

## **Automatic Mixed Precision Analysis and Transformation Tool**

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HPC applications use floating point arithmetic operations extensively to solve computational problems. Mixed-precision computing seeks to use the lowest precision data type that is sufficient to achieve a desired accuracy, improving performance and reducing power consumption. However, it can be difficult to build valid mixed-precision configurations and navigate the performance/accuracy space without the help of automated tools. I will present our work on an end-to-end source-level mixed-precision tuner that analyses the mixed precision program using algorithmic differentiation as well as creates a source-level mixed precision version of the program using compiler techniques.