	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**	Next-generation noninvasive neurostimulation technologies for treatment of neurodegenerative disorders
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/