

IXPUG

Intel Xeon Phi HPC Users Group

APPLICATION PERFORMANCE ON INTEL XEON PHI – BEING PREPARED FOR KNL AND BEYOND

Workshop

June 23, 2016, 08:30 – 18:00

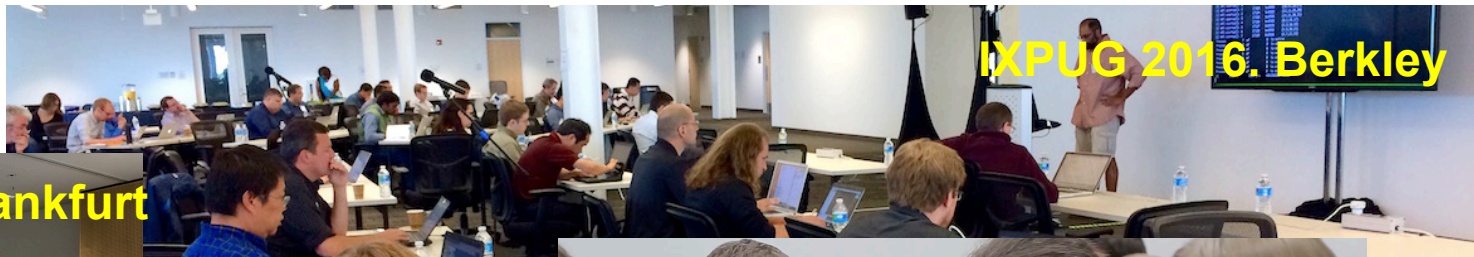
Marriott Frankfurt Hotel

IXPUG Mission

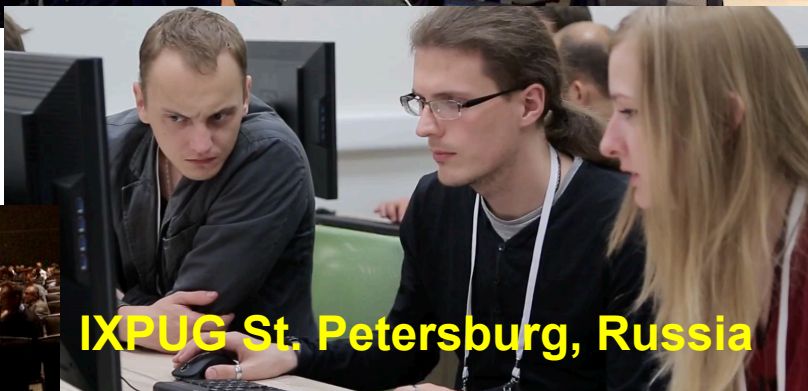
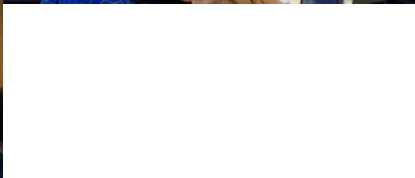
Provide a forum for the *free exchange* of information that enhances the *usability* and *performance* of scientific and technical applications running on supercomputers based on the Intel Xeon Phi processor.

IXPUG collaborates closely with Intel Corporations, but IXPUG is not legally affiliated with Intel.

Building a Community to Share Experiences and Best Practices



ISC 2016 BOF Frankfurt



Upcoming IXPUG Activities

- *Workshop, Application Performance on Intel Xeon Phi – Being Prepared for KNL and Beyond, June 23, 2016 (@ISC2016)*
- IXPUG 2016, September 19-23, Argonne National Lab, Chicago, IL
- Birds of a Feather, SC16, Salt Lake City, UT

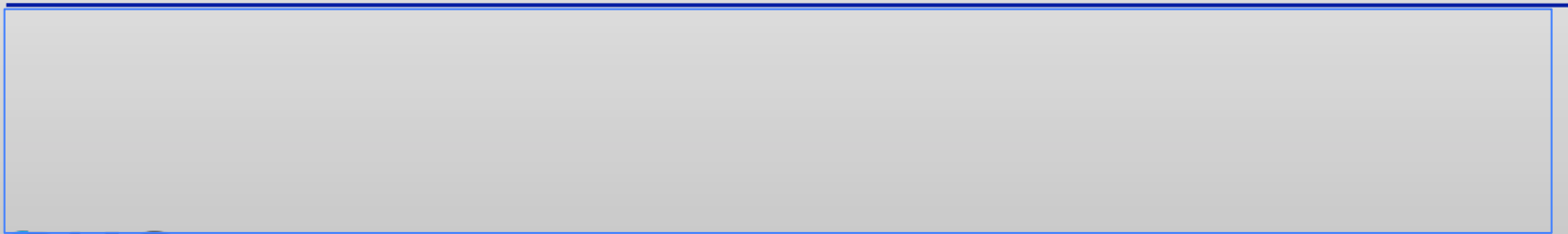
IXPUG Leadership

- Leadership Board
 - President: Richard Gerber, **NERSC/Berkeley Lab**
 - Vice-President: Thomas Steinke, **Zuse-Institut Berlin (ZIB)**
 - Secretary: Melyssa Fratkin, Texas Advanced Computing Cntr (**TACC**)
- Steering Committee
 - CJ Newburn, **Intel** (Georg Zitzlsberger, **Intel**)
 - David Martin, Argonne Leadership Computing Facility (**ALCF**)
 - Estela Suarez, **Jülich** Supercomputing Centre
 - Jeanine Cook, Sandia National Laboratories (**SNL**)
 - Michael Lysaght (**ICHEC**)
 - Doug Doerfler, (**NERSC/Berkeley Lab**)

How Can You Get Involved?

- Participate in meetings
- Volunteer to be on the steering committee for events
- Join the working groups
- Host your own IXPUG event!
- Sign up for the IXPUG email lists at www.ixpug.org

IXPUG COMMUNITY



IXPUG Goal: Build a vibrant HPC
community around Xeon Phi

Evaluating IXPUG

- What do you like?
- What don't you like?
- What would you like to see more of?

IXPUG charter

The Intel® Xeon Phi™ User's Group (IXPUG) is an independent users group whose mission is to provide a forum for the free exchange of information that enhances the usability and efficiency of scientific and technical applications running on large High Performance Computing (HPC) systems using the Intel® Xeon Phi™ processor. IXPUG is administered by representatives of member sites that operate large Phi-based HPC systems.

IXPUG holds meetings and other activities as determined by its members to further its mission. Participants include staff from member sites, users of member sites' facilities, Intel staff, and others with an interest in using the Intel® Xeon Phi™ for scientific computing on large HPC systems.

Participation in IXPUG meetings and other activities is open to anyone interested in using the Phi for large-scale scientific or technical computing.

A Steering Committee manages the overall direction of IXPUG, planning meetings and activities and working with members and sponsors to determine the most effective way to serve the HPC community.

IXPUG Q&A

- What is IXPUG?
 - IXPUG is a community-driven organization that fosters technical collaboration around tuning for the Intel® Xeon Phi™ [Co-]processor family.
 - IXPUG stands for Intel® Xeon Phi™ Users Group
- How did it get started?
 - The original vision for IXPUG was that “exceptional success” for the Xeon Phi program requires more than a 1-way communication between Intel and HPC center and application scientists; it involves building a community that develops and shares tribal knowledge on how to transform, parallelize, and optimize code to make the most of Xeon Phi.
 - Over a period of years, Intel and the HPC community have worked together to create and share technical collateral, training, workshops to share proof points and challenges, and to forge a way forward together.
 - In 2014, the Texas Advanced Computing Center hosted a highly successful IXPUG meeting and the excitement and enthusiasm from that meeting have carried over to a number of ensuing events.
- How does IXPUG relate to Intel?
 - IXPUG has independence from Intel, but it benefits from Intel’s support, especially its technical investment.
- How does IXPUG relate to other ‘code modernization efforts?’
 - IXPUG is one of many ways of supporting the broader community’s code modernization efforts. Those efforts stem from Intel, application readiness efforts at the U.S. Department of Energy national labs, and numerous similar efforts in academia and at HPC centers world-wide.
- Who is part of IXPUG?
 - Anyone interested in achieving performance on codes running on the Intel Xeon Phi is welcome to be part of IXPUG. IXPUG's focus is on High Performance Computing applications in science and engineer, but it is not limited to those areas.
 - IXPUG is governed and led by an leadership board and steering committee. IXPUG also has organizational members, who are committed to providing resources to help support IXPUG (staff time, hosting meetings, etc.)
 - Participants in IXPUG primarily come from industry, academia, national labs and institutes, and HPC centers from around the world.
 - Intel contributes heavily to IXPUG through participation from its technical staff and Intel also helps defray costs associated with IXPUG activities.
 - If you would like to participate, please see the "Join IXPUG" link on the IXPUG web site (<http://ixpug.org/>) (Link will be available soon.)
- What does IXPUG do?
 - IXPUG brings together experts and practitioners as a community, in events at major HPC-related conferences, standalone workshops, active technical working groups, and sharing learnings through ixpug.org and other related sites.

Organizational Members

- Organizations that are actively and significantly engaged in using the Intel Xeon Phi in scientific or engineering High Performance Computing.
- Applications for new organizational members considered by Steering Committee
- Organizational member representatives are eligible to serve on Steering Committee
- Host IXPUG meetings and other events

Meeting Cadence

- One yearly IXPUG general meeting (e.g. this one)
 - Want to have two
 - North America, Europe, Asia?, Australia?
 - Integrate with IPCC
- SC
 - BOF @ SC14, @ SC15
 - Workshop? Tutorials?
- ISC
 - BOF and Workshop at ISC 15
- Other meetings?

Other activities

- Working groups – have forums soon
 - Data pre-conditioning
 - Other suggestions?

What Can You Do?

- Sign up for the IXPUG email lists (ixpug.org)
- Participate in meetings
- Volunteer to serve on the steering committee and leadership board
- Contribute to the community portal (coming soon!) 😊
- Let us know what would be useful to at the IXPUG general meeting today at 5:15
 - Meetings?
 - Training?
 - Email lists?
 - Web forums?
 - Focused workshops?
 - Hack-a-thons?