



Currently, advances in artificial intelligence (AI) – predominantly in machine learning – seem to be changing different areas of medicine almost on a daily basis. Wherever sufficient data is available, AI systems can learn to classify images or signals, to recognize clinically relevant events, to predict the outcome after incidents or medical intervention or otherwise find novel patterns that are relevant to physicians.

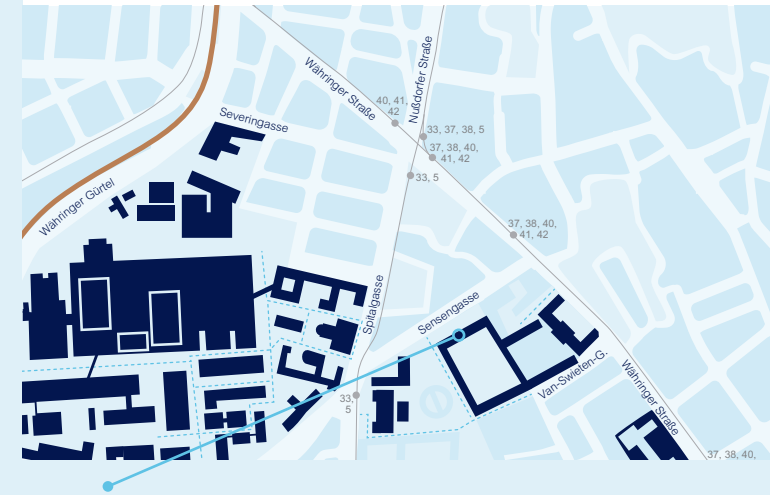
The Institute of Artificial Intelligence and Decision Support (AID) at the Medical University of Vienna, having emerged from two renowned previous institutes, has performed basic and applied research in AI and machine learning for more than 30 years. Based on several successful collaborations with clinical and pre-clinical research groups, the AID is offering its expertise to all such institutions at the Medical University of Vienna and beyond, while also cooperating with other AI centers of excellence.

This symposium thus serves a two-fold purpose:

- Several applications of AI in clinical medicine and biology will be presented, providing examples for other potential research partners as to what AI can achieve.
- Based on position statements by the collaborating clinicians and life scientists the potentials of AI in various medical fields will be discussed, and questions on how much AI medicine really needs, and what the limitations of such systems are, will be addressed.

Everyone interested in following the progress of AI in medicine is cordially invited.

Please register until 5th November by sending an E-Mail to sec-ai@meduniwien.ac.at.



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 CENTER FOR MEDICAL STATISTICS,
INFORMATICS AND INTELLIGENT SYSTEMS
MEDICAL UNIVERSITY OF VIENNA

Invitation Artificial Intelligence in Clinical and Preclinical Settings

Can AI revolutionize medical practice?

12th November 2019

Medical University of Vienna, 1090 Vienna

www.meduniwien.ac.at/ai

Please be aware that photographs and/or video footage will be taken at the event. These may be used for the purpose of documenting or reporting the event and published in print and online media, on various social media platforms and on MedUni Vienna's website.

Programme

2.00 pm

Welcome

2.05 – 2.25 pm

Introduction: Artificial Intelligence at AID and Beyond

Georg Dorffner, Institute of Artificial Intelligence and Decision Support, Medical University of Vienna

2.25 – 2.50 pm

Invited Talk:

Identifying Predictive Image Patterns for Disease Course and Treatment Response

Georg Langs, Department of Biomedical Imaging and Image-guided Therapy, Medical University of Vienna

2.50 – 3.15 pm

Case Study 1:

Diagnosing Cardiac Amyloidosis Based on MRI

Diana Bonderman, Department of Medicine II
Asan Agibetov, Institute of Artificial Intelligence and Decision Support, Medical University of Vienna

3.15 – 3.40 pm

Case Study 2:

Predictive Modelling using DNA Methylation

Thomas Mohr, Institute of Cancer Research, Medical University of Vienna and ScienceConsult
Alexander Tolios, Department of Blood Group Serology and Transfusion Medicine, Medical University of Vienna

3.40 – 4.00 pm

Coffee Break

4.00 – 4.25 pm

Case Study 3:

Deep Learning for Nuclei Segmentation: Towards a Robust Method for Microscopic Tissue Analysis

Isabella Ellinger, Institute of Pathophysiology and Allergy Research
Amirreza Mahbod, TissueGnostics and Institute of Artificial Intelligence and Decision Support, Medical University of Vienna

4.25 – 4.50 pm

Case Study 4: Predicting Relapse in Hyperthyroidism

Wolfgang Raber, Department of Medicine III
Georg Dorffner, Institute of Artificial Intelligence and Decision Support, Medical University of Vienna

4.50 – 5.15 pm

Invited Talk: AI in the Eye

Ursula Schmidt-Erfurth, Department of Ophthalmology and Optometry, Medical University of Vienna

5.15 – 5.40 pm

From Data to Knowledge to Cure

Matthias Samwald, Institute of Artificial Intelligence and Decision Support, Medical University of Vienna

5.40 – 6.00 pm

Wrap up and General Discussion

6.00 pm

Buffet and networking

Part of this research is a contribution to our research focus “Data Science for Personalized Medicine” (cemsis.meduniwien.ac.at/ds4pm/)