Astrid Berg

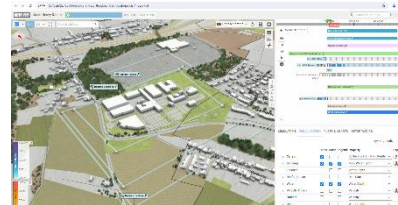VRVis Zentrum für Virtual Reality und Visualisierung Forschungs-GmbH
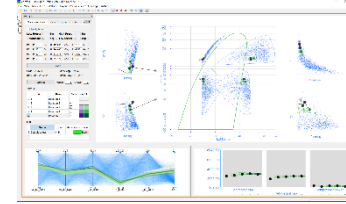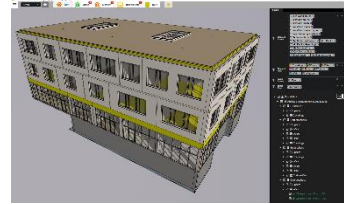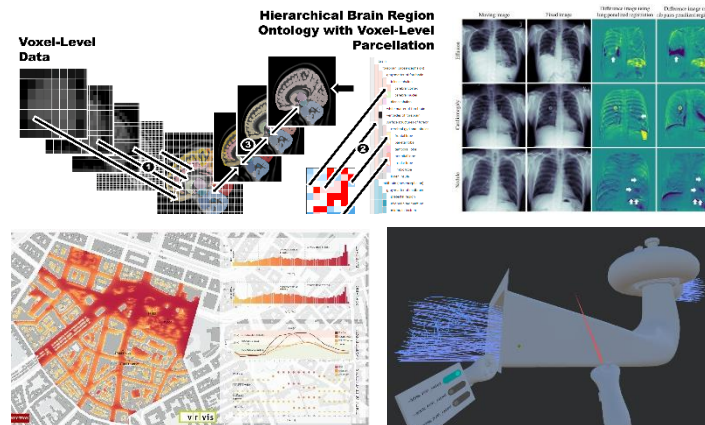Vienna, Austria

VRVis: 24 Years of Experience in Translational Research in Visual Computing

2000-2023

Scientific Excellence ➤ **Successful Translation to Industry**

- 55 finished PhDs
- 230 Interns
- 180 finished Masters Theses
- >950 Publications
- >90 Awards and Best Papers
- 10 of 17 SDGs
- 67,2 Mio Euro Technology Value Creation Over the Last 10 Years
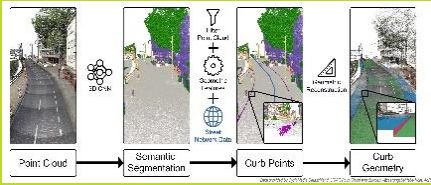- 300 Partner from Industry and Science
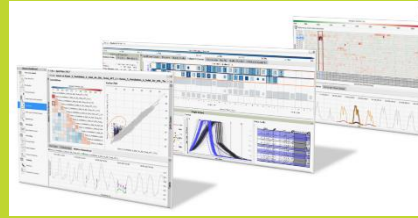- 3 Spin-offs
- 35 Patents

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ASAI Networking Event 2024
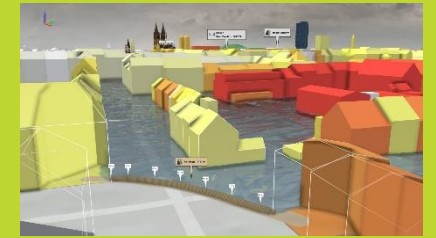
vrvis

Application Areas

Point cloud segmentation and 3D reconstruction in the **construction industry**

Visual analytics and data science for the **energy sector and Industry 4.0**

Simulation and web-based interactive visualization for the **automotive industry**
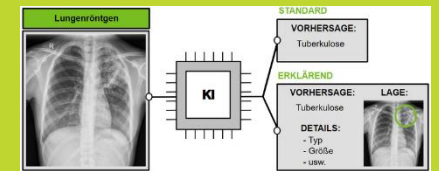

Hydrodynamic modeling for **disaster management and climate change adaptation**

Solutions for **digital radiology**

Visual computing is the bridging technology that connects computers with people and supports them on their way to a sustainable, digitized future.

Explainable artificial intelligence for more **trustworthy medicine solutions**
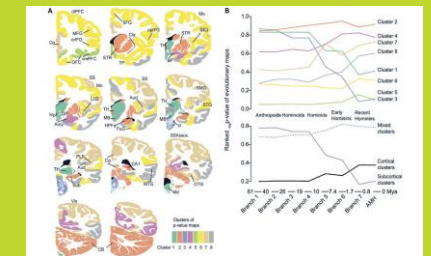

3D and tactile technologies for **creative industries and cultural heritage**

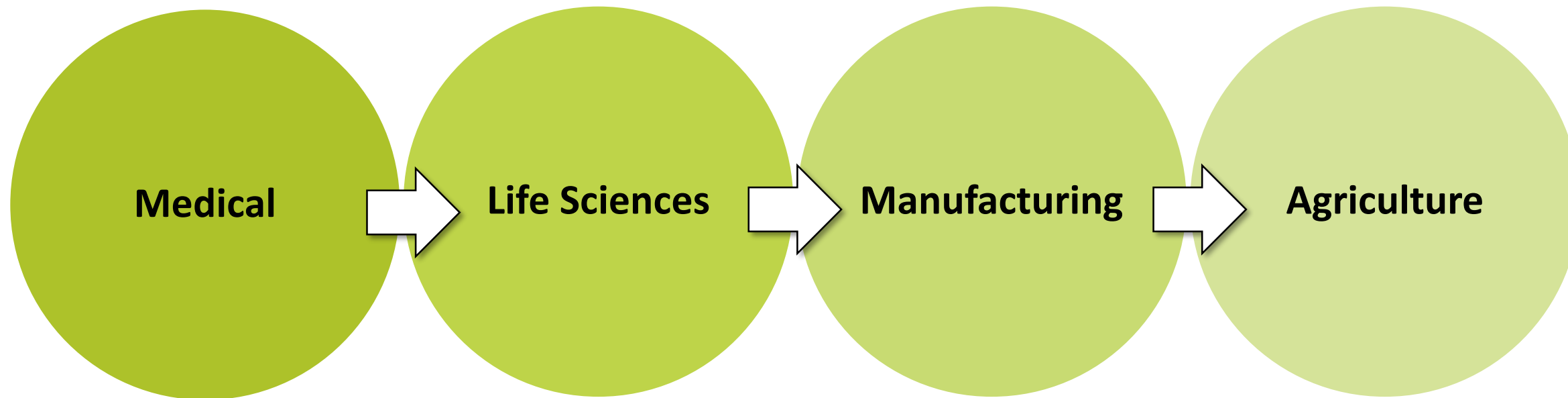Virtual reality applications as **training tool**

Visual computing for **geology and planetary science**

Applications for data-driven **life sciences**

vrvis

(Biomedical) Image Informatics Group (Head: Katja Bühler)

Medical → Life Sciences → Manufacturing → Agriculture

FFG - AI4Green

PETAL

Agri-PET/MRI
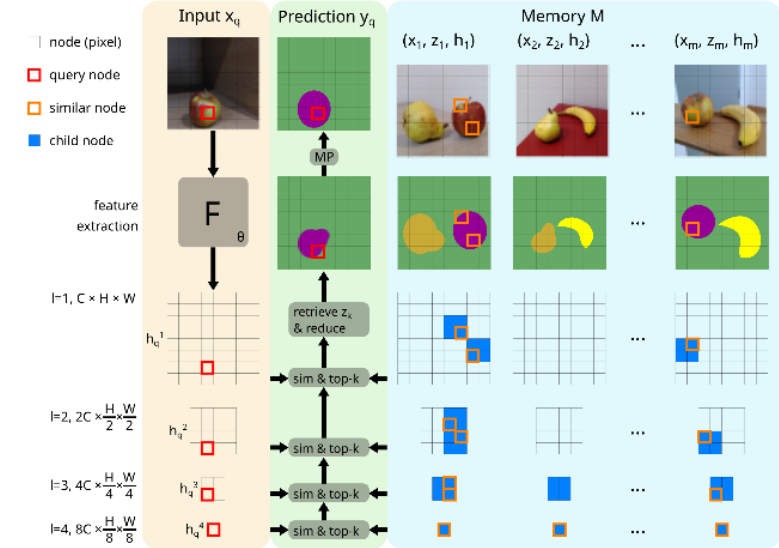
Selected AI Research Topics at VRVis - Medicine and Life Sciences

Explainable and Trustworthy AI

Domain aware medical image classifier interpretation by counterfactual impact analysis

Shape Reconstruction
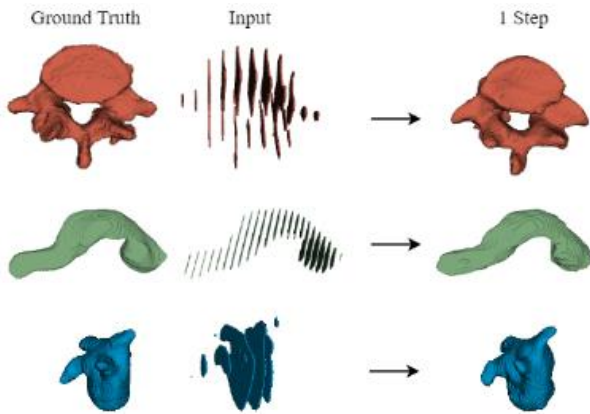
Fast Medical Shape Reconstruction via Meta-learned Implicit Neural Representation
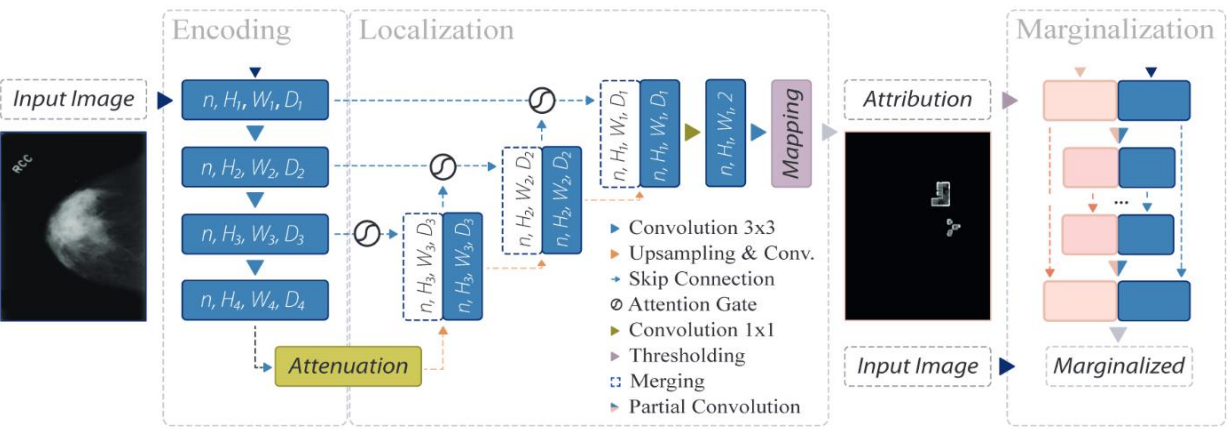
Continual Learning

PARMESAN: Parameter-Free Memory Search and Transduction for Dense Prediction Tasks

Multi-modal Segmentation

Soft Tissue Sarcoma Co-Segmentation in Combined MRI and PET/CT Data

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ASAI Networking Event 2024
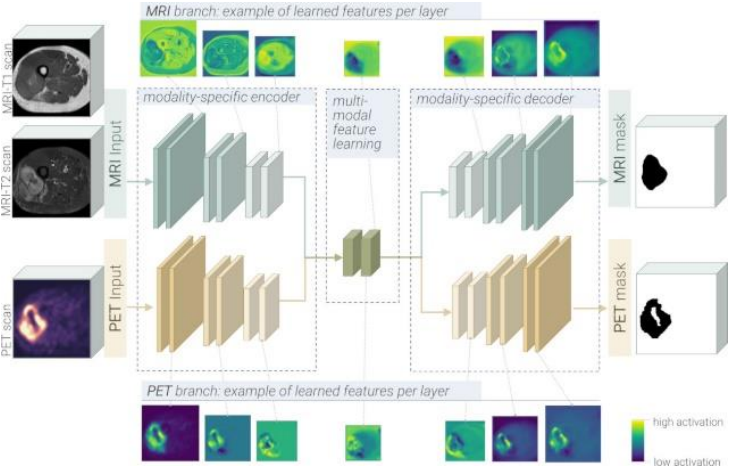
vrvis

Point Cloud Reconstruction

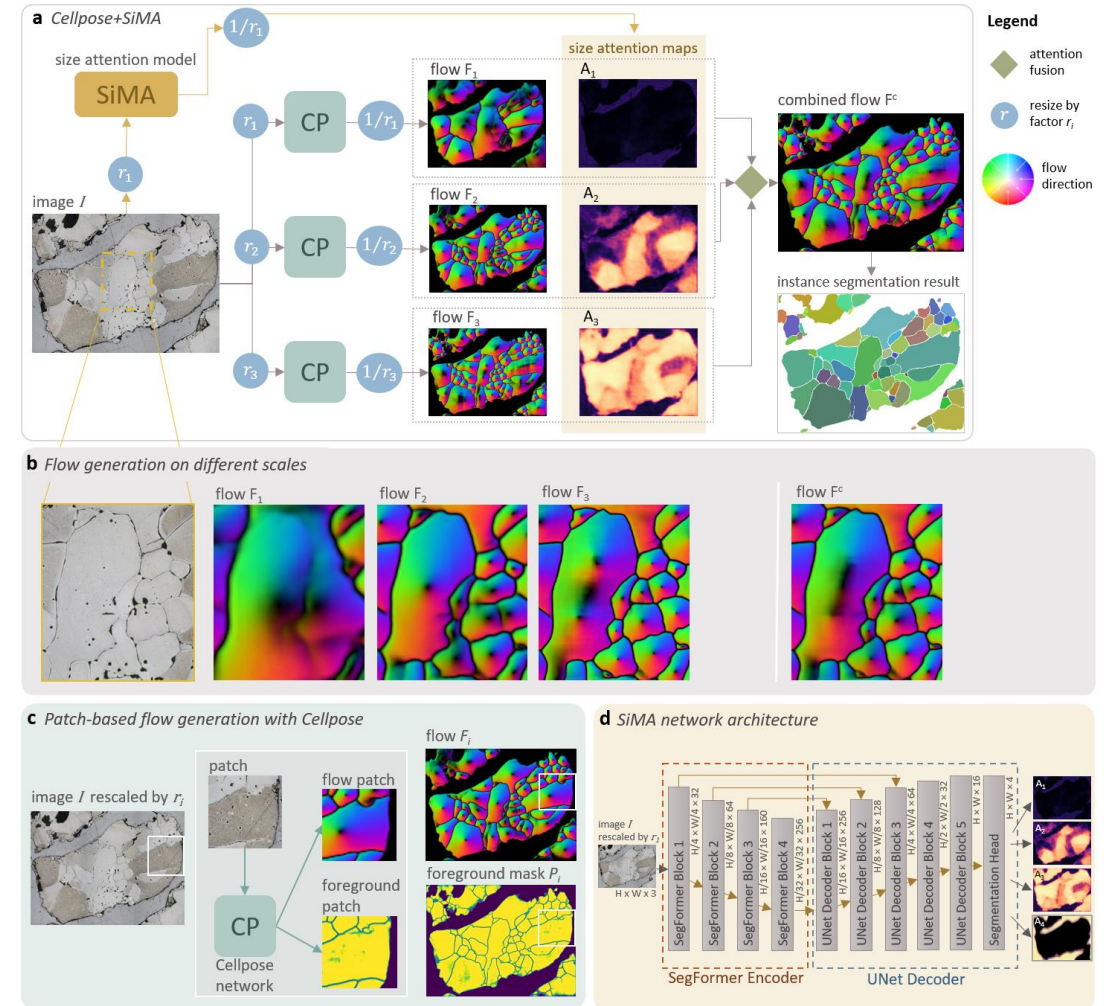Classification of Urban Point Clouds Using 3D CNNs
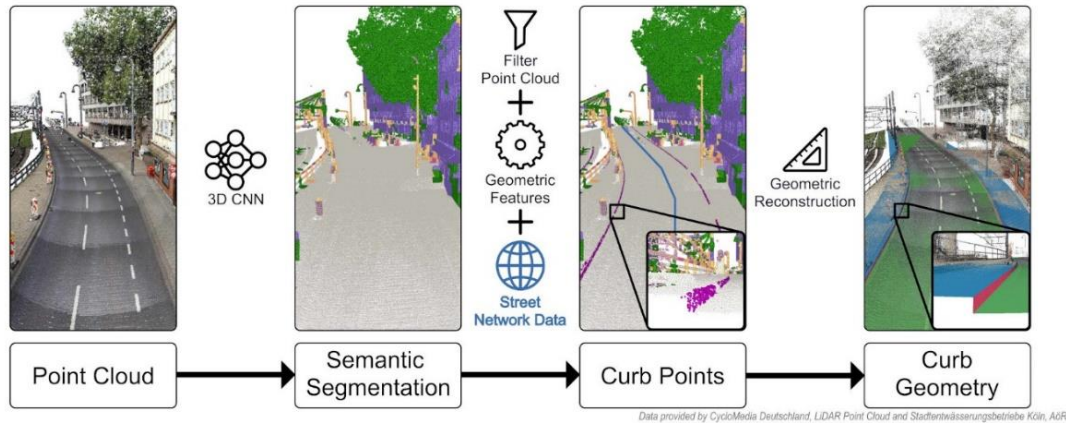
Geometric NerF reconstruction from rebar images with depth map
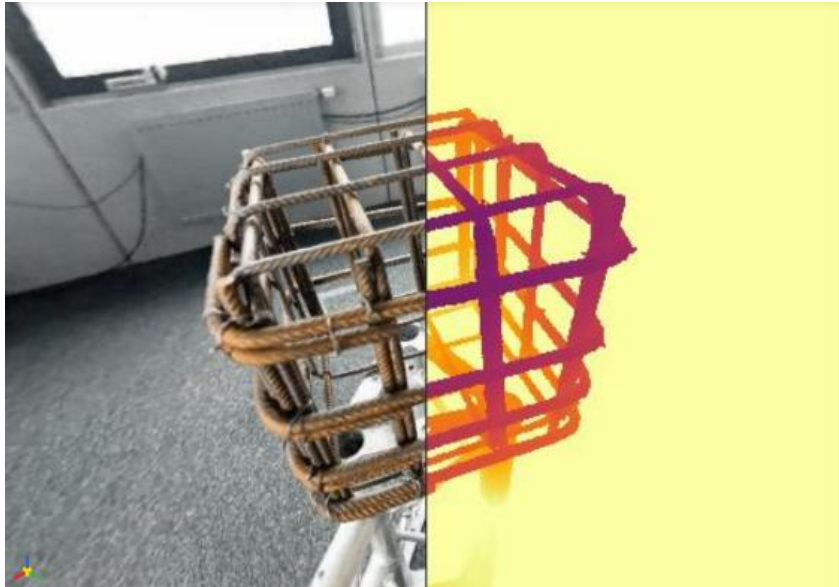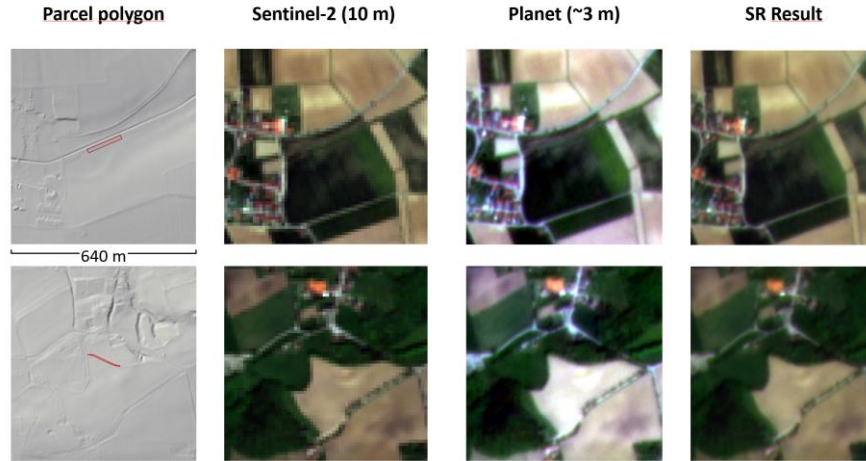

2D and 3D Segmentation

Multiscale Attention-Based Instance Segmentation for Measuring Crystals With Large Size Variations

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Selected AI Research Topics at VRVis - Climate Science and Agriculture
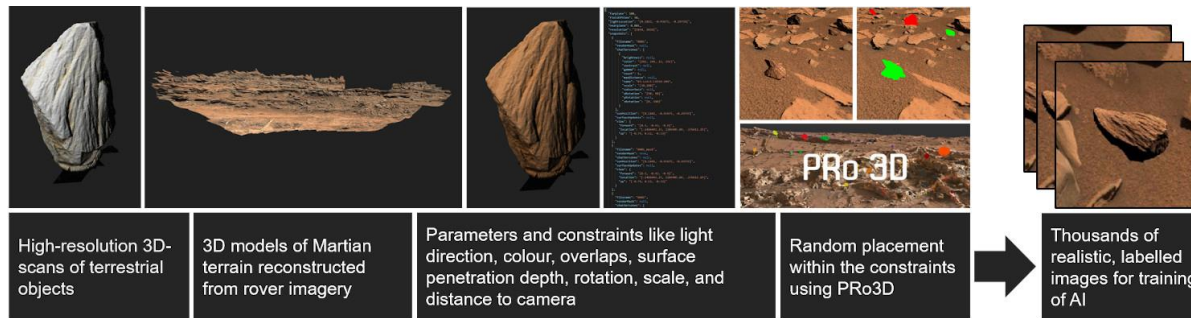
Super-Resolution

SMAIL: Super-resolution-based monitoring through AI for small land parcels
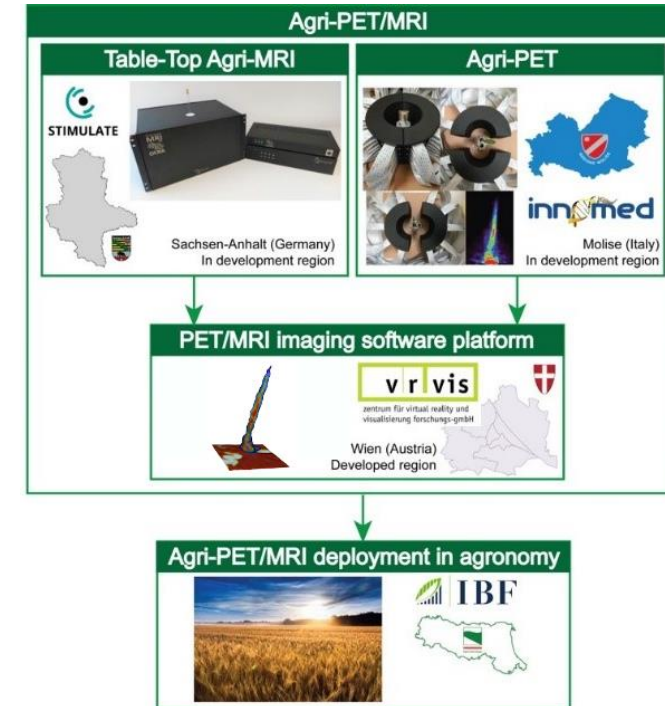

Synthetic Data Generation

Planetary scientific target detection via deep learning: A case study for finding shatter cones in Mars rover images

Multi-modal Registration

Agri-PET/MRI: A new imaging system to detect stress in crops and increase yields

Physics-Informed AI

- Future Topic in COMET Modul ClimaSens: Flood and microclimate modelling

Thank you for your Attention!

Please visit us at

https://www.VRVis.at/

Save the date:

**IEEE VIS 2025 @ Vienna
1.11. - 7.11.2025**

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