## I B Instruments & Methods for Biology & Medicine

19 May 2022 • Faculty of Biomedical Engineering CTU in Prague • Kladno

08:00	Registration
08:50	Conference opening
09:00	Invited lecture: Lasers in medicine prof. Ing. Helena Jelínková, DrSc. Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering
<b>Telemedicine and eHealth</b> guarantor dr. Mužík 9:45 – 10:45	Review of technologies for young patients with diabetes         Pavel Trnka         Design of an educational game for children with diabetes         Aneta Buchtelová         Creating a methodology for optimizing the used technologies that are tailored to the patient with diabetes based on monitoring of his behavioral and physiological data – Study design
	Martina Vlasáková         Post-stroke telerehabilitation using mirror therapy in virtual reality         Ondřej Antoš
10:45	Coffee break
Diagnostic Imaging guarantor doc. Hozman 11:00 - 12:00	Flow determination in pulmonary arteries using transluminal gradient Evgeniia Mardanshina Soft tissue visualization in micro-CT imaging – Fuzzy logic aided image transfer function design
	Branislav Gašpar         In silico Energy Balance of an MRI coil         Jaroslav Marek         Volume, shape and dimensions analysis of the tissue specimen after the cervical conization         Tereza Kislingerová
12:00	Lunch break
13:00	Invited lecture: Electromagnetics-based hyperthermia therapy for treatment of brain cancer Dario Rodrigues, Ph.D. University of Maryland School of Medicine, Baltimore, MD, USA
<b>in Biomedicine</b> tor doc. Vrba 45 – 14:45	Electromagnetics-based hyperthermia therapy for treatment of brain cancer         Dario Rodrigues, Ph.D.         University of Maryland School of Medicine, Baltimore, MD, USA         Catheter navigation system for RF liver ablation         Jakub Kollár         Microwave hyperthermia treatment planning algorithms         Ksenia Kulaková         Predicting temperature of tissues during head and neck microwave hyperthermia         Matouš Brunát         Brain heating by microwave hyperthermia
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notechnologiesEM field in BiomedicinedicineEM field in ComedicinePospíšilováEm field in Biomedicine16:15G	Electromagnetics-based hyperthermia therapy for treatment of brain cancer         Dario Rodrigues, Ph.D.         University of Maryland School of Medicine, Baltimore, MD, USA         Catheter navigation system for RF liver ablation         Jakub Kollár         Microwave hyperthermia treatment planning algorithms         Ksenia Kulaková         Predicting temperature of tissues during head and neck microwave hyperthermia         Matouš Brunát         Brain heating by microwave hyperthermia         Jan Rédr         Coffee break         The use of functionalized nanofiber membrane as a system for Escherichia coli detection         Leontýna Varvařovská         Use of functionalized nanofibers in olfactory practice         Ján Varga         Bionanosensors in early-stage theragnostics         Aleksei Pashchenko         Preparation of nanofibers for binding of liposomes and retrospective view