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LSU CCT Receives Top Paper Award by HPDC

A research paper whose co-authors include LSU's Gabrielle Allen, Werner Benger, Andrew Merzky, and Ed Seidel has been named by the International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC) as one of the top 20 papers in the past 20 years of publications. Gabrielle Allen is associate professor of LSU's Department of Computer Science and Center for Computation & Technology (CCT), Werner Benger and Andre Merzky are research scientists at the LSU CCT; and Ed Seidel is professor of the LSU Department of Physics & Astronomy and former director of the LSU CCT.

HPDC is the premier computer science conference for presenting new research related to high-performance parallel and distributed systems used in both science and industry. Since its inception, HPDC has been at the center of new discoveries in systems such as clusters, grids, clouds, and parallel and multicore computers.

Published in 2000, "The Cactus Code: A Problem Solving Environment for the Grid" explained how the intensive computing requirements of physics applications using the Cactus Code encourage the use of distributed and metacomputing, described the development and experiments which were performed with Cactus, and detailed how its design made it an ideal application test bed for Grid computing.

Originating in the academic research community, Cactus has been developed and used over many years by a large, international collaboration of physicists and computational scientists. Specifically, Cactus is an open-source problem-solving environment designed for scientists and engineers. Its modular structure facilitates parallel computation across different architectures and collaborative code development among different groups.

The Cactus group at CCT continue to innovate in software that advances both physics and computer science, and in particular lead the development of the Einstein Toolkit to provide a cutting edge toolkit for relativistic astrophysics which has been adopted by some 60 groups around the world.

The papers were nominated by members of the HPDC community at large, and a special committee narrowed the list to the best 20. A special edition issue containing the 20 papers will be distributed at the HPDC's 2012 meeting, to be held this summer in the Netherlands.

G. Allen, W. Benger, T. Goodale, H.C. Hege, G. Lanfermann, A. Merzky, T. Radke, E. Seidel, and J. Shalf, The cactus code: "*A Problem Solving Environment for the Grid,*" High-Performance Distributed Computing, 2000. Proceedings. The Ninth International Symposium on, IEEE, 2000, pp. 253–260.

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