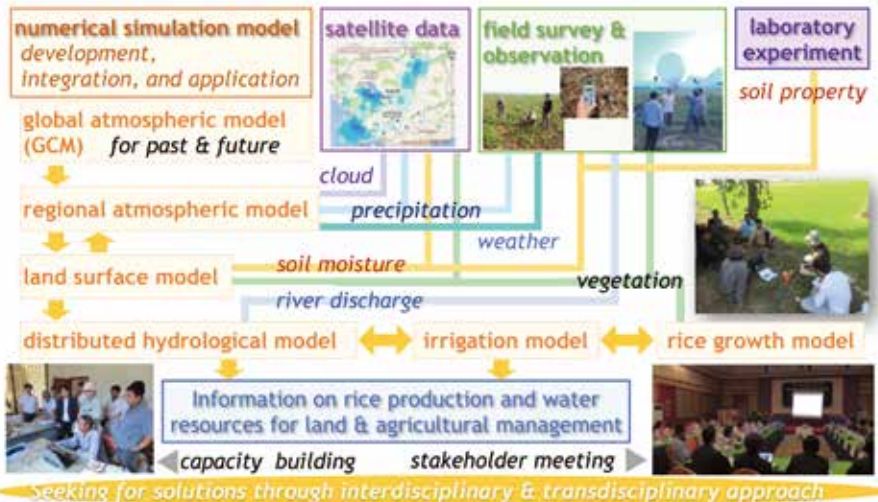


Observation and Modelling of Soil – Plant – Atmosphere Interaction for Sustainable Land Management

My research interest is “soil-plant-atmosphere interaction” in regional to country scale: how land surface condition affects local rainfall and climate through water and energy fluxes between land and atmosphere. Current research topics are (i) estimation of pedotransfer function and dielectric behavior of soils in regional scale to improve the algorithm of microwave satellite remote sensing of soil moisture; (ii) development of an integrated system of remote sensing, field observation, and numerical model simulations (data assimilation) for environmental monitoring & projection; (iii) process-based study on the mechanism of the soil-plant-atmosphere interaction; (iv) assessment of land-use change and global warming on food production and water resources; etc. Research methodology involves field survey, in-situ observation, laboratory experiment, satellite remote sensing, and numerical model development & simulations. Capacity building and implementation into the society especially in the developing countries are also the key.



Asst. Prof.
TSUJIMOTO Kumiko

