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LSU Trains Louisiana Students and Teachers at SuperComputing Camp

The LSU Center for Computation & Technology, or CCT, is holding their fourth annual Beowulf Boot Camp this week. The June 6-10th event will allow high school students and teachers a unique opportunity to learn the basics of supercomputing alongside university researchers at LSU.

The camp was created by LSU Professor Thomas Sterling, who invented the Beowulf supercomputing cluster in 1994, and his research group. Beowulf is a multi-computer architecture of inexpensive personal computer hardware that can be used for parallel computation. This class of computer clusters is now deployed worldwide, most commonly used in support of scientific computing, and represents more than 80 percent of the fastest 500 computers in the world.

"This particular LSU camp has been very popular for students planning to enter the field of computer science, engineering, or math," said Sterling. "In a very short period of time, the students are exposed to important motivating application domains like climate modeling and societal problems, the ways supercomputers in general and Beowulf clusters in particular help with these problems, and how supercomputers can be used for these important purposes through hands-on experience."

But Sterling emphasized that "far more important than the supercomputing itself, the Beowulf Bootcamp teaches the students about themselves, their intrinsic abilities, and their potential career opportunities. Barriers are dramatically reduced: many of them are visiting a university campus for the first time, they get a chance to meet and talk to college professors, and they do something that they could never have imagined doing. This builds their self-confidence and expands their self-esteem to an unprecedented degree. The goal is to get them to stay in high school, go to college, and in a few cases enter the field of information technology."

"The Beowulf Boot Camp is an initiative designed to raise the awareness of and interest in high performance computing in Louisiana high schools," said Steven Brandt, LSU CCT IT consultant and instructor for the Beowulf Boot Camp. "The goal is to familiarize students with all aspects of a supercomputer, giving them hands-on experience with touching or assembling hardware components. No less significant to the High Performance Computing adventure is an understanding of the software. Students not only install the operating system and run benchmarks, but they learn how to program. Our goal for the programming section is ambitious but focused: we seek to give the students a basic understanding of MPI."

The 2011 LSU Beowulf Boot Camp is sponsored by Hewlett-Packard, Advanced Micro Devices, and the LONI Institute (Louisiana Optical Network Initiative).

For more information on the camp or to get on the waiting list for next year's camp, visit: <http://www.cct.lsu.edu/BeowulfSummerCamp>.

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