

# Applying Appropriate Software Engineering to Extreme- Scale Software Development

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# Observations

- Organizer of workshop series – SE-CSE
- Common issue – communication problems
  - SE practices need appropriate tailoring
  - Computational developers need to use appropriate practices
- Second issue – lack of good examples
  - People want to see successes from developers that “look like them”
  - Need to document and share SE successes

# “Agile” Approaches Needed

- View SE as a collection of practices that can be used as needed –  
**NOT**
- Monolithic processes that have to be followed in entirety
- SE practices should be used only to the degree they are helpful -- All teams should NOT use all practices on all projects
- SE practices are often an afterthought, only when problems arise – too late at this point

# SE Practice Examples

## Ones we've seen

- Source code management (i.e. version control)
- Documentation (i.e. Wikis)
- Automatic build and release management
- Project management (i.e. Trello)

## Ones we'd like to see (more?)

- Unit Testing
- Test-Driven Development
- High-level Requirements
- Metrics
- Code Review