The objectives of the Institute are to provide training and hands-on experience in the use of computational techniques for science and engineering students, and to prepare those who choose to pursue graduate studies in technology areas which are dependent upon computational science and engineering.

Students are encouraged to continue work with AHPCRC professors at their home universities upon completion of the program and many students are offered opportunities for internships at the Army Research Laboratory the subsequent summer.

Prerequisites: Students MUST be US citizens. This program is intended for undergraduate students who anticipate graduation in Spring 2014 or later.

Applications should include the following form which is available at: www.ahpcrc.org

A one page statement including career and research objectives and computer experience.

A current transcript of coursework, "Unofficial Transcripts" are acceptable.

Two letters of recommendation (recommendations from AHPCRC affiliated faculty are given preference, but not required).

This information should be emailed to the following address by February 28, 2013 (late applications might not be given assurance of full consideration)

AHPCRC Summer Institute
Grace Fontanilla
Stanford University
Durand Bldg
496 Lomita Mall
Stanford, CA 94305
email: fontanilla@stanford.edu
In 2011, Adam Duran, a student at New Mexico State University, created an android app that turns an android tablet into a braille input device for sight impaired students. The app was so successful that a patent is being filed for the technology. Adam’s project is one of a number of successful research projects performed by students at the Summer Institute. For more information see link:

http://me.stanford.edu/research/centers/ahpcrc/news.html

The 2013 Curriculum will include courses such as:

- C Programming, JAVA
- Parallel Computing
- Android Development
- Introduction to Computational Engineering
- Computational Meshes
- Numerical Solutions of ODE
- Boundary Integral Techniques
- Linear Algebra and Optimization

The students will gain valuable research experience working with Principal Investigators and mentors in one of the following AHPCRC research groups listed below:

- HPC-Enabled Parametric Studies of Underbody Blasts: From High-Fidelity to Reduced Order Models
- 2D Nano-Electromechanical Devices
- LisztFE: Finite Element Codes for Exascale Computing
- Computational Fluid Dynamics for Blood Transfusions
- Computational Modeling of the Inhalation of Toxic Agents in the Lungs
- Scalable, Shared, and Distributed Memory Algorithms for Computational Solids, Fluids and Geometry
- High Performance Data Analytics

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