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## KEYNOTE

### Multicore Grids and the Data Deluge

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#### ABSTRACT

Technology advances suggest that the data deluge, network bandwidth and computers performance will continue their exponential increase. Computers will exhibit 64-128 cores in some 5 years. Consequences include a growing importance of data mining and data analysis capabilities that need to perform well on both parallel and distributed Grid systems. Parallelism needs to be extended from cluster to multicore architectures. Grids need to inherit the simplicity and broad support of Web 2.0 including mash-ups, gadgets and clouds. Clouds are virtual clusters forming a Grid that exports a system not a service interface. We look at possible scientific computing execution and programming environments that build on commodity Web 2.0 and multicore software concepts. Perhaps these will get good commercial support and finally allow attractive parallel and Grid software environments.

#### SPEAKER BIOGRAPHY



**Geoffrey C. Fox** (8122194643, [gcf@indiana.edu](mailto:gcf@indiana.edu), <http://www.infomall.org>). Professor Fox received a Ph.D. in Theoretical Physics from Cambridge University and is now professor of Computer Science, Informatics, and Physics at Indiana University. He is director of the Community Grids Laboratory of the Pervasive Technology Laboratories at Indiana University. He previously held positions at Caltech, Syracuse University and Florida State University. He has published over 550 papers in physics and computer science and been a major author on four books. Professor Fox has worked in a variety

of applied computer science fields with his work on computational physics evolving into contributions to parallel computing and now to Grid and multicore chip systems. He has worked on the computing issues in several application areas – currently focusing on Defense, Earthquake and Ice-sheet Science and Chemical Informatics. He is involved in several projects to enhance the capabilities of Minority Serving Institutions.

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