DR. DIMITRIJE MARKOVIĆ

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CAREER HISTORY

POSTDOC, TECHNISCHE UNIVERSITÄT DRESDEN, FACULTY OF PSYCHOLOGY, CHAIR OF NEUROIMAGING, DRESDEN, GERMANY

2014– Present

POSTDOC, UNIVERSITY CLINIC JENA, NEUROLOGY DEPARTMENT, BIOMAGNETIC CENTER, JENA, GERMANY

2013 – 2014

GUEST RESEARCHER, MAX PLANCK INSTITUTE FOR HUMAN COGNITIVE AND BRAIN SCIENCES, NEUROLOGY DEPARTMENT, LEIPZIG, GERMANY

2013 – 2015

PHD STUDENT | TEACHING ASSISTANT, GOETHE UNIVERSITY, INSTITUTE FOR THEORETICAL PHYSICS, FRANKFURT AM MAIN, GERMANY

2008 – 2013

EDUCATION

DOCTORATE IN NATURAL SCIENCE (DR. PHIL. NAT.), GOETHE UNIVERSITY, INSTITUTE FOR THEORETICAL PHYSICS, FRANKFURT A.M., GERMANY, MAY 2013

Supervisor: Prof. Dr. Claudius Gros
Thesis Title: "Power laws and adaptation in complex systems"
Research Area: Complex and adaptive dynamical systems.

DIPLOMA IN THEORETICAL AND EXPERIMENTAL PHYSICS, BELGRADE UNIVERSITY, FACULTY OF PHYSICS, BELGRADE, SERBIA, SEPTEMBER 2007

Supervisor: Dr. Milan Petrović
Thesis Title: "Solitons in quasi-periodic photonic lattices"
Research Area: Nonlinear dynamical phenomena in photorefractive media.

RESEARCH AREAS

Non-equilibrium phase transitions: Self-organised criticality, Power-law scaling in natural phenomena.

Non-linear dynamics: Dynamical phase transitions, Self-organisation towards the edge of chaos.

Computational neuroscience: Rate encoding artificial neuronal networks with synaptic and intrinsic plasticity.

Probabilistic modelling: active inference, control theory, Bayesian reinforcement learning, computational models of cognition.

Bayesian statistics and data analysis

INVITED TALKS

WELLCOME TRUST CENTRE FOR NEUROIMAGING, UCL

November 2017

MAX PLANCK UCL CENTRE FOR COMPUTATIONAL PSYCHIATRY AND AGEING RESEARCH

May 2017

WELLCOME TRUST CENTRE FOR NEUROIMAGING, UCL

May 2017

INSTITUTE FOR THEORETHICAL PHYSICS, GOETHE UNIVERSITY, FRANKFURT A.M., GERMANY, SEMINAR ON COMPLEX AND COGNITIVE SYSTEMS

June 2015

INSTITUTE FOR COGNITIVE SCIENCE, NEUROBIOPSYCHOLOGY DEPARTMENT, OSNABRÜCK UNIVERSITY, OSNABRÜCK, GERMANY

September 2012

BERNSTEIN CONFERENCE COMPUTATIONAL NEUROSCIENCE, BERLIN, GERMANY

September 2010

PROFESSIONAL ACTIVITIES

Membership: (2009-2013) European Network for the Advancement of Artificial Cognitive Systems, Interaction and Robotics. (2014) Organization for Human Brain Mapping.

Peer reviewed articles for: Frontiers in Robotics and AI, PLOS One, MDPI Mathematics, MDPI Entropy (https://publons.com/author/1556219/dimitrije-markovic).

IT EXPERIENCE

Programming languages: Python, Java, Matlab, C++, C

Probabilistic programming languages for Python: PyMC3, Pyro, Theano, Pytorch

Cluster computing software: SLURM

Contributions to public software repositories on github.com