Curriculum vitae of Dr. Simona Olmi

Personal details

Birth	4th May, 1982, Prato, Italy
Nationality	Italian
Phone	+39 338 4593340
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URL	http://www.linkedin.com/pub/simona-olmi/28/15b/3b6
Languages	Italian: mother tongue, English: excellent, French: working knowledge, German: basic knowledge.

Current Position

01/2021 – **Researcher (permanent position)**, *Istituto dei Sistemi Complessi (ISC), CNR*, via Madonna del Piano 10, 50019 Sesto Fiorentino, Italy.

Previous Employments

02/2018 – **Starting Research Position (Fixed-Term contract)**, *Inria Sophia Antipolis Méditerranée*
01/2021 *Research Centre, MathNeuro Team*, 2004 route des Lucioles, Boîte Postale 93 06902 Sophia Antipolis, Cedex, France.

08/2017 – **Researcher (Fixed-Term contract)**, *Institut für Theoretische Physik*, Technische Univer-
01/2018 sität Berlin, Hardenbergstr. 36, 10623 Berlin, Germany.

08/2016 – **Post-Doctoral Researcher (Institutsstipendium)**, *Weierstrass Institute for Applied Anal-*
07/2017 *ysis and Stochastics*, Berlin, Germany.

02/2016 – **Researcher (Fixed-Term contract)**, *Aix-Marseille Université, Institut de Neurosciences*
07/2016 *des Systèmes, Marseille, France*, Collaboration with Dr. V. Jirsa, Funding project: Epinext - Epilepsies et troubles de l'Excitabilité Neuronale.

02/2016 – **Researcher (Fixed-Term contract) - part-time position at 30**%, *Istituto dei Sistemi*
01/2018 *Complessi (ISC), CNR*, via Madonna del Piano 10, 50019 Sesto Fiorentino, Italy.

02/2015 – **Researcher (Fixed-Term contract)**, *Istituto dei Sistemi Complessi (ISC), CNR*, via
01/2016 Madonna del Piano 10, 50019 Sesto Fiorentino, Italy.

01/2013 – **Post-Doctoral Researcher (Scholarship)**, *Istituto dei Sistemi Complessi, CNR, Sesto*
12/2014 *Fiorentino, Italy*, Collaborations with Prof. A. Torcini and Dr. S. Boccaletti, Funding: Italian Ministry of University and Research within the project CRISIS LAB PNR 2011-2013.

11/2009 – **Associate Researcher**, *Istituto dei Sistemi Complessi, CNR, Sesto Fiorentino, Italy*.
01/2010

Education

01/2010 – **Ph.D. in Nonlinear Dynamics and Complex Systems**, *Department of Systems and*
05/2013 *Informatics at University of Florence, Italy*, Advisor: Prof. Antonio Politi, Topics: Collective Dynamics in Complex Neural Networks.

10/2005 – **M.Sc. in Theoretical Physics**, *Department of Physics, University of Florence*, Advisor:
06/2009 Prof. R. Livi, Topics: Dynamics of pulse-coupled diluted neuronal networks – Final rank: 110/110 cum Laude.

10/2001 – **B.Sc. in Physics**, *Department of Physics, University of Florence*, Advisor: Prof. L. Casetti,
12/2005 Topics: Regular and chaotic dynamics in Hamiltonian systems – Final rank: 109/110.

Research

Field of research	**Nonlinear Dynamics of Complex Systems, Computational Neuroscience, Complex Networks, Equilibrium and Nonequilibrium Statistical Mechanics**.
Keywords	**Dynamics of Neural Networks, Neural Mass Models, Epileptic Seizures, Stability of Collective Solutions, Synchronization of Complex Networks, Power Grids**.
Publications	**23 published articles in refereed journals, 3 articles under review**.
Talks, Seminars and Posters	In the last 10 years Dr. Olmi has given 38 talks at international workshop and conferences, most of them upon invitation. Moreover she has presented 13 posters at international workshops and conferences and she has given 14 seminars in differents institutes and universities in Denmark, France and Germany.
Visiting Researcher	Physikalisch-Technische Bundesanstalt, Berlin (Germany); Astronomy and Physics Department of Aarhus University (Denmark); University of Copenhagen, Dept. of Biomedical Science (Denmark); Institut de Neurosciences des Systèmes, Faculté de Médecine de la Timone, Marseille (France); Max Planck Institute for the Physics of Complex Systems, Dresden (Germany) Institut D'études Avancées, Université de Cergy-Pontoise (France)
Bibliometric indices	**h-index: 12/9 (GS/ISI)**, *Total number of citations: 616/411 (GS/ISI)*, – Google Scholar (GS) - web of science (ISI).

Awards and Honours

2019 **Simulation-based method to target Epilepsy goes into clinical trial**, *https://www.humanbrainproject.eu/en/follow-hbp/news/simulation-based-method-to-target-epilepsy-goes-into-clinical-trial*.

2019 **Grant PROCOPE 2019 from the french-german Partenariat Hubert Curien in the period 01.01.2019-31.12.2020**, *in the framework of the research project "Control of multiscale neural networks: bridging the scales from micro to macroscopic dynamics"*, German partner Dr. Zakharova Anna (Institut für Theoretische Physik, Technische Universität Berlin).

2018 **Grant from SAM Inria Sophia Antipolis Research Centre to finance a PhD position in the period 01.11.2018-31.10.2021**, *on the research line "Next generation neural mass model"*.

2017 **Grant for financing a position as student assistant in the period 01.10.-31.12.2017**, *in the framework of the Junior research project 2017-2018 "Controlling Multiscale Networks: interplay of dynamics and topology in modern power grid"*, Funding from DFG (German Research Foundation).

2017 **Award by the french Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche**, *Habilitation as Lecturer (maîtres de conférences) for the Section 69 - Neurosciences*, Qualification Number 17269277882.

2017 **Award by the french Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche**, *Habilitation as Lecturer (maîtres de conférences) for the Section 29 - Constituants élémentaires*, Qualification Number 17229277882.

2015 **CNR Short-term mobility fellowship**, *1 month visit to the Institut de Neurosciences des Systèmes in Marseille*.

2015 **Award by the french Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche**, *Habilitation as Lecturer (maîtres de conférences) for the Section 28 - Milieux denses et matériaux*, Qualification Number 15228277882.

2013 **Award by the International Advisory Board**, *First prize for the best poster at the conference XXXIII Dynamics Days Europe*.

2011 **Award by the Organization for Computational Neuroscience (OCNS)**, *Travel grant to participate to the Computational Neurosciences Meeting 2011 - Stockholm, Sweden*.

2010 **Award by Ottawa University**, *Travel grant to participate to the 4th Computational Neuroscience Summer School 2010 - uOttawa Centre for Neural Dynamics, Ottawa University (Canada.*

2010 **Award by the Italian Ministry for the University and for the Research (MIUR)**, *three year PhD fellowship to follow the PhD Course in "Nonlinear Dynamics and Complex Systems", University of Florence, Italy;.*

2009 **Award by the Organization for Computational Neuroscience (OCNS)**, *Travel grant to participate to the Computational Neurosciences Meeting 2009 - Berlin, Germany.*

10 most relevant publications

H. Taher, S. Olmi and E. Schöll, "Enhancing power grid synchronization and stability through time-delayed feedback control", Physical Review E **100** (6), 062306 (2019)

S. Olmi, S. Petkoski, F. Bartolomei, M. Guye and V. Jirsa, "Controlling seizure propagation in large-scale brain networks", Plos Computational Biology **15** (2), e1006805 (2019)

D. Angulo-Garcia, S. Luccioli, S. Olmi, A. Torcini "Neurons death and rebirth in sparse heterogeneous inhibitory neurons", New Journal of Physics **19**, 053011 (2017)

S. Olmi, "Chimera states in coupled Kuramoto oscillators with inertia", Chaos **25**, 123125 (2015)

S. Olmi and A. Torcini, "Dynamics of fully coupled rotators with unimodal and bimodal frequency distribution", in "Control of Self-Organizing Nonlinear Systems", Eds E. Schöll *et al.* (Springer Verlag, Berlin, 2016)

S. Olmi, E. A. Martens, S. Thutupalli, A. Torcini, "Intermittent chaotic chimeras for coupled rotators", Phys. Rev. E **92**(3), 030901(R) (2015)

S. Olmi, A. Navas, S. Boccaletti, A. Torcini, "Hysteretic transitions in the Kuramoto model with inertia", Phys. Rev. E. **90**(4) 042905 (2014)

S. Luccioli, S. Olmi, A. Politi, A. Torcini, "Collective dynamics in sparse networks", Phys. Rev. Lett. **109**, 138103 (2012)

S. Olmi, A. Politi, A. Torcini, "Collective chaos in pulse-coupled neural networks", Europhysics Letters **92**, 60007 (2010)

S. Olmi, R. Livi, A. Politi, A. Torcini, "Collective oscillations in disordered neural networks", Physical Review E **81**, 046119 (2010)

Organization of Conferences/Workshops

2020 **Satellite "Exact mean field formulation of complex (neural) networks"**, *International conference CCS2020: The Conference on Complex Systems 2020*, online conference.

2019 **Minisymposium "Structure and dynamics of future power grids"**, *XXXIX Dynamics Days Europe*, Rostock, Germany.

2019 **Workshop "Nonlinear Waves in Biology"**, *International conference Waves Côte d'Azur*, Nice, France.

2019 **Workshop "Theoretical Neuroscience III - Bridging scales toward clinical applications"**, *International conference NeuroFrance 2019*, Marseille, France.

2017 **Workshop "New advances in theoretical tools for the study of large scale neural systems"**, *CNS 2017, 26th Annual Computational Neuroscience Meeting*, Antwerp, Belgium.

2017 **Minisymposium "Controlling complex networks: application to power grids"**, *XXXVII Dynamics Days Europe*, Szeged, Hungary.

2016 **Minisymposium "The Kuramoto Model with Inertia in Complex Networks"**, *XXXVI Dynamics Days Europe*, Corfu, Greece.