Summer School: Satellite-based Hydrological Data Assimilation

	TUESDAY 26/08	WEDNESDAY 27/08	THURSDAY 28/08
8:15-9:00	Introduction/Welcome	Introduction of the day	Introduction of the day
9:00-10:00	Global Hydrology: Monitoring and Modelling, and Operation (Henrik Madsen)	Global Hydrology: Model Calibration and Human Water-use (Petra Döll)	Soil DA/Multi-Sensor DA (Gabrielle De Lannoy)
10:15-11:15	Satellite Gravity and Water Cycle (Guillaume Ramillien)	Calibration and Assimilation using Altimetry (Peter Bauer-Gottwein)	Practical Session – Satellite Gravity DA based on PyGLDA
11:30-12:30	Soil Remote Sensing: Opportunities and Challenges (Anke Fluhrer)	Insights of Hydrogeology, In-situ Groundwater, and Validation (Mohammad Shamsudduha)	Continued
12:30-13:30	LUNCH	LUNCH	LUNCH
13:30-14:30	Introduction to Data Assimilation: Kalman Filter and Ensemble Kalman Filter applied to a Simple Bucket Model; Generating Ensembles; Design Matrix; Soil Data, Gravity Data; Operators in Space and Time; and Scale Mismatches (Maike Schumacher)	GRACE(-FO) Post Processing and Challenges (Ehsan Forootan)	Data Assimilation of Current and Future Gravity Missions (Jürgen Kusche)
14:45-15:45	Practical Session: Data Assimilation for a Simple Model	Practical Session: Analysis Tools AAU's Matlab GUI and the Python-based SaGEA Toolbox (Fan Yang & Nooshin Mehrnegar)	Hydrological Data Assimilation Case Studies (Maike Schumacher & Leire Retegui-Schiettekatte)
16:00-17:00	Continued	Addressing Technical Challenges of GRACE(-FO) Data Assimilation in Practice	Feedback
	Dinner	Dinner and Come Together	