Ginkgo

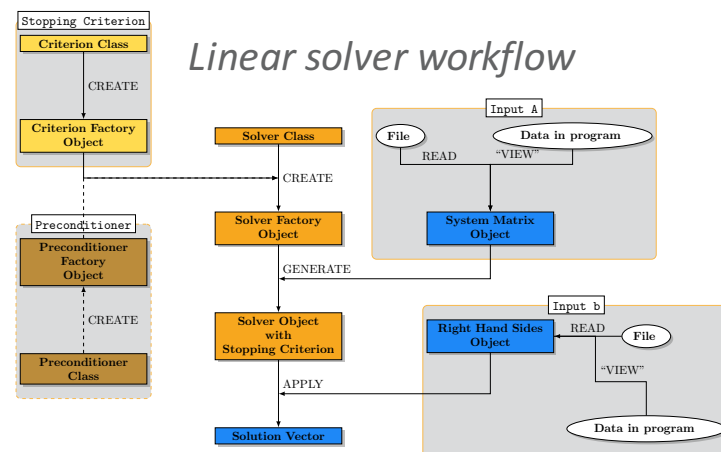## A Linear Operator Library for Sparse Problems

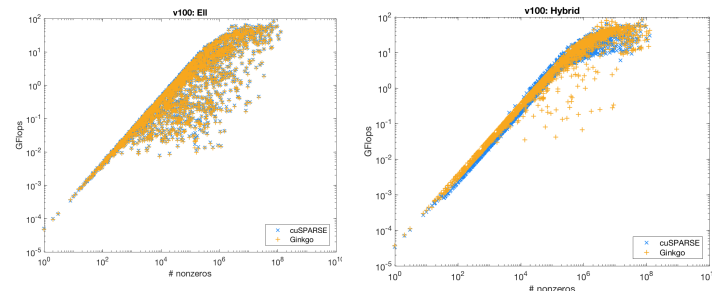Hartwig Anzt, Terry Cojean, YenChen Chen, Goran Flegar, Pratik Nayak, Yuhsiang M. Tsai, Enrique S. Quintana-Orti

- Open-source C++ framework for sparse linear algebra.

- Sparse linear solvers, preconditioners, SpMV etc.

- Generic algorithm implementation:

  + reference kernels for checking correctness;

  + architecture-specific highly optimized kernels.

- Focused on GPU accelerators (i.e. NVIDIA GPUs).

- Software quality and sustainability efforts guided by xSDK community policies:

  https://xsdk.info/

  - open source   GitHub   BSD

  - Doxygen

  - CMake Cross-platform Make

  - googletest Google C++ Testing Framework   GitLab CI

Linear solver workflow

Performance evaluation on NVIDIA Volta

https://github.com/ginkgo-project/ginkgo