Biographical Sketch for Scott A. Klasky

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Education

Ph.D. in Physics (1994), University of Texas, Austin, TX, 1994, *B.S.* in Physics (1989), Drexel University.

Select Professional Experience

2014 – Present, Adjunct Faculty, Dept. of Computer Science, Georgia Tech University, Atlanta, Georgia.

2012 – Present, Group Leader: Scientific Data, Computer Science and Mathematics, ORNL,

2009 – Present, Adjunct Professor, Dept. of Electric and Computer Science, University of Tennessee Knoxville, Knoxville TN.

2007 – Present, Adjunct Professor, Dept. of Information Technology, North Carolina State University, Raleigh, NC.

2005 – Present, Visiting Professor, Dept of Electrial and Computer Engineering, Rutgers University, Piscataway NJ.

2005 – 2011, Senior Research Scientist, and End-to-End task Lead, Oak Ridge National Laboratory, Oak Ridge, TN.

1999 – 2005, Senior Research Scientist, Princeton Plasma Physics Laboratory, Princeton NJ.

1995 – 1999, Senior Research Scientist, Syracuse University (Northeast Parallel Architecture Center, Syracuse NJ.

10 Related Publications from 2014

1. Q. Liu, J. Logan, Y. Tian, H. Abbasi, N. Podhorszki, J. Y. Choi, S. Klasky, R. Tchoua, J. Lofstead, R. Oldfield, et al.. Hello ADIOS: the challenges and lessons of developing leadership class I/O frameworks. Concurrency and Computation: Practice and Experience 2014, 26, 1453–1473.

2. Y. Zhang, Q. Liu, S. Klasky, M. Wolf, K. Schwan, G. Eisenhauer, J. Choi, N. Podhorszki, Active workflow system for near real-time extreme-scale science in Proceedings of the first workshop on Parallel programming for analytics applications, ACM, pp. 53–62.

3. S. Lakshminarasimhan, X. Zou, D. A. Boyuka II, S. V. Pendse, J. Jenkins, V. Vishwanath, M. E. Papka, S. Klasky, N. F. Samatova. DIRAQ: scalable in situ data-and resource-aware indexing for optimized query performance. Cluster Computing 2014, 1–19.

4. G. Teodoro, T. Pan, T. Kurc, J. Kong, L. Cooper, S. Klasky, J. Saltz. Region Templates: Data Representation and Management for Large-Scale Image Analysis. arXiv preprint arXiv:1405.7958 2014.

5. D. A. Boyuka, S. Lakshminarasimham, X. Zou, Z. Gong, J. Jenkins, E. R. Schendel, N. Podhorszki, Q. Liu, S. Klasky, N. F. Samatova, Transparent in Situ Data Transformations in ADIOS in Cluster, Cloud and Grid Computing (CCGrid), 2014 14th IEEE/ACM International Symposium on, IEEE, pp. 256–266.

6. H. Tang, X. Zou, J. Jenkins, D. A. Boyuka II, S. Ranshous, D. Kimpe, S. Klasky, N. F. Samatova, Improving Read Performance with Online Access Pattern Analysis and Prefetching in Euro-Par 2014 Parallel Processing, Springer International Publishing, 2014, pp. 246–257.

7. X. Zou, S. Lakshminarasimhan, D. A. Boyuka II, S. Ranshous, H. Tang, S. Klasky, N. F. Samatova, Fast Set Intersection through Run-Time Bitmap Construction over PForDeltaCompressed Indexes in Euro-Par 2014 Parallel Processing, Springer International Publishing, 2014, pp. 668–679.

8. S. Herbein, S. Klasky, M. Taufer. Benchmarking the Performance of Scientific Applications with Irregular I/O at the Extreme Scale. Proceedings of the Seventh International Workshop on Parallel Programming Models and Systems Software for High-End Computing (P2S2), Minneapolis, Minnesota 2014.

9. M. Gamell, D. S. Katz, H. Kolla, J. Chen, S. Klasky, M. Parashar, Exploring automatic, online failure recovery for scientific applications at extreme scales in Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis, IEEE Press, pp. 895–906.

10. C. Docan, F. Zhang, T. Jin, H. Bui, Q. Sun, J. Cummings, N. Podhorszki, S. Klasky, M. Parashar. ActiveSpaces: Exploring dynamic code deployment for extreme scale data processing. Concurrency and Computation: Practice and Experience 2014.

Select Synergistic Activities

- **General:** Extensive experience in large-scale scientific applications, high performance I/O, cloud computing, visualization, data analysis, workflow automation, collaboration. Team lead for the 2013 R&D 100 ADIOS project.

- **Co-PI Exact Co-design Center.**

- **Co-PI, DOE ASCR SciDAC Scalable Data Analysis and Visualization.**

- **Co-PI**, **DOE ASCR Combustion Co-design Project.**

- **Lead-PI,** DOE ASCR project, Runtime system for I/O staging in support of in-situ processing of extreme scale data. (**RSVP**)

- Co-PI, DOE SciDAC **EPSI** Project.

- Co-PI, DOE ASCR **ICEE** Project.

- Co-PI, DOE ASCR, Exascale O/S Project (**HOBBES**).

Recent Collaborators (outside Oak Ridge National laboratory).

Agrawal NWU, J. Ahrens LANL, A. Aiken Stanford, I. Altintas UCSD, J. Bennett SNL, W. Bethel LBNL, P. T. Bremer LLNL., P. Bridges UNM, R. Brightwell SNL, E. Brugger LLNL, C. S. Chang PPPL, J. Chen SNL, H. Childs U. Oregon, A. Choudhary NWU, J. Cummings Caltech, S. Ethier PPPL, E. Feibush PPPL, W. Feng Va. Tech, G. Fox U. Indiana, B. Geveci Kitware, M. Greenwald MIT, B. Hamann UCD, P. Hanrahan Stanford, C. Hansen U. Utah, J. Hesthaven EPFL, M. Humphrey U. VA., C. Johnson U. Utah, K. Joy UCD, A. Kahn U. Utah, H. Kolla SNL, S. Krieder IIT, A. Kritz Lehigh, W. K. Liao NWU, J. Lofstead SNL, B. Ludaescher UCD, K. L. Ma UCD, P. McCormick LANL, K. Moreland SNL, R. Moser U. TX , W. Nevins LLNL, R. Oldfield SNL, D. K. Panda OSU, S. Parker U. Colorado, V. Pascucci U. Utah, R. Pordes Fermilab, D. Quinlan LLNL, D. Rotem LBNL, A. Sanderson U. Utah, K. Schwan G. Tech, E. Seidel U. Illinois, H. W. Shen OSU, M. Shephard RPI, C. Silvia NYU, L. Sugiyama MIT, A. Taflove NWU, W. Tang PPPL, M. Taufer U. Dell., G. Tynan UCSD, L. Ward SNL, P. Widener, SNL, M. Wolf G. Tech, J. Woodring LANL, H. Yu U. Neb.

Graduate and Postgraduate Advisors: G. Fox (U. Syracuse), R. Matzner (UT, Austin)

Ph.D. Dissertation Co-Advisees

V. Bhat (Rutgers), G. Lofstead (Georgia Tech), H. Abbasi (Georgia Tech), Y. Tian (Auburn)

Postdoctoral Advisees

Post Docs: H. Abbasi (UTK), J. Choi (ORNL, Q. Liu (ORNL), J. Logan (ORNL), K. Mu (ORNL)