

Distinguished Banquet

Speaker

Dr. Jeffrey Wadsworth



President and Chief Executive Officer
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Columbus, Ohio

Title: Energy Challenges and the Role of High Performance Computing

Energy challenges are central to the most important strategic problems facing the United States and the world. It is increasingly obvious that even large-scale deployments of the best, currently-available, energy technologies will not be adequate to successfully tackle this problem. Achieving a secure energy future will require utilizing, and improving upon, a comprehensive portfolio of energy system technologies. This goal is complicated because first, energy technology strategies are inextricably linked to national security and health issues. Second, within energy technologies, not only is it vital to consider environmental issues such as curbing global warming, but also it is a fact that economic considerations strongly influence the public and political views on energy policy. It is clear that a significant and sustained effort in basic and applied research and development (R&D) will be required to deliver new advances and ensure a sustainable and affordable energy future. Many of the challenges to be overcome fall within the scope of multi-disciplinary computational modeling in engineering and science. Further, large-scale simulation is increasingly assuming a role that is a co-equal with theory and experiment in the search for answers to complex scientific questions. Battelle manages or co-manages six DOE national laboratories that together house some of the most powerful computers in the world that have enabled remarkable scientific progress. The U.S. Department of Energy (DOE) and its national laboratories have been world leaders in the use of advanced high-performance computing to address critical problems in science and energy. Today, advanced computational resources at the petascale are poised to address critical problems in addressing global energy needs and improving the efficiency of energy production and utilization.

Brief Biography:

Dr. Jeff Wadsworth has been President and CEO of Battelle Memorial Institute since January 2009. Battelle is the world's largest nonprofit research and development organization, executing about \$5B of work annually and employing about 21,000 people. Jeff formerly led Battelle's Global Laboratory Operations business, where he oversaw Battelle's management or co-management of eight major laboratories: six national laboratories of the U.S. Department of Energy, the Department of Homeland Security's National Biodefense Analysis and Countermeasures Center; and a new private sector renewable energy laboratory in Kuala Lumpur, Malaysia.

Dr. Wadsworth was educated at Sheffield University in England, where he studied metallurgy, earning a bachelor's degree in 1972 and a Ph.D. in 1975. He was awarded a Doctor of Metallurgy degree in 1991 for his published work and received the highest recognition conferred by the university, an honorary Doctor of Engineering degree, in July 2004. He has worked at Stanford University, Lockheed Missiles and Space Company, and Lawrence Livermore National Laboratory, and from 2003 to June 2007, Jeff was director of Oak Ridge National Laboratory, the Department of Energy's largest multipurpose science laboratory.

Dr. Wadsworth has authored or co-authored more than 285 papers in the open scientific literature, 1 book, and 4 U.S. patents. His many honors and awards include two honorary doctorates, two honorary professorships from Chinese universities, and election to the rank of Fellow of three technical societies. He was elected a member of the National Academy of Engineering in 2005.