

Graduate Teaching Assistantship (PhD) Opportunity at Northern Arizona University in Flagstaff, AZ



Assessing neighborhood effects on individual tree-, patch- and stand-level responses using airborne and mobile lidar

Restoration of frequent-fire forests in the Southwest relies on tree thinning and prescribed fire to reestablish structure and process to create more resilient ecosystems. Fundamental to the design of restoration treatments are the understanding of neighborhood- or fine-scale spatial patterning, successional trajectories following treatments, the role of plant interactions, and how these factors impact ecological processes. New remote sensing platforms have recently been attracting more attention, especially (handheld) mobile laser scanning which has proven to be a fast and efficient tool for collecting forest structural data. The [Sánchez Meador Lab](#) of [Forest Biometrics and Quantitative Ecology](#) in the [School of Forestry](#) at [Northern Arizona University, Flagstaff, AZ](#) is currently seeing applicants for a [PhD graduate teaching assistantship](#) focused on developing new approaches data processing and fusion, exploration of new methodologies and algorithms, and the enhancement of the widely available remote sensing datasets such as airborne lidar and multispectral imagery to explore successional dynamics following disturbance and spatially-explicit neighborhood effects in conifer-dominated forests of the Southwest.

The position includes a full stipend, tuition waiver, and health benefits for three years. The successful applicant and Dr. Sánchez Meador will pursue additional funding depending on project details and as needed.

Applications from passionate creatives with a quantitative and analytical approach to solving complex problems are encouraged. Desire and experience to design and conduct observational and/or experimental studies that requires field work, logistics planning, oversight of a field crew, and extensive backcountry camping are positives; as well as proficiencies in forest ecology, applied statistics, programming languages such as R and/or Python, excellent oral and written communication skills, and an ability to work independently and to manage multiple responsibilities and deadlines.

Required Qualifications:

- Ability to meet all requirements for admission to the School of Forestry PhD program
- Master's degree in forestry, geography, data science, or a related field.
- Demonstrable research experience, collaboration abilities, and excellent English (written and oral) communication skills.

Preferred Qualifications:

- Experience as a college-level teaching assistant in forestry, environmental or natural sciences.
- Coding proficiency in R with experience managing and analyzing large datasets.
- Comparable enthusiasm for field work at remote sites and demanding bendovers of analyses sitting/standing in front of a computer.
- Experience in spatial mapping of trees, processing of remote sensing datasets like airborne and mobile lidar, processing dendrochronology or understory/overstory biomass samples, and/or using maximum likelihood for a model comparison framework.

Information about NAU's graduate program, including eligibility requirements, is available at <http://nau.edu/CEFNS/Forestry/Degrees>

However, interested candidates are encouraged to contact with Dr. Sanchez Meador as soon as possible using the information provided below or submit your CV, a brief written statement of interest, and copies of unofficial degree transcripts to initiate a dialog via e-mail.

Contact Information:

Dr. Andrew Sánchez Meador
School of Forestry
Northern Arizona University
Flagstaff, AZ 86011-5018, USA
Andrew.SanchezMeador@nau.edu
928-523-3448