TECHNISCHE UNIVERSITÄT DRESDEN

Faculty of Environmental Sciences, Institute of Photogrammetry and Remote Sensing

EXTRUSO

Europäische Union

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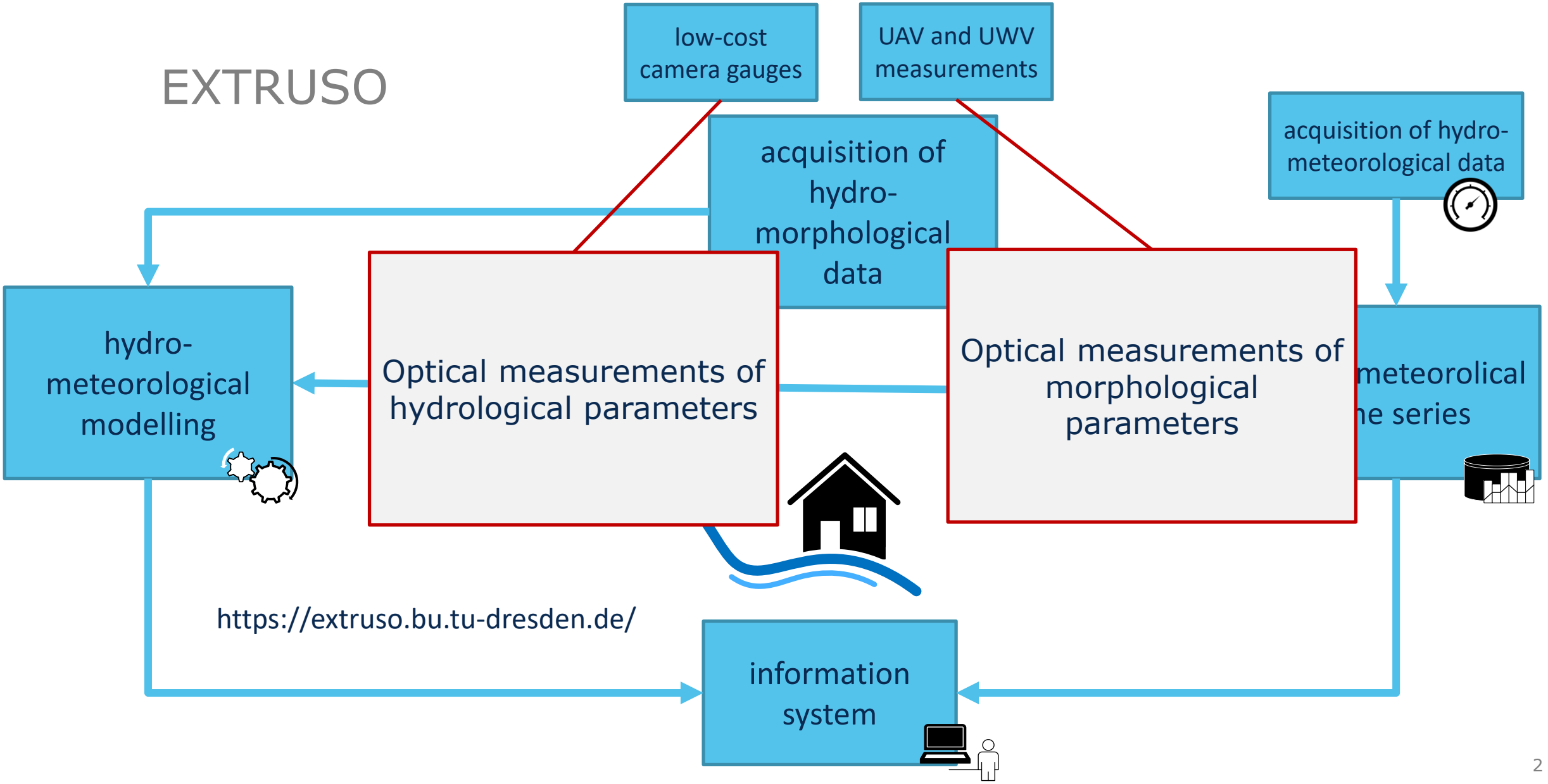
Photogrammetric Low Cost Systems for Flash-Flood Analysis

Hannes Sardemann,
Anette Eltner

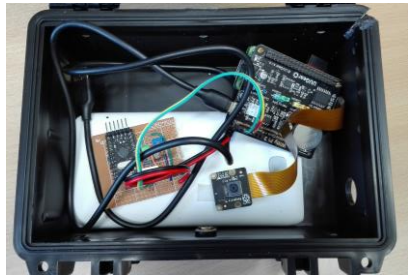
Geneve, 04.12.2017

DRESDEN concept
Exzellenz aus Wissenschaft und Kultur

EXTRUSO

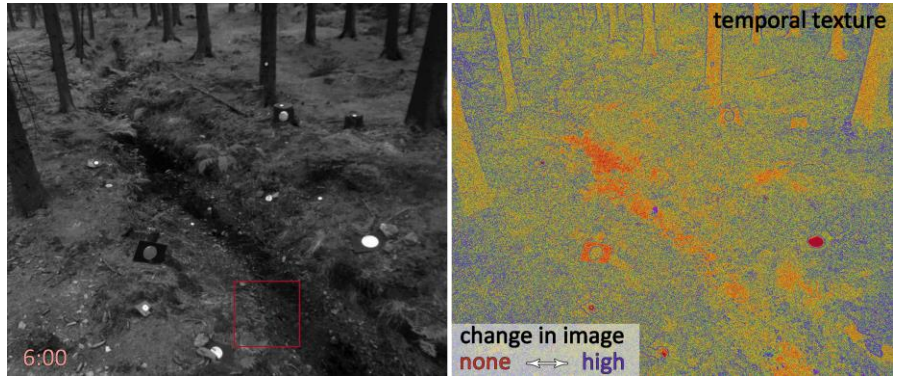

low-cost camera gauges
UAV and UWV measurements
acquisition of hydro-morphological data
acquisition of hydro-meteorological data
hydro-meteorological modelling
Optical measurements of hydrological parameters
Optical measurements of morphological parameters
meteorolical ne series
https://extruso.bu.tu-dresden.de/
information system

Low cost camera-based gauging station



Raspberry-Pi based camera case

Automatic waterline detection



M. Kröhnert, R. Meichsner (2017): Segmentation of environmental time lapse image sequences for the determination of shore lines captured by hend-held smartphone cameras

Projection from image into 3D model

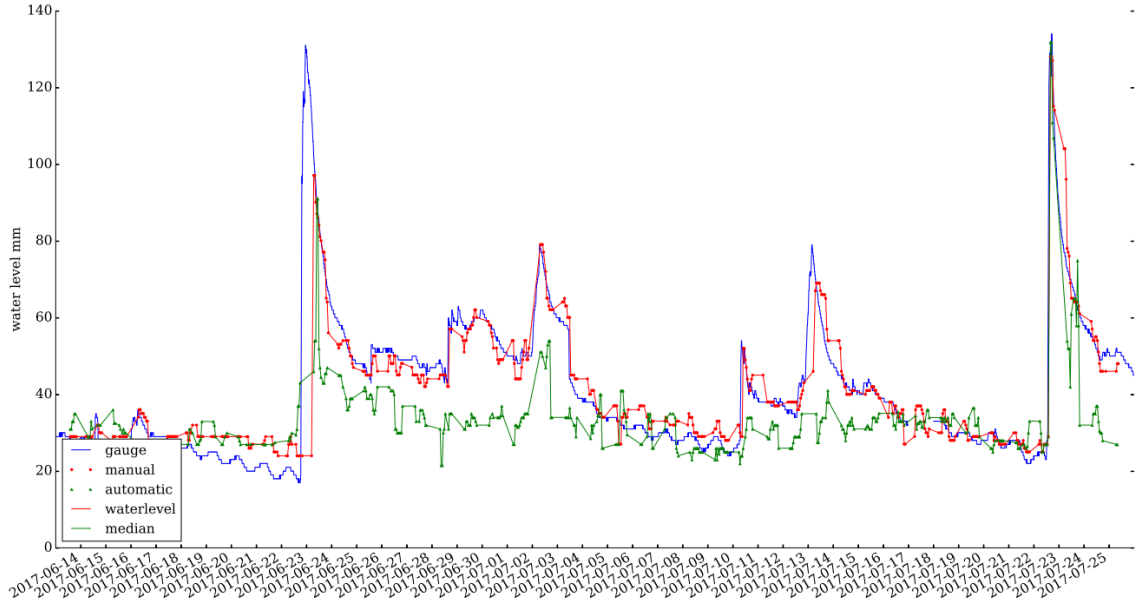
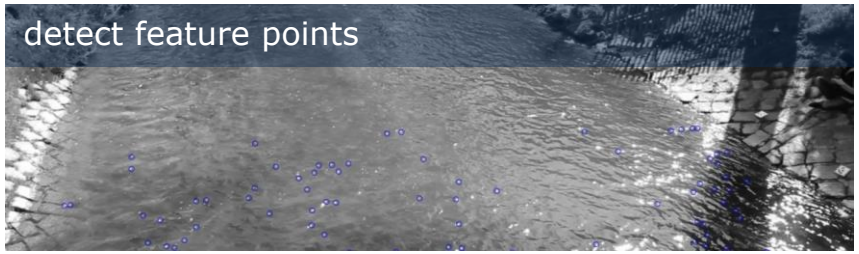
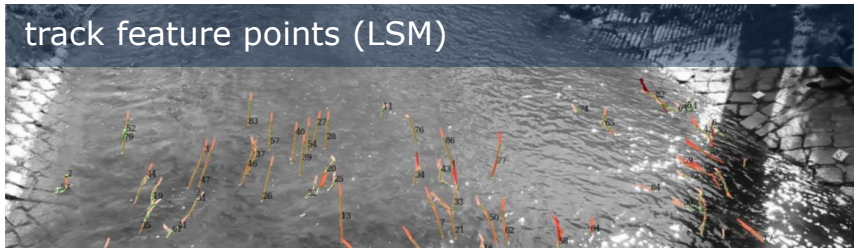
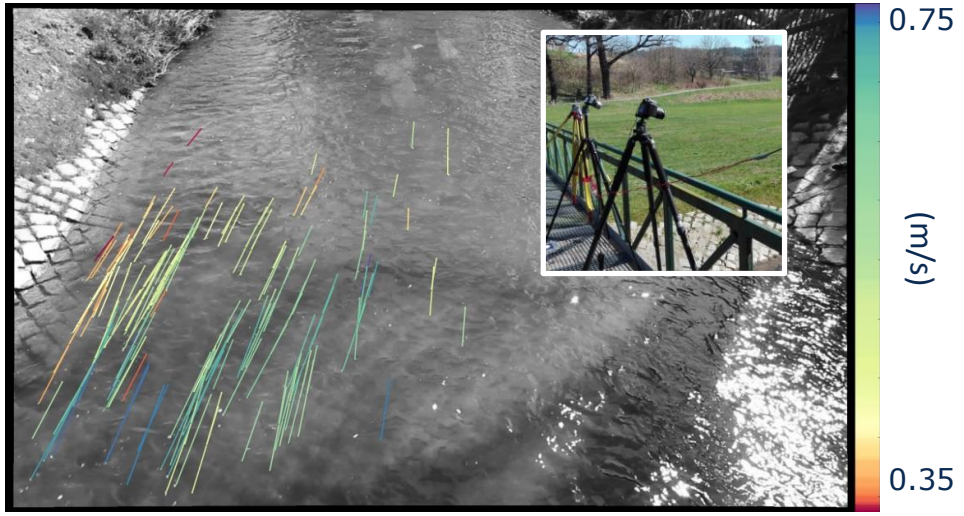
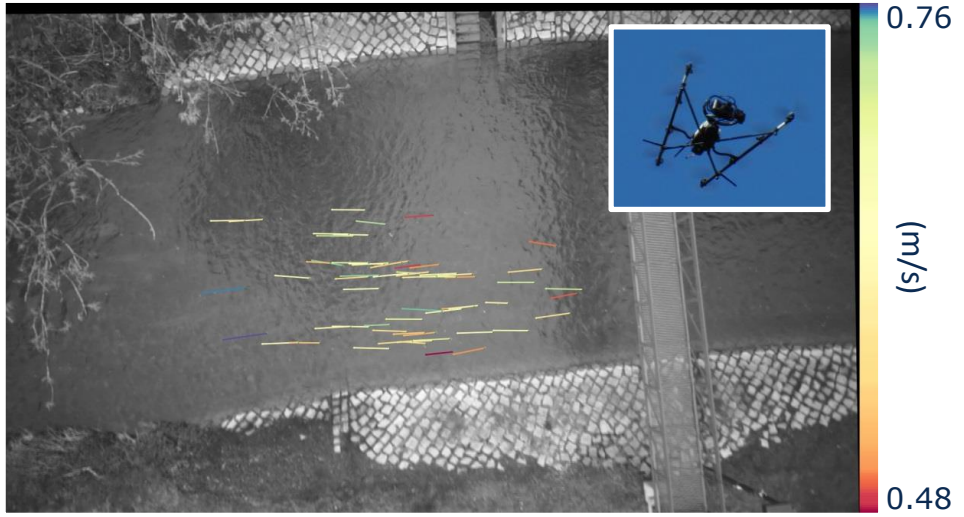


Image-based flow velocity measurement



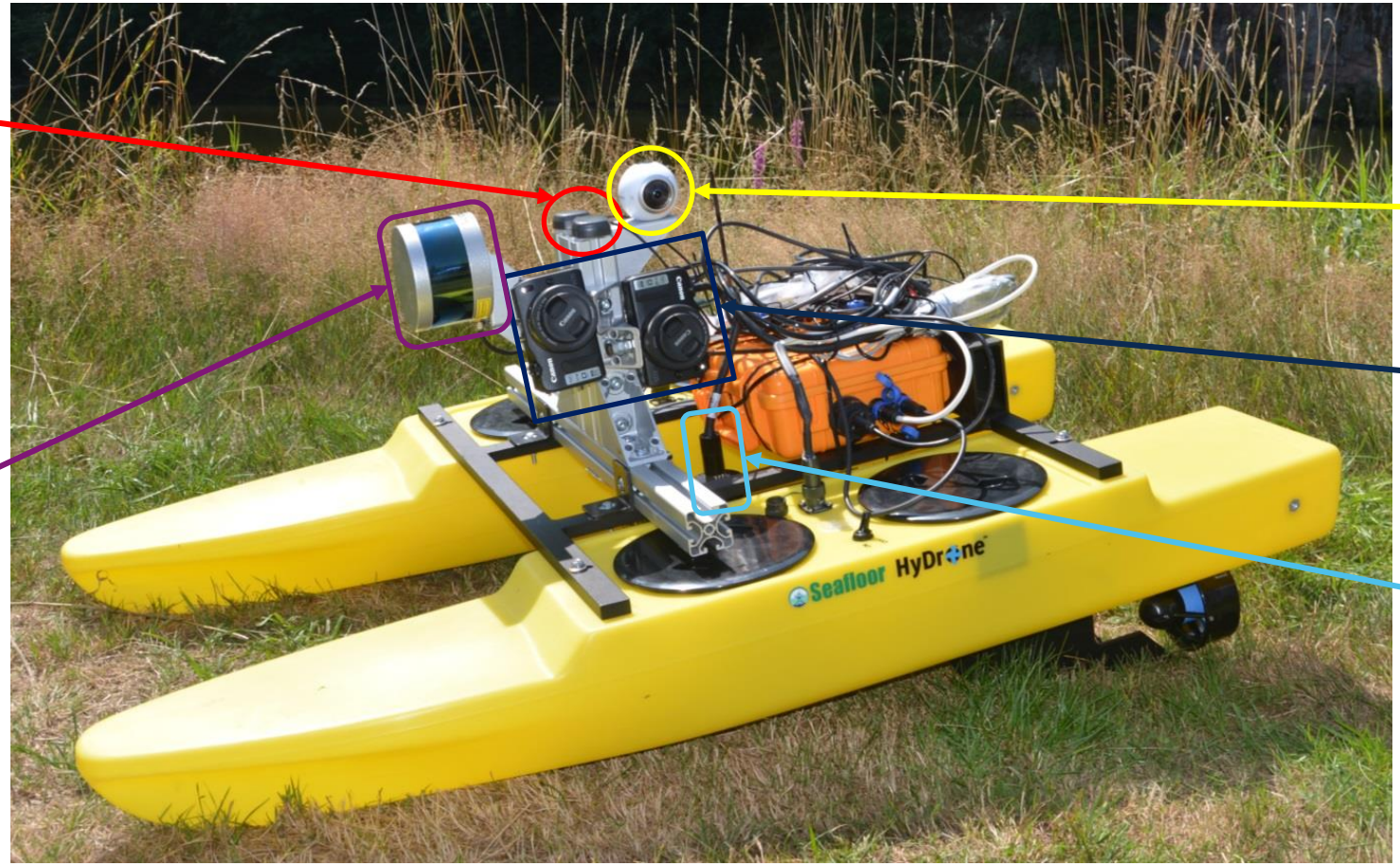




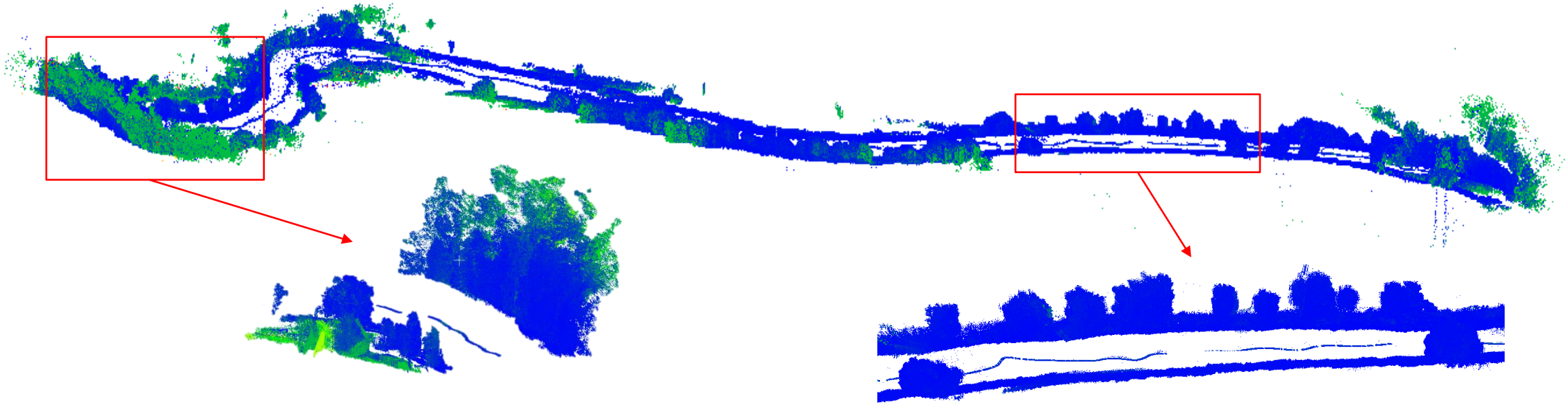


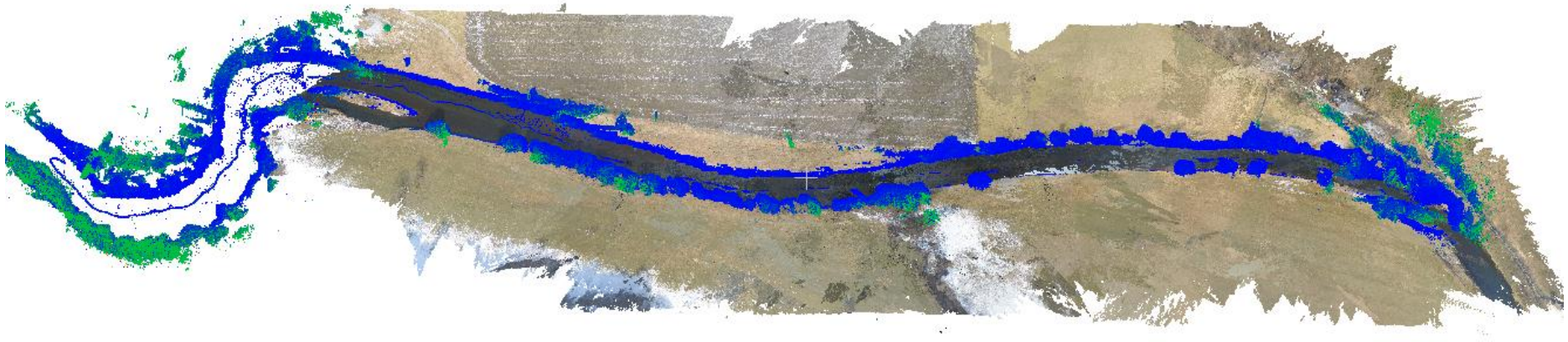
Optical Measurement of morphological Parameters

Unmanned Water Vehicle (UWV) as multi-sensor platform

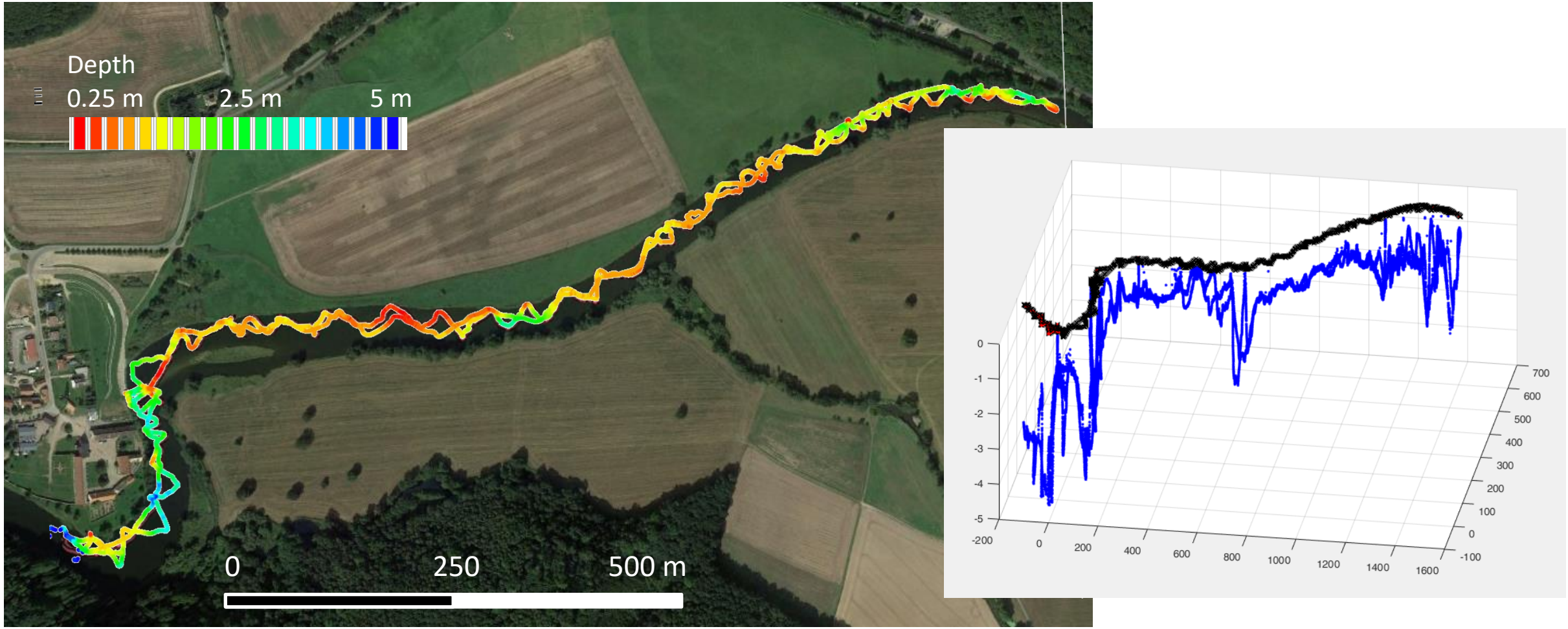


3D-pointclouds of the river banks





River profile from single beam echosounder



Thank you for your attention

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