HPC CARPENTRY

HPC Carpentry

Community Building in Education

Lightning Talk — Nov. 15, 2023

Scientific Software and the People Who Make It Happen:

Building Communities of Practice

The International Conference for High Performance Computing, Networking, Storage, and Analysis (Supercomputing-SC23)

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- Andrew Reid (he/him), NIST
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Some Important Contributions

- Early ComputeCanada (now the Digital Research Alliance of Canada) contributions
- Peter Steinbach, "HPC In A Day"
- SC17 BoF
  - Andy Turner, Christina Koch, Tracy Teal, Bob Freeman, Chris Bording
- CarpentryCon 2018 discussions
- SC18 BoF
  - Andy Turner, Christina Koch, Peter Steinbach, Alan O'Cais, Jeffrey Stafford, John Simpson, Daniel Smith, Bob Freeman
- Well-attended informal session at SC19
- CarpentryCon 2020@Home
  - Trevor Keller, Christina Koch, and others
- SC21 BoF – high-value feedback from HPC operators
- Present in the Carpentries Incubator, Winter 2021
- Begin working towards Lesson Program Incubation
- CarpentryCon 2022
  - Lightning talk, sprint, breakout session
- June 2023 – formal acceptance into Lesson Program Incubation

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The Carpentries

Motivated by a common problem in research practice – increasingly foundational computational research work was done by a variety of practitioners, often short-timers, with a variety of skill sets, and a variety of practices.

Founded by Greg Wilson starting in the late 1990s, with various structural changes in response to feedback over the years – current umbrella organization (2018) encompasses several sub-organizations – software carpentry, library carpentry, and data carpentry.

Central idea: The skills necessary to demonstrate the value of better practices can be taught in a workshop setting working hands-on with the actual systems – learners build "muscle memory" of having done key steps in the process, and come away with the power to move themselves forward.

⇨ Candidate solution: Use Carpentries techniques to build the bridge for HPC users.

Connects the HPC Carpentries original community, with technical knowledge of HPC systems and practices, with the larger Carpentries community and its tools, providing access to an audience, contributors, and a solid pedagogical model.

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Getting Involved

The GitHub Project Page:
github.com/hpc-carpentry

The Slack:
#hpc-carpentry on **carpentries.slack.com**
(slack-invite.carpentries.org)

The Topicbox E-mail List:
carpentries.topicbox.com/groups/discuss-hpc

The main website:
hpc-carpentry.org