Crushing the Big Data Challenge with Machine Learning on Emerging Intel Architectures

COLLABORATORS

Intel, IU,
Rutgers, Virginia Tech, Kansas,
Stony Brook, Arizona State, Utah
The interdisciplinary center focuses on modernizing applications to increase parallelism and scalability through optimizations that leverage cores, caches, threads, and vector capabilities of microprocessors and coprocessors.

**Simulation:** major science MILC code to make optimal use of the SIMD vector units and many-core architecture of the Intel® Xeon Phi™ Processor Family. *Lead by Steven Gottlieb*

**Data Analytics:** novel parallel systems supporting high performance iterative computation and MPI-quality communication that can drive libraries like Intel’s DAAL on HPC and Cloud systems. *Lead by Judy Qiu*
The System Solution to Big Data Problems

- Integration of Hadoop/Harp with Intel’s DAAL and other libraries
- Start HPC incubator project in Apache to bring HPC-ABDS to community
- Implement National Strategic Computing Initiative HPC-Big Data Convergence with HPC-ABDS

Indiana University (Fox, Qiu, Crandall, von Laszewski), Rutgers (Jha), Virginia Tech (Marathe), Kansas (Paden), Stony Brook (Wang), Arizona State (Beckstein), Utah (Cheatham)
THANK YOU

CONTACT INFORMATION

Judy Qiu
xqiu@indiana.edu