

## Christian Engelmann, Ph.D.

Computer Scientist - Extreme-scale High-Performance Computing  
Computer Science and Mathematics Division, Oak Ridge National Laboratory (ORNL)

✉ P.O. Box 2008, Oak Ridge, TN 37831-6016  
☎ +1 (865) 574-3132 / 📠 +1 (865) 576-5491

🌐 [www.christian-engelmann.info](http://www.christian-engelmann.info)  
✉ [engelmannc@computer.org](mailto:engelmannc@computer.org)

### List of Publications

#### Peer-reviewed Journal Papers

- [1] Saurabh Hukerikar and Christian Engelmann. Resilience design patterns: A structured approach to resilience at extreme scale. *Journal of Supercomputing Frontiers and Innovations (JSFI)*, 4(3), June 2017. ISSN 2409-6008. To appear.
- [2] Amogh Katti, Giuseppe Di Fatta, Thomas Naughton, and Christian Engelmann. Epidemic failure detection and consensus. *International Journal of High Performance Computing Applications (IJHPCA)*, February 2017. ISSN 1094-3420. doi: 10.1177/1094342017690910. URL <http://www.christian-engelmann.info/publications/katti17epidemic.pdf>.
- [3] Christian Engelmann and Thomas Naughton. A new deadlock resolution protocol and message matching algorithm for the extreme-scale simulator. *Concurrency and Computation: Practice and Experience*, 28(12):3369–3389, August 2016. ISSN 1532-0634. doi: 10.1002/cpe.3805. URL <http://www.christian-engelmann.info/publications/engelmann16new.pdf>.
- [4] Marc Snir, Robert W. Wisniewski, Jacob A. Abraham, Sarita V. Adve, Saurabh Bagchi, Pavan Balaji, Jim Belak, Pradip Bose, Franck Cappello, Bill Carlson, Andrew A. Chien, Paul Coteus, Nathan A. Debardeleben, Pedro Diniz, Christian Engelmann, Mattan Erez, Saverio Fazzari, Al Geist, Rinku Gupta, Fred Johnson, Sriram Krishnamoorthy, Sven Leyffer, Dean Liberty, Subhasish Mitra, Todd Munson, Rob Schreiber, Jon Stearley, and Eric Van Hensbergen. Addressing failures in exascale computing. *International Journal of High Performance Computing Applications (IJHPCA)*, 28(2):127–171, May 2014. ISSN 1094-3420. doi: 10.1177/1094342014522573. URL <http://www.christian-engelmann.info/publications/snir14addressing.pdf>.
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- [6] Chao Wang, Frank Mueller, Christian Engelmann, and Stephen L. Scott. Proactive process-level live migration and back migration in HPC environments. *Journal of Parallel and Distributed Computing (JPDC)*, 72(2):254–267, February 2012. ISSN 0743-7315. doi: 10.1016/j.jpdc.2011.10.009. URL <http://www.christian-engelmann.info/publications/wang12proactive.pdf>.
- [7] Stephen L. Scott, Geoffroy R. Vallée, Thomas Naughton, Anand Tikotekar, Christian Engelmann, and Hong H. Ong. System-level virtualization research at Oak Ridge National Laboratory. *Future Generation Computer Systems (FGCS)*, 26(3):304–307, March 2010. ISSN 0167-739X. doi: 10.1016/j.future.2009.07.001. URL <http://www.christian-engelmann.info/publications/scott09system.pdf>.
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- [9] Xubin (Ben) He, Li Ou, Martha J. Kosa, Stephen L. Scott, and Christian Engelmann. A unified multiple-level cache for high performance cluster storage systems. *International Journal of High Performance Computing and Networking (IJHPCN)*, 5(1-2):97–109, 2007. ISSN 1740-0562. doi: 10.1504/IJHPCN.2007.015768. URL <http://www.christian-engelmann.info/publications/he07unified.pdf>.
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- [1] Saurabh Gupta, Devesh Tiwari, Tirthak Patel, and Christian Engelmann. Reliability of HPC systems: Large-term measurement, analysis, and implications. In *Proceedings of the 30<sup>th</sup> IEEE/ACM International Conference on High Performance Computing, Networking, Storage and Analysis (SC) 2017*, Denver, CO, USA, November 12-17, 2017. IEEE Computer Society, Los Alamitos, CA, USA. Acceptance rate 18.7% (61/327). To appear.
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- [3] Saurabh Hukerikar and Christian Engelmann. A pattern language for high-performance computing resilience. In *Proceedings of the 22<sup>nd</sup> European Conference on Pattern Languages of Programs (EuroPLoP) 2017*, Kloster Irsee, Germany, July 12-16, 2017. ACM Press, New York, NY, USA. To appear.
- [4] Mahesh Lagadapati, Frank Mueller, and Christian Engelmann. Benchmark generation and simulation at extreme scale. In *Proceedings of the 20<sup>th</sup> IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications (DS-RT) 2016*, pages 9–18, London, UK, September 21-23, 2016. IEEE Computer Society, Los Alamitos, CA, USA. ISBN 978-1-5090-3506-9. doi: 10.1109/DS-RT.2016.18. URL <http://www.christian-engelmann.info/publications/lagadapati16benchmark.pdf>. Acceptance rate 42.0% (21/50). Best paper candidate.
- [5] Saurabh Hukerikar and Christian Engelmann. Havens: Explicit reliable memory regions for HPC applications. In *Proceedings of the 20<sup>th</sup> IEEE High Performance Extreme Computing Conference (HPEC) 2016*, pages 1–6, Waltham, MA, USA, September 13-15, 2016. IEEE Computer Society, Los Alamitos, CA, USA. doi: 10.1109/HPEC.2016.7761593. URL <http://www.christian-engelmann.info/publications/hukerikar16havens.pdf>.
- [6] Kun Tang, Devesh Tiwari, Saurabh Gupta, Ping Huang, QiQi Lu, Christian Engelmann, and Xubin He. Power-capping aware checkpointing: On the interplay among power-capping, temperature, reliability, performance, and energy. In *Proceedings of the 46<sup>th</sup> IEEE/IFIP International Conference on Dependable Systems and Networks (DSN) 2016*, pages 311–322, Toulouse, France, June 28 - July 1, 2016. IEEE Computer Society, Los Alamitos, CA, USA. doi: 10.1109/DSN.2016.36. URL <http://www.christian-engelmann.info/publications/tang16power-aware.pdf>. Acceptance rate 22.4% (58/259).
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- [13] Thomas Naughton, Christian Engelmann, Geoffroy Vallée, and Swen Böhm. Supporting the development of resilient message passing applications using simulation. In *Proceedings of the 22<sup>nd</sup> Euromicro International Conference on Parallel, Distributed, and network-based Processing (PDP) 2014*, pages 271–278, Turin, Italy, February 12-14, 2014. IEEE Computer Society, Los Alamitos, CA, USA. doi: 10.1109/PDP.2014.74. URL <http://www.christian-engelmann.info/publications/naughton14supporting.pdf>. Acceptance rate 32.6% (73/224).
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- [33] Geoffroy R. Vallée, Kulathap Charoenpornwattana, Christian Engelmann, Anand Tikotekar, Chokchai (Box) Leangsuksun, Thomas Naughton, and Stephen L. Scott. A framework for proactive fault tolerance. In *Proceedings of the 3<sup>rd</sup> International Conference on Availability, Reliability and Security (ARES) 2008*, pages 659–664, Barcelona, Spain, March 4–7, 2008. IEEE Computer Society, Los Alamitos, CA, USA. ISBN 978-0-7695-3102-1. doi: 10.1109/ARES.2008.171. URL <http://www.christian-engelmann.info/publications/vallee08framework.pdf>. Acceptance rate 21.1% (40/190).

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## Peer-reviewed Conference Posters

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