

	GL leader	Martin Lamoš, PhD
1	CEIPEX RESEARCH TOPIC LEVEL2	Brain & Mind Research: deep brain stimulation
2	RESEARCH GROUP	Multi-modal and Functional Neuroimaging
3	TOPICS/FOCUS	The future of deep brain stimulation in the treatment of parkinson's disease
4	SUMMARY	This fellowship is based at the Multimodal and Functional Neuroimaging at Masaryk University (Martin Lamoš, Ivan Rektor) Our research focuses on developing novel noninvasive electrical stimulation methods for the central nervous systems, using advanced high-frequency (kHz) supraphysiological waveforms aimed at improving treatments for Parkinson's disease and related movement disorders. We combine clinical studies in patients and healthy volunteers with theory and computational modelling. Our teams have access to advanced electrophysiology, medical imaging, and unique opportunities to work with patients carrying deep brain stimulation (DBS) implants, enabling both acute and chronic recordings from implanted electrodes. Collaboration with the Bioelectronics Materials and Devices group (Prof. E. Glowacki) at the Brno University of Technology CEITEC campus is also envisioned as a part of this project. A successful fellowship can be tailored to individual expertise, ranging from theoretical and computational modelling, through fundamental biophysics of kHz stimulation, to preclinical electrophysiology and clinical studies with human participants
5	RG WEBPAGE/CONTACT	https://mafil.ceitec.cz/en/