Projects

Example of Intern Projects:

Hydronic Evaporative System

- 0.97% Efficient Water Circulation
- Utilizes 45% bends, oversized Piping Network, and Smaller Pumps
- Cooling Tower
  - highly efficient; seawater consuming less at 99% wet-bulb temp
- Chiller
  - Back-up cooling alternative at high relative humidity condition
- Building Automation System
  - Water System; Electrical Management; Air Management

Optimizing Efficiency of the NCAR-Wyoming Supercomputing Center Facility

Visualization of Air Quality Data in VAPOR

Examples of Other Past Project Titles:

- Profiling Parallel Application Performance
- Multi-scale Probabilistic Modeling in Geospace Science
- Efficient Time-Stepping Schemes for a Discontinuous Galerkin (DG) Non-Hydrostatic Model

Apply

Application Deadline: January 20, 2016 (4:00 pm MT)

Please read and follow all instructions carefully. Only complete applications will be considered.

- Visit the application website at: www2.cisl.ucar.edu/siparcs/opportunities
- You may choose to apply for up to two projects by indicating 'first choice', 'second choice' on each application.
- Please attach one (1) PDF document with the three required components to your online application.
  
  - Required materials, in order are:
    - Letter of Interest
    - CV/Resume
    - Unofficial Transcript
  
- Answer all questions on the application, including providing the names and email addresses for two recommending faculty members.

If you have questions or limitations to using the online application system or questions about the process please contact us at:

(303) 497-1288
siparcs@ucar.edu

UCAR values diversity and is an Affirmative Action/Equal Opportunity Employer.

We provide equal employment opportunities without regard to race, color, religion, gender, national origin, ancestry, age, marital status, sexual orientation, domestic partner status, physical or mental disability, or veteran status. All applicants are considered relative to job-related factors.
Overview

The SParCS Program at the National Center for Atmospheric Research is aimed at university students who are interested in pursuing a career in such areas as computational science, data analysis, geostatistics, computer science, visualization, and computational geosciences. The goal of the SParCS program is to make a long-term, positive impact on the quality and diversity of the workforce needed to use and operate 21st century supercomputers. Graduate students and undergraduate students (who have completed their sophomore year by summer 2016) gain significant hands-on experience in high-performance computing and related fields that use HPC for scientific discovery and modeling.

This program embeds students as summer interns in the Computational and Information Systems Laboratory, an organization within NCAR charged with provisioning supercomputing and data systems to the geosciences research community. The roles of service and research in CISL support NCAR’s broad scientific mission of discovery in the atmospheric and related sciences.

Details

The program runs 11 weeks from May 16, 2016 to July 29, 2016.

Current Types of Internships
- Application Development
- Application Optimization
- Computer Science
- Data Science
- Geostatistics
- Visualization
- Numerical Methods

Benefits
- $15.35/hour for undergraduate and $18.15 for graduate students
- UCAR casual benefits apply, including a regional bus pass, AD&D and Worker’s Compensation coverage
- Housing is provided to interns at Bear Creek Apartments @ University of Colorado*
- One round-trip airfare or mileage, whichever is less, is provided from points of origin within the United States

*Housing is subject to income tax, as determined on IRS Form W-4

Eligibility Requirements
- Applicants must be available May 16 through July 29, 2016 to participate
- Must be a graduate student, or undergrad completed sophomore year
- Must currently be enrolled in a U.S. university
- Must be authorized to work in the U.S. to be eligible for the SParCS program. For F visa students accepted to the SParCS program, CPT work authorization issued through the designated school official (DSO) will be required. For OPT it will be required through both a DSO and the U.S. Citizen and Immigration Services (USCIS) will be required.

Skills/Abilities

The program aims to:
- Keep a research journal
- Attend technical seminars
- Attend skill-enhancing workshops
- Give an oral presentation of results

Current Internship Skills
- Ability to work with a diverse group of peers
- Skill in the use of software for communication purposes (e.g., Word, Excel, PowerPoint, email)
- Ability and willingness to learn and use scientific computing tools and programs
- Good oral and written communication skills
- Basic problem solving skills
- Ability to analyze data and draw conclusions
- Potential to excel in a scientific career
- Basic knowledge of mathematics, computer science or engineering through coursework
- Ability to work full-time during the summer program
- Ability to interact with mentors and peers in a manner to support collaboration and inquiry
- Ability and willingness to work with guidelines and policies of organization and assigned work groups