



UPLIFT Kick-Off Workshop July 7th/8th 2022

Program Thursday July 7th

08:30 AM	Roland Pail	Introduction to UPLIFT
09:30 AM	Peter Bunge	Geodynamics
10:00 AM	Coffee Break (30 min)	
10:30 AM	Roland Pail	Geodesy
11:00 AM	Michael Krautblatter	Landscape Evolution
11:30 AM	Anke Friedrich	Geology
12:00 PM	Questions and Answers	
12:15 PM	Lunch Break (75 min)	
13:30 PM	Brian Wernicke	Uplift history of the Colorado Plateau, western USA: perspectives from the Grand Canyon region
13:45 PM	Beth Kahle	Uplift and seismicity in Southern Africa
14:00 PM	Gareth Roberts	Geological and geomorphological constraints on histories of mantle convection
14:15 PM	Taylor Schildgen	Quantifying drainage-divide migration from orographic rainfall over geologic timescales
14:30 PM	Peter van der Beek	High resolution exhumation histories from $4\text{He}/3\text{He}$ thermochronology: a status update of the COOLER project
14:45 PM	Nina Kukowski	Record and non-record of vertical motion
15:00 PM	Coffee Break and Poster Session (90 min)	
16:30 PM	Sergei Lebedev	Seismic tomography: resolution, uncertainty, upper mantle structure and links to geology and topography
16:45 PM	Maria Tsekhmistrenko	Mantle plume and lower mantle seismic tomography
17:00 PM	Christophe Zaroli	Global seismic tomography using SOLA-Backus-Gilbert inversion
17:15 PM	Patrick Cordier	Rheology: doing the splits between nature and the laboratory
17:30 PM	Martin Horwath	Bedrock displacements in polar regions from GNSS: measurement, analysis, and interpretation
17:45 PM	Hansjörg Kutterer	3D regional displacement fields with a glance at uncertainty



Friday July 8th

08:30 AM	High Performance Computing: Featuring Nils Kohl
09:00 AM	Panel Discussion: Uncertainty
10:30 AM	Coffee Break (30 min)
11:00 AM	Panel Discussion: Signal Separation
12:30 PM	Lunch Break (75 min)
13:45 PM	Gender and Diversity: Featuring Prof. Dr. Joann Stock
14:45 PM	Final discussion, conclusion, outlook
16:15 PM	Break
16:30 PM	Social Event
19:00 PM	Dinner at Augustiner Biergarten, Steinebach am Wörthsee

List of participants and affiliation

¹ Institute of Astronomical and Physical Geodesy, TUM

² Geophysics, Dept. of Earth and Environmental Sciences, LMU

³ Geology, Dept. of Earth and Environmental Sciences, LMU

⁴ Landslide Research, Engineering Geology, TUM

⁵ Numerical Mathematics, TUM

⁶ Earth Observation Data Science, German Aerospace Center and TUM

UPLIFT spokespersons: Prof. Roland Pail¹, Prof. Peter Bunge²

UPLIFT Proposer Team: Prof. Dr. Anke Friedrich³, Prof. Dr. Stuart Gilder², Prof. Dr. Urs Hugentobler¹, Prof. Dr. Heiner Igel², Prof. Dr. Michael Krautblatter⁴, Dr. Markus Wiedemann², Prof. Dr. Barbara Wohlmuth⁵, Prof. Dr. Xioaxiang Zhu⁶

UPLIFT Post Doc: Yi-Wei Chen¹



UPLIFT PhD students: Hamish Brown², Andreas Burkhart⁵, Eugenio D'Ascoli², Alina Ludat³, Dieke Gerritsen², Isabel Papanagnou², Maximilian Rau⁴, Berta Vilacis²

UPLIFT Scientific Coordinator: Dr. Christina Plattner¹

Associated researchers: Dr. Sara Carena³, Dr. Beth Kahle³, Dr. Marcus Mohr², Dr. Stefanie Rieger³, Dr. Bernhard Schuberth², Dr. Ingo Stotz², Dr. Michael Wack²

Associated PhD students: Mugabo Dusigizimana³, Roman Freissler², Matthias Graf¹, Nicolas Hayek², Jincheng Ma², Josef Niedermeir¹, Gabriel Robl², Marius Schlaak¹, Ayo Taiwo²

External guest scientists and affiliation:

Prof. Dr. Patrick Cordier, Université de Lille, France

Prof. Dr. Martin Horwarth, TU Dresden, Germany

Nils Kohl, Friedrich-Alexander-Universität Erlangen, Germany

Prof. Dr. Nina Kukowski, Friedrich-Schiller-Universität Jena, Germany

Prof. Dr.-Ing. Hansjörg Kutterer, Karlsruher Institut für Technologie, Germany

Prof. Dr. Sergei Lebedev, University of Cambridge, UK

Dr. Gareth Roberts, Imperial College London, UK

Prof. Dr. Taylor Schildgen, Helmholtz Centre Potsdam, Germany

Prof. Dr. Joann Stock, California Institute of Technology

Dr. Maria Tsekhmistrenko, Dublin Institute for Advanced Studies, Ireland

Prof. Dr. Peter van der Beek, Universität Potsdam, Germany

Prof. Dr. Brian Wernicke, California Institute of Technology

Dr. Christophe Zaroli, Univeristé de Strasbourg, France



The UPLIFT project, 10 PhD projects and and PostDoc project

Nr.	Topic	Supervisor	Candidate
1	Determination of contemporary uplift rates from geodetic observations	Hugentobler ¹ Zhu	Hamed Karimi
2	Interpretation of gravity and gravity changes in light of uplift processes	Pail, Bunge	Betty Heller
3	Paleoflow directions, hydrodynamic regime and sedimentation rate changes from magnetic, thermochronological and provenance studies of sedimentary sections related to the CR-Yellowstone plume system	Gilder, Friedrich	Dieke Gerritsen
4	Construction of an event- and process-based geological model	Friedrich, Gilder	Alina Ludat
5	Linking of seismic tomography models and geodynamic Earth models	Igel, Bunge	Isabel Papanagnou
6	Adjoint geodynamic model enabled by high-performance computing	Bunge, Kranzlmüller	Hamish Brown
7	Transient landscape evolution through response models to plate and plume mode	Krautblatter, Friedrich	Maximilian Rau
8	The Lithospheric transfer function	Bunge, Pail	Berta Vilacis
9	Model adequacy under uncertainty	Wohlmuth, Melas	Andreas Burkhart
10	Curation of data for interactive visualization of the coupled dynamic Earth models	Kranzlmüller, Wiedemann	Eugenio D'Ascoli
Post Doc	Data integration, model interfaces and knowledge transfer		Dr. Yi-Wei Chen