

Interactions between high-performance computing and computer algebra: overview and perspectives

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This introductory talk is a (certainly subjective) presentation of the interactions between high-performance computing (HPC) and computer algebra. We shall start with an overview of passed achievements based, in particular, on the PASCO workshop series. Then, we shall discuss the many opportunities and challenges that modern computer hardware offer to computer algebraists. This latter part will also serve as a short tutorial for participants unfamiliar with fundamental HPC concepts and techniques.