

Rodrigo Quian Quiroga

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EDUCATION **Ph.D. in Signal analysis**, *Medical University of Luebeck, Germany* 1998
Thesis: **Quantitative analysis of EEG signals.**

M.S., Physics, *University of Buenos Aires, Argentina* 1993

RESEARCH INTERESTS

Neuroscience, visual perception, visuo-motor transformation, neural coding, analysis of multi-unit recordings and local field potentials, time-frequency decompositions, methods of statistical physics, dynamical systems, chaos and synchronization.

RESEARCH EXPERIENCE

Lecturer in Bioengineering 2004-
Dept. of Engineering. University of Leicester, UK.

Sloan-Swartz Post-doctoral fellow 2001-2004
Sloan-Swartz Center of Theoretical Neurobiology, Caltech, USA
Advisor: Prof. Christof Koch and Prof. Richard Andersen

Post-doc researcher 1998-2001
Research Center Juelich, Germany.
Advisor: Prof. Peter Grassberger

Visiting scientist February-March 2001
Brain Science Institute, RIKEN, Japan.

Visiting scientist March 2000
Department of Comparative and Physiological Psychology
Catholic University of Nijmegen, The Netherlands.

Graduate Research assistant 1996-1998
Institute of Physiology, Medical University of Luebeck, Germany.

Graduate Research assistant 1995-1996
Department of Epilepsy,
Institute of Neurological Investigations FLENI, Argentina.

Graduate Research assistant 1993-1995
Department of Neurophysiology
Institute of Neurological Investigations FLENI, Argentina.

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TEACHING EXPERIENCE

Graduate Teaching Assistant & Undergraduate Teaching Assistant

March 1994 – April 1996
March 1991 – March 1994

Department of Physics, University of Buenos Aires, Argentina

- Lectured Physics II (optic and thermodynamics), Physics I (mechanics, electromagnetism and hydrodynamic), Physics I (laboratory), Classical Mechanics.

Graduate Teaching Assistant & Undergraduate Teaching Assistant

April 1993 – May 1996
March 1989 – April 1993

Ciclo Basico Comun, University of Buenos Aires, Argentina

- Lectured Physics (mechanics).

Invited lecturer

May – August 1994

Hospital Italiano, Argentina

- Lectured Physics applied to anesthesiology.

AWARDS

- Prize to the scientific-technological production. University of Buenos Aires, 1995.
- Young researcher travel award for participation at the 6th International Evoked Potentials Symposium. Okazaki, Japan, 1998.
- Young researcher travel award for participation at the 24th International Epilepsy Congress. Buenos Aires, Argentina, 2001.
- Young investigator awardee. Award given by the American Epilepsy Society, 2001.
- Sloan-Swartz fellow, 2001-2003.

OTHER SKILLS

- Fluent in Spanish, English and German.
- Experience in Windows, Unix, DOS and Mac platforms.
- Matlab, Fortran, C, Pascal and Basic programming languages.

SELECTED RECENT PUBLICATIONS (*full list available upon request*)

Unsupervised spike sorting with wavelets and superparamagnetic clustering.
R. Quian Quiroga, Z. Nadasdy and Y. Ben-Shaul. *Neural Computation*, in press.

Single-trial event-related potentials with Wavelet Denoising.
R. Quian Quiroga and H. Garcia. *Clin. Neurophysiol.* 114: 376-390, 2003.

Performance of different synchronization measures in real data: a case study on EEG signals. R. Quian Quiroga, A. Kraskov, T. Kreuz and P. Grassberger. *Phys. Rev. E*, 65: 041903; 2002.

Wavelet Transform in the analysis of the frequency composition of evoked potentials. R. Quian Quiroga, O. Sakowitz, E. Basar and M. Schurmann. *Brain Research Protocols*, 8: 16-24; 2001.