

4th Training Course (**Virtual**) on **New Advances in Land Carbon Cycle Modeling**

Who should attend?

Graduate students, post-docs and young scientists who want to learn modeling, data assimilation, machine learning, deep learning, and ecological forecasting
Modelers who want to gain simplicity in structure, computational efficiency for your models
Empiricists who want to use your data to constrain models toward ecological forecasting

What are you going to learn?

New theory on land carbon storage dynamics
Matrix approach to land carbon, nitrogen, and phosphorus modeling
Data assimilation system with both flux- and pool-based observations
Deep learning and machine learning to enhance process-based research
Ecological forecasting

Who is going to teach?

Lecturers and instructors

Ye Chen, Northern Arizona U, USA
Sasha Hararuk, U. of Central Florida, USA
Toby Hocking, Northern Arizona U, USA
Forrest Hoffman, ORNL, USA
Enqing Hou, Northern Arizona U, USA
Xin Huang, Northern Arizona U, USA
Yuanyuan Huang, CSIRO, Australia
Jiang Jiang, Nanjing Forestry U, China
Lifen Jiang, Northern Arizona U, USA
Junyi Liang, Chinese Agricultural U. China
Cuijuan Liao, Tsinghua U, China
Chris Lu, Sun Yat-sen U, China
Yiqi Luo, Northern Arizona U, USA
Shuang Ma, JPL/Cal Tech, USA
Daniel Ricciuto, ORNL, USA
Carlos Sierra, MPI-BGC, Germany

Ben Smith, Western Sydney U, Australia
Feng Tao, Tsinghua U, China
Ying Wang, U. of Oklahoma, USA
Mat Williams, Edinburg U, UK
Jianyang Xia, East China Normal U, China

Invited speakers

Wenjuan Huang, Iowa State U, USA
Chris Jones, Met Office, UK
Trevor Keenan, UC Berkeley, USA
Alexandra Konings, Stanford U, USA
Shilong Piao, Peking U, China
Anne Trugman, UC Santa Barbara, USA
Susan Trumbore, MPI-BGC, Germany
Will Wieder, NCAR, USA
Sönke Zaehle, MPI-BGC, Germany

When and what is your commitment?

May 17-28, 2021 of Phoenix, Arizona, US time (with the weekend on May 22 and 23 off)
You will go through 10 units of online training, one unit per day. For each unit, you will read three (units 1-8) or two (units 9 and 10) chapters, listen to corresponding pre-recorded lectures, take quizzes, do exercises according to one pre-recorded instruction, and attend one synchronized virtual meeting. You will get feedback from instructors on your answers to quizzes and exercises.

What is the cost?

Trainees pay \$400 of tuition fee to compensate for the time of instructors.
Graduate students enrolled in the course get 2 credits through Northern Arizona University
Financial support available for applications from underrepresented groups in STEM
One book, *Land Carbon Cycle Modeling: Matrix Approach, Data Assimilation, and Ecological Forecasting* (manuscripts of the e-book this year), is freely available for you.

How to apply?

Please submit your application form by **March 15, 2021** online via this link:
<https://forms.office.com/Pages/ResponsePage.aspx?id=n57UJ-GJoEqZo9NbV7K6A8KgDXP1HTJKtGtgpOD52NRUNEJHVVIaS1JXWTE1MjIFME5GQTIMMExNSC4u>

We will inform you of our decision about your application by March 29, 2021.
Please contact Dr. Lifen Jiang (lifen.jiang@nau.edu) for any questions.