

# Applications, Mini-Apps, Mini-workflows, Benchmarks

## Multi-institutions collaboration topics

### Contributors:

Riken: Naoya Maruyama

NCSA/UIUC: Ed Seidel

BSC: Rosa Badia

ANL: Matthieu Dreher, Florin Isaila

The objective is to define a set of benchmarks/applications for CS research in the JLESC community

Missing pieces (Gap analysis):

- Characterization of mini-apps
  - Performance meta-data
  - Categorization of mini-apps based on intended aspects to evaluate (e.g., a set of mini-apps for evaluating programming models)
- Mini-apps representing coupled problems
- Mini-apps for workflows, adaptive runtimes, etc.

### Collect information on existing mini-apps

#### Characterization of the mini-apps

#### A common set of miniapps exhibiting representative I/O workloads for the JLESC applications

- Lead: Ed Seidel
- Identify and collect I/O workloads
- Need volunteers from the application experts to propose such codes

#### A relevant set of workflow patterns that could serve as a benchmark to evaluate future proposals of architectures for managing HPC workflows in terms of I/O and storage requirements

- Lead: Matthieu Dreher
- Identify, collect and share such workflow patterns

## Collaboration projects