symposia* 286, 25-33.
28. **Fiorentino G., Caracuta V., Calcagnile L., Delia M., Matthiae P., Mavelli F., Quarta G.** (2008) Third millennium B.C. climate change in Syria highlighted by Carbon stable isotope analysis of <sup>14</sup>C-AMS dated plant remains from Ebla-Tell Mardikh. *Palaeogeography Palaeoclimatology Palaeoecology* 266, 51-58.
29. **Ruiz-Mirazo K., Mavelli F.** (2008). On the way towards basic autonomous systems: stochastic simulations of minimal lipid-peptide cells, *BioSystems* 91, 374-387.
30. **Piotto S., Concilio S., Iannelli P., and Mavelli F.** (2008) *DDFT Simulations of the Assembly of Block Copolymers in Confined Systems*, *AIP Conf. Proc.* 1042, 44-45.
31. **Bianchino E., Piotto S., Concilio S., Sciancalepore C., Curri M. L., Agostiano A., Striccoli M., Mavelli F.,** *Investigation of morphology of nanocrystal based nanocomposites. Theoretical and computational analysis* *AIP Conf. Proc.* 1042, (2008) 261-262.
32. **Mavelli F., Ruiz-Mirazo K.** (2007). *Stochastic simulations of minimal self-reproducing cellular systems*. *Philosophical Transactions Of The Royal Society Of London Series B: Biological Sciences* 362, 1789-1802, (doi:10.1098/rstb.2007.2071).
33. **Mavelli F., Ruiz-Mirazo K.** (2007). *Question 8: Bridging the Gap Between In Silico and In Vitro Approaches to Minimal Cells*. *Origins Of Life And Evolution Of The Biosphere* 37, 455-458, (doi:10.1007/s11084-007-9085-2)
34. **Ruiz-Mirazo K., Mavelli F.** (2007). *Modelling minimal 'lipid-peptide' cells*. *Origins Of Life And Evolution Of The Biosphere*. 37, 433-437 (doi:10.1007/s11084-007-9089-y).
35. **Mavelli F., Piotto S.,** (2006), *Stochastic Simulations of Homogeneous Chemically Reacting Systems*, *Journal Of Molecular Structure* 771, 55-64 (doi:10.1016/j.theochem.2006.03.016).
36. **Luisi P.L., Stano P., Rasi S., Mavelli F.,** (2004), *A Possible Route To Prebiotic Vesicle Reproduction*, *Artificial Life* 10:3, 297-308

37. **Agostiano A., Mavelli F., Milano F., Giotta L., Trotta M., Nagy L. and Maroti P.**, (2004), *pH-sensitive fluorescent dye as probe for proton uptake in photosynthetic reaction centers*, *Bioelectrochemistry* 63, 125-128.
38. **Piotto S., Mavelli F.**, (2004), *Monte Carlo simulations of vesicles and fluid membranes transformations*, *Origins of Life and Evolution of the Biosphere* 34, 225-235.
39. **Rasi S., Mavelli F., Luisi P. L.**, (2004), *Matrix Effect In Oleate Micelles-Vesicles Transformation*, *Origins of Life and Evolution of the Biosphere* 34, 215-224.
40. **Rasi S., Mavelli F., Luisi P.L.**, (2003) *Cooperative Micelle Binding and Matrix Effect in Oleate Vesicles Formation*, *Journal of Physical Chemistry B* 107 14068-14076.
41. **Milano F., Agostiano A., Mavelli F., Trotta M.**, (2003), *Kinetics of the Quinone Binding reaction at the QB site of Reaction centers from the purple bacteria Rhodobacter sphaeroides reconstituted in liposomes*, *Eur J. Biochem.* 270, 4595-4605.
42. **Maestro M., Mavelli F., Paiano G., Polacco E.**, (2002), *Optical rotation second-order effects*, *Chemical Physics* 280, 103-109 .
43. **Curri M.L., Agostiano A., Mavelli F., Della Monica M.**, (2002), *Reverse micellar systems: self organised assembly as effective route for the synthesis of colloidal semiconductor nanocrystals*, *Materials Science and Engineering C* 22, 423-426.
44. **Mavelli F., Maestro M.**, (1999), *A Stochastic Simulation of the Micellization Kinetics*, *Journal of Chemical Physics* 111, 4310-4318.
45. **Inglese A., Mavelli F., De Lisi R., Milioto S.**, (1997), *Group Contribution to the Infinite Dilution Partial Molar Volume of Alkanes, Alcohols, and Glycols in Polar Organic Solvents*, *Journal of Solution Chemistry* 26, 319-336.
46. **Mavelli F.**, (1997), *Stochastic Simulation of Surfactant Aggregation Kinetics*, *Progr. Colloid Polym. Sci.* 103, 155-159.
47. **Mavelli F., Luisi P.L.**, (1996) *Autopoietic Self-Reproducing Vesicles: a Simplified Kinetic Model*, *J. Chem. Phys* 100, 16600-16607.
48. **Chizmadzhew Y.A., Maestro M., Mavelli F.**, (1994) *A simplified kinetic model for an autopoietic synthesis of micelles*, *Chem. Phys. Lett.* 226, 56-62.

## Papers on Books

1. **Mavelli F., Rampioni G., Damiano L., Messina M., Leoni L., Stano P.**, *Molecular communication technology: General considerations on the use of synthetic cells and some hints from in silico modelling*, in Pizzuti C., Spezzano G. Eds.: "Advances in Artificial Life and Evolutionary Computation", in book series: *Communications in Computer and Information Science*, Vol. 445, 169-189, (2014), DOI: 10.1007/978-3-319-12745-3\_14
2. **Piedrafita G, Mavelli F, Morán F, Ruiz-Mirazo K .**, *On the transition from prebiotic to proto-biological membranes: from 'self-assembly' to 'self-production'*. In: Kamps G., Karsai I. And Szathmary E., "Advances in Artificial Life. Darwin Meets von Neumann". *LNAI-I* vol. 5777, 256-264, Springer-Verlag (2011) ISBN: 978-364221282-6.
3. **Ruiz-Mirazo K., Piedrafita G., Ciriaco F., Mavelli F.**, *Stochastic Simulations of Mixed-Lipid Compartments: from self-assembling vesicles to self-producing protocells*, in: Arabnia H.R., "Software Tools and Algorithms for Biological Systems" in books Series: *Advances in Experimental Medicine & Biology*, vol. 696, 689-696, Springer (2011) ISBN: 978-1-4419-7045-9.

4. **Mavelli F.**, *Theoretical Approaches to Ribocell Modelling*. In Luisi PL and Stano P. (eds) *The Minimal Cell*, Springer (2011) ISBN 978-90-481-9943-3.
5. **Della Gatta P., Mavelli F.**, *Ribocell Modeling*. In: Miglino O., Ponticorvo M., Rega A., Rubinacci F., *Modelli, sistemi e applicazioni di Vita Artificiale e Computazionale Evolutiva*. NAPOLI: Fridericiana Editrice Universitaria (2009) p. 55-65, ISBN: 978-88-8338-091-4
6. **Mavelli F., Ciriaco F., Cassidei L., Lamanna U.T.**. *Stochastic Simulations of Proto-Cells: Lipid Vesicles Dynamics*. In: Macagnano A., Ramundo Orlando A., Allen Farrelly F., Petri A., Girasole M., *Advanced Topics in Cell Model Systems*. HAUPPAUGE NY: Nova Science Publishers (UNITED STATES), (2009) ISBN: 978-1-60692-906-3.
7. **Mavelli F., Lerario .M., Ruiz-Mirazo K.**, *'ENVIRONMENT': A Stochastic Simulation Platform to Study Protocell Dynamics*. In: Arabnia H.R., Yang M.Q., Yang J.Y. *Proceedings of the 2008 International Conference on Bioinformatics & Computational Biology II*, (2008) 934-941, Las Vegas: CSREA press, UNITED STATES, ISBN:1-601132-053-1.
8. **Mavelli F., Ruiz-Mirazo K.**, *Stochastic Simulation of fatty-acid proto cell models*. In: Sergey M. Bezrukov. "Noise and Fluctuations in Biological, Biophysical, and Biomedical Systems". Bellingham, Washington: SPIE (United States) (2007), 1B1-1B10. ISBN: 9780819467393.
9. **Ruiz-Mirazo K., Mavelli F.**, *Simulation Model for Functionalized Vesicles: Lipid-Peptide Integration in Minimal Protocells*. In: F. Almeida e Costa et al. (Eds.): "Advances in Artificial Life", ECAL (2007), LNAI 4648, 32-41, Berlin/Heidelberg: Springer (Germany), ISBN: 978-3-540-74912-7 (doi:10.1007/978-3-540-74913-4\_4).
10. **Ruiz-Mirazo K., Mavelli F.**, *Stochastic Simulations of proto-cellular self-assembling systems*. In: "Science and Supercomputing in Europe: report 2006". BOLOGNA: CINECA (ITALY) (2006), 170-179. ISBN: 978-88-86037-19-8.
11. **Fresta M., Maestro M., Mavelli F.**, *A self-catalyzed (autopoietic) synthesis of an anionic surfactant; experimental evidence and theoretical modeling*. In: "Self-Production of Supramolecular Structures", G.F. Fleischaker, S. Colonna e P. L. Luisi eds., NATO ASI Series C, 446, (1994) 285-290, ISBN 978-0-7923-3163-6.

## PhD Dissertations

- Mavelli F.**, (2003) *Theoretical investigations on autopoietic replication mechanisms*, Diss., Naturwissenschaften, Eidgenössische Technische Hochschule ETH Zürich, Nr. 15218.
- Mavelli F.**, (1996) *Teorie e Tecniche di Calcolo per Cinetiche in Sistemi Complessi*, PhD. Thesis in Chemical Science, National Library of Rome and Florence.

## Conferences Partecipation from 2005

*Modelling Enzymatic Reactions in Giant Vesicles*, SYSCHEM 2015, Rolduc - the Netherlands, 19th-22nd May, 2015.

*In vitro and in silico minimal cell models*, 2nd International Summit on Integrative Biology, Chicago USA, 4th-5th August 2014 [**Invited**].

*In silico minimal cell model systems*, CoSMoS Satellite Workshop of ALIFE14, New York USA, 30th July 2014

*In silico minimal cell model systems*, SYSCHEM 2014, San Sebastian-Spain, 9th-12th June, 2014.

*Giant vesicles as minimal cell models*, Working group meeting COST CM1304. Munich Germany, 20th-22nd November 2014

*Stochastic Simulations of Minimal Cell Model Systems*, XLI Congresso Nazionale di Chimica Fisica, Alessandria 23th-27th June 2013.

*Stochastic simulations of minimal cell model systems*, 12th Joint European Thermodynamics Conference Brescia, 1st-5th July 2013 [**Invited**].

*Modelling Protein Expression in Compartmentalized Lipid Systems*, Third COBRA Workshop (BioChemIT2013) Milano-Bicocca 5th of July 2013

*In Silico Minimal Cell Model Systems*, Workshop: Protocelles: Back to the future, Satellite meeting at ECAL'13, Taormina 2nd of September 2013. [**Invited**]

*Stochastic simulations of minimal cell models* European Genomics Meeting, (CNR) Area Tor Vergata, 10-11 October 2011 [**Invited**].

*Ribocell Modelling.*, Artificial Life XII. Odense, 19-23 August 2010.

Deterministic and Stochastic approaches to minimal cell models: the Ribocell case study. SynBioNet Meeting. Nottingham, 18-22 March 2010.

*Stochastic simulations of proto-cell dynamics*. Congress of the World Association of Theoretical and Computational Chemists (WATOC 2008), Sydney 14-19 September 2008,

*Ab-initio structural study of dithiol adsorption on Au(111)*. Congress of the World Association of Theoretical and Computational Chemists (WATOC 2008), Sydney 14-19/09/2008.

*Theoretical approaches to the Ribocell*. XV International Conference on the Origin of Life, Firenze 24-29 of August 2008, 206.

*Stochastic simulations of proto-cell dynamics*. Acta Biophysica Romana 2008. Roma. 10-11 of March 2008.

*Stochastic simulations of proto-cell dynamics*. XXXVI Congresso Nazionale di Chimica Fisica, 17-22 June 2007 Gallipoli (Lecce) - Italy.

*Stochastic Simulation of proto-biological cells*. International School on Complexity (4th Course). 2-5 October 2006 Erice (Trapani) – Italy. [**Invited**]

*Working towards 'basic autonomy' a simulation model to study minimal self-producing cells*. Alife X: Workshop on advances in simulation models of autonomous systems. June 3-7 Venice – Italy [**Invited**]

*Stochastic Simulation of chemically Reacting Systems*. WATOC 2005, Modelling Structure and Reactivity. 16-21, January. Cape-Town, South Africa.

### Conferences Committee

**WG COST MEETING 2015**, Action CM1304 *Biomimetic compartmentalized chemical systems*, 25th-26th of September 2015, Bari Italy, Local Organizer.

**WIVACE 2015**: Italian Workshop of artificial Life and Evolutionary Computing, 22nd-24th of September 2015, Bari Italy (<http://wivace.org>), Workshop General Chair.

**INTEGRATIVE BIOLOGY 2014**, 2nd International Summit on Integrative Biology, Chicago USA, 4th-5th August 2014, Organizing Committee Member.

### Editorial works

Guest Editor of the special issue: *Protocell: designs for Life*, Life MDPI, along with P.Stano.