

Delite: Domain Specific Languages for Big Data and Heterogeneous Parallelism

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Delite is a compiler framework and runtime for building high-performance DSLs, developed at Stanford and EPFL. Delite DSLs are embedded in Scala to provide a high-level programming model, but generate fast, low-level code for heterogeneous targets using runtime code generation techniques (lightweight modular staging, LMS). With a recently added cluster backend that also includes GPU execution, machine learning kernels written in the OptiML DSL shows speedups of up to 7x over Spark and up to two orders of magnitude over Hadoop.

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Session Classification: Lightning Talks on Demand