# Environmental Science Graduate Program Seminar Series

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*Professor Ankur Desai is Associate Chair and Director of Graduate Studies in the Department of Atmospheric and Oceanic Sciences at the University of Wisconsin-Madison. His lab studies a variety of phenomena on the interactions of ecosystems with climate, from regional to global scales, using long-term in-situ experiments and numerical modeling. Desai has served as past chair of the Agricultural and Forest Meteorology committee of the American Meteorological Society; and is currently editor of the Journal of Geophysical Research-Biogeosciences, member of the National Ecological Observatory Network science advisory committee, and co-PI of the North Temperate Lakes Long-Term Ecological Research (LTER) site and the Predictive Ecosystem Analyzer project (PEcAn ). He received his Bachelor's degree in computer science and environmental studies from Oberlin College, a Master's in Geography from University of Minnesota, and a Ph.D. in Meteorology from The Pennsylvania State University. Since 2007, he has lived in Madison with his wife and three daughters.*

## Ankur Desai, PhD

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**Smith 3150 | 2 - 15 - 19 | 3:00 pm - 4:00 pm**

### *Advancing the science of Earth energy and carbon exchanges*

For decades, atmospheric scientists, environmental engineers, hydrologists, ecologists, and biogeochemists have sought ways to improve measurements and models of gas exchange between Earth's surface and the atmosphere, including for water (evapotranspiration) and carbon (photosynthesis and respiration). A number of technologies and approaches, such as eddy covariance flux towers and land surface models, have emerged as a result. However, there are known biases with many of these and the persistent issue of mismatch in spatial scales of observations and models. I will present how our lab is addressing specific challenges using new approaches to calculate surface fluxes, scale them, and compare to models.