Niklas Müller

Nieuwe Achtergracht 129, 1018 WS
Amsterdam, The Netherlands

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EDUCATION

2022 – present
Universiteit van Amsterdam, Brain and Cognition Group, Department of Psychology, Amsterdam, The Netherlands
PhD Candidate Computational Neuroscience: *Building Human Vision Using AI*
Advisors: Dr. H. Steven Scholte, Dr. Iris I. A. Groen

2020 – 2022
Vrije Universiteit Amsterdam, Faculty of Science, The Netherlands
MSc Artificial Intelligence, Cognitive Science Track
Thesis Title*: Divisive Normalization Improves Population Receptive Field Model Based on Non-Human Primate Electrophysiology Recordings.*
Advisors: Dr. Tomas Knapen, Prof. Dr. Serge Dumoulin

2016 – 2019
Georg-August-Universität Göttingen, Institute for Informatics, Göttingen, Germany
BSc Applied Computer Science, Neuroinformatics Tracks
Thesis Title: *Decoding Algorithms for Brain-Control of 3D-Movements Based on Local Field Potentials*
Advisors: Prof. Dr. Alexander Gail, Prof. Dr. Florentin Wörgötter

PROFESSIONAL APPOINTMENTS

Sept 2021 – Aug 2022
Spinoza Centre for Neuroimaging, Amsterdam, The Netherlands
Research Assistant with Prof. Dr. Serge Dumoulin

April 2021 – July 2022
Vrije Universiteit Amsterdam / Demonstrator Lab, Amsterdam, The Netherlands
Software Developer, App: “Meta-Grip”

Feb 2021 – March 2021
Vrije Universiteit Amsterdam, Faculty of Science, Amsterdam, The Netherlands
Teaching Assistant, Software Design

2020 – 2024
Netzwerk-BWP e. V., Erfurt, Germany
Project partner; Software Developer
Project in historic vocational training and education and science research

Oct 2019 – Aug 2020
IBM Client Innovation Center Germany GmbH, Magdeburg, Germany
Software Developer

April 2019 – Sept 2019
Georg-August-Universität Göttingen, Institute for Informatics, Göttingen, Germany
Teaching Assistant, Logic and Verification

2017 – 2019
Georg-August-Universität Göttingen, Professorship for Applications and E- Business, Göttingen, Germany
Software Developer

AWARDS AND GRANT FUNDING

2024. Social and Behavioural Data Science Centre Staff-to-Staff Education: Instructor for Workshop on *Visual Content Analysis*, Amsterdam, The Netherlands. ~1675€
2023. Data Science Center Training Support: Attendance of *Conference for the Society for Neuroscience*, Washington D.C., US. ~1500€
2023. Data Science Center Training Support: Attendance of *Conference for Cognitive Computational Neurosci ence*, Oxford, Uk. ~1000€
2023. Data Science Center Training Support: Attendance of Workshop: *Bayesian Inference for Cognitive Mod elling*, Amsterdam, The Netherlands. 500€
2016. Niedersachsenstipendium: Financial aid for students from non-academic families. 500€

CONFERENCE PROCEEDINGS

Müller N, Scholte HS & Groen IIA (2024) *Spatial sampling of deep neural network features improves encoding models of foveal and peripheral visual processing in humans.* bioRxiv, doi: 2024.08.05.606515.

Scholte HS, Smidi J, Loke J, **Muller N**, Groen II, van Gerven MA. *Convolutional neural networks align early in training with neural representations.* Cognitive Computational Neuroscience (CCN), Boston, US [Poster]

Müller N, Scholte HS & Groen IIA (2024) *A single spatial transform improves predictions of neural responses by deep neural network models.* Cognitive Computational Neuroscience (CCN), Boston, US [Poster]

Müller N, Snoek CG, Groen IIA & Scholte HS (2024). *Shape-Biased Learning by Thinking Inside the Box*. bioRxiv, doi: 2024.05.30.595526.

Müller N, Scholte HS & Groen IIA (2024). *Enriching ConvNets with pre-cortical processing enhances alignment with human brain responses.* Re-Align Workshop @ International Conference on Learning Representations (ICLR), Vienna, Austria [Poster]

Müller N, Groen IIA & Scholte HS (2023) *Increasing behavioural alignment of DNNs and humans using high res olution images.* 19th NVP Dutch Society for Brain and Cognition Winter Conference (NVP), Egmond aan Zee, The Netherlands [Poster]

Müller N, Groen IIA & Scholte HS (2023) *Ultra-high resolution images improve modeling of neural activity evoked by natural scenes.* Annual Meeting for the Society for Neuroscience (SfN), Washington, USA [Poster]

Müller N, Groen IIA & Scholte HS (2023) *Pre-Training on High-Quality Natural Image Data Reduces DCNN Tex ture Bias.* Cognitive Computational Neuroscience (CCN), Oxford, UK [Poster]

TALKS AND WORKSHOPS

September 2024	*Pitch presentation*	NEAT, Osnabrück, 2024
August 2024	*Lab meeting presentation*	HebartLab, Justus Liebig University Giessen, 2024
March 2024	*Visual Content Analysis Workshop*	SoBe Data Science Center, Amsterdam, 2024
October 2023	*Workshop on Computer Vision*	DSC Data Science Day, Amsterdam, 2023

MENTORSHIP EXPERIENCE

2024. Tutoring of group of advanced PhD candidate ABC Summer School: *NeuroAI*, Amsterdam
2024. Supervision of four master students and three bachelor students at department of psychology, UvA
2023 – present. Mentorship of two PhD students at Department of Psychology, UvA

2022 – 2023. Supervision of one master student and two bachelor students at Department of Psychology, UvA.

AUXILIARY ACTIVITIES

2024 – present.	PhD Representative on Program Group Board
2023 – present.	Member of Brain and Cognition Group Activity Committee
2023 – 2024.	Organization of weekly VISLab lab meeting
2022 – 2024.	Organization of weekly CAVA lab meeting

ACADEMIC REFERENCES

- **Dr. Iris I. A. Groen**
  Institute for Informatics
  University of Amsterdam
  Building LAB42, Room L.420
  Science Park 900, 1098 XH
  Amsterdam, The Netherlands
  i.i.a.groen@uva.nl

- **Dr. H. Steven Scholte**
  Psychology Research Institute, Brain and Cognition Group
  University of Amsterdam
  Building G, Room GO.03
  Nieuwe Achtergracht 129, 1018 WS
  Amsterdam, The Netherlands
  h.s.scholte@uva.nl

- **Dr. Tomas Knapen**
  Faculty of Behavioural and Movement Sciences, Cognitive Psychology
  Spinoza Centre for Neuroimaging, (Principal Investigator)
  Vrije Universiteit Amsterdam
  Meibergdreef 75, 1105 BK
  Amsterdam, The Netherlands
  t.knapen@vu.nl