

**University of Szeged, Albert Szent-Györgyi Medical School
Department of Medical Physics and Informatics**

Topic list (2023/2024):

Supervisor	Topic
Prof. Ferenc Peták	Respiratory consequences of mechanical ventilation in experimental models
Prof. Ferenc Peták	Respiratory consequences of cerebral hypoperfusion in experimental models
Prof. Ferenc Bari	Experimental modelling of cerebral hypoperfusion
Prof. Ferenc Bari	Nanomedicine as therapeutic option for stroke
Prof. Tibor Nyári	Investigation of the pattern of deaths in Hungary
Dr. József Tolnai	Monitoring of physiological processes with telemedicine tools
Dr. Gergely Fodor	Respiratory mechanical investigations in small animal models
Dr. Tibor Szabó	Redox proteins for biosensor application
Dr. Árpád Márki and Dr. Attila Nagy	Applications of 3D printing in medicine
Dr. László Égerházi and Dr. Tibor Szabó	3D printed microfluidic devices for biophotonic applications
Dr. László Égerházi and Dr. Ferenc Rárosi	Evaluating the capabilities of generative artificial intelligence in validating the accuracy of medical documentations
Dr. Ferenc Rárosi	Application of classification methods and prediction models in biomedical research
Dr. Ferenc Rárosi	Statistical hypothesis testing in biomedical research
Dr. Péter Makra	Data collection and analysis problems in respiratory mechanics
Dr. Péter Makra	Haemoglobin correction in the multimodal imaging of the cortex
Dr. Mónika Szűcs	Application of statistical methods in biological and medical research
Dr. János Lückl	The electrophysiological analysis of the ictal-interictal continuum in acute and subacute encephalopathies
Dr. János Lückl	Analysis of the spreading depolarizations with electrophysiological methods in animal and clinical research