



Summer 2021 DRUMS Directed Research for Undergraduates in Mathematics and Statistics

The Mathematics and Statistics Departments of North Carolina State University invite qualified applicants for a Research Experiences for Undergraduates (REU) program that pairs mathematics and statistics students for interdisciplinary summer research projects. Proposed projects span applications in applications including disease modeling (COVID-19), physiology, imaging, and extreme weather events; using tools from linear algebra, partial differential equations, probability, sensitivity analysis, parameter inference, optimization, and machine learning. In addition to the technical aspects of the program, students also receive a background in useful auxiliary skills like mathematical programming, writing reports in LaTeX, applying for graduate school, and preparing scientific presentations. Details of this program and a list of projects can be found at <https://math.sciences.ncsu.edu/undergraduate/drums/>

The DRUMS program will use a hybrid format in which some students will work at NCSU and some will participate remotely for 10 weeks during summer and during the 2021 fall semester. Formal summer activities will be May 24th – August 1st, with arrival on 23rd. The work during the fall semester will be conducted online via zoom. The time commitment for this part of the program will be approximately 5 hours per week including a 1h weekly remote meeting.

We encourage students of all backgrounds to apply. This includes students who might have nontraditional mathematical and/or statistical training, or who are just beginning their mathematical studies.

Students will need to submit a curriculum vitae/resume, a transcript (unofficial is fine), and two reference letters. In addition, students will need to submit a one-page personal statement. One letter should list a local faculty member who is willing to serve as a contact to NCSU faculty (the contact person is needed to help coordinate activities during the fall semester). The personal statement should include the reason(s) why you wish to participate in the DRUMS REU at NCSU.

Due to restrictions from NSF and NSA, our program is restricted to US citizens and permanent residents, and participants must be undergraduate students at the time of participation.

Students will receive a stipend in the amount of \$6,000 for the 10 weeks, housing, a partial meal allowance, and travel support up to \$500 per student to cover transport to and from NCSU.

Application Deadline: Review of applications begins February 15 and will continue until all slots are filled. Please apply at <https://www.mathprograms.org/db/programs/1054>

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