SC20

Everywhere we are | more than hpc.

Birds of a Feather on Software Engineering and Reuse in Modeling, Simulation, and Data Analytics for Science and Engineering

BOF web site: http://bit.ly/swe-cse-bof

Organizers	
David E. Bernholdt	Oak Ridge National Laboratory
Neil Chue Hong	University of Edinburgh, Software Sustainability Institute
Anshu Dubey	Argonne National Laboratory
Nasir Eisty	California Polytechnic State University
Charles Ferenbaugh	Los Alamos National Laboratory
Sandra Gesing	University of Notre Dame
Rinku Gupta	Argonne National Laboratory
Carina Haupt	German Aerospace Center (DLR)
Axel Huebl	Lawrence Berkeley National Laboratory (LBNL)
Catherine Jones	Science and Technology Facilities Council (STFC)
Mozhgan Kabiri Chimeh	University of Sheffield

Motivation and Goals

- CSE software developers already facing scientific demands for “bigger, better, and faster” modeling and simulation capabilities, entailing larger, more multidisciplinary and geographically dispersed development teams, must now also contend with significant architectural changes. Further, increases in data volume and complexity, and the increasing integration of “big data” (analytics) infrastructures (both hardware and software) raise additional SWE challenges.
- Our goal is to bring together people concerned about this topic to share existing activities, discuss how we can expand and improve on them, and share the results, complementing “traditional” venues for the academic (often versus practical) discussion of SWE for CSE, such as conferences and workshops.

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Agenda

Time	Topic	Speaker/Moderator
5 min	BOF Introduction	David E. Bernholdt
16 min	Lightning Talks (5)	
55 min	General Discussion	Audience and Panel

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Lightning Talks

	Topic	Speaker	Affiliation
1	Macro-Engineering Scientific Software	Michael A. Heroux	Sandia National Laboratories
2	Theory-Software Translation: Research Challenges and Future Directions	Sandra Gesing	University of Notre Dame
3	Business Models for Sustaining Software	Mike Zentner	San Diego Supercomputer Center
4	The Research Software Engineer Encyclopedia!	Vanessa Sochat	Stanford University
5	The POP Centre of Excellence in HPC	Fouzhan Hosseini	Numerical Algorithms Group (NAG)

Use the Questions tab to pose questions for the speakers
They will answer during the discussion period

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Q&A for Lightning Talks

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	Topic	Speaker	Affiliation
1	Macro-Engineering Scientific Software	Michael A. Heroux	Sandia National Laboratories
2	Theory-Software Translation: Research Challenges and Future Directions	Sandra Gesing	University of Notre Dame
3	Business Models for Sustaining Software	Mike Zentner	San Diego Supercomputer Center
4	The Research Software Engineer Encyclopedia!	Vanessa Sochat	Stanford University
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Panel Introductions

David E. Bernholdt	Oak Ridge National Laboratory
Neil Chue Hong	University of Edinburgh, Software Sustainability Institute
Anshu Dubey	Argonne National Laboratory
Nasir Eisty	California Polytechnic State University
Charles Ferenbaugh	Los Alamos National Laboratory
Sandra Gesing	University of Notre Dame *(Lightning Speaker)*
Rinku Gupta	Argonne National Laboratory
Carina Haupt	German Aerospace Center (DLR)
Michael A. Heroux	Sandia National Laboratories *(Lightning Speaker)*
Fouzhan Hosseini	Numerical Algorithms Group (NAG) *(Lightning Speaker)*
Axel Huebl	Lawrence Berkeley National Laboratory (LBNL)
Mozhgan Kabiri Chimeh	University of Sheffield
Vanessa Sochat	Stanford University *(Lightning Speaker)*
Mike Zentner	San Diego Supercomputer Center (Lightning Speaker)

Use the Questions tab to pose questions for the panel

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Other Software-Related Events at SC20 (Check Out the Recordings!)

Day/Time	Event Type	Event Title (and Link for Details)
Monday, Nov. 9 10:00am-2:00pm ET	Tutorial	Managing HPC Software Complexity with Spack: Part 1
Tuesday, Nov. 10 10:00am-2:00pm ET	Tutorial	Managing HPC Software Complexity with Spack: Part 2
Wednesday, Nov. 11 10:00am-6:30pm ET	Workshop	Seventh SC Workshop on Best Practices for HPC Training and Education
Wednesday, Nov. 11 2:30pm-6:30pm ET	Workshop	Correctness 2020: 4th International Workshop on Software Correctness for HPC Applications
Thursday, Nov. 12 10:00am-1:00pm ET	Workshop	RSE-HPC-2020: Research Software Engineers in HPC
Friday, Nov. 13 10:00am-6:10pm ET	Workshop	EduHPC20: Workshop on Education for High-Performance Computing
Friday, Nov. 13 10:00am-6:10pm ET	Workshop	P3HPC: 3rd International Workshop on Performance Portability and Productivity
Tuesday, Nov. 17 3:30pm-4:30pm ET	State of the Practice	Responding to Pandemic Driven Change
Wed., Nov. 18 11:30am-12:45pm ET	BOF	Spack Community BOF