

Computational Science & Engineering Software Sustainability and Productivity Challenges (CESSESP Challenges)

October 15th-16th 2015, Washington DC, USA

Workshop Reading Resources

Publications and White Papers:

- Faulk, Stuart, Eugene Loh, Michael L. Van De Vanter, Susan Squires, and Lawrence G. Votta. "Scientific computing's productivity gridlock: How software engineering can help." *Computing in science & engineering* 11, no. 6 (2009): 30-39.
- Daniel S. Katz, Rajiv Ramnath, "Looking at Software Sustainability and Productivity Challenges from NSF", August 2015, <http://arxiv.org/ftp/arxiv/papers/1508/1508.03348.pdf>
- Kogge, Peter, and John Shalf. "Exascale Computing Trends: Adjusting to the "New Normal" for Computer Architecture." *Computing in Science & Engineering* 15, no. 6 (2013): 16-26.
- Hans Johansen et al, [Extreme-Scale Scientific Application Software Productivity: Harnessing the Full Capability of Extreme-Scale Computing](#) (2013)
- Basili, Cruzes, Carver, Hochstein, Hollingsworth, Zelkowitz, Shull, "Understanding the High-Performance Computing Community: A Software Engineer's Perspective", *IEEE Software*, (2008), 25(4):29–36, <http://dx.doi.org/10.1109/MS.2008.103>
- S. Falk et al., Measuring High Performance Computing Productivity, *The International Journal of High Performance Computing Applications*, Winter 2004, 18(4):459–473, <http://dx.doi.org/10.1177/1094342004048539>
- High Productivity Computing Systems and the Path Towards Usable Petascale Computing (Collection of Papers), Part B: System Productivity Technologies, *Cyberinfrastructure Technology Watch (CTWatch) Quarterly*, 2 (4B), Nov 2006, <http://www.ctwatch.org/quarterly/archives/november-2006-a.html>
- A Vision and Strategy for Software for Science, Engineering and Education, NSF Report, <http://www.nsf.gov/pubs/2012/nsf12113/nsf12113.pdf>, 2013.
- Nancy Maron, [A Guide to the Best Revenue Models and Funding Sources for Your Digital Resources, An Ithaka Report](#), March 2014.

- Kevin Guthrie, Rebecca Griffiths, Nancy Maron, “[Sustainability and Revenue Models for Online Academic Resources](#)”, An Ithaka Report, May 2008.

Workshop Reports:

- [Accelerating Innovation for Competitive Advantage: The Need for Better HPC Application Software Solutions](#), High Performance Computing Software Workshop Report, US Council on Competitiveness, 2005.
- Software Productivity for Extreme-Scale Science, DOE ASCR Workshop Report, 2013.
- Extreme-Scale Scientific Application Software Productivity: Harnessing the Full Capability of Extreme-Scale Computing (2013)
- [Cyberinfrastructure Software Sustainability and Reusability](#), NSF-funded workshop, 2009.
- Report: The Second International Workshop on Software Engineering for CSE, Jeffrey C. Carver, IEEE Computing in Science and Engineering, 11(6), 2009.
<http://dx.doi.org/10.1109/MCSE.2009.203>
- Summary of the First Workshop on Sustainable Software for Science: Practice and Experiences (WSSSPE1), Dan S. Katz et al., Journal of Open Research Software (2014). <http://doi.org/10.5334/jors.an>
- [2015 Software Infrastructure for Sustained Innovation \(SI2\) Principal Investigators Workshop](#), (2015)

Web Sites:

- UK Software Sustainability Institute: <http://www.software.ac.uk>