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Data Driven Modeling of Complex Systems

This talk will demonstrate hybrid techniques that combine machine learning with standard methodological frameworks from complex systems science, such as networks and nonlinear dynamics, to carry out data-driven modeling of the South Asian monsoon, a complex geophysical system of great socio-economic significance. We will show two sets of results; the first will include our findings on monsoon systems evolution during the Holocene, identifying regime shifts in paleoclimate records from the Himalayas. The second set will show an algorithm that employs climate networks analysis and decision trees-based regression for forecasting monsoon from spatiotemporal reanalysis data.

The event is part of the group seminar AG Mandel-Zakharova at TU Berlin and will take place in hybrid format. For information on how to access the event, please contact: henning.reinken@itp.tu-berlin.de

Wednesday, 17.08.2022 · 11:00h · EW 731/via Zoom

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