

James J. Hack



James J. Hack directs the National Center for Computational Sciences (NCCS), a leadership computing complex at Oak Ridge National Laboratory (ORNL) providing high performance computing resources for tackling scientific grand challenges. His responsibilities include the identification of major high performance computing needs from scientific and hardware perspectives, and the implementation of strategies to meet those needs as machine architectures continue to evolve. He also served as a founder and first Director of the Oak Ridge Climate Change Science Institute, which integrates scientific projects in modeling, observations, and experimentation with ORNL's powerful computational and informatics capabilities to answer some of the most pressing global change science questions.

After receiving his Ph.D. in Atmospheric Dynamics from Colorado State University in 1980, Hack became a research staff member at the IBM Thomas J. Watson Research Center, where he worked on the design of high-performance scientific computing architectures. He moved to the National Center for Atmospheric Research in 1984, an NSF-sponsored laboratory, in Boulder Colorado. He went on to lead in the development of NCAR's global atmospheric model, known as the Community Climate Model. His primary scientific interests include physical parameterization techniques, numerical methods, and diagnostic methods for evaluating simulation quality. Before coming to Oak Ridge at the end of 2007, he was serving in the roles of senior scientist, head of the Climate Modeling Section, and deputy director of the NCAR Climate and Global Dynamics Division.

Hack has previously held an Adjoint Professor position at the University of Colorado at Boulder, and was an Inaugural Faculty Member in the Bredesen Center for Interdisciplinary Research and Graduate Education (CIRE) at the University of Tennessee, Knoxville. He is author or co-author of over 100 scientific or technical publications with a Web of Science h-index of 39 and Google Scholar h-index of 48 with over 14,000 citations to his work. He has served as an editor for the Journal of Climate, given testimony to congress on the topic of climate change, and recently completed participation as a member of a National Research Council Study on A National Strategy for Advancing Climate Modeling. He is a member, and Fellow, of the AMS, and a member of the American Geophysical Union. He is also actively involved on a number of national and international advisory and steering committees among which include the Department of Energy Office of Science and National Science Foundation appointments.