

## Jiafu Mao



**Scientist, Ecosystems Simulations Science**

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Jiafu Mao is a research scientist with the Ecosystems Simulations Science group in the Environmental Sciences Division and the Climate Change Science Institute at ORNL.

He is currently working on different projects like the incorporation of the GLM/GCAM model systems in the CESM model (IESM project), the replication and parameter improvement of soil biogeochemical module for CLM (CSSEF project), the improvement of CLM dynamic carbon allocation using the Partitioning in Trees and Soils (PiTS) observations (SFA project), single-factor simulation and remote sensing evaluation of CLM and CESM at various spatial-temporal scales (SFA project).

Mao earned a combined MA-PhD in atmospheric sciences at Institute of Atmospheric Physics, Chinese Academy of Sciences (IAP/CAS) in 2007. During this time, he primarily researched the land ecosystem module in the global climate system model. From 2002 to 2003, he coupled an atmosphere-vegetation interaction model (AVIM) with a new generation grid-point atmosphere model and evaluated the coupled model performance regionally and globally. From 2004 to 2008, Mao established the M-SDGVM model, which was specifically designed for simulating the carbon and water cycle from point level to regional ecosystem properties over continental China at different temporal scales. After his work in China, he became a joint postdoctoral research fellow at the University of New South Wales and the Commonwealth Scientific and Industrial Research Organization (CSIRO) in Australia (Jan. 2008-Aug. 2009), where he succeeded in the linkage of the CSIRO Atmosphere Biosphere Land Exchange (CABLE) model and the National Center for Atmospheric Research's Dynamic Global Vegetation Model (DGVM) with the MK3L model, and in the systematic evaluations and applications of the coupled models.

Mao was a Postdoctoral Research Associate with ORNL from August 2009 until his staff appointment in November of 2011.

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