Curriculum Vitae

Prof. Dr. Daniel Kaiser

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Education

2015	PhD in Cognitive and Brain Sciences (CIMeC, University of Trento) Supervisor: Marius Peelen Thesis title: *Inter-object grouping in visual processing: How the brain uses real-world regularities to carve up the environment*
2012	Diploma in Psychology, Minor in Statistics (Regensburg University) Supervisors: Gyula Kovács, Mark Greenlee Thesis title: *Dissociating repetition priming and adaptation-aftereffect related neural activity in the human brain*

Research Experience

2021 –	Professor (W1) for Neural Computation at the Department for Mathematics and Computer Science, Physics, Geography (Justus-Liebig-Universität Gießen)
2019 – 2021	Lecturer (Assistant Professor) at the Department of Psychology (University of York)
2017 – 2019	Postdoctoral researcher in the *Neural Dynamics of Visual Cognition* group (Freie Universität Berlin, with Radoslaw Cichy)
2016	Visiting postdoctoral researcher in the *Active Vision and Cognition* group (BCCN, Humboldt University Berlin, with Sven Ohl and Timo Stein)
2016 – 2017	Postdoctoral researcher in the project *Characterizing and Improving Brain Mechanisms of Attention* (CIMeC, University of Trento, with Marius Peelen)
2012 – 2015	PhD student in the *Visual Cognitive Neuroscience* group (CIMeC, University of Trento, with Marius Peelen)

Teaching Experience

2022	Lecture *Sensation and Perception* (BSc Psychology, JLU Gießen)
2022	Lecture *Neural Computation I* (BSc Data Science, JLU Gießen)
2022	Seminar *Neural Computation I* (BSc Data Science, JLU Gießen)
2021	Lecture *Cognitive Neuroscience Methods* (BSc Psychology, University of York)
2020	Lecture *Brain Mechanisms of Visual Recognition* (BSc Psychology, University of York)
2020	Seminar *Third Year Empirical Project* (BSc Psychology, University of York)
2020	Lecture *Cognitive Neuroscience Methods* (BSc Psychology, University of York)
2019	Seminar *Cognitive Neuroscience* (MSc Social, Cognitive and Affective Neuroscience, FU Berlin, with Radoslaw Cichy)
2018	Seminar *MEG and EEG methods for imaging in neuroscience* (PhD, Karolinska Institute Stockholm, with Daniel Lundqvist and Radoslaw Cichy)
2016	Lecture *Foundations of Cognitive Neuroscience* (MSc Cognitive Science, University of Trento, with Marius Peelen)
2015	Lecture *Current Debates in Cognitive Neuroscience* (MSc Cognitive Science, University of Trento, with Daniel Adams)
2014/15	Summer school course *The Social Brain* (Harvard University, with Paul Downing and Marius Peelen)

Grants and Awards

2022 – 2025	Research grant *Spatiotemporal prediction in the cortical processing of natural visual information* (within SFB/TRR135) funded by the German Research Foundation (DFG) – 426,800€
2018 – 2021	Research grant *Objects in Scenes* funded by the German Research Foundation (DFG) – 340,320€
2019	Research Startup Stipend by the Department of Education and Psychology of Freie Universität Berlin – 2,000€
2018/19/22	DAAD Conference Travel Stipends – 5,000€
2017	CIMeC Young Researcher Award (among the three best junior researchers in 10 years) – 500€
2016	Humboldt Talent Travel Award, Humboldt University Berlin (one month visiting postdoc) – 3,000€
2015	Abstract award at Workshop on Concepts, Actions and Objects – 200€
2013/14/15	Best presentation awards at CIMeC Doctoral School Day – 600€

2012 – 2015	PhD grant of the CIMeC, University of Trento – monthly stipend (1,200€)
2011	Research internship stipend of the German Academic Scholarship Foundation – 1,100€
2009 – 2012	Studentship of the German Academic Scholarship Foundation – monthly stipend (300€)

Supervision

2022 –	Dr. Sanjeev Nara (Postdoc, JLU Gießen)
2021 –	Rico Stecher (PhD Student, JLU Gießen)
2021 –	Gongting Wang (PhD Student, FU Berlin, Co-Supervision with Radoslaw Cichy)
2019 –	Matthew Foxwell (PhD Student, University of York)
2019 –	Lixiang Chen (PhD Student, FU Berlin, Co-Supervision with Radoslaw Cichy)
2014 –	8 research assistants, 15+ BSc/MSc students

Reviewing

Journals: Attention Perception & Psychophysics, Behavioral Brain Research, Cerebral Cortex, Cognition, Communications Biology, Cortex, eLife Sciences, eNeuro, European Journal of Neuroscience, Frontiers in Human Neuroscience, Journal of Experimental Psychology: Human Perception & Performance, Journal of Experimental Psychology: Learning Memory & Cognition, Journal of Neurophysiology, Journal of Neuroscience, Journal of Cognitive Neuroscience, Nature Communications, Nature Human Behavior, Neuroimage, Neuropsychologia, Neuroscience, PeerJ, Perception, PloS Biology, PloS ONE, Proceedings of the Royal Society B, Psychological Science, Psychophysiology, Trends in Cognitive Sciences, Visual Cognition.

Grant Agencies: Biotechnology and Biological Sciences Research Council (UK), Canadian Foundation for Innovation, Research Council of Norway

Publications

Kaiser D. (2022) Characterizing dynamic neural representations of scene attractiveness. *J Cogn Neurosci* 34: 1988-1997. PDF

Chen L, Cichy RM*, Kaiser D*. (2022) Semantic scene-object consistency modulates N300/400 EEG components, but does not automatically facilitate object representations. *Cereb Cortex* 32: 3553-3567. *equal contribution PDF

Iamshchinina P, Karapetian A, Kaiser D*, Cichy RM*. (2022) Resolving the time course of visual and auditory object categorization. *J Neurophysiol* 127: 1622-1628. *equal contribution PDF

Kaiser D, Jacobs AM, Cichy RM. (2022) Modelling brain representations of abstract concepts. *PLOS Comput Biol* 18: e1009837. PDF

Kaiser D, Cichy RM. (2021) Parts and wholes in scene processing. *J Cogn Neurosci* 34: 4-15. PDF

Iamshchinina P, Kaiser D, Yakupov R, Haenelt D, Sciarra A, Mattern H, Lüsebrink F, Duezel E, Speck O, Weiskopf N, Cichy RM. (2021) Perceived and mentally rotated contents are differentially represented in cortical depth of V1. *Commun Biol* 4: 1069. PDF

Ambrus GG, Eick CM, Kaiser D, Kovács G. (2021) Getting to know you: emerging neural representations during face familiarization. *J Neurosci* 41: 5687-5698. PDF

Kaiser D, Häberle G, Cichy RM. (2021) Coherent natural scene structure facilitates the extraction of task-relevant object information in visual cortex. *Neuroimage* 340: 118365. PDF

Stein T, Kaiser D, Fahrenfort JJ, van Gaal S. (2021) The human visual system differentially represents subjectively and objectively invisible stimuli. *PLOS Biol* 19: e3001241. PDF

Kaiser D, Nyga K. (2020) Tracking cortical representations of facial attractiveness using time-resolved representational similarity analysis. *Sci Rep* 10: 16852. PDF

Kaiser D, Inciuraite G, Cichy RM. (2020) Rapid contextualization of fragmented scene information in the human visual system. *Neuroimage* 219: 117045. PDF

Xie S, Kaiser D, Cichy RM. (2020) Visual imagery and perception share neural representations in the alpha frequency band. *Curr Biol* 30: 2621-2627. PDF

Kaiser D, Häberle G, Cichy RM. (2020) Real-world structure facilitates the rapid emergence of scene category information in visual brain signals. *J Neurophysiol* 124: 145-151. PDF

Kaiser D, Häberle G, Cichy RM. (2020) Cortical sensitivity to natural scene structure. *Hum Brain Mapp* 41: 1286-1295. PDF

Battistoni E, Kaiser D, Hickey C, Peelen MV. (2020) The time course of spatial attention during naturalistic visual search. *Cortex* 122: 225-234. PDF

Ambrus GG*, Kaiser D*, Cichy RM, Kovács G. (2019) The neural dynamics of familiar face recognition. *Cereb Cortex* 29: 4775-4784. *equal contribution PDF

Kaiser D, Turini J, Cichy RM. (2019) A neural mechanism for contextualizing fragmented inputs during naturalistic vision. *eLife* 8: e48182. PDF

Kaiser D, Quek GL, Cichy RM, Peelen MV. (2019) Object vision in a structured world. *Trends Cogn Sci* 23: 672-685. PDF

Proklova D, Kaiser D, Peelen MV. (2019) MEG sensor patterns reflect perceptual but not categorical similarity of animate and inanimate objects. *Neuroimage* 193: 167-177. PDF

Cichy RM, Kaiser D. (2019) Deep neural networks as scientific models. *Trends Cogn Sci* 23: 305-317. PDF

Kaiser D, Cichy RM. (2018) Typical visual-field locations enhance processing in object-selective channels of human occipital cortex. *J Neurophysiol* 120: 848-853. PDF

Kaiser D, Cichy RM. (2018) Typical visual-field locations facilitate access to awareness for everyday objects. *Cognition* 180: 118-122. PDF

Kaiser D, Moeskops MM, Cichy RM. (2018) Typical retinotopic locations impact the time course of object coding. *Neuroimage* 176: 372-379. PDF

Kaiser D, Peelen MV. (2018) Transformation from independent to integrative coding of multi-object arrangements in human visual cortex. *Neuroimage* 169: 334-341. PDF

Kaiser D, Haselhuhn T. (2017) Facing a regular world: How spatial object structure shapes visual processing. *J Neurosci* 37: 1965-1967. PDF

Kaiser D, Oosterhof NN, Peelen MV. (2016) The neural dynamics of attentional selection in natural scenes. *J Neurosci* 36: 10522-10528. PDF

Stein T, Kaiser D, Hesselmann G. (2016) Can working memory be non-conscious? *Neurosci Conscious* 1: 1-3. PDF

Proklova D*, Kaiser D*, Peelen MV. (2016) Disentangling representations of object shape and object category in human visual cortex: the animate-inanimate distinction. *J Cogn Neurosci* 28: 680-692. *equal contribution PDF

Kaiser D*, Azzalini DC*, Peelen MV. (2016) Shape-independent object category responses revealed by MEG and fMRI decoding. *J Neurophysiol* 115: 2246-2250. *equal contribution PDF

Kaiser D, Stein T, Peelen MV. (2015) Real-world spatial regularities affect visual working memory for objects. *Psychon Bull Rev* 22: 1784-1790. PDF

Stein T, Kaiser D, Peelen MV. (2015) Interobject grouping facilitates visual awareness. *J Vis* 15: 1-10. PDF

Hickey C, Kaiser D, Peelen MV. (2015) Reward guides attention to object categories in real-world scenes. *J Exp Psychol Gen* 144: 264-273. PDF

Keresztes A, Kaiser D, Kovács G*, Racsmány M*. (2014) Testing promotes long-term learning via stabilizing activation patterns in a large network of brain areas. *Cereb Cortex* 24: 3025-3035. *equal contribution PDF

Kaiser D, Stein T, Peelen MV. (2014) Object grouping based on real-world regularities facilitates perception by reducing competitive interactions in visual cortex. *Proc Natl Acad Sci USA* 111: 11217–11222. PDF

Kaiser D*, Strnad L*, Seidl KN, Kastner S, Peelen MV. (2014) Whole person-evoked fMRI activity patterns in human fusiform gyrus are accurately modeled by a linear combination of face- and body-evoked activity patterns. *J Neurophysiol* 111: 82-90. *equal contribution PDF

Kaiser D, Walther C, Schweinberger SR, Kovács G. (2013) Dissociating the neural bases of repetition-priming and adaptation in the human brain for faces. *J Neurophysiol* 110: 2727-2738. PDF

Kovács G, Kaiser D, Kaliukhovich DA, Vidnyánszky Z, Vogels R. (2013) Repetition probability does not affect fMRI repetition suppression for objects. *J Neurosci* 33: 9805-9812. PDF

Walther C, Schweinberger SR, Kaiser D, Kovács G. (2013) Neural correlates of priming and adaptation in familiar face perception. *Cortex* 49: 1963–1977. PDF

Gießen, September 2022