

CV Prof. Karl Gegenfurtner, Ph.D.

Member, German National Academy of Science

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Academic career

- since 2001 Professor of Psychology, Justus-Liebig-University Giessen
- 2000 – 2001 Professor of Biological Psychology, Otto-von-Guericke University Magdeburg
- 1993 – 2000 Research scientist, MPI for biological Cybernetics, Tübingen (AG Bühlhoff)
- 1990 – 1993 Postdoctoral fellow, Howard Hughes Medical Institute and Center for Neural Science at New York University (Prof. J. Anthony Movshon)

Education

- 1998 Habilitation in Medical Psychology and Behavioral Neurobiology, Medical Faculty, Tübingen University
- 1986 – 1990 Ph.D. in Experimental Psychology, New York University, New York (Advisors: Prof. George Sperling and Prof. John Krauskopf).
- 1981 – 1986 Diploma in Psychology, Regensburg University.

Funding

- 2020 – 2025 ERC Advanced Grant Color 3.0: An object-oriented approach to color
- 2014 – 2025 DFG Collaborative Research Center SFB/TRR 131 Cardinal mechanisms of perception, Spokesperson.
- 2021 – 2023 Australian Research Council Discovery Project: Emergent cues underlying the perception of shape, colour, and material. PIs: Anderson, Gegenfurtner, Wichmann.
- 2017 – 2022 EU Dynamics in vision and touch (DYVITO), Marie-Curie ITN
- 2013 – 2022 DFG International Research Training Group IRTG 1901: The brain in action.
- 2013 – 2016 BMBF-NSF Computational Neuroscience Program: Circuit models of form processing in primate V4. PIs: Gegenfurtner, Pasupathy, Bair
- 2012 – 2016 EU Perceptual representation of shape, illumination and material (PRISM) Marie-Curie Initial Training Network
- 2009 – 2016 DFG Reinhart Koselleck-Projekt Perception of material properties.
- 2010 – 2014 DFG Mesopic vision.
- 2008 – 2012 EU Co-ordination for optimal decisions in dynamic environments (CODDE) Marie-Curie Initial Training Network
- 2008 – 2011 Augenbewegungen beim Lesen in unterschiedlichen Medien (LOEWE) Partner in main project Kulturtechniken und ihre Medialisierung
- 2006 – 2009 EU Gaze-based communication. Partner STREP, FET-Open
- 2004 – 2011 DFG Research group FOR560: Perception and Action, Spokesperson.
- 2004 – 2008 Summer school Visual Neuroscience, Founder and Organizer (Volkswagen Foundation)
- 2003 – 2010 DFG Graduate program NeuroAct: Brain and behavior, Co-Spokesperson
- 2003 – 2007 EU Perception for recognition and action (PRA). Partner Marie-Curie ITN
- 2002 – 2006 DFG Perception of natural scenes.
- 2002 – 2005 BMBF Neue Verfahren der Informationsverarbeitung auf der Basis neurokognitiver Modellierung (ModKog) Partner in research group.
- 2001 – 2009 DFG Cortical mechanisms of color vision.

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Awards, honours and fellowships

2020	Visiting scientist, University of Sydney, Australia, Department of Psychology
2018	Visiting scientist, University of Cambridge, UK, Department of Psychology
2017 – 2021	Deputy Senator, National Academy of Science (Leopoldina)
since 2017	Member, Wilhelm-Wundt Society
2016	Wilhelm-Wundt-medal of the German Psychological Association
since 2015	Member, National Academy of Science (Leopoldina)
2014	Rank-Prize-Funds Lecture, European Conference on Visual Perception
1998	Heisenberg-Fellowship, DFG
1995	Attempto Prize for excellence in neurobiology of Universität Tübingen
1995	Habilitation-Fellowship, DFG

Services

since 2021	Alexander-von-Humboldt-Foundation, Henriette Hertz Scouting program
since 2018	Associate Editor, Journal of Vision,
2016 – 2023	Alexander-von-Humboldt-Foundation, fellowship selection committee
2015 – 2021	Editorial board, Psychological Review
2012 – 2013	President, Vision Sciences Society
2010 – 2014	Board of Directors, Vision Sciences Society
2010 – 2014	Editorial board, Psychological Research
2009 – 2018	Editorial board, Perception
2009 – 2018	Editorial board, Journal of Vision
2008 – 2013	Editorial board, Visual Neuroscience
2007 – 2018	Editorial board, Vision Research
2004, 2014	Organizer, Tagung experimentell arbeitender Psychologen Teap, Giessen
2004 – 2016	Founder and organizer, Summer school “Visual neuroscience: From spikes to awareness”
2002 – 2009	Editorial board, Journal of Physiology
1999 – 2003	Spokesperson, Special interest group General Psychology of the German Psychological Association
1998 – 2003	Founder and organizer, Tübinger Wahrnehmungskonferenz TWK

Mentoring (current positions of former students and PostDocs of mine)

Professors, Lecturers	Prof. Jutta Billino (Gießen), Prof. Frederic Devinck (Rennes), Dr. Jan Drewes (Chengdu), Prof. Volker Franz (Tübingen), Dr. Martin Giesel (Aberdeen), Dr. Kai Hamburger (Gießen), Dr. Constanze Hesse (Aberdeen), Dr. Gesche Hübner (UC London), Prof. Dirk Kerzel (Geneva), Prof. Neil Mennie (Nottingham), Dr. Maria Olkkonen (Durham), Prof. Celine Paeye (Universite Paris), Prof. Jochem Rieger (Oldenburg), Prof. Thomas Schmidt (Kaiserslautern), Prof. Alexander Schütz (Marburg), Dr. Sascha Serwe (Hagen), Prof. Anna Seydell Greenwald (Georgetown), Prof. Miriam Spering (UBC, Vancouver), Dr. Martin Stritzke (Plön), Prof. Marco Tommasi (Chieti), Dr. Matteo Toscani (Bournemouth), Prof. Matteo Valsecchi (Bologna), Prof. Romain Vergne (INRIA, Grenoble), Dr. Brian White (Kingston, Canada), Dr. Christoph Witzel (Southampton), Prof. Weina Zhu (Kunming)
Industry, clinic	Florian Bayer (Carl Zeiß AG), Dr. Kurt Debono (SR Research), Dr. Denise de Grave (Unilever), Dr. Lukas Kaim (Hexagon Metrology), Dr. Urs Kleinholdermann (Universitätsklinikum Giessen Marburg), Dr. Lars Pracejus (Seeklinik Brunnen, Schweiz), Dr. Oliver Rinner (CEO, Biognosys), Dr. Christiane Wiebel (Honda Research), Dr. Dagmar Wismeijer (TNO)

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Selected publications

1. de Vries, J.P., Akbarinia, A., Flachot, A. & Gegenfurtner, K.R. (2022) Emergent color categorization in a neural network trained for object recognition. **eLife**, 11, e76472.
2. Marlow, P., Gegenfurtner, K. & Anderson, B. (2022) The role of color in the perception of three-dimensional shape. **Current Biology**, 32(6):1387-1394.
3. Goettker, A., Pidaparthy, H., Braun, D., Elder, J. & Gegenfurtner, K.R. (2021) Ice hockey spectators use contextual cues to guide predictive eye movements. **Current Biology**, 31, R991-R992.
4. de Haas, B., Iakovidis, A.L., Schwarzkopf, S. & Gegenfurtner, K.R. (2019) Individual differences in visual salience vary along semantic dimensions. **PNAS**, 116 (24) 11687-11692.
5. Witzel, C. & Gegenfurtner, K.R. (2018) Color perception: objects, constancy, and categories. **Annual Review of Vision Science**, 4, 475-499.
6. Goettker, A., Braun, D.I., Schütz, A.C. & Gegenfurtner, K. R. (2018) Execution of saccadic eye movements affects speed perception. **PNAS**, 115(9):2240-2245.
7. Ennis, R., Toscani, M. & Gegenfurtner, K.R. (2017) Seeing lightness in the dark. **Current Biology**, 27(12):R586-R588.
8. Valsecchi, M., & Gegenfurtner, K. R. (2016). Dynamic Re-calibration of Perceived Size in Fovea and Periphery through Predictable Size Changes. **Current Biology**, 26, 59–63.
9. Gegenfurtner, K.R., Bloj, M. & Toscani, M. (2015) The many colours of ‘the dress’. **Current Biology**, 25, R1–R3.
10. Toscani, M., Valsecchi, M. & Gegenfurtner, K.R. (2013) Optimal sampling of visual information for lightness judgments. **PNAS**, 110(27), 11163-11168.
11. Toscani, M., Valsecchi, M. & Gegenfurtner, K.R. (2013) Selection of visual information for lightness judgments by eye movements. **Phil Trans Royal Soc B**, 368, 20130056.
12. Schütz, A.C., Trommershäuser, J.T. & Gegenfurtner, K.R. (2012) Dynamic integration of information about salience and value for saccadic eye movements. **PNAS**, 109(19), 7547-7552.
13. Trommershäuser, J., Glimcher, P.W. & Gegenfurtner, K.R. (2009) Visual Processing, learning and feedback in the primate eye movement system. **Trends Neurosci**, 32, 583-590.
14. Schütz, A. C., Braun, D. I., Kerzel, D., & Gegenfurtner, K. R. (2008). Improved visual sensitivity during smooth pursuit eye movements. **Nature Neuroscience**, 11, 1211–1216.
15. White, B. J., Stritzke, M., & Gegenfurtner, K. R. (2008). Saccadic facilitation in natural backgrounds. **Current Biology**, 18, 124–128.
16. Hansen, T., Olkkonen, M., Walter, S., & Gegenfurtner, K. R. (2006). Memory modulates color appearance. **Nature Neuroscience**, 9, 1367–1368.
17. Kerzel, D., & Gegenfurtner, K. R. (2003). Neuronal processing delays are compensated in the sensorimotor branch of the visual system. **Current Biology**, 13, 1975–1978.
18. Gegenfurtner, K. R. (2003). Cortical mechanisms of colour vision. **Nature Reviews Neuroscience**, 4, 563–572.
19. Gegenfurtner, K. R., & Kiper, D. C. (2003). Color vision. **Annual Review of Neuroscience**, 26, 181–206.
20. Gegenfurtner, K. R., & Rieger, J. (2000). Sensory and cognitive contributions of color to the perception of natural scenes. **Current Biology**, 10, 805–808.
21. Gegenfurtner, K. R., Mayser, H., & Sharpe, L. T. (1999). Seeing movement in the dark. **Nature**, 398, 475–476.
22. Gegenfurtner, K. R. and Hawken, M. J. (1996) Interactions between color and motion in the visual pathways. **Trends in Neurosciences**, 19, 394-401.
23. Hawken, M. J., Gegenfurtner, K. R. and Tang, C. (1994) Contrast dependence of colour and luminance motion mechanisms in human vision. **Nature**, 367, 268-270.