



NATIONAL SECURITY AGENCY  
CENTRAL SECURITY SERVICE  
FORT GEORGE G. MEADE, MARYLAND 20755-6000

## THE DIRECTOR'S SUMMER PROGRAM

### CRYPTOLOGIC MATHEMATICS FOR EXCEPTIONAL UNDERGRADUATE MATHEMATICIANS

The Director's Summer Program (DSP) is the National Security Agency's (NSA's) premier outreach to the nation's most outstanding undergraduate mathematics majors. Each summer we invite about two dozen exceptional students to collaborate with each other and with NSA mathematicians on problems critical to the intelligence gathering and information assurance missions of the agency. Admission to the 12-week program is highly competitive. Applicants should have a demonstrated superior mathematical aptitude. A full year of abstract algebra and analysis are strongly recommended. Some computer experience, especially in C, C++ and mathematical software packages, is desirable.

DSP participants work on a wide range of problems in mathematics, cryptology, and communications technology. These problems often involve applications of abstract algebra, geometry, number theory, probability, statistics, combinatorics, graph theory, algorithms, computer science, and analysis. At the beginning of the summer, students are presented with introductory lectures on modern cryptologic mathematics and with descriptions of several current problems of interest. Each student chooses one or two as the focus of his or her research. Students document their work in technical papers which are internally published at the agency.

Information about the Director's Summer Program is sent to over 300 colleges and universities each year. In addition, students who have scored well in the annual William Lowell Putnam Mathematical Competition are invited to apply. Because of the lengthy processing required, applications must be received by October 31<sup>st</sup> each year. To apply, students should send a resume, at least two letters of recommendation from faculty members familiar with their technical work, and current transcripts. A list of courses which will have been completed by the end of the academic year should also be included. Applicants must be U.S. citizens capable of obtaining a security clearance. Information should be sent to:

National Security Agency  
9800 Savage Road  
Suite 6844  
Fort George G. Meade, MD 20755-6844  
ATTN: R1 (DSP)

The Director's Summer Program is held at NSA headquarters from late May through mid-August. Students are paid a competitive salary based their education level. In addition, students receive annual, sick and Federal Holiday leave. Housing accommodations can be arranged upon request. Students who attend schools in excess of 75 miles from Fort Meade, MD, are eligible for a round-trip airline ticket to and from school, or mileage reimbursement up to the cost of a government issued airline ticket.

The Director's Summer Program is an extremely rewarding summer experience! For additional information, please e-mail [mathsummer@nsa.gov](mailto:mathsummer@nsa.gov). For more information about career opportunities at the NSA, please visit [www.nsa.gov](http://www.nsa.gov).