Adrián Gutiérrez Gómez

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EDUCATION

PhD in Computational Neurosciences 04.2021 - present
Epileptology department, University Hospital, University of Bonn, Germany
-Supervised by Prof. Dr. Florian Mormann

MSc Neural Systems and Computation 02.2016 - 07.2019
Institute of Neuroinformatics, ETHZ/University of Zurich, CH Overall grade: 5.1 / 6
-Title of thesis: *Adaption of somatic membrane conductances to the spectral content of subthreshold input current*
-Supervised by Prof. Dr. Rodney J. Douglas and Dr. Saray Soldado Magraner

Certification: Laboratory Animal Handling (Mice, Rats, Rabbits, Gerbils) 06.2011
Faculty of Medicine, Benemérita Universidad Autónoma de Puebla, MX 36 hours

BSc Biomedicine 08.2010 - 11.2015
Institute of Physiology, Benemérita Universidad Autónoma de Puebla, MX. Overall grade: 9.4 / 10
-Title of thesis: *Internal stochastic resonance on the human auditory sensory pathway* (*cum laude*)
-Supervised by Prof. Dr. Elías Manjarrez-López

High School diploma 08.2007 - 06.2010
Preparatoria Iberoamericana, Puebla, MX Overall grade: 9.6 / 10

PUBLICATIONS AND CONFERENCES

Augmenting global coherence in EEG signals with binaural or monaural noises. 07.2020
-*Brain Topography, 10548 (774). Available at:https://doi.org/10.1007/s10548-020-00774-5.*
-*Authors:* Huidobro N, Gutierrez A, Gutierrez J, Zea I, Mendez-Balbuena I, Flores A, Trenado C, Manjarrez E.

Internal stochastic resonance within the human brain elicited by binaural noises 11.2015
44th annual meeting of the Society for Neurosciences, Washington DC, USA
- Poster presentation at the meeting.
-Authors: A. Gutierrez Gomez, N. Huidobro, R. Kristeva, E. Manjarrez.

Effects of aging on calcium signaling in in-situ endothelial cells of rat aorta 11.2012
FALAN meeting/55th national congress of physiological sciences, MX
- Poster presentation at the meeting.
- Authors: Manzano-Flores G,Gutierrez-Gomez A,Torres-Jacome J,Hernandez V, Moccia F, Tanzi F, Berra-Romani R.

WORK EXPERIENCE

Seat Guard (Sitzwache) 10.2020 - present
See Spital, Horgen, CH
-Part-time job as a care-taker for patients suffering from various neurological diseases.
-Asylstrasse 19, 8810 Horgen (https://www.see-spital.ch/de/Home.1925.html).

Seat Guard (Sitzwache) 12.2020 - present
Careanesth, CH.
-Part-time job as a care-taker for patients with various neurological diseases in several regional hospitals.
- Nelkenstrasse 15, 8006 Zürich (https://www.careanesth.com/).

Plasticity in cortical representation of rear limb locomotion in mice 04 - 07.2018
Laboratory of Neurophysiology, Brain Research Institute, University of Zurich, CH
- Research student working on data processing of video recordings from limb movement tracking in mice.
- Supervised by Prof. Dr. Fritjof Helmchen and MD Wolfgang Omlor.

Adaption of calcium signaling in aorta endothelial cells under physical stress 08.2011 - 06.2012
Laboratory of Cardiovascular Physiology, Benemérita Universidad Autónoma de Puebla, MX
- Research intern working on rat aorta surgical extraction, pharmacological tissue testing and processing of calcium imaging data.
- Supervised by Prof. Roberto Berra-Romani.

PROJECTS

Electrophysiological data processing pipeline 07-09.2019
Development of an user-friendly pythonic pipeline for data processing from *in-vitro* electrophysiological neuronal recordings.
-Institute of Neuroinformatics, University of Zurich, 07-09.2019. Supervised by Prof. Dr. Rodney J. Douglas and Dr. Saray Soldado-Magraner.

Pythonic access to Axon Binary Format (ABF) files 07.2019
Contribution to the multi-channel option for the PyABF library.
-Available at: https://pypi.org/project/pyabf/

Modelling of a CA3 hippocampal pyramidal neuron 01-08.2019
Implementation of a CA3 hippocampal neuronal model (in NEURON) into a pythonic environment. Available at: modeldb.yale.edu/228599.
-Institute of Neuroinformatics, University of Zurich, 01-08.2019. Supervised by Prof. Dr. Rodney J. Douglas and Dr. Saray Soldado-Magraner.

In vitro electrophysiology of brain-slice and organotypic neurons 11.2018-06.2019
Master thesis project. *In-vitro* electrophysiological study of intrinsic plasticity in hippocampal neurons
-Institute of Neuroinformatics, University of Zurich, 10.2018-06.2019. Supervised by Prof. Dr. Rodney J. Douglas and Dr. Saray Soldado-Magraner.

Acquisition and processing of patient EEG data 02-11.2015
Bachelor thesis project. EEG study of the sensory auditory cortex.
-Institute of Physiology, Benemérita Universidad Autónoma de Puebla, 02-11.2015. Supervised by Prof. Dr. Elías Manjarrez López.

TECHNICAL SKILLS

Programming: Python, Matlab, NEURON.
Software and tools: Office suite, Adobe suite, LaTex.
Lab techniques: Patch-clamp, calcium imaging, EEG, cell culture, pharmacology, histology.

LANGUAGES

Spanish (Native) English (Fluent) French (Fluent) German (B1)

HONORS AND ACHIEVEMENTS

Scholarship 09.2018
CONACyT (National council for science and technology), Mexico.
-National scholarship for students with outstanding academic performance to pursue their studies abroad.

Scholarship for academic excellence 08.2012 and 2014
SEP (National ministry of public education), Mexico.
-National scholarship for students with outstanding academic performance.

Scholarship 09.2012
Benemérita Universidad Autónoma de Puebla, Mexico
-Scholarship for students to gain experience in research through an internship

EXTRA-CURRICULAR ACTIVITIES

-Collaborator to the internationalization program (organizational position)
Institute of physiology, Benemérita Universidad Autónoma de Puebla, Mexico.

-Music (professional drummer by the Yamaha School of Music, Mexico)
Concerts, teaching, competitions.

-Literature, fine arts, traveling.

REFERENCES

Prof. Dr. Florian MORMANN
email: florian.mormann@ukbonn.de
tel: +49 228 287-15738
address: University of Bonn,
Department of Epileptology,
Venusberg-Campus 1,
53127 Bonn, Germany

Prof. Dr. Rodney J. DOUGLAS
email: rjd@ini.uzh.ch
tel: +41/44 635 30 51
address: Institute of Neuroinformatics,
Campus Irchel, University of Zurich,
Winterthurerstrasse 190, CH-8052
Zurich, Switzerland.

Further references available upon request.
14.07.2022.