

# SEG WORKSHOP

## High Performance Computing in the Geosciences

### BERKELEY, CALIFORNIA USA

### 18–21 JULY 2011



Society of Exploration Geophysicists  
The International Society of Applied Geophysics



### High Performance Computing in the Geosciences Speaker List

Name	Affiliation	Title
Katie Antypas .....	NERSC, LBNL, UC Berkeley	LBNL-DOE-HPC Hardware and Software Resources (NERSC, ACTS, SciDAC)
Wes Bethel .....	LBNL	Challenges and Solutions for Visual Data Analysis on Current and Emerging HPC Platforms
Biondo Biondi .....	Stanford	Panel: Academic and National Lab Perspective
Hank Childs.....	LBNL	Challenges and Solutions for Visual Data Analysis on Current and Emerging HPC Platforms
Bob Clapp .....	Stanford	Mapping Algorithms to Architecture: Stream Based Computing with FPGAs
Richard Clarke.....	BP	High Performance Computing: Perspective of a Seismic Processor and Imager
Micheal Commer.....	LBNL	Large-scale Geophysical Electromagnetic Imaging and Modeling on Graphical Processing Units
David Donofrio.....	LBNL-UC Berkeley	GreenWave: An Energy-Efficient Architecture for Seismic Imaging
Ken Esler.....	Stone Ridge Tech	Accelerating Reservoir Simulation with GPUs
Thomas Halsey .....	ExxonMobil	Computational Science and HPC at ExxonMobil
Keith Jackson.....	LBNL	Cloud Computing for Data Intensive Science
Marek Kacewicz .....	Chevron	State of the Art and Future of Integrated Petroleum Systems Modeling
Wei Liu.....	Chevron	Accelerate TTI RTM on CPU/GPU-hybrid Systems
Shawn Maxwell.....	SLB	Microseismic/Hydro-fracturing
Paulius Micikevicius...	Nvidia	Stencil Computation on GPUs for Seismic Migration
Inder Monga .....	LBNL	Service-Oriented Networks: Bridge between Campus and Mega-CloudCenters
Scott Morton.....	Hess	Moderator: Industry Perspective
Tamas Nemeth .....	Chevron	Geophysical Application Development on FPGAs: A Perspective from Geophysicists
Greg Newman .....	LBNL	New Approach to Joint Geophysical Imaging of Electrical and Seismic Data in Hydrocarbon Exploration
Dave Nichols.....	SLB	A Large Scale, Commercial, Implementation of Seismic Imaging Algorithms on GPUs
Masoud Nikravesch .....	UC Berkeley-LBNL	LBNL-DOE-HPC- Hardware and Software Resources (NERSC, ACTS, SciDAC)
Mike Oristaglio .....	SEAM Project/ Mgr	SEG SEAM Project Phase II – Challenges in Land Seismic Modeling
Marchetti Paolo.....	ENI	Tentative
Oliver Pell.....	Maxeler	Accelerating Large Scale Geoscience Applications with FPGAs
Franz-Josef Pfreundt...	Fraunhofer ITWM	SDPA/GPI – A Novel Approach to Parallelize Seismic Data Processing Software
Arch Robison .....	Intel	Language Support for Fork-join and Vector Parallelism
Jürgen Rurainsky.....	Fraunhofer ITWM	Immensive Visualization, the New Challenge
Guido Satta .....	CRS4.it	Fitting Two Imaging Algorithms to Hardware Accelerator Paradigms
Gilad Shainer.....	Mellnox	Accelerating GPU-based Computing over InfiniBand
Paulo Roberto Souza ..	Petrobras	Seismic Imaging on GPU
Hamdi Tchelepi.....	Stanford	Panel: Academic and National Lab Perspective
Jonas Toelke .....	Ingrain	Lattice Boltzmann Multi-phase Simulation in Porous Media using GPUs
Bin Wang .....	TGS-Nopec	Moderator: Academic and National Lab Perspective