

# IXPUG2016 Agenda

## Wednesday, September 21, 2016

### Applications (Room 1416)

Start	End	Title	Author(s)
8:15 AM	8:45 AM	Breakfast	
8:45 AM	9:15 AM	Optimizations of Bspline-based Orbital Evaluations in Quantum Monte Carlo on Multi/Many-core Shared Memory Processors	Ye Luo, Amrita Mathuriya, Anouar Benali, Luke Shulenburg and Jeongnim Kim
9:15 AM	9:45 AM	Enabling Large-Scale Hybrid Density Functional Theory Based Ab Initio Molecular Dynamics in Condensed-Phase Systems	Robert Distasio, Junteng Jia and Alvaro Vazquez-Mayagoitia
9:45 AM	10:15 AM	Performance Optimization of Quantum Espresso on KNL	Taylor Barnes and Jack Deslippe
10:15 AM	10:45 AM	Break	
10:45 AM	11:15 AM	Cache Blocking using Tiling in a Molecular Dynamics Application	Benny Mathew and Manoj Nambiar
11:15 AM	11:45 AM	Efficient MPI/OpenMP Parallelization of the Hartree-Fock Method on Intel® Xeon Phi Processors	Yuri Alexeev, Michael D'Mello, Vladimir Mironov and Alexander Moskovsky
11:45 AM	11:55 AM	MILC Staggered Conjugate Gradient Performance on Intel KNL	Ruizi Li, Carleton Detar, Douglas Doerfler, Steven Gottlieb, Ashish Jha, Balint Joo, Dhiraj Kalamkar and Doug Toussaint
11:55 AM	12:05 PM	Optimizing Magnetic Fusion PIC Code XGC1 for Xeon Phi	Tuomas Koskela
12:05 PM	12:15 PM	Scaling the Performance of a FDFD Geophysical-imaging Application to Multi-node KNL Clusters	Tareq Malas, Thorsten Kurth and Jack Deslippe
12:15 PM	1:30 PM	Lunch	
1:30 PM	2:00 PM	Accurate and Efficient Earthquake Simulations on Intel Xeon Phi	Josh Tobin, Alexander Breuer, Charles Yount, Alexander Heinecke and Yifeng Cui
2:00 PM	2:30 PM	Seismic Simulations with Local Time Stepping on Xeon and Xeon Phi Processors	Alexander Breuer, Alexander Heinecke and Yifeng Cui
2:30 PM	3:00 PM	Grid: Structured Cartesian Mesh Library for Quantum Chromodynamics	Peter Boyle, Azusa Yamaguchi, Guido Cossu and Antonin Portelli
3:00 PM	3:30 PM	Break	
3:30 PM	3:40 PM	Enabling High-performance Simulation of Subsurface Flows and Geochemical Processes with Chombo-Crunch on Intel Xeon Phi Knights Landing	Andrey Ovsyannikov

3:40 PM	3:50 PM	Reconstructing Particle Trajectories in High Energy Physics with Xeon and Xeon Phi	David Abdurachmanov, Peter Elmer, Giuseppe Cerati, Slava Krutelyov, Steven Lantz, Matthieu Lefebvre, Kevin McDermott, Daniel Riley, Matevz Tadel, Peter Wittich, Frank Wuerthwein and Avi Yagil
3:50 PM	4:00 PM	HACC on the KNL - Porting, Optimizing, and Early Experiences	Hal Finkel, Adrian Pope and JD Emberson
4:00 PM	4:30 PM	Optimizing MFDn (a Nuclear Physics CI Code) for KNL	Pieter Maris
4:30 PM	5:00 PM	Boundary Element Method for Manycore Architectures	Jan Zapletal and Michal Merta

### Memory Models and Methods (Room 1407)

Start	End	Title	Author(s)
8:15 AM	8:45 AM	Breakfast	
8:45 AM	9:15 AM	Managing Per Job Reconfiguration of Xeon Phi Knights Landing Clusters	Michael Hebenstreit
9:15 AM	9:45 AM	MCDRAM on 2nd Generation Intel® Xeon Phi™ Processor	James Tullos and Karthik Raman
9:45 AM	10:15 AM	Cache Size on KNL at LANL	Phillip Romero
10:15 AM	10:45 AM	Break	
10:45 AM	11:15 AM	Chroma on Knights Landing Three Ways	Balint Joo, Frank Winter, Thorsten Kurth and Jacques Bloch
11:15 AM	11:45 AM	Tuning Generated Code for KNL	James Osborn
11:45 AM	11:55 AM	Asynchronous Memory Migration on the KNL	Swann Perarnau and Kamil Iskra
11:55 AM	12:05 PM	Understanding Knight's Landing High Bandwidth Memory Using the STREAM Benchmark	Agrima Bahl and Brian Austin
12:05 PM	12:15 PM	Bringing the Customer to the Tech	Richard Coffey and Jini Ramprakash
12:15 PM	1:30 PM	Lunch	

### Programming (Room 1407)

Start	End	Title	Author(s)
1:30 PM	5:00 PM	Programming Intel's 2nd Generation Xeon Phi (Knights Landing)	Carlos Rosales-Fernandez, Kent Milfeld and John Cazes

### Optimization (Room 1404)

Start	End	Title	Author(s)
8:45 AM	12:15 PM	Optimize Your Workload for Memory and SIMD Parallelism on x86 Platforms with Intel® Advisor XE	Zakhar Matveev and Michael D'mello
12:15 AM	1:30 PM	Lunch	

1:30 PM	5:30 PM	Optimizing Codes Using the Roofline Model	Jack Deslippe, Zakhar Matveev, Richard Gerber, Brandon Cook, Tuomas Koskela, Mathieu Lobet and Tareq Males
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Key: Tutorial Keynote Presentation Lightning Talk