

ADOLFY HOISIE

Los Alamos National Laboratory *Email:* *hoisie@lanl.gov*
Modeling, Algorithms and Informatics *Telephone:* *(505) 667-5216*
Computer and Computational Sciences Division
MS B256
Los Alamos, NM 87545

Job History:

04/2000-Present Group Leader (acting) of the Modeling, Algorithms and Informatics Group CCS-3

03/1997-Present Research Scientist/Team Leader, Parallel Architectures and Performance, CIC-3, Los Alamos National Laboratory, Los Alamos, NM

12/1987-03/1997 Senior Research Associate, Parallel Applications and Performance, Cornell Theory Center, Cornell University, Ithaca, NY.

10/1981-09/1987: Research Associate, Scientific Computing, Nuclear Power Reactors Institute, Bucharest, Romania .

Professional Awards

Winner of IEEE's **Gordon Bell Award**, 1996.

Key Qualifications

Parallel architectures, microprocessor architecture, performance analysis, performance modeling, high-performance networks, parallel computing, parallel algorithms.

Education

Ph.D. in Computational Science, *expected* fall 2001. Cornell University.

M.Eng. in Engineering-Physics, Bucharest University, Romania, 1981.

Selected *Recent* Publications and Invited Presentations

Stefan Goedecker and Adolfy Hoisie, "Performance Optimizations of Numerically Intensive Codes", **book**, SIAM, March 2001.

Fabrizio Petrini, Adolfo Hoisie, Wu-chun Feng and Richard Graham, "Performance Evaluation of the Quadrics Interconnection Network", Workshop on Communication Architecture for Clusters (CAC '01), San Francisco, April 2001.

Adolfo Hoisie, Olaf Lubeck, Harvey Wasserman, "Performance and Scalability Analysis of Teraflop-Scale Parallel Architectures Using Multidimensional Wavefront Applications", The International Journal of High Performance Computing Applications, Volume 14, No4, Winter 2000, pp. 330-346.

Adolfo Hoisie, Olaf Lubeck, Harvey Wasserman, Fabrizio Petrini, Hank Alme, "A General Predictive Performance Model for Wavefront Algorithms on Clusters of SMPs", LAUR-00308, Proceedings of ICPP 2000, IEEE Computer Society, August 2000, pp. 219.

Adolfo Hoisie, Olaf Lubeck, Harvey Wasserman, "Performance Analysis of Wavefront Algorithms on Very-Large Scale Distributed Systems", Springer's "Lectures Notes in Control and Information Sciences", 249, page 171, 1999.

Adolfo Hoisie, "Performance and Scalability Modeling of Applications on Teraflop-Scale Architectures", Invited talk, Petaflops II, Santa Barbara, February 1999.

Adolfo Hoisie, Olaf Lubeck, Harvey Wasserman. "Scalability Analysis of Multidimensional Wavefront Algorithms on Large-Scale SMP Clusters". Proceedings of Frontiers of Massively Parallel Computing '99, Annapolis, MD, February 1999.

J. Kress, S. Goedecker, A. Hoisie, H. Wasserman, O. Lubeck. "Parallel $O(n)$ Tight-Binding Molecular Dynamics of Polyethylene and Compressed Methane". the Journal of Computer-Aided Materials Design, 5, 1998.

S. Goedecker, A. Hoisie, J. Kress, O. Lubeck, H. Wasserman. "Scalable Quantum Mechanical Simulation of large Polymer Systems". Awarded "Honorable Mention" In the Supercomputing competition at Supercomputer '97, Mannheim, Germany, June 19-21, 1997.