



UNIVERSITÄT
HEIDELBERG
ZUKUNFT
SEIT 1386

WORKSHOP HUMAN INTELLIGENCE MEETS ARTIFICIAL INTELLIGENCE

4-5 Oct 2023

Marsilius-Kolleg, Heidelberg University

Abstract: Human intelligence (HI) emerges through the coordinated activity of a highly intricate and interconnected neural network, our brain. Understanding HI thus rests on understanding how this network implements cognitive processes, a question tackled by cognitive and neuro-scientists for decades. On the other hand, in the field of artificial intelligence (AI), the past few years have witnessed considerable progress in developing and understanding artificial deep neural networks. These models share common principles with the brain, sometimes even borrowing ideas from neuroscientific principles, although they also differ in important ways. As it stands, using modern AI tools to improve our understanding on HI, and vice versa, is a scientific field still in its infancy.

This workshop brings together experts on HI and AI to highlight recent progress in these areas and stimulate novel ideas bridging both fields. Our overarching questions are:

- 1) How can AI help to better understand HI?
- 2) How can we leverage deep learning models to explain neural mechanisms underlying HI?
- 3) How can HI inspire the development of AI?

Our invited speakers have focused and are currently focusing on these questions. We hope that this workshop will connect researchers on HI and AI, and identify novel collaborations between the fields.

This workshop is funded by Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany's Excellence Strategy - EXC 2181/1 - 390900948 (the Heidelberg STRUCTURES Excellence Cluster) and FoF4 of Heidelberg University.

Organized and supported by:



STRUCTURES
CLUSTER OF
EXCELLENCE

FIELD OF FOCUS 4
SELF-REGULATION AND REGULATION
INDIVIDUALS AND SOCIETIES

