Summer 2009
Undergraduate Research Opportunities
Mesoscale & Climatological Studies

Hobart & William Smith Colleges
Summer Research Program
June 1 – July 31, 2009

Deadline for Applications: February 20, 2009
Multiple Student Positions Available

For questions or more information contact:

Professor Neil F. Laird
Department of Geoscience
Hobart and William Smith Colleges
(laird@hws.edu; (315) 781-3603; http://people.hws.edu/laird)

Student Positions sponsored by The National Science Foundation
Summer 2009 Undergraduate Research Opportunities
June 1 – July 31, 2009

Mesoscale & Climatological Studies
Hobart & William Smith Colleges, Geneva, NY
Funds provided by the National Science Foundation

Program Description

Multiple summer research positions are available for undergraduate students to research several aspects of lake-effect snowstorms, summer lake-breeze circulations, and Great Lakes thunderstorms using a variety of meteorological data sets. Accepted students will conduct research investigations in close collaboration with Dr. Neil Laird during a 9-week summer program at Hobart & William Smith Colleges from June 1 through July 31. Students will receive a $3,375 summer salary, a food allowance of $900, free housing (with kitchen facilities) on the campus of Hobart & William Smith Colleges, and reimbursement of travel costs to and from Geneva, NY.

The research topics which will be investigated during the summer research program include:

Lake-Effect Snowstorms: This study will examine historical lake-effect snowstorms associated with the Great Lakes and several smaller mid-latitude lakes, such as the New York State Finger Lakes and Lake Champlain. Data analyses will include utilization of WSR-88D radar data and meteorological data sets.

Summer Lake-Breeze Circulations: This investigation will determine the climatology of lake breezes throughout the Great Lakes region and their impact on near shore conditions. Data analyses will include use of climatological surface data, digital elevation models, and statistical software.

Great Lakes Thunderstorms: This research will investigate the impact of the stable over-lake boundary layer on severe thunderstorm development over the Great Lakes. Data analyses will include utilization of WSR-88D radar data and meteorological data sets.

This research is funded through two National Science Foundation grants in collaboration with Dr. David Kristovich of the University of Illinois. Students will have the opportunity to interact with several visiting researchers during the program and present their research results at subsequent regional or national scientific meetings. Students will develop or enhance skills related to working with meteorological software and large databases, statistical analysis techniques, and scientific writing and presentation.

Eligibility

Undergraduate students (first-year through senior) working toward a degree in meteorology, atmospheric sciences, or other related degree program are encouraged to apply. Background coursework in meteorology is essential. Prior experience with meteorological data, statistical methods, and established computer skills are preferred. Applicants should have excellent oral and written communication skills and be willing to work both within a collaborative group setting and independently.

Application Procedure

Submit the completed application form (including statement of interest) and a copy of your college transcript to: Dr. Neil Laird, Department of Geoscience, Hobart & William Smith Colleges, 300 Pulteney Street, Geneva, NY 14456. The 2009 application form is available at http://people.hws.edu/laird along with information on past summer research students and their accomplishments. For additional information please contact Dr. Neil Laird (laird@hws.edu; (315) 781-3603).

Deadline

Completed application materials for these positions must be received by February 20, 2009. Applicants will be notified of decisions by March 6, 2009.
Application Form: HWS Summer Research Program

Name: _______________________________________
School Address:                              Home Address:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Telephone: (_____) ______________________
Email: ___________________________________
Home Institution: ___________________________________________________________
Major: _____________________________________   Minor: ________________________
Expected graduation date: ______________________________ (example, May 2011)

Provide a statement of interest that includes the following items.
1. Describe your interests in meteorology and this summer research program.
2. How would this research experience benefit your undergraduate education and career goals?
3. List any background you have relevant to this program (science courses, research or work experiences, conference or meeting presentations, etc.)

Use a 1, 2, 3 to prioritize your interest in the following research areas (1 = most interested).
   ___ Lake-Effect Snowstorms
   ___ Summer Lake-Breeze Circulations
   ___ Great Lakes Thunderstorms

Provide information for two faculty / research mentors that may be contacted to discuss their interaction with you:

1. Name: _____________________________________
   Job Title:____________________________________   Email: _________________________
   Address: _____________________________________  Phone: (_____) ___________________
   ___________________________________________

2. Name: _____________________________________
   Job Title:____________________________________   Email: _________________________
   Address: _____________________________________  Phone: (_____) ___________________
   ___________________________________________

Send this application form (with statement of interest) and a copy of your college transcript to:
Dr. Neil Laird, Department of Geoscience, Hobart & William Smith Colleges, 300 Pulteney Street,
Geneva, NY 14456

For more information email laird@hws.edu or call (315) 781-3603
Completed applications must be received by Friday, February 20, 2009.