

## Postdoctoral Research Associate Position in Global Forest Ecology

Forest Advanced Computing & Artificial Intelligence (FACAI) Lab  
GFBI-Hub-Purdue  
Department of Forestry and Natural Resources  
Purdue University

**Position description:** The Global Forest Biodiversity Initiative (GFBI) Hub in the Department of Forestry and Natural Resources at Purdue University (**GFBI-Hub-Purdue**) is a GFBI continental center of research, education, and public outreach. As the core of GFBI-Hub-Purdue, our Lab of Forest Advanced Computing & Artificial Intelligence (FACAI) employs the paradigm of Artificial Intelligence (AI) encompassing different state-of-the-art machine learning and statistical methods to study global, regional, and local forest resource management and biodiversity conservation. FACAI has two parallel focuses. The economic focus (FACAI-ECON) is supervised by Dr. Mo Zhou, and the ecological focus (FACAI-ECO) is supervised by Dr. Jingjing Liang. All the graduate students and post-doctoral fellows are affiliated with either FACAI-ECON, or FACAI-ECO, or both. FACAI-ECO is seeking applicants for a 12-month postdoctoral Research Associate position with strong interests and expertise in global forest ecology. The successful candidate is expected to develop research proposals and high-impact publications which connect GFBI global data and network to cutting-edge artificial intelligence research. Desirable starting time is spring or summer 2018, but can be flexible.

**Benefits:** The successful candidate will receive an annual compensation of ca. US\$47,500 with benefits. Additional support may be available pending satisfactory performance. The successful candidate will have opportunities to coordinate works at three other GFBI Hubs in China, Spain, and Switzerland.

**Qualifications:** A Ph.D. degree in forest ecology, ecology, computer science, statistics, or related fields is required. Candidates will be evaluated based on the following criteria:

- Strong quantitative skills, and oral and writing proficiency,
- Strong research background in forest ecosystems,
- Experience with AI and/or big data,
- Experience with developing successful funding proposals
- Proficiency in using R, Matlab, and other programming languages/tools

**Application:** A single pdf file containing a) the applicant's CV, b) a Vision Statement outlining the candidate's research interests, career goals, and qualifications, especially with regard to the foregoing criteria, c) two (2) representative publications/ job market paper/working papers, and d) contact information of three (3) references, should be sent to the email address listed below no later than May 1, 2018.

## Contact information:

Dr. Jingjing Liang [jjliang@purdue.edu](mailto:jjliang@purdue.edu)

<http://www.gfbinitiative.org/liang>

Assistant Professor of Quantitative Forest Ecology, Dept. of Forestry and Natural Resources, Purdue University

Adjunct Professor, Beijing Forestry University, China

Professeur associé, Université du Québec à Montréal, Canada

Associate member, Centre d'étude de la forêt (CEF), Canada

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<https://ag.purdue.edu/fnr/facai/>

*Purdue University is an EEO/AA employer. All individuals, including minorities, women, individuals with disabilities, and veterans are encouraged to apply*

The Postdoctoral Researcher assigned to the project will work in Purdue FACAI laboratory and will conduct research on biodiversity and ecosystem function using machine learning based on big data.

1. Orientation will include in-depth conversations between the PI, Jingjing Liang, and the Postdoctoral Researcher. Mutual expectations will be discussed and agreed upon in advance. Orientation topics will include (a) the amount of independence the Postdoctoral Researcher requires, (b) interaction with coworkers, (c) productivity including the importance of scientific publications, (d) work habits and laboratory safety, and (e) documentation of research methodologies and experimental details so that the work can be continued by other researchers in the future.

2. Career Counseling will be directed at providing the Postdoctoral Researcher with the skills, knowledge, and experience needed to excel in his/her chosen career path. In addition to guidance provided by the PI, Jingjing Liang, the Postdoctoral Researcher will be encouraged to discuss career options with researchers and managers at Purdue University and with students and colleagues of the Global Forest Biodiversity Initiative (GFBI) coordinated by the PI.

3. Experience with Preparation of Grant Proposals will be gained by direct involvement of the Postdoctoral Researcher in proposals prepared by the FACAI lab. The Postdoctoral Researcher will have an opportunity to learn best practices in proposal preparation including identification of key research questions, definition of objectives, description of approach and rationale, and construction of a work plan, timeline, and budget.

4. Publications and Presentations are expected to result from the work supported by the grant. These will be prepared under the direction of the PI, Jingjing Liang, and in collaboration with researchers on our proposal team as appropriate. The Postdoctoral Researcher will receive guidance and training in the preparation of manuscripts for scientific journals and presentations at conferences.

5. Teaching and Mentoring Skills will be developed in the context of regular meetings within the Department of Forestry and Natural Resources, Purdue University, in which graduate students and postdoctoral researchers describe their work to colleagues within the group and assist each other with solutions to challenging research problems, often resulting in cross fertilization of ideas.

6. Instruction in Professional Practices will be provided on a regular basis in the context of the research work and will include fundamentals of the scientific method, laboratory safety, and other standards of professional practice. In addition, the Postdoctoral Researcher will be encouraged to affiliate with one or more professional societies in his/her chosen field.

7. Technology Transfer activities will include regular contact with researchers at Purdue University and other GFBI institutions. The Postdoctoral Researcher will be given an opportunity to become familiar with the university-industry relationship including applicable confidentiality requirements and preparation of invention disclosure applications.

8. Success of the Mentoring Plan will be assessed by monitoring the personal progress of the Postdoctoral Researcher through a tracking of the Postdoctoral Researcher's progress toward his/her career goals after finishing the postdoctoral program.