



# Hands-On Activities



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See slide 2 for  
license details

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- **The requested citation for the overall tutorial is: David E. Bernholdt, Anshu Dubey, Michael A. Heroux, and Jared O'Neal, Better Scientific Software tutorial, in SC '19: International Conference for High Performance Computing, Networking, Storage and Analysis, Denver, Colorado, 2019. DOI: [10.6084/m9.figshare.10114880](https://doi.org/10.6084/m9.figshare.10114880)**
- Individual modules may be cited as *Module Authors, Module Title*, in Better Scientific Software Tutorial...

## Acknowledgements

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## Options

- **Kanban using GitHub Issues**
  - See module 03 Agile, slide 35
- **Simplest CI example**
  - [https://github.com/jrdoneal/CI\\_HelloWorld](https://github.com/jrdoneal/CI_HelloWorld)
  - See also module 07 Coverage/CI, slide 18
- **CI example w/ multiple platforms and specific compiler versions**
  - [https://github.com/jrdoneal/CI\\_Multiplatform](https://github.com/jrdoneal/CI_Multiplatform)
  - Instructions in README.md
- **Code coverage, testing and CI tutorial (C++)**
  - <https://github.com/amklinv/morpheus>
  - See following slide, then README.md
- **Code coverage, testing, and CI example (Fortran, C++)**
  - <https://github.com/jrdoneal/infrastructure>
  - Instructions in README.md

## Suggested Approach

- **Make sure you are setup appropriately**
  - See module 00 Intro, slide 11
- Work individually or in small groups (2-3)
- Work at your own pace on whichever activities interest you
- Let us know if you need help or have questions
- Instructors will be circulating and available to help as needed
- **We're also happy to discuss other topics from the tutorial**

# Special Notes for Morpheus Tutorial

- A code coverage and testing tutorial can be found at the Morpheus repository doxygen pages
  - <https://amklinux.github.io/morpheus/index.html>
- **STEP 1:** These exercises must be run on your own local machine or on a remote machine that you have access to.
- If you cannot generate your own gcov output, the associated lcov output is online
  - <https://amklinux.github.io/morpheus/lcovFiles/index.html>