

# Publications

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*Thomas R. Knösche*

## Computational Neuroscience – Neural Modeling

T. Kunze, A.D.H. Peterson, J. Haueisen, T.R. Knösche: A Model of Individualized Canonical Microcircuits Supporting Cognitive Operations, *PLoS ONE* 12(12): e0188003.  
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A. Spiegler, S. Kiebel, F. Atay, T.R. Knösche: Bifurcation analysis of neural mass models: impact of extrinsic inputs and dendritic time constants. *NeuroImage* 52(3), 1041-1058 (2010)  
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DOI: 10.1016/j.neuroimage.2009.05.096

## Diffusion MRI and Tractography

M. Tittgemeyer, L. Rigoux, T.R. Knösche: Cortical parcellation based on structural connectivity: A case for generative models. *NeuroImage*, 175: 592-603 (2018)

T.R. Knösche, A. Anwander, M. Liptrot, T.B. Dyrby: Validation of tractography – comparison with manganese tracing. *Human Brain Mapping*, 36(10):4116-34 (2015)  
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A. Viehweger, T. Riffert, B. Dithal, T.R. Knösche, A. Anwander, M. Bauer, H. Stepan, I. Sorge, W. Hirsch: The Gini-coefficient: A new method to assess fetal brain development. *Pediatric Radiology* 44(10), 1290-1301 (2014)  
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M. Ruschel, T.R. Knösche, A.D. Friederici, R. Turner, S. Geyer, A. Anwander: Connectivity architecture and subdivision of the human inferior parietal cortex revealed by diffusion MRI. *Cerebral Cortex* 24(9): 2436-2448 (2014)  
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S.G. Kim, J. Stelzer, P.L. Bazin, A. Viehweger, T.R. Knösche: Group-wise analysis of myelination profiles of cerebral cortex using the second eigenvector of the Laplace-Beltrami Operator. IEEE International Symposium on Biomedical Imaging (ISBI) 2014, Beijing, China. 1007 - 1010.

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### **Analysis of EEG/MEG and Source Modeling**

Ü. Aydin, S. Rampp, A. Wollbrink, H. Kugel, J.-H. Cho, T.R. Knösche, C. Grova, C.H. Wolters: Zoomed MRI guided by combined EEG/MEG source analysis: A multimodal approach for optimizing presurgical epilepsy work-up and its application in a multi-focal epilepsy patient case study. *Brain Topography*, accepted (2017)

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## Music Perception and other Cognitive Faculties

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## Unpublished Papers

M. Fuchs, B. Maess, T.R. Knösche: Reconstruction of distributed EEG/MEG sources using functio-anatomical constrained source covariance estimates. To be submitted to ...

T. Göbel, A. Anwander, J. Brauer, A.D. Friederici, T.R. Knösche: Tractography based analysis of structural maturation in the human brain. Major revision in Brain Topography

M. Tittgemeyer, T.R. Knösche: Cortical parcellation based on clustering of structural connectivity. Submitted to NeuroImage

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M. Knorr, T.R. Knösche: EEG interpolation by source space projection. To be submitted to ...

Drechsler, Lew, Vorwerk, Haueisen, Knösche, Grasedyck, Wolters: Validation of EEG forward modeling approaches in the presence of anisotropy in the source space. To be submitted to Neuroscience Methods

S.G. Kim, T.R. Knösche: Topological organization of the auditory cortex in musicians with absolute pitch, To be submitted to Journal of Neuroscience

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# Registry

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## Computational Neuroscience – Neural Modeling

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## Diffusion MRI and Tractography

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T.R. Knösche, A. Anwander, M. Liptrot, T.B. Dyrby: <i>Human Brain Mapping</i> , 36(10):4116-34 (2015)	•	•	•	•	•
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