Tien Dung Nguyen

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Education

PhD Neuroscience 2024 - present

Institute for Neuroscience, University of Texas at Austin

MSc. Computational Neuroscience 2020 - 2024

Bernstein Center for Computational Neuroscience Berlin, hosted at TU and HU Berlin

Erasmus+ Exchange Semester 2019 - 2020

Faculty of Organizational Sciences, University of Belgrade, Serbia

BSc. Computer Science and Economics (Business Information Systems) 2017 - 2020

Berlin School of Economics and Law in cooperation with Berliner Wasserbetriebe (co-op)

Research Experience

Research Internship at Vrije Universiteit Amsterdam May 2023 - June 2024

Computational Intelligence Group, advised by Prof. Dr. Anil Yaman

- Studying the emergence of grid-like representations in recurrent neural networks
- Confirmed that neural networks do not always learn grid cells when trained on navigation tasks as suggested in previous studies

Student Research Assistant at Charité - Universitätsmedizin Berlin Feb. 2022 - Aug. 2024

Brain and Data Science Group, advised by Prof. Dr. Stefan Haufe

- Implementation and extension of a decomposition method for bispectra and application to EEG data
- Built autoregressive hidden Markov models to predict gait modulations in subjects with Parkinson's disease (collaboration with Prof. Dr. Ioannis Ugo Isaias, University Hospital of Würzburg)
- Co-development of ROIconnect, a MATLAB-based open-source EEGLAB plugin for functional connectivity analysis on source level (collaboration with Dr. Arnaud Delorme, UCSD)

Lab Rotation at Technical University of Berlin Apr. 2022 - July 2022

Neural Information Processing Group, advised by Prof. Dr. Klaus Obermayer

- Studied the dynamics of a biophysically realistic two-population neural mass model (Cakan and Obermayer, 2020) through numerical simulations
- Discovered and studied an unexpected transition behavior from the high-activity state ("up state") to the low-activity state ("down-state") in the bistable regime

Lab Rotation at Charité - Universitätsmedizin Berlin Oct. 2021 - Jan. 2022

Computational Neurology Group, advised by PD Dr. Christian Meisel

- Built and trained convolutional neural networks on ECG data to predict atrial fibrillation
- Created processing pipelines for the ECG training dataset: MonDAFIS cohort

Work Experience

Student Research Assistant 2022 - 2024

Charité - Universitätsmedizin Berlin, Brain and Data Science group

Working Student 2020 - 2022

Expondo GmbH, Customer Experience Department

Working Student 2017 - 2020

Berliner Wasserbetriebe, IT Department (cooperative studies)

Teaching Assistantships

Machine Learning and Inverse Problems in Neuroimaging Summer 2023

Seminar, Technical University of Berlin

Machine Learning and Inverse Problems in Neuroimaging Winter 2022/2023

Seminar, Technical University of Berlin

Open Source Projects

ROIconnect

Co-development of ROIconnect, an open-source EEGLAB plugin for functional connectivity analysis

MNE-Python

Contribution to MNE-Connectivity, an open-source Python package for connectivity and related measures of MEG, EEG, or iEEG data built on top of the MNE-Python API.

Conferences, Workshops and Schools

Neural Traces 2024 Apr. 2024

Workshop on M/EEG Methods and Clinical Applications (Berlin, Germany) - organization

SFB ReTune Fall School 2023 Oct. 2023

Funded by the German Research Foundation (DFG) (Apolda, Germany) - poster presentation

Bernstein Conference 2023 Sept. 2023

Bernstein Network Compuational Neuroscience (Berlin, Germany) - poster presentation

9th Baltic-Nordic Summer School on Neuroinformatics (BNNI 2022) July 2022

Jagiellonian University (Kraków, Poland) - fully funded

Programming Skills

Languages: Python, MATLAB, Java, SAP ABAP, VBA
Others: Git, PyTorch/EvoTorch/Keras/scikit-learn, EEGLAB/MNE/Brainstorm, SPSS, MySQL

Scholarships

Talent Program for Students Dec. 2021 - Apr. 2023

Granted by e-fellows.net - merit-based

Summer School Scholarship Jul. 2022

Granted by the Jagiellonian University (Kraków, Poland) - fully funded, merit-based

Erasmus+ Scholarship Sept. 2019 - Jan. 2020

Granted by the Berlin School of Economics and Law (HWR Berlin) - fully-funded

Papers/Preprints

Pellegrini, F., **Nguyen, T. D.**, Herrera, T., Nikulin, V., Nolte, G., & Haufe, S. (2023). Distinguishing between-from within-site phase-amplitude coupling using antisymmetrized bispectra. *bioRxiv*, 2023-10. doi: https://doi.org/10.1101/2023.10.26.564193 [**submitted**]

Conference Abstracts/Posters

Nguyen, T. D., Pellegrini, F., Delorme, A., & Haufe, S. ROIconnect: An open-source EEGLAB plugin for functional connectivity analysis between regions of interest on source level. *Bernstein Conference 2023*. doi: 10.12751/nncn.bc2023.208 (link to poster)

Nguyen, T. D., Pellegrini, F., Liu, Z., Delorme, A., & Haufe, S. ROIconnect: An open-source EEGLAB plugin for linear and non- linear functional connectivity analysis between brain source regions of interest. *Neural Traces 2024 - Advanced M/EEG Methods and Clinical Applications Workshop.*

Extracurricular Activities

Member of the Joint Committee (GKmE) 2020 - 2024

Bernstein Center for Computational Neuroscience Berlin

Member of the Study Committee (Ausbildungskommission) 2020 - 2024

Bernstein Center for Computational Neuroscience Berlin

Classical Piano Performance 2004 - present

Hans-Werner-Henze Music School - yearly non-professional recitals/performances