

## PERSONAL INFORMATION

## Miklós Emri

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## WORK EXPERIENCE

01/06/2016–Present

## Senior research fellow

Department of Medical Imaging, Clinical Center, University of Debrecen, Debrecen (Hungary)

- *Multimodal brain network analysis*
- *Multimodal image processing*
- *Biostatistics*
- *Education: Medical imaging, Programming in R, Python , Statistics*

01/06/2005–31/05/2016

## Senior research fellow

Department of Nuclear Medicine, Clinical Center, University of Debrecen, Debrecen (Hungary)

- *MiniPET development*
- *Brain network analysis*
- *Multimodal image processing*
- *Biostatistics*
- *Education: PET method. Medical imaging, Programming in C++, R*

01/06/1995–31/05/2005

## Research fellow

PET Center, Medical and Health Science Center, University of Debrecen, Debrecen (Hungary)

- *PET physics and development*
- *Brain activation analysis*
- *Multimodal image processing*
- *Education: PET methods, biophysics*

01/09/1987–31/05/1995

## Research assistant

Biomedical Cyclotron Laboratory, University of Debrecen, Debrecen (Hungary)

- *Biophysics research and methodological developments*
- *Software development for PET- radio-chemistry automation*
- *Education: biophysics and statistics*

01/09/1985–30/08/1987

## Research Assitant

Interdisciplinary Laboratory, Institute for Nuclear Research of the Hungarian Academy of Sciences, Debrecen (Hungary)

- *Mass spectroscopy*
- *Statistical analysis*

## EDUCATION AND TRAINING

05/2005–Present

### PhD degree

Doctoral School of Molecular Medicine, University of Debrecen, Debrecen (Hungary)

Thesis: Optimization of the protocol of brain activation PET studies, Supervisor: prof. Dr. Lajos Trón

01/09/1979–16/06/1984

### Master of Science in Physics

Faculty of Science, Kossuth Lajos University, Debrecen (Hungary)

01/09/1974–15/06/1978

### High-school graduation

Ságvári Secondary School, Kayincbarcika (Hungary)

## PERSONAL SKILLS

Mother tongue(s)

Hungarian Sign Language

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	C1
08629, Á078100					

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
Common European Framework of Reference for Languages

Communication skills

- Good verbal and written communication skills both in an office environment and with research communities.
- Experienced at giving presentations to large audiences.

Organisational / managerial skills

- Excellent organisational and prioritisation skills in research and R&D projects.
- Excellent leadership skills, especially gained as software development management (currently responsible for a team of 4 people)

Job-related skills

Experienced in methodological development arising from medical imaging, bioinformatics and statistics.

Other skills

### PhD supervision

- Monte-Carlo Based Analysis of the Performance Characteristics of MiniPET Scanner (Sándor Attila Kis, 2010)
- Voxel-Wise Motion Artifacts in Population-Level Whole-Brain Connectivity Analysis of Resting-State fMRI (Tamás Spisák, 2015).
- Effective Connectivity Based Brain Network Analysis (Csaba Aranyi, predoctoral PhD student)
- Statistical Analysis of Hemodynamic Patterns in Different Pathologies. (Mariann Nagy, 3<sup>rd</sup> year PhD student)

## ADDITIONAL INFORMATION

### Selected publications

- Aranyi C, Opposits G, Nagy M, Berényi E, Vér Cs, Csiba L, Katona P, Spisák T, **Emri M**: *Population-level Correction of Systematic Motion Artifacts in fMRI in Patients with Ischemic Stroke*. 2016, accepted in Journal of Neuroimaging
- Opposits G, Kis SA, Trón L, Berényi E, Takács E, Dobai JG, Bognár L, Szűcs B, **Emri M**: *Population based ranking of frameless CT-MRI registration methods*, Zeitschrift für Medizinische Physik, 2015, 25 (4), 353-367
- Spisák T, Jakab A, Kis SA, Opposits G, Aranyi C, Berényi E, **Emri M**: *Voxel-Wise Motion Artifacts in Population-Level W Brain Connectivity Analysis of Resting-State fMRI*. 2014, PLOS ONE 9 (9), 19
- Clemens B, Puskas S, Besenyi M, Spisak T, Opposits G, Hollody K, Fogarasi A, Fekete I, **Emri M**: *Neurophysiology of juvenile myoclonic epilepsy: EEG-based network and graph analysis of the interictal and immediate preictal states*. 2013, Epilepsy Research 106:(3) 357-369.
- **Emri, M.**, Kisely, M., Lengyel, Z., Balkay, L., Márián, T., Mikó, L., Berényi, E., Sziklai, I., Trón, L., Tóth, Á.: Cortical projection of peripheral vestibular signaling. J. Neurophysiol 89 (5), 2639-2646., 2003.

### Statistics:

- 96 publications (32 Hungarian), IF: 129.9
- 881 independent citations, Hirsh-index: 18

### Projects

- *Application of Multiprocessor and GRID Technique in Medical Imaging*. 2002-2005. IKTA-00006/2001. Consortium leader
- *MiniPET R&D*. 2001-2003. NKFP OM 1A/0010. The leader of the MiniPET software development
- *Multimodális képfeldolgozás R&D*. 2006-2009. Jedlik Ányos NKFP A1-2006-0017. The leader of the University of Debrecen research team
- *Central Nervous System Imaging: Development SiPM based PET and Multimodal Image processing System*. 2010-2013. FP7 ENIAC\_08-1-2011-0002. The leader of the image processing development group
- *In vivo Macro-Scale Connectom in Different Pathology*. 2013-2017. KTIA\_NAP\_13-1. Coordination of the methodological developments and statistical analysis
- *SCOPIA: Development of software-assisted clinical tools based on endoscopic diagnostics*. 2015-2018. VKSZ\_14-1-2015-0072. The leader of the virtual bronchoscopy project

### Memberships

- 1987 – Hungarian Society of Nuclear Medicine
- 2010 – Hungarian Society of Neuroradiology
- 2010 – European Association of Nuclear Medicine