SC16 Birds of a Feather on

Software Engineering for **Computational Science and Engineering** on **Supercomputers**

Organizers	
David E. Bernholdt	Oak Ridge National Laboratory
Jeffrey Carver	University of Alabama
Neil Chue Hong	University of Edinburgh
Mike Heroux	Sandia National Laboratories
Daniel S. Katz	University of Illinois
James Lin	Shanghai Jiao Tong University
Kengo Nakajima	University of Tokyo

BOF web site: https://cse-software.org/resources/events/2016-11-sc16-bof/

SC16 evaluation survey: http://bit.ly/sc16-eval   **Discussion notes:** http://bit.ly/se-hpc-bof

Motivation and Goals

- Software engineering (SWE) for computational science and engineering (CSE) is challenging, with ever-more sophisticated, higher fidelity simulation of ever-larger and more complex problems involving larger data volumes, more domains and more researchers. Targeting high-end computers multiplies these challenges. **We invest a great deal in creating and sustaining these codes, but we rarely talk about that experience. Instead we focus on the scientific results.**

- Our goal is to **raise awareness of SWE for CSE on supercomputers** as a major challenge, and to begin the **development of an international "community of practice"** to continue these important discussions outside of annual workshops and other "traditional" venues.

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Agenda

Time	Topic	Speaker
3 min	BOF Introduction	David E. Bernholdt
10 min	Formal Methods for HPC : Correct Dosage	Ganesh Gopalakrishnan
27 min	Lightning Talks (9)	various
40 min	General Discussion	Audience
10 min	Wrap-Up and Next Steps	Audience

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Lightning Talks

	Topic	Speaker	Affiliation
1	Software Citation Principles	Daniel S. Katz	University of Illinois
2	Collaborating with academics to build software: some ways to fail	James Hetherington	University College London
3	Software Fellowship Programme (UK Software Sustainability Institute)	Aleksandra Pawlik	New Zealand e-Science Infrastructure
4	Is generic HPC Carpentry possible? Experiences from the community	Aleksandra Pawlik	New Zealand e-Science Infrastructure
5	Practical Software Sustainability @ The Netherlands eScience Center	Jason Maassen	Netherland e-Science Center
6	SC17: initiatives to improve inclusion in HPC	Toni Collis	EPCC
7	NSF Program Perspectives on Software Engineering in Science Software Projects	Rajiv Ramnath	National Science Foundation (US)
8	The Science Gateways Community Institute	Nancy Wilkins-Diehr	SDSC/UCSD
9	The ACME Climate Project Learning Initiative: A Cheatsheet	Mike Heroux	Sandia National Laboratories