

CURRICULUM VITAE

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Personal Information

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born: January 16, 1976 in Rome, Italy

nationality: Italian

marital status: not married

language skills: Italian - mother tongue
English - fluent (spoken and written)
French - fluent (spoken and written)
German - fluent (spoken)/good (written)

Educational background and positions

since 02/'09 Postdoctoral fellow in the laboratory "Cellular Physiology of Cortical Microcircuits" (directed by Dr. A. Bacci) at the European Brain Research Institute, Rome, Italy

March 2008 PhD in Theoretical Physics (grade *magna cum laude*), University of Potsdam, Germany

Thesis: "Manipulations of spike trains and their impact on synchrony analysis"
(available at <http://nbn-resolving.de/urn:nbn:de:kobv:517-opus-17447>),
supervisors Prof. J. Kurths and Dr. S. Grün.

04-12/2007 Research Assistant in the group Neuroinformatics/Theor. Neuroscience (directed by Dr. M. Nawrot), Inst. Biology, Neurobiology, Free University, Berlin, Germany.

10/'06-04/'07 Technical staff in the Computational Neuroscience Group, RIKEN Brain Science Institute, Saitama, Japan

since 2006 Associate member of the Bernstein Center for Computational Neuroscience (BCCN) Berlin, Germany.

2003 - 2006 Research Assistant in the group Neuroinformatics/Theor. Neuroscience (lab of PD Dr. Sonja Grün), Inst. Biology, Neurobiology, Free University, Berlin, Germany.

2002 Diploma in Physics, University of Rome "La Sapienza", Italy (grade 108/110).

Thesis: "Statistical analysis of turbulent signals"
supervisor Prof. A. Vulpiani, University of Rome "La Sapienza", Italy.

- 1998-1999 Study of physics in the Department of Physics, University Paris 7 - Denis Diderot, Paris, France (European exchange-study project “Socrates-Erasmus”).
- from 1995 Study of Physics, University of Rome “La Sapienza”, Italy.
- 1995 High school diploma “Maturità classica” (humanistic studies), grade 50/60.

Publications and Abstracts

- 2009 Pazienti A and Grün S, Transition between spike patterns induced by spike sorting errors in multi-unit recordings (to be submitted)
- 2008 Pazienti A, Maldonado P, Diesmann M and Grün S, The effectiveness of systematic spike dithering depends on the precision of cortical synchronization, *Brain Research, Brain and Vision*, 2008, 1225, 39-46.
- 2007 Pazienti A and Grün S, Spike sorting of multielectrode recordings affects the outcomes of synchrony analyses, Program No. 319.4. 2007 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2007. Online
- Pazienti A, Diesmann M, Grün S, Bounds of the ability to destroy precise coincidences by spike dithering, *Advances in Brain, Vision, and Artificial Intelligence, Lecture Notes in Computer Science*. 2007, Springer Berlin/Heidelberg, chap. 41, 428-437.
- 2006 Pazienti A and Grün S, Robustness of the Significance of Spike Synchrony with respect to Sorting Errors, *J Comput Neurosci*. 2006 Dec 21(3):329-42.
- Pazienti A and Grün S, Impact of Spike Sorting Errors on Higher Order Correlations, in *Proceedings of the 15th Annual Computational Neuroscience Meeting*, p.81.
- 2005 Pazienti A and Grün S, Influence of Spike Sorting Errors on Spike Correlation, in *XXV Dynamic Days Europe 2005, Europhysics Conference Series, Vol. 29E*, p.248.
- Pazienti A and Grün S, Influence of Spike Sorting Errors on Spike Correlation, in *Proceedings of the 14th Annual Computational Neuroscience Meeting*, p.93.
- Pazienti A and Grün S, Influence of Spike Sorting Errors on Unitary Event Statistics, in *Proceedings of the 6th Meeting of the German Neuroscience Society/30th Göttingen Neurobiology Conference*, eds. H. Zimmermann and K. Kriegelstein. *Neuroforum, Supplement 1*, p.460A, 2005.

Talks and Posters

- 2009 Pazienti A and Grün S, Transition between spike patterns induced by spike sorting errors in multi-unit recordings. **Poster** at the 18th Annual Computational Neuroscience Meeting, Berlin, Germany.
- 2008 Manipulations of spike trains and their impact on synchrony analysis. **Talk** at the European Brain Research Institute, Rome (Italy), October 16, 2008.
- Pazienti A, Maldonado P, Diesmann M, Grün S, Derivation of temporal precision of spike synchronization by spike dithering. **Poster** at the First Status Seminar of the Helmholtz Alliance on Systems Biology, Potsdam, Germany, June 22-24, 2008.
- 2007 Pazienti A and Grün S, Spike sorting of multielectrode recordings affects the outcomes of synchrony analyses. **Poster** at the 37th annual meeting of the Society for Neuroscience, San Diego, CA, USA.
- Pazienti A, Diesmann M, Grün S, Bounds of the ability to destroy precise coincidences by spike dithering. **Poster** at the meeting Brain, Vision, and Artificial Intelligence BVAI2007, Napoli, Italy.
- Pazienti A and Grün S, Bounds of the ability to destroy precise coincidences by spike dithering. **Poster** at the 3rd Bernstein Symposium for Computational Neuroscience, Berlin, Germany.
- Pazienti A and Grün S, Spike classification errors affect correlation analyses. **Poster** at the 10th Tamagawa-Riken Dynamic Brain Forum 2007 Hakuba, Japan
- 2006 Pazienti A and Grün S, Impact of Spike Sorting Errors on Correlations in Multiple Parallel Point Processes. **Poster** at the RIKEN BSI Retreat 2006, Hotel Heritage, Shinrin-koen, Saitama, Japan.
- Pazienti A and Grün S, Impact of Spike Sorting Errors on Correlations in Multiple Parallel Point Processes. **Poster** at the 2nd Bernstein Symposium for Computational Neuroscience, Berlin, Germany.
- Pazienti A and Grün S, Impact of Spike Sorting Errors on Higher Order Correlations, **Poster** at the 15th Annual Computational Neuroscience Meeting, Edinburgh, UK.
- Impact of Spike Classification Errors on Pairwise and Higher Order Correlations. **Talk** at the Bernstein Center for Computational Neuroscience, Berlin, Germany.
- Impact of Spike Classification Errors on Pairwise and Higher Order Correlations. **Talk** at the meeting “Doktorandentage 2006”, University of Potsdam, Germany.
- Pazienti A and Grün S, Influence of Spike Sorting Errors on Spike Correlation. **Poster** at the German-Japanese Workshop on Computational Neuroscience, Tokyo, Japan.

- 2005 Pazienti A and Grün S, Influence of Spike Sorting Errors on Spike Correlation. **Poster** at the 1st Bernstein Symposium for Computational Neuroscience, Freiburg, Germany.
- Pazienti A and Grün S, Influence of Spike Sorting Errors on Spike Correlation. **Poster** at the conference “XXV Dynamic Days Europe 2005”, Berlin, Germany.
- Pazienti A and Grün S, Influence of Spike Sorting Errors on Spike Correlation. **Poster** at the 14th Annual Computational Neuroscience Meeting, Madison, WI, USA.
- Influence of Spike Sorting Errors on Spike Correlations. **Talk** at the VW-workshop “Dynamics of Cortical Cell Assemblies - Experiments and Theory”, Berlin, Germany.
- Pazienti A and Grün S, Influence of Spike Sorting Errors on Unitary Event Statistics. **Poster** at the 6th Meeting of the German Neuroscience Society, Göttingen, Germany.
- 2004 Influence of Spike Sorting Errors on Unitary Events: why conservative is bad. **Talk** at the workshop “Brainworks 2004”, Emmendingen, Germany.
- Influence of Spike Sorting Errors on Unitary Events - Thesis Project Outline. **Talk** at the VW-workshop “Dynamics of Cortical Cell Assemblies - Experiments and Theory”, Hamburg, Germany.
- 2003 Statistical Analysis of Turbulent Signals. **Talk** at the Institute of Biology, Neurobiology, Free University, Berlin, Germany.

Jobs and Teaching at University

- 2007 Lecturing for the "Oberseminar *Chaos, Ordnung, Komplexität*", summer term, University of Potsdam, Germany
- 2006 Co-organization of the seminar “Selected Topics in Computational Neuroscience”, summer term, Free University, Berlin, Germany.
- 2005-2006 Co-organization of the seminar “Selected Topics in Computational Neuroscience”, winter term, Free University, Berlin, Germany.
- 2005-2006 An introduction to spike sorting. Lecture and exercise for the course “Introduction to computational Neuroscience and Neuroinformatics”, winter term, Free University, Berlin, Germany.
- 2005 Tutoring in the international course “Analysis and Models in Neurophysiology” of the German Neuroscience Society (NWG), Freiburg, Germany.
- 2003-2006 System administration at the Neuroinformatics/Theor. Neuroscience group, Free University, Berlin, Germany.

- 2004 Tutoring in the international course “Analysis and Models in Neurophysiology” of the German Neuroscience Society (NWG), Freiburg, Germany.
- 2004 An introduction to spike sorting. Lecture for the course “Introduction to computational Neuroscience and Neuroinformatics”, summer term, Free University, Berlin, Germany.
- 2004 Tutoring for the course “Introduction to computational Neuroscience and Neuroinformatics”, summer term, Free University, Berlin, Germany.
- 2003 Tutoring in the international course “Analysis and Models in Neurophysiology” of the German Neuroscience Society (NWG), Freiburg, Germany.
- 1999-2000 Student Assistant in the Erasmus Office of the Physics Department, Faculty of Natural Sciences, University of Rome “La Sapienza”, Italy (orientation for students, reception of foreign students, web-page design and administration).

Workshops

- 2008 Participation in the workshop “Spike train analysis”, Storkow, Germany
- 2006 Participation in the “Berlin-BCCN PhD Symposium”, Liebenwalde, Germany.
- Local organization of the workshop “Spatio-temporal scales of cortical interaction”, Le Cannelle, Monte Argentario, Italy.
- 2004 Participation in the Kick-off meeting of the Bernstein Centers for Computational Neuroscience organized by the National Network for Computational Neuroscience and the Federal Ministry for Education and Research, Berlin, Germany.
- Participation in the “Interdisciplinary College 2004” organized by the German Cognitive Science Society, Günne, Möhnesee, Germany.

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