Michael Rosenblum

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Prof. for Synchronization and time series analysis

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University Training and Degree

1975 – 1980 M.Sc. in Physics from Moscow State Pedagogical University

Advanced Academic Qualifications

2003 Habilitation in Theoretical Physics, Potsdam University
1990 Doctoral degree in Physics of High Frequencies, Supervisor Prof. Dr. Polina Landa, Moscow State University

Postgraduate Professional Career

Since 1997 Research Associate, apl. Professor, Institute of Physics and Astronomy, University of Potsdam
1996 - 1997 Max Planck Research Fellow, Institute of Physics and Astronomy, University of Potsdam
1994 - 1996 A. von Humboldt Research Fellow, Institute of Physics and Astronomy, University of Potsdam
1994 - 1995 Visiting Scientist, Center for Polymer Studies, Department of Physics, Boston University, Boston, USA
1984 - 1993 Engineer, Researcher, Senior Researcher, Mechanical Engineering Research Institute, Russian Academy of Sciences, Moscow, Russia
1981 - 1983 Engineer, Power Nets Design Institute, Moscow, Russia

Miscellaneous

2008 - 2013 Member of the Editorial Board of Physical Review E
Since 2014 Editor of Chaos: Int. J. of Nonlinear Science
2015 American Physical Society Outstanding Referee
Referee for Physical Review Letters, Physical Review, Physica A, Physica D, Physics Letters, Europhysics Letters, New J. of Physics, etc..
Over 110 publications in peer-reviewed journals, one book, 16 book chapters. Citation index > 26000, Hirsh index 57 (Google scholar, March 2019)

10 Selected Publications

1. Pikovsky A, **Rosenblum M**, Kurths J. Synchronization: a universal concept in nonlinear sciences. Cambridge University Press; 2001;
2. **Rosenblum M**, Pikovsky AS, Kurths J. Phase synchronization of chaotic oscillators. Physical Review Letters 1996; 76(11): 1804.
3. Schäfer C, **Rosenblum M**, Kurths J, Abel, H-H. Heartbeat synchronized with ventilation. Nature 1998; 392(6673): 239.

4. Tass P, **Rosenblum M**, Weule J, Kurths J, Pikovsky A, Volkmann J, et al. Detection of n: m phase locking from noisy data: application to magnetoencephalography. Physical Review Letters 1998; 81(15): 3291.
5. **Rosenblum M**, Pikovsky A. Controlling synchronization in an ensemble of globally coupled oscillators. Physical Review Letters 2004; 92(11): 114102.
6. **Rosenblum M,** Pikovsky A. Delayed feedback control of collective synchrony: an approach to suppression of pathological brain rhythms. Physical Review E 2004; 70(4): 041904.
7. **Rosenblum M**, Pikovsky A. Self-organized quasiperiodicity in oscillator ensembles with global nonlinear coupling. Physical Review Letters 2007; 98(6): 064101.
8. Kralemann B, Frühwirth M, Pikovsky A, **Rosenblum M**, Kenner T, Schaefer J, et al. In vivo cardiac phase response curve elucidates human respiratory heart rate variability. Nature Communications 2013; 4: ncomms3418.
9. Velazquez JP, Guevarra Erra R, **Rosenblum M**. The epileptic thalamocortical network is a macroscopic self-sustained oscillator: Evidence from frequency-locking experiments in rat brains. Scientific Reports 2015; 5: srep08423.
10. Cestnik R, **Rosenblum M**. Inferring the phase response curve from observation of a continuously perturbed oscillator. Scientific Reports 2018; 8: srep13606.