Hips is a hybrid “à la carte” software programme for solving sparse linear equation systems with the degree of precision and time/memory commitment required and desired by the user.

Hips is THE solution for solving systems combining several difficulties: very large n (number of equations in the system >1 billion), 3D mesh and high level of complexity.

Hips is hybrid: according to the needs of the problem, Hips mobilises direct or iterative solving methods.

**Possible applications:**
- simulation of physical phenomena (reservoirs, electromagnetics)
- magnetohydrodynamics
- fluid flows
- manipulation of abstract concepts (finance...)

**Language:** Fortran, C

**Keywords:** HPC, parallel computing, solving sparse linear systems, hybrid direct iterative method.

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