

Niklas Müller

Nieuwe Achtergracht 129, 1018 WS
Amsterdam, The Netherlands
n.muller@uva.nl

EDUCATION

2022 – present	Universiteit van Amsterdam, Brain and Cognition Group, Department of Psychology, Amsterdam, The Netherlands PhD Candidate Computational Neuroscience: <i>Building Human Vision Using AI</i> 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: <i>Divisive Normalization Improves Population Receptive Field Model Based on Non-Human Primate Electrophysiology Recordings.</i> 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: <i>Decoding Algorithms for Brain-Control of 3D-Movements Based on Local Field Potentials</i> 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
Feb 2021 – March 2021	Vrije Universiteit Amsterdam / Demonstrator Lab, Amsterdam, The Netherlands Software Developer, App: “Meta-Grip”
April 2021 – July 2022	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

2025	Data Science Center Training Support: Attendance of Workshop on Concepts, Actions, and Objects, Rovereto, Italy	~800€
2025	Social and Behavioural Data Science Centre Travel Grant: Research Visit with Adrien Doerig at Freie Universität Berlin	500€
2024	Brain and Cognition Project Grant: Hiring a research assistant, Amsterdam, The Netherlands	1500€
2024	Social and Behavioural Data Science Centre Staff-to-Staff Education: Instructor for Workshop on <i>Visual Content Analysis</i> , Amsterdam, The Netherlands	~1675€
2023	Data Science Center Training Support: Attendance of <i>Conference for the Society for Neuroscience</i> , Washington D.C., US	~1500€
2023	Data Science Center Training Support: Attendance of <i>Conference for Cognitive Computational Neuroscience</i> , Oxford, UK	~1000€
2023	Data Science Center Training Support: Attendance of Workshop: <i>Bayesian Inference for Cognitive Modelling</i> , Amsterdam, The Netherlands	500€
2016	Niedersachsenstipendium: Financial aid for students from non-academic families	500€

CONFERENCE PROCEEDINGS

Müller N, Groen IIA & Scholte HS (2025) *Identifying functional specialization in human visual cortex using deep neural networks*. Dutch Society for Brain and Cognition (NVP), Egmond aan Zee, The Netherlands [Talk]

Müller N, Snoek CG, Groen IIA & Scholte HS (2025) *Object-zoomed training of convolutional neural networks inspired by toddler development improves shape bias*. European Conference on Visual Perception (ECVP), Bonn, Germany [Poster]

Luo Y, **Müller N** (2025) *Viewpoint Diversity Improves Convolutional Neural Network Generalization and Robustness*. Cognitive Computational Neuroscience (CCN), Amsterdam, The Netherlands [Poster]

Müller N, Papale P, Groen IIA & Scholte HS (2025) *Sample, Don't Assume: Unconstrained Receptive Field Mapping*. Cognitive Computational Neuroscience (CCN), Amsterdam, The Netherlands [Poster]

Müller N, Groen IIA & Scholte HS (2025) *Objects are not scenes: temporally distinct processing of object and scene information*. Workshop on Concepts, Actions, and Objects, Rovereto, Italy [Poster]

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, **Müller N**, Groen II, van Gerven MA (2024) *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 resolution 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 Texture Bias*. Cognitive Computational Neuroscience (CCN), Oxford, UK [Poster]

TALKS AND WORKSHOPS

December 2025	<i>Conference talk</i>	Dutch Society for Brain and Cognition
May 2025	<i>Lab meeting presentation</i>	Cognitive Computational Neuroscience lab (Prof. Dr. Adrien Doerig, Prof. Dr. Radek Cichy)
September 2024	<i>Flash talk</i>	NEAT, Osnabrück, 2024
August 2024	<i>Lab meeting presentation</i>	HebartLab, Justus Liebig University Giessen, 2024
March 2024	<i>Visual Content Analysis Workshop</i>	SoBe Data Science Center, Amsterdam, 2024
October 2023	<i>Workshop on Computer Vision</i>	DSC Data Science Day, Amsterdam, 2023

MENTORSHIP EXPERIENCE

2024	Tutoring of a group of advanced PhD candidates 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 – 2025.	CCN 2025 Local Committee Chair
2024 – present.	PhD Representative on Program Group Board
2023 – present.	Member of Brain and Cognition Group Activity Committee
2023 – present	Ad-hoc reviewer Cognitive Computational Neuroscience
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