

Curriculum Vitae

Professor Dr. Martin A. Giese

Personal Details:

Day of birth: June 21, 1966
Family status: married, 1 child
Address: University of Tübingen
Hertie Institute for Clinical Brain Research
& Centre for Integrative Neuroscience
Otfried-Müller-Str.25
72076 Tübingen, Germany
Tel.: +49(0)7071 29 89 124
Fax: +49(0)7071 29 25 014
E-mail: martin.giese@uni-tuebingen.de
ORCID: 0000-0003-1178-2768



Scientific Interests:

- Neural and NN models of high level vision (social perception)
- Neural mechanisms of motion, action, and social perception (physiology, psychophysics)
- Movement analysis and computational modelling of the motor system
- Technical applications related to movement disorders and psychiatric diseases
- Mechanisms of non-invasive neural stimulation

Education and Positions:

Since 2008 Professor for Computational Sensomotrics, Center for Integrative Neuroscience (CIN) and Hertie Institute for Clinical Brain Research (HIH), University Clinic Tübingen

2007-2008 Senior Lecturer, School of Psychology, Bangor University, Bangor, UK

2006 Habilitation in Informatics, University Ulm

2001-2007 Junior Group Leader 'Action Representation and Learning' (Volkswagenstiftung), University Hertie Institute for Clinical Brain Research (HIH), University Clinic Tübingen

2000-2001 Director, Boston Research Laboratory, Honda Americas, Boston, MA

1998-2001 Postdoc and Visiting Researcher, Center for Biological and Computational Learning, M.I.T., Cambridge MA

1998 PhD (Promotion) in Electrical Engineering (Neuroinformatics), Ruhr-University Bochum, *summa cum laude*

1993 Diploma in Electrical Engineering

1991 Vordiplom (BA) in Psychology

1986-1993 Study of Electrical Engineering and Psychology, Ruhr-University Bochum, Germany

Academic Achievements:

- Since 2022** Spokesperson, Research Area N3 (Neurorehabilitation, Neuroprosthetics, and Neurotechnology) in the Hertie Institute for Clinical Brain Science, Tübingen
- Since 2021** Steering board, Competence Center for Biointelligence, Fraunhofer IPA, Stuttgart
- Since 2021** Associate Editor, Cognitive Neurodynamics
- Since 2021** Co-Speaker, Else-Kroener-Fresenius-Foundation Graduiertekolleg 'Clin Brain: Artificial Intelligence in Brain Science'
- Since 2020** Co-Speaker for Tübingen, Hertie Network of Excellence in Clinical Neuroscience
- 2019-2021** Editor in Chief, ACM Transactions on Applied Perception
- Since 2018** Member of the faculty of the Max Planck Research School for Intelligent Systems
- Since 2015** Associate Editor Frontiers Computational Neuroscience
- 2011** Foundation of MA Track 'Neural Information Processing', Graduate Training Center for Neuroscience, Tübingen
- Since 2008** Associate Editor of the ACM Transactions on Applied Perception

Academic Distinctions / Awards:

- 2023** Mementos EIC Award from Association of Computing Machinery (ACM)
- 2020** Advisor of A. Mukovskiy, winner Südwestmetall Award (best doctoral thesis in computer science)
- 2019** ERC Synergy Grant RELEVANCE (European Research Council)
- 2018** Advisor of L. Fedorov, winner Attempto Award, Uni Tübingen (best doctoral thesis in neuroscience)
- 2016 + 2003** Awards of grants from the Human Frontiers Science Program (HFSP)
- 2008** W3 professorship (declined) Inst f. Neurinformatics, Bochum, Germany
- 2001** Award of a Junior Research Group of the Volkswagen Foundation
- 1998** Fellowship of the Deutsche Forschungsgemeinschaft
- 1987-1995** Fellow German National Academic Foundation (Studienstiftung des deutschen Volkes)

Publications (selection):

Taubert, N., Stettler, M., Siebert, R., Spadacenta, S., Sting, L., Dicke, P. et al., Giese, M.A. (2021). Shape-invariant encoding of dynamic primate facial expressions in human perception. **eLife**, 10:e61197.

Siebert, R., Taubert, N., Spadacenta, S., Dicke, P. W., Giese*, M. A. & Thier*, P. (2020). A naturalistic dynamic monkey head avatar elicits species-typical reactions and overcomes the uncanny valley. **ENEURO**. 0524-19.2020. (*equal contribution)

Fedorov, L., Chang, D., Giese, M. A., Bühlhoff, H. & de la Rosa, S. (2018). Adaptation aftereffects reveal representations for encoding of contingent social actions. **Proceedings of the National Academy of Science**, 115(29), 7515-7520.

Giese, M. A. (2016). Face Recognition: Canonical Mechanisms at Multiple Timescales. **Current Biology**, 26(13), 534-537.

Endres D, Christensen A, Omlor L, Giese MA (2011) Emulating human observers with Bayesian binning: segmentation of action streams. **ACM Transactions on Applied Perception (TAP)**, 8(3):16:1- 12.

Caggiano, V., Fleischer, F., Pomper, J. K., Giese*, M. A. & Thier*, P. (2016). Mirror Neurons in Monkey Premotor Area F5 Show Tuning for Critical Features of Visual Causality Perception. **Current Biology**, 26(22), 3077-3082. (*equal contribution)

Omlor L, Giese MA (2011) Anechoic blind source separation using Wigner marginals. **Journal of Machine Learning Research**, 12, 1111-1148.

Christensen A, Ilg W, Giese MA (2011) Spatiotemporal tuning of the facilitation of biological motion perception by concurrent motor execution. **J. Neurosci.** 31(9), 3493-9.

Curio C., Bühlhoff H.H., Giese M.A. (2011) *Dynamic Faces: Insights from Experiments and Computation*. MIT Press, Cambridge, MA

Caggiano V, Fogassi L, Rizzolatti G, Pomper JK, Thier P, Giese MA, Casile A (2011) View-based encoding of actions in mirror neurons of area f5 in macaque premotor cortex. **Current Biology** 21(2), 144-8.

Roether CL, Omlor L, Giese MA (2008) Lateral asymmetry of bodily emotion expression. **Current Biology**, 18, R329-330

Ilg W, Golla H, Thier H P, Giese MA (2007) Quantification of the spatiotemporal characteristics of influences of cerebellar dysfunction on gait. **Brain**, 130, 786-98.

Heinrich H. Bühlhoff, Christian Wallraven Martin A. Giese(2008) Handbook of Robotics Chapter 64: Perceptual Robotics: Example-based representations of shapes and movements. From: Siciliano, B., O. Khatib (eds.): Springer Handbook of Robotics, Springer, Berlin, Germany, 2008, pp. 1481-1498.

Casile A, Giese MA (2006) Non-visual motor learning influences the recognition of biological motion. **Current Biology**, 16, 69-74.

Leopold DA, Bondar IV, Giese MA (2006) Norm-based face encoding by single neurons in the monkey inferotemporal cortex. **Nature**, 442, 572-575

Omlor L, Giese MA (2006) Blind source separation for over-determined delayed mixtures. In: Schölkopf B, Platt J, Hoffman, T (eds): **Advances in Neural Information Processing Systems 19**, MIT Press, Cambridge MA, 1049-1056.

Giese MA, Poggio T (2003) Neural mechanisms for the recognition of biological movements and action. **Nature Reviews Neuroscience** 4:179-192

Giese MA (1999) *Neural Field Theory of Motion Perception*. Kluwer Academic Publishers, Dordrecht, Netherlands.