# THE INTEL XEON PHI USERS GROUP

David Martin IXPUG Vice President dem@alc.anl.gov

ECP Annual Meeting, February 1, 2017





- Worldwide Organization
- Optimization of scientific applications on Intel Xeon Phi based HPC systems
- Free exchange of information and ideas
- Meetings and activities open to everyone
- Independent
- Strong support from, and interactions with, Intel

http://www.ixpug.org/

#### 12 major events in ~2 years!











#### Past Meetings

- IXPUG Annual Meeting, September 12-22, 2016 Argonne National Laboratory, Argonne, USA
- IXPUG at Intel HPC Developer Conference, November 12-13, 2016 Salt Lake City, USA
- BoF: "Optimizing Performance on Intel<sup>®</sup> Xeon Phi and Beyond: Unleashing the Power of Many-Core Processors", November 16, 2016 – SC16, Salt Lake City, USA
- IXPUG Annual Spring Meeting, April 10-13, 2017, University of Cambridge, Cambridge, UK
- IXPUG Software-Defined Visualization Workshop, May 22-25, 2017 – TACC, Austin, USA
- IXPUG Russia Annual Meeting, June 1-2, 2017 Russian Academy of Sciences, Moscow, Russia

#### **Upcoming Meetings**

- IXPUG Workshop: "Experiences on Intel Knights Landing at the One Year Mark", June 22, 2017 – ISC, Frankfurt am Main, Germany
- IXPUG Annual Meeting, Sept 22-25, 2017 Texas Advanced Computing Center, Austin, USA
- IXPUG Fall Forum, October 9-11, 2017 King Abdullah University of Science and Technology, Saudi Arabia
- IXPUG BoF, November 2017 SC17, Denver, USA



## **IXPUG Working Groups**

Name Organizer

Description

General Optimization and Tuning

John Pennycook

This working group is focused on sharing general results and techniques, troubleshooting optimization issues, and facilitating collaboration between community members and Intel engineers.

Vectorization

MPI

Georg Zitzlsberger This working group is focused on identifying frequent patterns and challenges encountered in using compiler-assisted (auto-) vectorization, to generate feedback for compilers and language standards (e.g. OpenMP).

Michael Lysaght This working group is focused on sharing knowledge of methods for using MPI generally and of Intel-oriented exploitation of MPI (e.g. Intel fabric, MPI library and profilers).

#### **IXPUG Discussion Forums**



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NEWSLETTER

**Q** Search Recent Categories Tags Users Forums WORKING GROUPS Posted By Last Reply Q. ★ A Call for Participation 1 week ago Interested in discussing Artificial Intelligence/Machine Learning usage on Intel architecture? 1 week ago Knights Landing Machine learning deep learning artificial intelligence Showing 2 of 2 posts





## Leadership Board

- President: Michael Lysaght, Irish Centre for High-End Computing (recently moved on...)
- Vice-President: David Martin, Argonne National Laboratory
- Secretary: Melyssa Fratkin, Texas Advanced Computing Center, The University of Texas at Austin
- Outgoing President: Richard Gerber, NERSC/Lawrence Berkeley National Laboratory



Taisuke Boku University of Tsukuba



Doug Doerfler NERSC / Berkeley Lab



Richard Gerber NERSC/Lawrence Berkeley National Laboratory



Clay Hughes Sandia National Laboratory



Juha Jaykka The University of Cambridge



David Keyes King Abdullah University of Science & Technology





Kent MilfeldHai Ah NamTexas Advanced Computing Center Los Alamos National Laboratory



John Pennycook Intel



Thomas Steinke Zuse Institute Berlin



Estela Suarez Jülich Supercomputing Center



Vit Vondrak VSB - Technical University of Ostrava



## How to Get Involved

- Join IXPUG (www.ixpug.org)
- Contribute to an IXPUG Forum
- Participate in an IXPUG Working Group
- Attend an IXPUG Meeting
- Host an IXPUG Meeting
- Volunteer for the IXPUG Steering Group