

PhD opportunity in remote sensing and ecology at the Univ. of Florida

Are you passionate about using new data streams to study ecological systems? In particular, are you interested in using LiDAR and hyperspectral data? Are you keen on learning advanced computational and/or statistical methods to answer these questions? Then this PhD position might be of interest to you.

The position is with Dr. Denis Valle (School of Forest, Fisheries, and Geomatics Sciences [SFFGS], University of Florida). Dr. Valle is also affiliated with the Tropical Conservation and Development program (<http://www.tcd.ufl.edu/>) and the School of Natural Resources and Environment (<http://snre.ifas.ufl.edu/>) at UF.

Research in Dr. Valle's group currently focuses on tackling important applied problems in global change biology (e.g., land-use/land-cover change), conservation, and ecology, by applying and creating innovative models. Examples of past research can be found at <http://denisvalle.weebly.com> under the "publications" tab.

This PhD position provides an exciting opportunity to gain broad experience and expertise working with remote sensing data and will provide broad training in all associated research skills. Given the wide range of problems tackled by Dr. Valle's group, there is considerable flexibility regarding the specific project to be developed. However, we are particularly interested in projects that utilize LiDAR to understand large-scale spatial patterns regarding the 3D structure of tropical forests (e.g., for additional details, see Valle et al. 2022 *Methods in Ecol. And Evol.*) or that focus on developing novel methods to extract information from LiDAR and hyperspectral data.

What we expect from you:

- You must be highly motivated, able to undertake independent and self-motivated activity, yet you must also be a good team worker
- Great communication skills
- Experience and/or enthusiasm about computational and Bayesian methods (training can be provided)
- Relevant background in biology, remote sensing, zoology, ecology, behavioral ecology, GIS, ecological statistics, or related areas.
- Experience in computer programming (e.g., R, Python, or Matlab) will be positively viewed

- Contribute to building a collaborative and interactive local and international research team
- Produce a high quality PhD dissertation, with manuscripts written for publication
- Search for additional sources of funding during project execution
- Meet the formal admission requirements for the University of Florida and the SFFGS (<https://ffgs.ifas.ufl.edu/academics/apply/>)

This is a fully funded 4-year position and will be located at the UF campus in Gainesville, FL. This is an ideal position for a student looking to advance their computational and statistical training while developing solutions to real-world ecological problems. The successful candidate will be fully involved in project idea development, data analysis and publication of results.

If interested, please email the items listed below to drvalle@ufl.edu until Oct. 15th:

- CV with contact information
- Contact information for three professional or academic references
- Writing sample (e.g. a scientific paper, grant application, class project) that demonstrates your ability to synthesize complex information;
- One page cover letter describing:
 - a) prior research experience (if any),
 - b) career goals and interests and how they align with those from the Valle lab, and
 - c) prior experience (if any) with modelling and computer programming.

Start Date: Jan/2023 (Spring), May/2023 (Summer) or August/2023 (Fall)

Information about the University of Florida: The University of Florida (<http://www.ufl.edu>) is among the top 5 U.S. public universities, according to the 2021 U.S. News & World Report rankings. UF is a Land-Grant, Sea-Grant, and Space-Grant institution, encompassing virtually all academic and professional disciplines, with an enrollment of more than 50,000 students.

The University of Florida is an equal employment and affirmative action employer and a provider of ADA services. All qualified applicants will

receive consideration for employment without regard to age, ethnicity, color, race, religion, sex, sexual orientation or identity, national origin, disability status or protected veteran status.

Information about the City of Gainesville: Situated in the rolling countryside of north central Florida, Gainesville is much more than a stereotypical college town. Home of the University of Florida, seat of Alachua County's government and the region's commercial hub, it is progressive, environmentally conscious and culturally diverse. The presence of many students and faculty from abroad among its 99,000-plus population adds a strong cross-cultural flavor to its historic small-town Southern roots. Its natural environment, temperate climate and civic amenities make Gainesville a beautiful, pleasant and interesting place in which to learn and to live. Gainesville has been ranked as one of the best cities to live in the United States.

Florida boasts a diversity of fauna and flora common to both southern temperate and subtropical climates and is replete with springs, rivers, backwater streams, lakes, freshwater and saltwater marshes, mangrove fringes, cypress swamps, hardwood hammocks, sandhills, scrub, pine flatwoods, and rangeland. Nested between the Atlantic Ocean and the Gulf of Mexico, Florida has more than 2,000 kilometers of coastal beaches and estuaries. Special features include the Florida Keys, which constitute an archipelago of picturesque subtropical islands, and the unique Everglades, or "river of grass," which sprawls across the vast southern peninsula.