Internship presentation

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Self presentation

1. first year student at Enseirb-MATMECA, major in computer sciences
2. Internship: Implementing mixed-precision algorithms in PaStiX
3. Team TOPAL with Mathieu Faverge and Pierre Ramet
Perform numerical factorization in mixed-precision: When factorizing $Ax = b$ into $LUx = b$, have $L$ and $U$ stored in simple precision instead of double

Solve $LUx = b$ with previously obtained matrixes

Perform an iterative refinement of the solution
First results

Comparison of the time to solve in normal and mixed precision for 8 different matrixes
Work to be done:

1. Evaluating the time saved by this method
2. Implementing benchmarking tests for plafrim