SESIÓN CIENTÍFICA 31 ENERO 2014
SALÓN DE ACTOS DEL CTB, 10:30

“Theoretical modeling and simulations of dynamical behavior of biomedical systems. Research activities of the Laboratory for Computational Systems Biology, CTB”.

Ponentes:

Alexander Pisarchik ISPIP PhD: Overview of activity. Synchronization of neurons with memory

Adrian Navas: Application of complex network theory to biomedical data

Jose Antonio Villacorta PhD: Dynamics of neuron networks

Juan García-Prieto: Behavioral and MEG experiments with ambiguous images

Mariano Alberto Muñoz: Electronic implementation of complex systems

(Each speaker will present for 10 minutes).

Alexander Pisarchik is senior researcher of the UPM-BBVA Isaac y Peral BioTech programme, chair of the Laboratory of Computational Systems Biology. He obtained PhD in Physics and Mathematics in 1990 from Institute of Physics of the Belarus Academy of Science. His research interests include the theory of chaos, complex networks, synchronization, multistability and stochastic dynamics, with applications to biomedical systems. He has been honored with several awards including the First Prize from the Belarus Academy of Science and the Second Prize from the Institute of Physics for his studies on nonlinear dynamics of complex systems. In 2009-2011 he has been elected member of Evaluation Commission for System of National Researchers of the Council for Science and Technology in Mexico. The results of his research have been published in more than 300 scientific papers, including more than 130 articles in peer-reviewed journals, one book, 5 chapters in books, and 5 patents. He directed 20 research projects and supervised 10 PhD students. Citations (Google): 1357 total, h-factor: 23, i10 index: 49.

Selected publications:


Adrian Navas obtained master degrees in physics and complex systems from UCM and UPM respectively in 2011 and 2012. He now is a PhD student at the Laboratory of Computational Systems Biology at CTB, conducting his research on the theory of complex networks and application to data analysis.

Selected publications:

Jose Antonio Villacorta obtained bachelor degrees in physics from UAM and in mathematics from UCM in 1996 and 2001, respectively, a master degree in neuroscience from UCM in 2005, and a PhD degree in neuroscience from UAM in 2007. Currently he holds a postdoctoral position at the Laboratory of Computational Systems Biology at CTB, conducting his research on neuron dynamics and complex network theory.

Selected publications:

Juan Garcia-Prieto obtained a bachelor degree in electronic engineering in 2008 and a master degree in computer science in 2011 from UCM. He now is a PhD student at the Laboratory of Computational Systems Biology at CTB, carrying out experiments with magnetoencephalography (MEG).

Mariano Alberto Muñoz obtained bachelor degree in electronic engineering in 2011 from UCM. He now is a PhD student at the Laboratory of Computational Systems Biology at CTB, carrying out experiments with electronic circuits to simulate dynamics of complex systems.