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Short biography

Michael Hoffmann graduated (Diploma) in biology with a thesis on the development of myopia at the ophthalmic department of Tübingen University (1994) and obtained his PhD with work on the electrophysiology of human motion perception in the ophthalmic department of Freiburg University (1998). He then moved to London (Imperial College and Royal Holloway University of London, UK, 1999), where he began to study the human visual system with functional magnetic resonance imaging, which he continued as a research fellow on his return to Freiburg (2002). Since 2004 he is head of the 'Section for clinical and experimental sensory physiology' of the ophthalmic department of Magdeburg University concerned with electrophysiological diagnostics and research on structure and function of the human visual system. He received continuous project funding by the German Research Foundation (DFG) since 2002, is member of the 'Commission for quality assurance of sensory physiological measures and equipment' of the German Society of Ophthalmology and training coordinator in the Horizon2020-funded European innovative training network 'NextGenVis', authored more than 50 publications in internationally peer-reviewed journals, and is reviewer for many scientific journals and funding bodies. In 2016 he received the 'Elfriede-Aulhorn award' for outstanding research in neuro-ophthalmology.

Research interests

The goal of Dr. Hoffmann's research is to understand the interplay of physiology, patho-physiology and plasticity of the human visual system. His team applies non-invasive electrophysiology to retina and visual cortex, magnetic resonance imaging (anatomical, functional and diffusion) and psychophysics to study participants with healthy vision and patients with acquired or congenital visual system disorders. One important long-standing focus of his activities is the investigation of structure and function of the visual system in human albinism, which he has been pursuing since 1999. Applying a combined approach of MRI, electrophysiology and perception-testing he detailed the cortical mapping of the visual field in human albinism and its relation to visual function and to other chiasma malformations, such as achiasma. Beyond its relevance for albinism, this work helps to understand general principles of human visual system development.