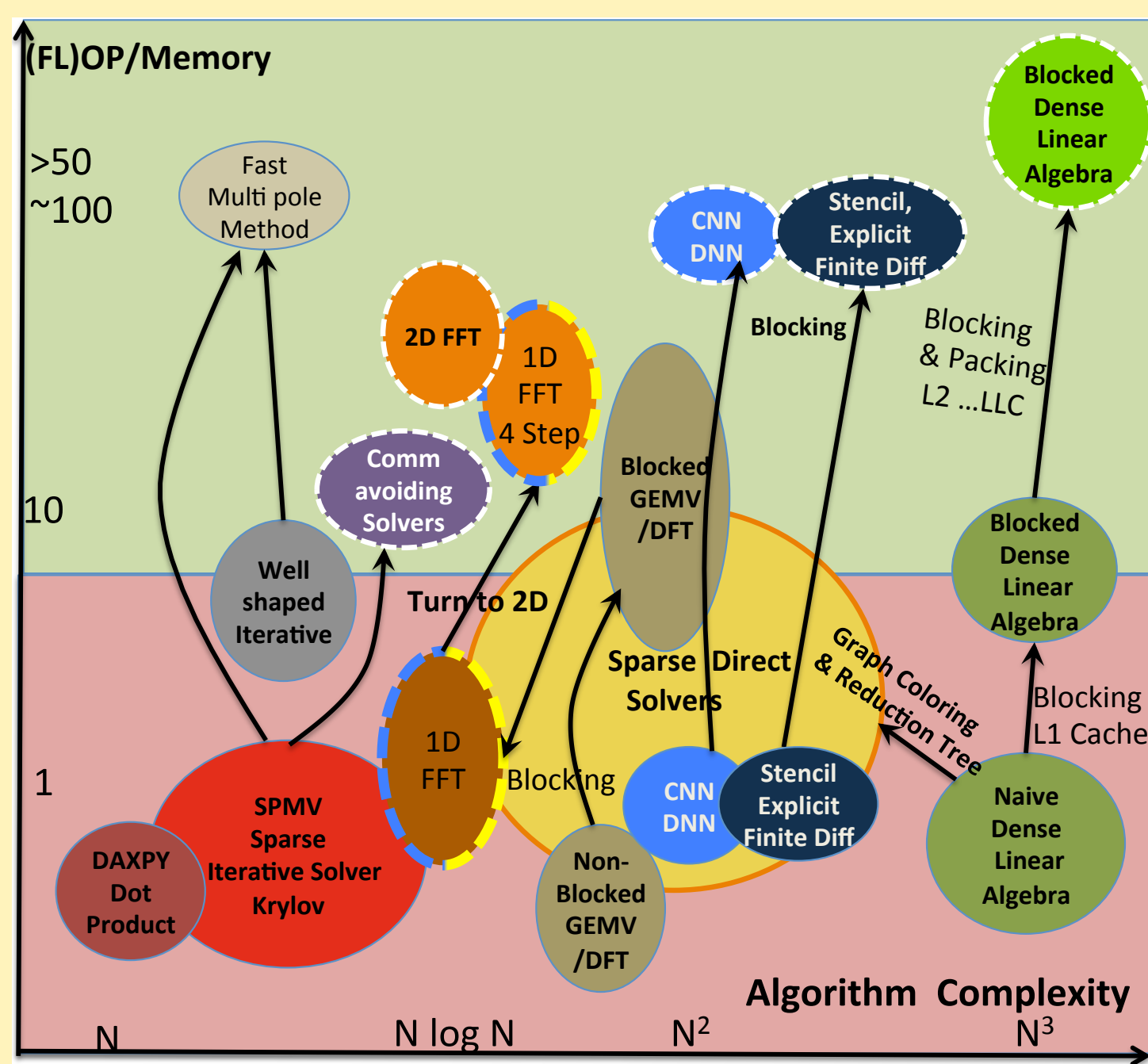


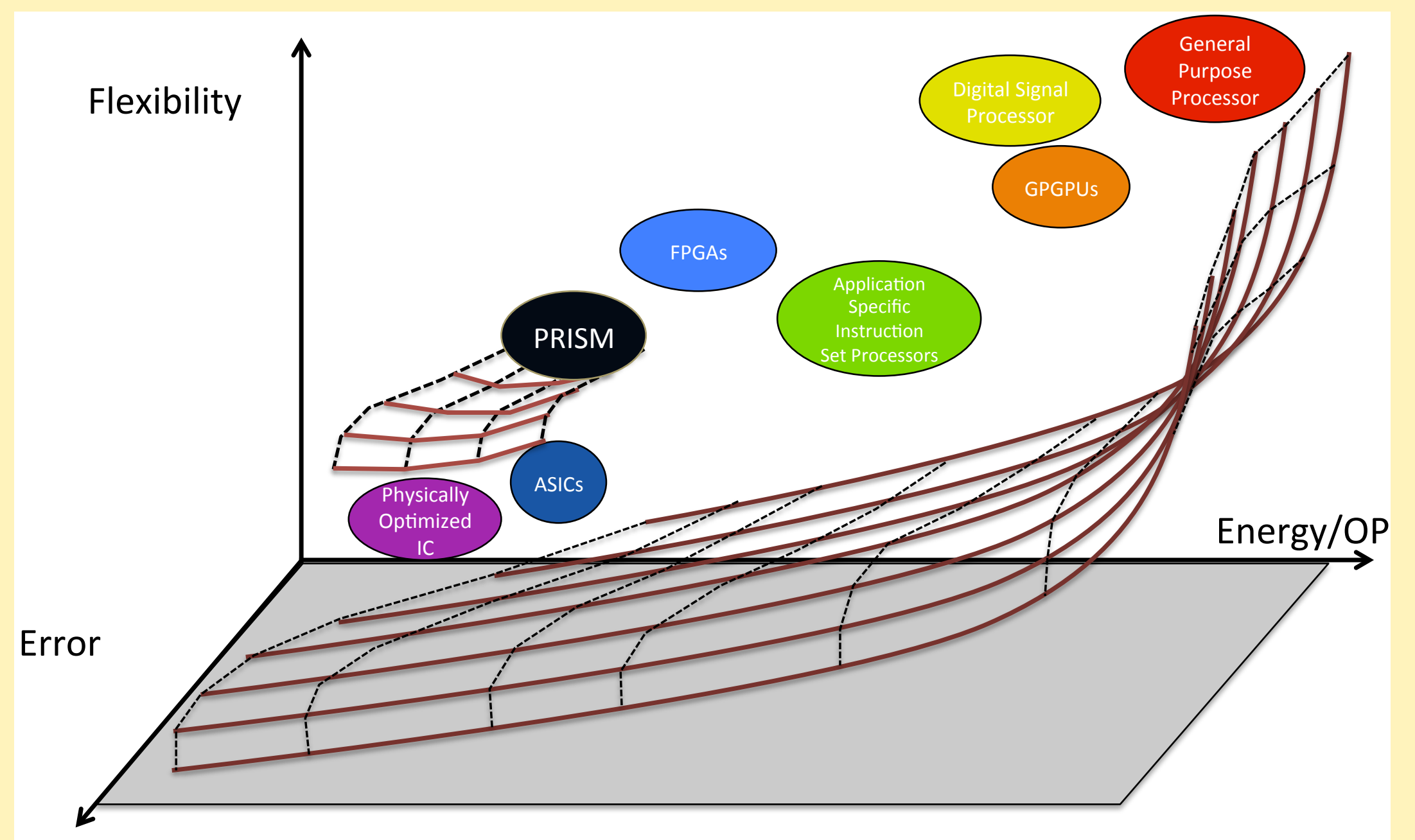
PRISM: Platform for Rapid Investigation of Efficient Scientific-computing & Machine-learning

PI: Mark Horowitz Stanford University

Tools for Joint Optimization of Algorithms and the Hardware



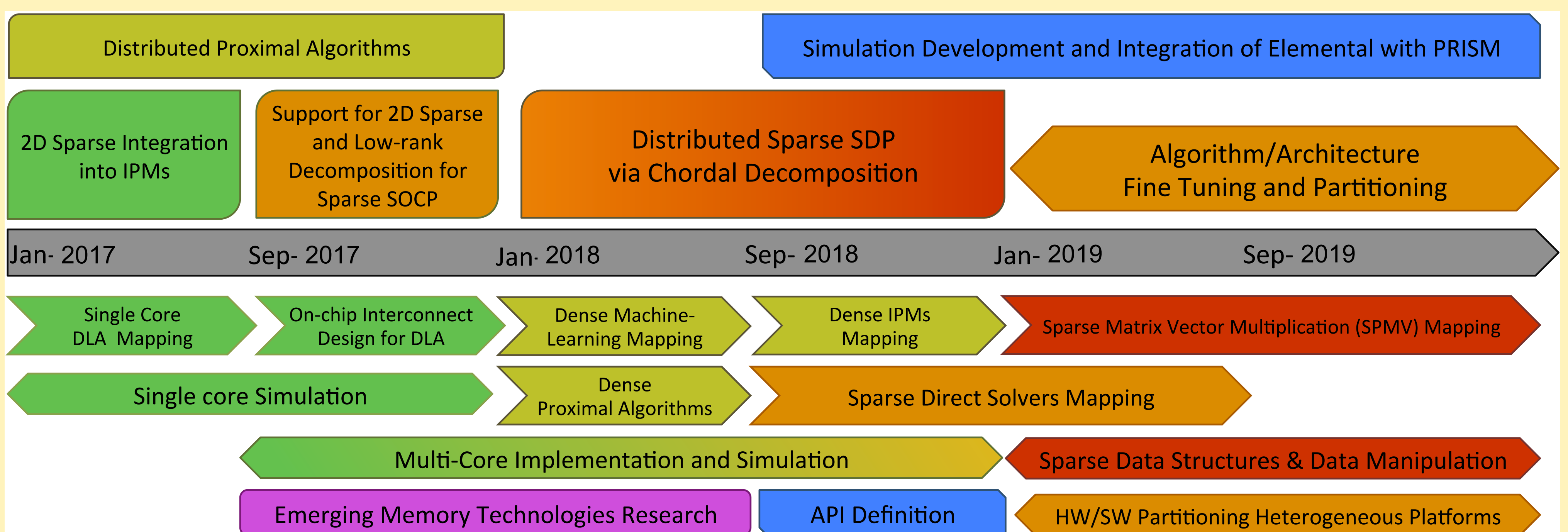
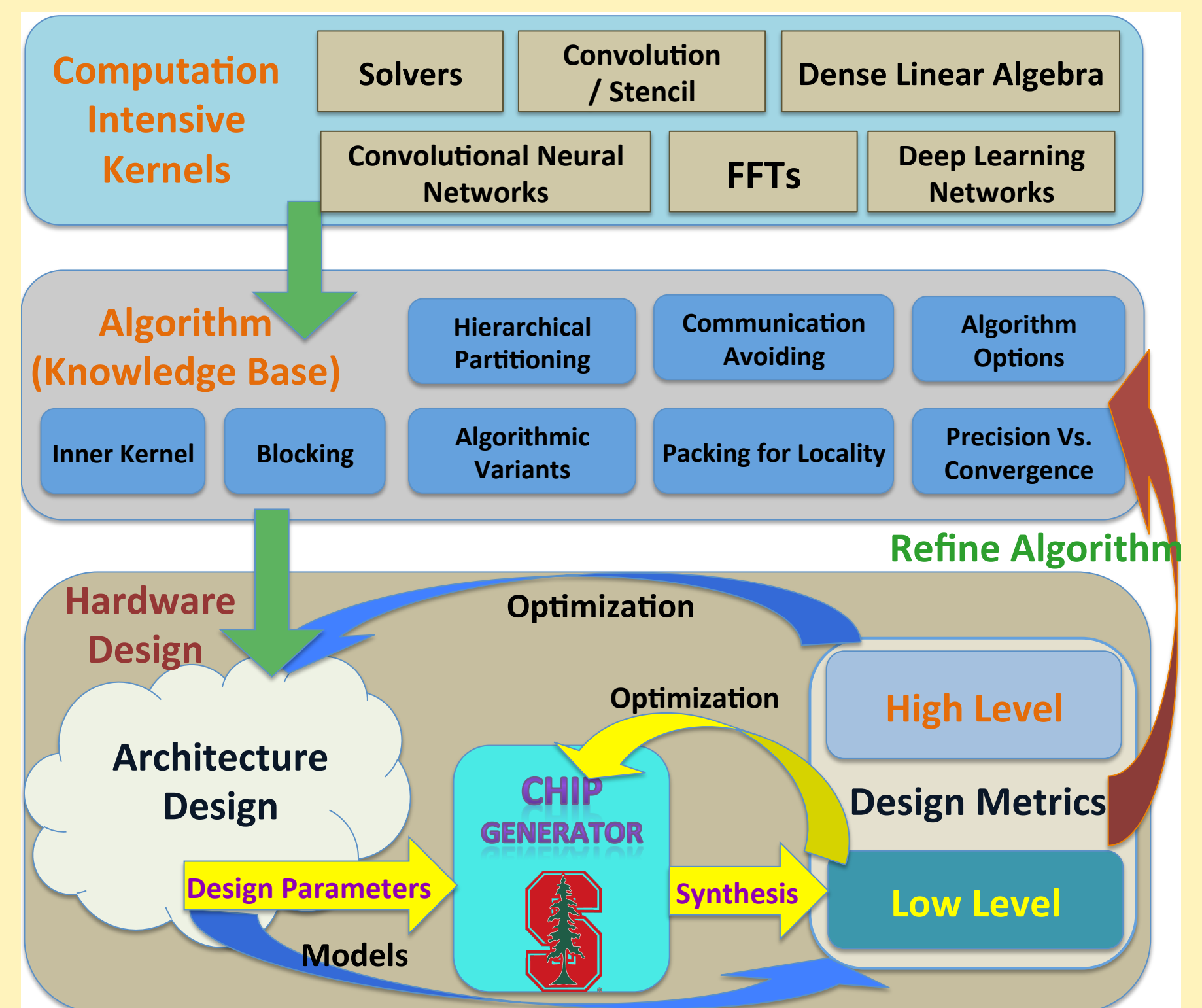
Compute Complexity vs. Memory Complexity



Design Space of Hardware Design

Approach

1. Focus on Compute Intensive Applications
2. Domain Knowledge Necessary
3. Machine-Learning and Scientific-Computing Share Several Kernels Like Dense Linear Algebra
4. Optimize Algorithms Hand-In-Hand with Architectures
5. Provide Tools for Rapid Study of Space



Green: Short term and less complicated milestones
 Orange and Red: Challenging breakthroughs and efforts
 Hardware/Software: Under/Above the timeline

Interested in meeting the PIs? Attach post-it note below!



National Science Foundation
 WHERE DISCOVERIES BEGIN

NSF Secure and Trustworthy Cyberspace Inaugural Principal Investigator Meeting
 Nov. 27 -29th 2012
 National Harbor, MD



Stanford University