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Óbuda University, Budapest, Hungary

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***RESEARCH & INNOVATION TRANSFORMING EUROPEAN HEALTHCARE***

Permanent Representation of the Republic of Slovenia to the European Union  
Boulevard du Régent 45-46, 1000 Brussels

# Agenda



## Introduction of

- Myself
- My research
- My research centre (HECON)
- Research at HECON
- Óbuda University (OU)
- Research capabilities at OU



# Me and my research

**Studies:** medical doctor, MBA, PhD

**Experience:** 3 yrs clinical, 17 yrs pharma (10 years international), >5 yrs academia

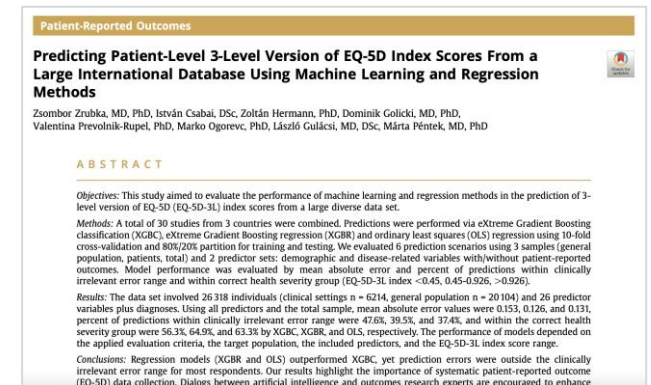
**Research area:** health economics and outcomes research

- Systematic literature review, meta-analysis
- Health economic modelling, health technology assessment
- Quality of life, patient-reported outcomes, psychometric validation of instruments
- Evidence assessment for digital health, and artificial intelligence in medicine

**Leadership international projects:** workgroup lead in ENOTTA COST action, board member in EcoAction (EIT), contributor in BUR-EB, Pecunia; scientific co-chair of the Digital Health Special Interest Group in ISPOR, the leading professional society of health economics and outcomes research globally: PICOTS-ComTeC a framework to define digital health interventions

**Collaboration with Slovenian scientists:** Institute for Economic Research

**Author:** of 143 scientific publications, journal article 51 (D1: 19, Q1: 12, Q2: 7), citations: 568



# The Health Economics Research Center

**Key colleagues:** Prof László Gulácsi DSc, Prof Márta Péntek DSc,

**Publications:** >770 total, >380 journal articles (D1 > 50, Q1 > 60), citations ~5000

**Research area:**

Health technology assessment, outcomes research, costing

Quality of life, patient-reported outcomes (e.g., Hungarian EQ-5D value-set)

Evidence synthesis, evidence-based medicine, pharmaceuticals, medical devices, digital health

**International research projects:** COMAC/HSR, BIOMED/PECO, DERMA, ENQual, CEEQNET, EuroCoDe, EUNetHTA, EuroVaQ, EURHOMAP, ASSPRO CEE 2007, H&W, BURQOL-RD, HealthPros, Pecunia, BUR-EB, ENOTTA

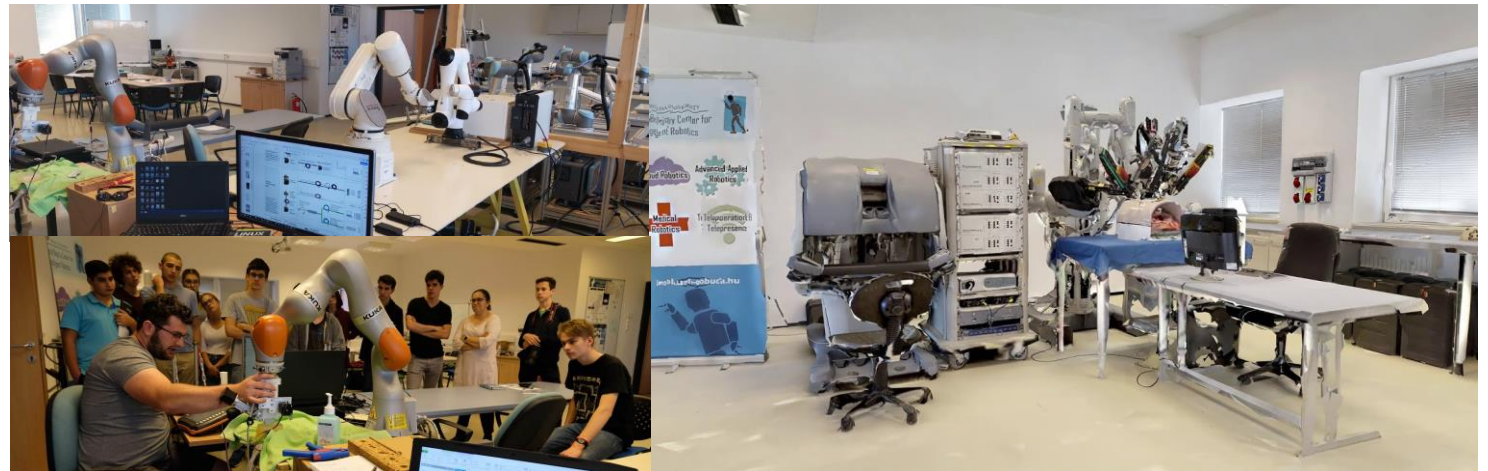
# Óbuda University

~ 13.000 students, >420 academic staff

Among top 1200 universities in THE, technical university with highest scientific performance in the Visegrad 4 region. First university with Doctoral School of Innovation Management in Hungary, and a University Venture Capital Fund in the region. ERC grant holder and partner in several H2020 projects.

## Strategic research areas

- Intelligent robotics and industry 4.0
- Health informatics
- Artificial intelligence
- Cybersecurity



# Health research capabilities at Óbuda University

*We are ready to join consortia with technological development and health economic evaluation capabilities*

## Intelligent robotics

Lab automation in the pharmaceutical industry  
High throughput sample transfer in digital pathology  
Robotic surgery (active participation in the Da Vinci Reserch Kit community)  
Robotic spine surgery  
Robotic ultrasound scanning  
Image-guided interventions based on combined modalities  
Technologies: ROS1,ROS2, OpenCV, Python, Tensorflow, Pythorch, 3DSlicer, cloud frameworks, machine vision with deep learning, 3D printing, prototype development

## Physiological controls

Robust control of positive systems  
Identification of physiological systems, artificial intelligence  
Physiological system modeling, e.g., (model-based control and optimisation)

- Modeling tumor growth under angiogenic signaling and chemotherapy
- Physical activity and meal disturbance modeling for artificial pancreas application

## Health informatics

Biosignal data acquisition technologies (remote patient monitoring, movement monitoring, harsh environments)  
Medical imaging, image processing (digital pathology, cancer research)  
Smart device design, medical device development (including MDR capabilities), and rapid prototyping

## HECON – Health Economics

Systematic literature review, meta-analysis  
Costing  
Health economic modelling, health technology assessment  
Quality of life, patient-reported outcomes, psychometric validation of instruments  
Evidence assessment for digital health, and artificial intelligence in medicine



ÓBUDAI EGYETEM  
ÓBUDA UNIVERSITY

# Thank you! Questions?

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