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RESEARCH	Methods for understanding complex systems: measurement, modeling, reliability, and performance.	
EDUCATION	<b>Stanford University</b> , Stanford, CA Ph.D., Computer Science (advised by Alex Aiken) <span style="float:right"><i>(expected)</i> 2011</span> M.S., Computer Science <span style="float:right">2009</span> <b>Massachusetts Institute of Technology</b> , Cambridge, MA M.Eng., Electrical Engineering and Computer Science <span style="float:right">2005</span> S.B., Mathematics <span style="float:right">2005</span> S.B., Computer Science <span style="float:right">2004</span>	
PROFESSIONAL EXPERIENCE	<b>Sandia National Labs</b> , Albuquerque, NM <i>Research Intern (telecommuting)</i> <span style="float:right">2006 – present</span> <b>IBM Research</b> , T.J. Watson Research Center, Yorktown Heights, NY <i>Research Intern, Blue Gene/L System Software Team</i> <span style="float:right">2002 – 2005</span> <b>InfoLab Group</b> , MIT Artificial Intelligence Lab, Cambridge, MA <i>Researcher and Programmer</i> <span style="float:right">2002 – 2003</span>	
HONORS AND AWARDS	Department of Energy, High Performance Computer Science Fellow (2005 – 2010) Honorary Stanford Graduate Fellow (2005 – 2008) Time Magazine Person of the Year (2006) MIT VI-A Fellow (2004 – 2005) Member and Officer, Eta Kappa Nu, Electrical Engineering Honor Society Best Design, ACM/IEEE Programming Competition 2003 (6.370) Best Gameplay, GizCon Boston 2002 (6.170)	
REFEREED CONFERENCE PUBLICATIONS	A. J. Oliner, A. V. Kulkarni, and A. Aiken. <i>Using Correlated Surprise to Infer Shared Influence</i> . In Proceedings of the International Conference on Dependable Systems and Networks ( <b>DSN</b> ), Chicago, Illinois, 2010. A. J. Oliner, A. Aiken, and J. Stearley. <i>Alert Detection in System Logs</i> . In Proceedings of the International Conference on Data Mining ( <b>ICDM</b> ), Pisa, Italy, 2008. A. J. Oliner and J. Stearley. <i>What Supercomputers Say: A Study of Five System Logs</i> . In Proceedings of the International Conference on Dependable Systems and Networks ( <b>DSN</b> ), Edinburgh, UK, 2007. A. J. Oliner, L. Rudolph, R. K. Sahoo. <i>Cooperative Checkpointing: A Robust Approach to Large-scale Systems Reliability</i> . In Proceedings of the 20th Annual International Conference on Supercomputing ( <b>ICS</b> ), Cairns, Australia, 2006. A. J. Oliner, L. Rudolph, R. K. Sahoo. <i>Cooperative Checkpointing Theory</i> . In Proceedings of the International Parallel and Distributed Processing Symposium ( <b>IPDPS</b> ), Rhodes Island, Greece, 2006. A. J. Oliner, L. Rudolph, R. K. Sahoo, J. E. Moreira, M. Gupta. <i>Probabilistic QoS Guarantees for Supercomputing Systems</i> . In Proceedings of the International Conference on Dependable Systems and Networks ( <b>DSN</b> ), Yokohama, Japan, 2005. A. J. Oliner, R. K. Sahoo, J. E. Moreira, M. Gupta, A. Sivasubramaniam. <i>Fault-aware Job Scheduling for BlueGene/L Systems</i> . In Proceedings of the International Parallel and Distributed Processing Symposium ( <b>IPDPS</b> ), Santa Fe, NM, 2004. R. Sahoo, A. Oliner, I. Rish, M. Gupta, J. Moreira, S. Ma, R. Vilalta, A. Sivasubramaniam. <i>Critical Event Prediction for Proactive Management in Large-scale Computer Clusters</i> . In Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining ( <b>KDD</b> ), Washington, DC, 2003.	

- The BlueGene/L Team. *An Overview of The BlueGene/L Supercomputer*. In Proceedings of Supercomputing (**SC**) and IBM Research Report, 2002.
- REFEREED WORKSHOP PUBLICATIONS
- J. Stearley and A. J. Oliner. *Bad Words: Finding Faults in Spirits Syslogs*. In Workshop on Resiliency in High-Performance Computing (**Resilience**), Lyon, France, 2008.
- D. Ramage and A. J. Oliner. *RA: ResearchAssistant for the Computational Sciences*. In Workshop on Experimental Computer Science (**ExpCS**), San Diego, CA, 2007.
- A. J. Oliner, R. K. Sahoo. *Evaluating Cooperative Checkpointing for Supercomputing Systems*. In Proceedings of the Second Workshop on System Management Tools for Large-Scale Parallel Systems at the International Parallel and Distributed Processing Symposium (**SMTPS**), Rhodes Island, Greece, 2006.
- A. J. Oliner, R. K. Sahoo, J. E. Moreira, M. Gupta. *Performance Implications of Periodic Checkpointing on Large-Scale Cluster Systems*. In Proceedings of the First Workshop on System Management Tools for Large-Scale Parallel Systems at the International Parallel and Distributed Processing Symposium (**SMTPS**), Denver, CO, 2005.
- R. K. Sahoo, I. Rish, A. J. Oliner, M. Gupta, J. E. Moreira, S. Ma, R. Vilalta and A. Sivasubramaniam. *Autonomic Computing Features for Large-scale Server Management and Control*. In the IJCAI Workshop on AI and Autonomic Computing (**IJCAI:AC**), Acapulco, Mexico, 2003.
- THESES
- A. J. Oliner. *Cooperative Checkpointing for Supercomputing Systems*. Master of Engineering thesis at MIT, 2005. Advised by L. Rudolph.
- UNPUBLISHED MANUSCRIPTS
- A. J. Oliner and A. Aiken. *A Query Language for Understanding Component Interactions in Production Systems*. In submission.
- A. J. Oliner, A. Kulkarni, and A. Aiken. *Community Epidemic Detection with Syzygy*.
- INVITED TALKS AND PRESENTATIONS
- A. J. Oliner. *Using Influence to Understand Complex Systems*. **AT&T Labs**, February 18, 2010.
- A. J. Oliner and A. Aiken. *Using Influence to Understand Complex Systems*. In two forms: **Google Tech Talk** (presented by A. Aiken), April 22, 2009 and **MIT CSAIL** (presented by A. J. Oliner), June 8, 2009.
- A. J. Oliner. *Inferring Influence using Correlated Anomalies*. **Aster Data**. December 12, 2008.
- A. J. Oliner. *Studying Systems as Artifacts*. Workshop on Resilience for Petascale HPC, at the Los Alamos Computer Science Symposium (**LACSS**). October 15, 2008.
- A. J. Oliner. *Why Stanley Swerved: Correlated Anomalies in an Autonomous Vehicle*. Open Source Quality (**OSQ**) Retreat. May 15, 2008.
- A. J. Oliner. *A Scientific Approach to Systems Reliability*. IBM Conference on Interaction between Architecture, Circuits, and Compilers (**P=ac<sup>2</sup>**). April 1, 2008.
- A. J. Oliner, N. Semsarilar, and A. Aiken. *Syzygy: Community Epidemic Detection*. Application Communities Project, **DARPA PI Meeting**. July 10, 2007.
- A. J. Oliner and A. Aiken. *Anomalies in Complex Systems*. Stanford **DARPA Grand Challenge Team**. March 08, 2007.
- A. J. Oliner, N. Semsarilar, H. Saidi, and A. Aiken. *Leveraging Communities to Control Epidemics*. Vernier Project, **DARPA Site Visit**. April 12, 2007.
- A. J. Oliner, R. K. Sahoo, J. E. Moreira, and M. Gupta. *Intelligent High Performance Computing*. **SQUALL Lunch**, CMU. November 09, 2004.
- TEACHING
- Course Assistant, *CS240 Advanced Topics in Operating Systems*, Prof. Dawson Engler, Stanford University.
- Course Assistant, *EE282 Computer Systems Architecture*, Prof. Christos Kozyrakis, Stanford University.

Teaching Assistant, *6.803/6.833 Human Intelligence Enterprise*, Prof. Patrick Winston, MIT.

PATENTS

Method and system for deciding when to checkpoint an application based on risk analysis. A. J. Oliner and R. K. Sahoo. Filed 2005, issued 2008. (U.S. Patent #7,392,433)

Hybrid method for event prediction and system control. A. J. Oliner, et. al. Filed 2003, issued 2008. (U.S. Patent #7,451,210)

Method for using a priority queue to perform job scheduling on a cluster based on node rank and performance. A. J. Oliner and R. K. Sahoo. Filed 2005. (Application #20060184939)