Tamás Spisák

computer scientist Ph.D.

25 October 1986

Essen, Germany

+49 170 244 3155

github.com/spisakt
spisakt.github.io/pTFCE
spisakt.github.io/RPN-signature

tamas.spisak@uk-essen.de

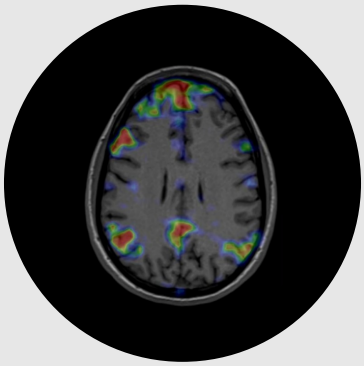
Expertise

- Neuroimaging methods: fMRI, DTI, DSC, ASL, PET, EEG/fMRI
- MRI artifacts
- Advanced statistics
- Software development
- Functional neuroanatomy cognition, pain mechanisms

Interests

- Neuroimaging methodology
- Machine Learning
- Brain Connectivity analysis
- Cognitive Neuroscience
- Neuropharmacology
- Pain and placebo mechanisms

DMN



Professional Experience

since 2017 **post-doc** — University Hospital Essen
Bingel-Lab, Department of Neurology

Imaging, connectivity and behaviour-based quantification, prediction and stratification in pain, placebo and extinction learning.
Developments:
pTFCE: statistical cluster enhancement
PUMI: modular neuroimaging pipeline library system
RPN-signature: predictive modelling of pain sensitivity.

2014-2017 **analysis team leader** — Gedeon Richter Plc., Hungary
Preclinical MR Imaging and Biomarker Center
Pharmacology and Drug Safety Research

Support of drug research projects with small-animal MR imaging, multi-source data integration and statistical analysis.
Pain, cognitive enhancement, Autism Spectrum Disorders, Obesity.

education

2011-2015 **Ph.D. in Computer Science** — University of Debrecen, Hungary
Doctoral School of Informatics
thesis: Voxel-wise Motion Artifacts in fMRI Brain Connectivity Analysis
Software development: BrainMOD, BrainCON

2013-2014 **visiting researcher** — Kempenhaeghe, TU/e, The Netherlands
ENIAC Central Nervous System Imaging JU project
dynamic EEG/fMRI brain connectivity in temporal lobe epilepsy

2005-2011 **M.Sc. student in computer science** — University of Debrecen, Hungary
Faculty of Computer Science
thesis: BrainLOC - Integrated brain atlas-based localization and region analysis

computer skills

programming	C/C++, python, R, MatLab, bash
software	Inkscape, Gimp, LaTeX
neuroimaging	Nipype, FSL, SPM, Slicer, Freesurfer, AFNI, MNI Tools, BrainVoyager
HPC	SGE, Slurm, MPI, OpenMP, pthread
machine learning	scikit-learn, nilearn, tensorflow, caret, glinternet

language skills

Hungarian	native
English	C1
German	B2

grants and awards

2017-	H2020 Marie Skłodowska-Curie Individual Fellowship
2016	main prize of Richter Innovative Research Fund
2015	Hungarian National Excellence award
2015	György Hevesy Izinta award
2013-2014	János Apáczai Csere Hungarian National Excellence Grant
2013	Campus Hungary Scholarship
2013	György Hevesy award

selected publications

T Spisák, Zs Spisák, M Zunhammer, U Bingel, S Smith, T Nichols, ZT Kincses, *Probabilistic TFCE: A generalized combination of cluster size and voxel intensity to increase statistical power*, NeuroImage 185, 12-26, 2019

T Spisak, et al., *Purkinje cell number-correlated cerebrocerebellar circuit anomaly in the valproate model of autism*, Nature Scientific Reports, in press, 2019

T Spisák, Zs Pozsgay, Cs Aranyi, S Dávid, P Kocsis, G Nyitrai, D Gajári, M Emri, A Czurkó, ZT Kincses, *Central sensitization-related changes of effective and functional connectivity in the rat inflammatory trigeminal pain model.* Neuroscience, 2016.

T Spisák, P Ossenblok, A Colon, W Compagner, SA Kis, G Opposits, M Emri, *Individual functional statistical parametric networks related to interictal epileptic EEG discharges: a dynamic sliding-window study* ECR [S.l.] C-2088, 10.1594/ecr2014/C-2088, 2014.

T Spisák et al., *Voxel-wise motion artifacts in population-level whole-brain connectivity analysis of resting-state fMRI*. PLoS One 9(9): e10494, 2014.

scientometric data

peer-reviewed (+under review) journal publications	16(+5)
conference papers, posters	25
Independent citations	182
H-index	8
(co-)supervision (Msc/PhD students)	5/2