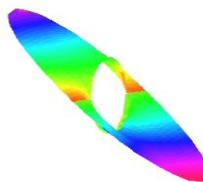


How Hard is the Discrete Logarithm Problem?



What is an “Inverse Problem”?

National Science Foundation Research Experiences for Undergraduates Site
in
**Computational Number Theory
and
Inverse Problems**
at
Rose-Hulman Institute of Technology,
Terre Haute, Indiana

Dates:

Saturday, June 6th – Friday July 31, 2009
(eight weeks).

Location:

Department of Mathematics,
Rose-Hulman Institute of Technology.

Financial Support:

\$3100 for eight weeks, on-campus housing provided, meal allowance, travel funds up to \$400 per participant, provided as needed.

Apply by:

Friday February 27th, 2009
(for full consideration)

The program will introduce eight undergraduate mathematics students to the world of **doing** mathematical research, both on their own and in collaboration with others. Participants will use undergraduate mathematics (and beyond?) as well as computer software such as Matlab and Maple to discover secrets hidden in problems inside number theory and inverse problems.

Participants:

- must be a citizen or permanent resident of the United States or its possessions.
- must be a full-time undergraduate student majoring in mathematics as of September 2009.
- must devote their full time to the program and not engage in any other course work or employment during the program.
- should have some background
 - in either *analysis* or *differential equations* (vector analysis, real analysis, complex analysis, ordinary or partial differential equations) for the project in *inverse problems*
 - in *algebra* (group theory, discrete mathematics, combinatorics, number theory) for the project in *computational number theory*
- should have some experience in using a high level mathematical package or programming language.
- will be selected on the basis of demonstrated mathematical creativity, motivation, and good work habits as well as meeting the above requirements, as determined from the application materials and recommendation letters.

Female, minority and physically disabled students are encouraged to apply.

An application form and additional information on the program is available at the website

<http://www.rose-hulman.edu/mathREU>

or by contacting Kurt Bryan via phone, email or mail (see contact information). Questions about the program should also be directed to Kurt Bryan.

Contact Information

Professor Kurt Bryan
Department of Mathematics
Rose-Hulman Institute of Technology
5500 Wabash Ave.
Terre Haute, IN 47803

kurt.bryan@rose-hulman.edu
(812) 877-8485