

Alexander Gail

Title	Prof. Dr. rer. nat.
Current position	Professor for Sensorimotor Neuroscience and Neuroprosthetics
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Academic education	
2002	Doctor of natural sciences, Philipps University Marburg
1997	Physics Diploma, Philipps University Marburg
1992–1997	Studies in Physics, Universities of Augsburg and Marburg
Scientific and professional career	
since 2012	Professor for Sensorimotor Neuroscience and Neuroprosthetics, Faculty of Biology, Georg August University Göttingen
since 2006	Principal Investigator (Research Group Leader), Bernstein Center for Computational Neuroscience, German Primate Center, Göttingen
2003–2006	Postdoctoral Research Fellow, Division of Biology, California Institute of Technology, Pasadena CA, USA
1997–2003	Research Associate, Neurophysics Group, Philipps University Marburg. DFG Research group “Dynamics of Cognitive Representation”
Research Interest	
I am interested in how we choose between multiple different action alternatives and plan according movements. Movements are more than reflexive responses to environmental changes. Goal-directed movements are the consequence of cognitive decision and planning processes. In my lab we investigate the neural mechanisms underlying the selection and planning of goal-directed movements.	
Neuronal signals that represent movement plans can be used to control neuroprosthetic devices. We also aim to identify brain areas and neural signals that are most suitable for the control of neuroprosthetic devices.	
Selected publications	
Klaes C, Westendorff S, Gail A (2011) Choosing goals not rules: Deciding among alternative rule-based action plans. <i>Neuron</i> 70:536-548	
Westendorff S, Klaes C, Gail A (2010) The cortical timeline for deciding on reach motor-goals. <i>J Neurosci</i> 30(15):5426-5436	

Gail A, Klaes C, Westendorff S (2009) Implementation of spatial transformation rules for goal-directed reaching via Gain modulation in monkey parietal and premotor cortex. *J Neurosci* 29:9490-9499

Gail A, Andersen RA (2006) Neural dynamics in monkey parietal reach region reflect context-specific sensorimotor transformations. *J Neurosci* 26:9376-9384

Gail A, Brinksmeyer H-J, Eckhorn R (2004) Perception-related modulations of local field potential power and coherence in primary visual cortex of awake monkey during binocular rivalry. *Cerebral Cortex* 14:300-313.