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**Title: *ASPIDE: A data-oriented programming model for AI/HPC Convergence***

**Abstract**

Extreme Data is an incarnation of Big Data concept distinguished by the massive amounts of data that must be queried, communicated and analyzed in (near) real-time by using a very large number of memory/storage elements and Exascale computing systems. Immediate examples are the scientific data produced at a rate of hundreds of gigabits-per-second that must be stored, filtered and analyzed, the millions of images per day that must be mined (analyzed) in parallel, the one billion of social data posts queried in real-time on an in-memory components database. Following the need of improvement of current concepts and technologies, **ASPIDE** project is focusing on data-intensive applications running on very large-scale computing elements to develop a data-oriented programming model for AI/HPC convergence. ASPIDE is providing a definition of a new programming paradigms, APIs, runtime tools and methodologies for expressing data-intensive tasks on Exascale systems, which can pave the way for the exploitation of massive parallelism in data analysis tasks.