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Title : " Land Data Assimilation"

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Abstract:

Advances in the field of satellite remote sensing have led to availability of various earth observation systems promising rich source of data to improve land surface model (LSM) simulations. How does one efficiently ingest the satellite retrieved observations (such as soil moisture, soil temperature, groundwater, etc.) into an LSM? This question has received increased attention among the modelling community. This talk shall briefly discuss the potential of data assimilation in hydrology and weather forecasting. Few research questions addressed revolve around whether direct assimilation of microwave brightness temperature can bypass the need for soil moisture assimilation? How does forward radiative transfer model deteriorate assimilation skill on regional scale? Can we improve the simulation of un-modeled irrigation processes over India? Does assimilating satellite radiances improve forecast skills in numerical weather prediction models? And finally, how do we integrate these in operational systems so that research finds meaning.