

# PetaScale Computation for the Geosciences Workshop

Title	Presentor	Download
The SCEC Pathway from Terascale to Petascale Computation in Earthquake System Science	Thomas Jordan (USC)	(currently unavailable)
Global Ocean Prediction with HYCOM	Alan J. Wallcraft (NRL)	<a href="#">(pdf)</a>
Scaling the High Order Method Modeling Environment (HOMME) on Blue Gene/L	Richard D. Loft (NCAR)	<a href="#">(PPT)</a>
Scaling of the Community Atmospheric Model to Ultra-high Resolution	Michael F. Wehner (LBNL)	<a href="#">(PPT)</a>
High Performance Computing and the Space Weather Modeling Framework	Darren De Zeeuw (University of Michigan)	<a href="#">(PDF)</a>
Challenges and Opportunities in Modeling Mantle Convection	Shijie Zhong (University of Colorado)	<a href="#">(PPT)</a>
An Overview of Performance Modeling Techniques in Support of Petascale Computing	Laura Carrington/Allan Snively (UCSD)	<a href="#">(PPT)</a>
Performance and Productivity Opportunities Using Global Address Space Programming Models	Kathy Yelick (LBNL, UC Berkeley)	<a href="#">(PDF)</a>
Topics in Performance and Performance Engineering in Climate Modeling	Patrick H. Worley (ORNL)	<a href="#">(PDF)</a>
Building Coupled Parallel and	Alan Sussman (UMD)	<a href="#">(PDF)</a>

Distributed Scientific Simulations		
Building Coupled Parallel and Distributed Scientific Simulations	Shirley Moore (UTK)	<a href="#">(PDF)</a>
Parallel Performance of a Non-hydrostatic, Unstructured-grid Coastal Ocean Model	Oliver Fringer (Stanford University)	<a href="#">(PPT)</a>
Resolving Clouds in Atmospheric Models	Bill Skamarock (NCAR/MMM)	<a href="#">(PPT)</a>
Progress and Issues in Developing a Comprehensive Model of Geospace	John Lyon(Dartmouth)	(currently unavailable)
Applying Automated Memory Analysis to Improve the Iterative Solver in the Parallel Ocean Model	John M. Dennis (UCAR)	<a href="#">(PPT)</a>
Improved Scalability of the Finite-Volume Dynamical Core: The Cubed-Sphere and 2-Dimensional (XY) Domain Decomposition	William M. Putman (NASA)	<a href="#">(PPT)</a>
Petascale Earthquake Inversion: Opportunities and Challenges	Omar Ghattas (UT)	(currently unavailable)
Toward Petascale Computational Seismology	Jeroen Tromp (Caltech)	<a href="#">(PPT)</a>
Integration Factor Splitting for the Euler Equations	Steve Thomas (NCAR)	<a href="#">(PDF)</a>
Climate Modeling at GFDL: Challenges for the Next Cycle, Venkatramani Balaji (Princeton University) <a href="#">(PDF)</a>		
MHD Modeling of the Solar Corona: Progress and Supercomputing Challenges	John Linker (SAIC)	<a href="#">(PDF)</a>
CFD & High-Order Methods	Kraig Winters (UCSD)	<a href="#">(PDF)</a>