



UNIVERSITY  
AT ALBANY

State University of New York

**Atmospheric Sciences Research Center**  
Division for Research

# Graduate Research Opportunities

## Graduate Research Opportunities and merit-based fellowships available at the University at Albany's Atmospheric Sciences Research Center

The Atmospheric Sciences Research Center (ASRC) of the University at Albany, State University of New York, has multiple research opportunities and merit-based fellowships for graduate students applying for Fall 2022 admission. These research positions span a broad spectrum of scientific areas, including:

- **Power Outage Prediction:** development of forecast tools for power outage prediction, improving wind and solar power production forecasting, the effects of climate change on renewable energy resources, and the interaction of wind farms (and their performance) with the atmospheric boundary layer processes; (Dr. Freedman)
- **Subseasonal-to-Seasonal Hydrologic Prediction:** ground- and satellite-based remote sensing to investigate vegetation-planetary boundary layer interactions, and/or improve subseasonal-to-seasonal hydrologic prediction; (Dr. Ferguson)
- **Air-Sea Interaction Observing System:** development of an autonomous, buoy-based system for measuring air-sea interaction from the sea surface to the top of the marine atmospheric boundary layer; (Dr. Miller, Dr. Freedman)
- **Coastal-Urban Systems:** modeling, observations, and applications to: weather; climate; energy and air quality; (Dr. J. González-Cruz)
- **African Easterly Waves:** Dynamics of African easterly waves and their interactions with Saharan Dust Aerosols; (Dr. Grogan, Dr. Lu, Dr Thorncroft)
- **Air Quality Observations in NYC:** utilizing data from a new, densely-distributed network of low-cost air quality sensors deployed in the New York City metropolitan area to determine spatial and temporal patterns, source attribution, and compare measurements with models; (Dr. Lu, Dr. Miller)
- **Surface-Atmosphere Exchanges:** using data from ground-based surface-atmosphere exchange networks (e.g., New York State Mesonet at regional scale, Ameriflux/Fluxnet at continental/global



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1220 Washington Avenue, Albany, NY 12227

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scale) to evaluate land surface models, land-atmosphere coupling, and planetary boundary layer schemes; (Dr. Miller, Dr. Lu)

- **Winter Weather Applications using AI:** developing machine-learning models and employing statistical techniques to study variations and sensitivities among climate regions and their influence on predictability as well as to investigate the predictability of winter-weather effects on NY state roadways; (Dr. Sulia, Dr. Thorncroft)
- **Climate and Health:** atmospheric particles and their environmental and climate impacts, including health effects of particles in the atmosphere and aerosol-cloud-precipitation-climate interactions. (Dr. Yu)
- **Renewable Energy and Grid Resiliency:** research will emphasize interdisciplinary research, including the role of weather and climate, concerned with deployment and operations of renewable energy on the grid; (Dr. Freedman, Dr. Perez).

For more details about these opportunities and ASRC faculty information, see the prospects listed with the [Department of Atmospheric and Environmental Sciences](#).

[Prospective Graduate Student Visiting Weekend](#) is February 24 - February 26 2022. Enthusiastic and motivated students with BS/MS degrees in meteorology, atmospheric science, physics, chemistry, computer science, mathematics, or related fields, are encouraged to apply. We also encourage applications from candidates who are members of underrepresented or marginalized communities.

### ***Funding opportunities available with ASRC:***

#### **Merit Based Scholarships**

***All incoming (2022-2023) ASRC-advised doctoral students are eligible to compete for one-year merit-based ASRC Graduate Fellowships that carry a full tuition waiver and stipend.***

The University at Albany's [Atmospheric Sciences Research Center \(ASRC\)](#) is pleased to announce merit-based first-year fellowships for new ASRC-advised doctoral students. A first-year fellowship includes full tuition (9 credits per semester) and a research assistantship stipend for a 12-month period beginning in late August 2022. Pending satisfactory academic performance, successful applicants can expect comparable support levels in subsequent years. All first-year doctoral students, domestic and international, interested in being advised or co-advised by an [ASRC faculty member](#) are eligible to apply. To receive full consideration for the fellowship, applicants must submit by **January 31, 2022:** (1) an application for admission to the appropriate [University at Albany Doctoral Program](#), and (2) a letter requesting fellowship consideration to the ASRC Graduate Fellowship Committee, c/o Dr. Fangqun Yu, [fyu@albany.edu](mailto:fyu@albany.edu). The letter of request should be a 1 page "cover letter" alerting the committee of the applicant's research interests and the potential ASRC advisor(s) should also be identified. Applicants are strongly encouraged to coordinate their application with a faculty member at ASRC prior to submission. Late applications may be considered under special circumstances.

#### **Graduate Research Assistantship**

For a listing of graduate student research assistantship opportunities within [ASRC](#) or the [Department of Atmospheric and Environmental Sciences](#), see [Graduate Student Resources](#).

## Teaching Assistantship

Eligible students can apply for teaching assistantship. Indicate interest at the time of submitting your application.

## Opportunities for individuals from underrepresented groups

We encourage individuals from underrepresented groups to contact faculty members to discuss research opportunities. In addition to the opportunities below, other opportunities might exist through university or external diversity fellowship programs that will allow you to work with a faculty member to craft a unique research project. You can either e-mail individual faculty members with whom you are interested in working or contact Dr. Sara Lance ([smlance@albany.edu](mailto:smlance@albany.edu)), Chair of ASRC's Diversity and Inclusion Committee, for more information.

## NOAA Cooperative Science Center in Atmospheric Sciences and Meteorology (NCAS-M) Graduate Student Fellowship

Atmospheric Science Research Center ([ASRC](#)), University at Albany hopes to recruit 1-2 underrepresented minority students for two-year NCAS-M Graduate Student Fellowships for the Fall 2022 semester, pending availability of funds. Students who meet the following criteria are encouraged to apply: graduate student with minimum 3.0 GPA in an academic major that aligns with NOAA's mission including atmospheric sciences and other STEM and/or social sciences. Must be a U.S. citizen to participate in this fellowship. There are several benefits to becoming a fellow, including: Two-year financial support (full tuition and annual minimum stipend of \$27,500 for doctoral students), training in NOAA-mission research and applications, mentorship and engagement with NOAA professionals, and professional skills development workshops.



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