



Prof. Dr.-Ing. Dorit Merhof

Lehrstuhl für Bildverarbeitung
Fakultät für Informatik und Data Science
Universität Regensburg

Challenges of Image Analysis in Biomedicine and Applications in Digital Pathology and Nephrology

Advanced imaging technologies result in large and complex scientific data repositories and require dedicated algorithms for analysis and visualization. In combination with advancements in artificial intelligence, especially deep learning, this opens new research perspectives at different levels of the image analysis pyramid.

In digital pathology, i.e., digitalization and automated analysis of histological slides, the application of artificial intelligence offers the potential to transform diagnostic pathology into quantitative "computational" pathology. This requires development of automated approaches for image analysis tasks such as tissue segmentation, detection of immune cells, segmentation of anatomical structures, or quantification and disease classification.

Such analysis approaches are also of interest in renal histopathology, to support an understanding of kidney diseases by developing "pathomics" analyses, i.e., large-scale extraction of quantitative image features that might detect previously unrecognized morphological attributes to characterize diseases and disease progression. These deep learning and pathomics approaches may facilitate quantitative pathology diagnostics towards a more precise and personalized nephropathology.

Time: Monday, 12 June 2023, 16:30h
Location: Seminarraum Physiologie
VKL 4.1.29
Universität Regensburg
and Zoom

To get the Zoom link please contact:
michaela.kritzenberger@ur.de