Some Works on Computing Models and Languages For Efficient Data-Parallel Execution

By: Pierre Fiorin
June 14, 2011

Abstract
The talk addresses how the current trend in hardware architecture will ask for new advances in programming environments. The talk will address in particular the need for stable paradigms to express data parallelism. Some important features will be stressed in the context of software industry facts of life taking into account past failures.

A particular point of view will be provided regarding what could be hoped from static analysis and compiler technologies. The talk will also describe some of the work that are underway around the Par4All open source platform and how we plan to further develop this platform in the future.

About the Speaker
Pierre is CEO and one of the founders of HPC Project. HPC Project is a company dedicated to produce modeling and real-time simulation environments. HPC Project makes use in its solutions of an advanced compiler technology able to produce efficient parallel code able to run on data-parallel accelerators. Before creating HPC Project, Pierre led a research team specialized in embedded high-performance computing for French Department of Defense. He also worked for a venture capital firm. Pierre has also been in charge of financing approvals for public funding of industrial R&D projects for the French telecoms and consumer electronics industries. Pierre is still part of several expert groups advising the French public authorities on R&D investments. Pierre is a former alumni of Ecole Polytechnique and has received a PhD from Orsay-Paris