Robin Gutzen

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@rgutzen
@rgutzen
robin-gutzen

RESEARCH INTERESTS

Neural Network Dynamics
Simulation & Validation
Statistical Testing
Neuromorphic Computing
Predictive Coding
Data Visualization

SKILLS

PROGRAMMING/PLATFORMS

Python
C++
Java
MatLab
JavaScript
PHP
SQL
HTML
Latex
Git
Linux

LANGUAGE

German
English
French

NON-RESEARCH INTERESTS

Climbing
Cooking
Woodworking

EDUCATION

RESEARCH CENTER JÜLICH

PhD. at Institute for Computational and Systems Neuroscience
Jul 2018 - today

RWTH AACHEN UNIVERSITY

Master Physics
Oct 2015 - Mar 2018
Major in Nanoelectronics, Minor in Biophysics
Thesis on validation of neural network simulations (@ Research Center Jülich)
Final grade 1.2

UNIVERSITÉ MONTPELLIER II

Erasmus exchange
Sep 2013 - Jun 2014 | Montpellier, France

RWTH AACHEN UNIVERSITY

Bachelor Physics
Oct 2011 - Sep 2015
Thesis on detection and analysis of dissolved fluorescent molecules

MATARÉ GYMNASIUM.EUROPASCHULE

Highschool
Sep 2002 - Jul 2011

WORK EXPERIENCE

RWTH INSTITUTE 1A | Research Assistant

Mar 2014 – Aug 2014
Literature research about novel materials for neuromorphic computing

EXTRACURRICULAR ACTIVITY

TEDXRWTHAACHEN

Organisator
2016, 2017

BEBUDDY-PROGRAMM

Supporting foreign students
2015-16

ACADEMIC WORK

PUBLICATIONS

2018 **R. Gutzen**, M. von Papen, G. Trensch, P. Quaglio, S. Grün, M. Denker "Reproducible neural network simulations: statistical methods for model validation on the level of network activity data" Frontiers in Neuroinformatics 12:90, doi:10.3389/fninf.2018.00090

2018 G. Trensch, **R. Gutzen**, I. Blundell, M. Denker, A. Morrison "Rigorous neural network simulations: a model substantiation methodology for increasing the correctness of simulation results in the absence of experimental validation data" Frontiers in Neuroinfromatics 12:81, doi:10.3389/fninf.2018.00081

POSTER PRESENTATIONS

2019 Meeting of the German Neuroscience Society, Göttingen
R. Gutzen, M. von Papen, G. Trensch, P. Quaglio, S. Grün, M. Denker "Reproducible neural network simulations: model validation on the level of network activity data"

2018 Bernstein Conference, Berlin
R. Gutzen, M. von Papen, G. Trensch, P. Quaglio, S. Grün, M. Denker "Reproducible neural network simulations: model validation on the level of network activity data"

2018 Human Brain Project Summit, Glasgow
A. Yegenoglu, **R. Gutzen**, M. Denker, S. Grün "Utilizing the Elephant and NetworkUnit frameworks within the Collaboratory for an HPC enabled workflow"

2017 Data Science Summer School, Paris
R. Gutzen, S. Grün, M. Denker "Validation Methods for Neural Network Simulations"

2017 INM Retreat, Jülich
R. Gutzen, S. Grün, M. Denker "Validation Methods for Neural Network Simulations"

TALKS

2019 Brain Twitter Conference
"How much do you trust a model? - Rigor in neuroscientific modeling and simulation through validation"

2019 Human Brain Project SP4 meeting, Paris
"Comparing activity dynamics of models and living brains"

WORKSHOPS & SCHOOLS

2019 2nd Data Analysis Methods (DAME) Workshop, Karlsruhe
2018 Data Analysis Methods (DAME) Workshop, Karlsruhe
2017 Data Science Summer School, Paris
2017 HBP BSP Hackathon, Geneva
2017 G-Node Advance Neural Data Analysis Course, Barmen

TUTORING

2019 3rd G-Node Advance Neural Data Analysis Course, Barmen
2018 RWTH lecture 'Introduction to Computational Neuroscience, Aachen

SERVICE

- Contributing to open source software: NetworkUnit, Elephant, SciUnit
- Peer review for Frontiers of Neuroinformatics (2018) under the advisement of Dr. Michael Denker