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Publications

A. Books

1. L. Biegler, O. Ghattas, M. Heinkenschloss, and B. van Bloemen Waanders, eds., *Large-Scale PDE-Constrained Optimization*, Lecture Notes in Computational Science and Engineering, Springer-Verlag, 2003.
2. L. Biegler, O. Ghattas, M. Heinkenschloss, D. Keyes, and B. van Bloemen Waanders, eds., *Real-time PDE-Constrained Optimization*, SIAM series on Computational Science and Engineering, SIAM, 2007.

B. Refereed Articles

1. T. Bui-Thanh, K. Willcox, and O. Ghattas, Parametric Reduced-Order Models for Probabilistic Analysis of Unsteady Aerodynamic Applications, *AIAA Journal*, submitted.
2. A. Askan, V. Akcelik, J. Bielak, and O. Ghattas, Parametric analysis of a nonlinear least squares optimization-based anelastic full waveform inversion method, *Geophysical Journal International*, submitted.
3. T. Bui-Thanh, K. Willcox, and O. Ghattas, Model Reduction for Large-Scale Systems with High-Dimensional Parametric Input Space, *SIAM Journal on Scientific Computing*, to appear.
4. A. Askan, V. Akcelik, J. Bielak, and O. Ghattas, Full waveform inversion for seismic velocity and anelastic losses in heterogeneous structures, *Bulletin of Seismological Society of America*, 97(6):1990–2008, 2007.
5. C. Burstedde and O. Ghattas, Algorithmic Strategies for Full Waveform Inversion: 1D Experiments, *Proceedings of SEG 2007*, San Antonio, September, 2007.
6. O. Bashir, O. Ghattas, J. Hill, B. van Bloeman Waanders, and K. Willcox, Hessian-based model reduction for large-scale data assimilation problems, *2007 International Conference on Computational Science*, Beijing, China, May, 2007.

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9. I. Pagani, A. Quist, O. Ghattas, R. Lal, P.R. LeDuc, Understanding subcellular structural domains in red blood cells through atomic force microscopy and confocal microscopy, *Blood*, submitted.
10. I. Pagani, H. Simon, O. Ghattas, P. LeDuc, Probing actin distribution in red blood cells using microfluidics, *Biotechnology and Bioengineering*, accepted, 2006.
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12. T. Bui-Thanh, K. Willcox, O. Ghattas, B. van Bloemen Waanders, Goal-oriented, model-constrained optimization for reduction of large-scale systems, *Journal of Computational Physics*, 224(2):880-896, 2006.
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14. T. Tu, H. Yu, L. Ramirez-Guzman, J. Bielak, O. Ghattas, K.-L. Ma, and D.R. O'Hallaron, From mesh generation to scientific visualization: An end-to-end approach to parallel supercomputing, *Proceedings of IEEE/ACM SC06*, Tampa, Florida, Nov. 2006.
15. V. Akcelik, G. Biros, A. Draganescu, O. Ghattas, J. Hill, and B. van Bloemen Waanders, Inversion of Airborne Contaminants in a Regional Model, *Proceedings of 6th International Conference on Computational Science (ICCS 2006)*, Lecture Notes in Computer Science, Vol. 3991, Springer, Reading, UK, May 2006.
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17. J. Bielak, O. Ghattas, and E.J. Kim, Parallel octree-based finite element method for large-scale earthquake ground motion simulation, *Computer Modeling in Engineering and Sciences*, 10(2):99–112, 2005.
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C. Other Publications

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