## Techniques for the automatic debugging of scientific floating-point programs



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- Objective: propose automatic techniques for detecting and remedying a wide class of numerical anomalies arising in single/multi-threaded applications
  - $\hookrightarrow$  helping developers not necessarily expert in numerical analysis
  - $\hookrightarrow$  improving their productivity

- Current contribution: framework based on
  - $\hookrightarrow$  the transformation and instrumentation of C code
  - $\hookrightarrow$  the search for a local minimum set of changes

## Application so far:

 $\hookrightarrow$  bug reports of the LAPACK library

