



**Graduate Research Assistantship (PhD) – Montclair State  
University**

A graduate student is sought to work with Dr Mark Chopping and collaborators on a research project contributing to NASA's Arctic-Boreal Vulnerability Experiment (ABOVE; <http://above.nasa.gov>). The goal of the research is to use semi-automated methods in the interpretation of high resolution imagery in order to assess changes in cover and aboveground biomass of shrubs in numerous sites across the Alaskan and Canadian erect dwarf-shrub and low-shrub Arctic tundra zones over a 10- to 15-year period. The person selected for the position will enroll in the Environmental Management PhD program: <http://www.montclair.edu/csam/environmental-management-phd>

The position will entail assessing high resolution imagery availability using catalogues; locating sites; generating high resolution canopy maps and statistics from the application of the CANAPI algorithm; development of remote sensing products and metadata (with the Principal Investigator); compilation of canopy statistics at the scales of NASA/US remote sensing instruments (Landsat, MODIS, MISR, VIIRS); co-ordination with project collaborators; evaluation of the accuracy and precision of results; and manuscript preparation. The position may or may not involve travel to the Arctic (this is not a requirement); it will be based in the Department of Earth and Environmental Studies (<http://www.montclair.edu/csam/earth-environment-studies>) located in the new Center for Environment and Life Sciences (<http://www.montclair.edu/csam/cels>), in the College of Science and Mathematics (<http://www.montclair.edu/csam>). The student will also be admitted as a member of the Montclair State University Remote Sensing Lab (<http://www.montclair.edu/csam/remote-sensing-lab>)

Deadline for application: April 30.

Start: Fall 2016.

Stipend of up to \$25,000 per year, plus tuition.

Qualifications: Masters in a scientific discipline with a focus on quantitative skills.

Experience/expertise in image processing methods, GIS and Remote Sensing, and computer programming are highly desired.

Application Requirements and Deadlines: <http://tinyurl.com/gp73u6e>

For more information please contact:

Mark Chopping, Ph.D.

Professor

Department of Earth & Environmental Studies

Montclair State University

Montclair, NJ 07043

E-mail: [choppingm@mail.montclair.edu](mailto:choppingm@mail.montclair.edu)



**NASA's Arctic-Boreal Vulnerability Experiment (ABOVE)** <http://above.nasa.gov>

The ABoVE campaign will take place in Alaska and western Canada during the next 5 to 8 years. ABoVE will seek a better understanding of the vulnerability and resilience of ecosystems and society to this changing environment, as Climate change in the Arctic and Boreal region is unfolding faster than anywhere else on Earth, resulting in reduced Arctic sea ice, thawing of permafrost soils, decomposition of long-frozen organic matter, widespread changes to lakes, rivers, coastlines, and alterations of ecosystem structure and function.



**MONTCLAIR STATE**  
**UNIVERSITY**

With a proud history and a vibrant future, Montclair State University is one of New Jersey's most diverse and dynamic institutions of higher education. Located 14 miles west of New York City on a 246-acre campus which boasts modern, state-of-the-art facilities complemented by green spaces, public plazas, and early twentieth-century architecture, the University offers a comprehensive undergraduate curriculum with a global focus; a broad variety of superior graduate programs through the doctoral level; and a talented and diverse faculty and student body. The University's six colleges and schools offer more than 300 undergraduate and graduate majors, minors, concentrations, and certificate programs, and with more than 120 student organizations and 17 varsity sports for men and women, Montclair State offers students the total college experience.

Montclair State University is an Equal Opportunity/Affirmative Action institution with a strong commitment to diversity.