

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
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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 2025 Head of the department 'N3: Neurorehabilitation, Neuroprosthetics, and Neurotechnology' at the Hertie Institute for Clinical Brain Research. (HIH), University Clinic Tübingen

Since 2008 Professor for Computational Sensomotorics, 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 2025	Head of the department 'N3: Neurorehabilitation, Neuroprosthetics, and Neurotechnology' at the Hertie Institute for Clinical Brain Research. (HIH), University Clinic Tübingen
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):

Seemann, J., Beyme, T., John, N., Harmuth, F., Giese, M. A., Schöls, L. et al. (2025). Capturing longitudinal change in cerebellar ataxia: Context-sensitive analysis of real-life walking increases patient relevance and effect size. **Movement Disorders** 2025

Christensen A, Taubert N, Huis In 't Veld EMJ, de Gelder B, Giese MA (2024) Perceptual encoding of emotions in interactive bodily expressions. **iScience** 27:108548

Seemann, J., Träschütz, A., Ilg, W. & Ilg, W. (2023). 4-Aminopyridine improves real-life gait performance in SCA27B on a single-subject level: a prospective n-of-1 treatment experience. **Journal of Neurology** (published online 13 July 2023).

Ilg, W., Müller, B., Faber, J., van Gaalen, J., Hengel, H., Vogt, I. R. et al. (2022). Digital gait biomarkers, but not clinical ataxia scores, allow to capture 1-year longitudinal change in Spinocerebellar ataxia type 3 (SCA3). **Movement Disorders** 2022.

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., Bülthoff, 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., Bülthoff 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. Bülthoff, 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.