

# HENRI CASANOVA

University of Hawai'i at Manoa  
Department of Computer and Information Sciences  
Pacific Ocean Science and Technology Building, Room 317  
1680 East-West Road, Honolulu, HI 96822  
Voice: (808) 956-2649 Fax: (808) 956-3548  
henric@hawaii.edu  
<http://navet.ics.hawaii.edu/~casanova>

## EDUCATION

**Ph.D.** – Computer Science, University of Tennessee, Knoxville (1998)

Dissertation: *Stochastic Models for Performance Analyses of Iterative Algorithms in Distributed Environments*

Advisors: Prof. Jack J. Dongarra and Prof. Michael G. Thomason

**M.S.** – Diplôme d'Etudes Approfondies (DEA) in Parallel Architectures and Applied Mathematics, University Paul Sabatier, Toulouse, France (1994)

Thesis: *A version of PVM for shared- and virtually shared-memory supercomputers*

Advisor: Prof. Michel Daydé

**B.S.** – Diplôme d'Ingénieur in Computer Science and Applied Mathematics, Ecole Nationale Supérieure d'Electronique, d'Electrotechnique, d'Informatique et d'Hydraulique de Toulouse (ENSEEIH) (1993)

## RESEARCH INTERESTS

Research areas of interest include parallel computing, Grid computing, Internet computing, scheduling theory and practice, simulation, as well as deployment software and middleware for distributed applications.

## PROFESSIONAL EXPERIENCE

**07/07 - present:** Associate Professor, Department of Information and Computer Sciences, University of Hawai'i at Manoa.

**08/05 - 06/07:** Assistant Professor, Department of Information and Computer Sciences, University of Hawai'i at Manoa.

**07/04 - 07/05:** Associate Research Scientist, San Diego Supercomputer Center, University of California, San Diego.

**07/02 - 07/05:** Adjunct Assistant Professor, Department of Computer Science and Engineering, University of California, San Diego.

**07/01 - 06/04:** Assistant Research Scientist, San Diego Supercomputer Center, University

of California, San Diego.

- 07/01 - 07/05:** Director of the Grid Research And Innovation Laboratory (GRAIL), University of California, San Diego
- 12/98 - 06/01:** Assistant Project Scientist, Department of Computer Science and Engineering, University of California, San Diego.
- 03/98 - 11/98:** Postdoctoral Research Associate, Computer Science Department, University of Tennessee, Knoxville.
- 01/95 - 02/98:** Graduate Research Assistant, Computer Science Department, University of Tennessee, Knoxville.
- 11/93 - 11/94:** Computer Science Advisor, French Ministry of Defense (DGA), Paris, France.
- 09/92 - 10/93:** Graduate Research Assistant, Institut de Recherche en Informatique de Toulouse (IRIT), Toulouse, France.

## PUBLICATIONS

### Journal Articles

30. *Scheduling Mixed-Parallel Applications with Advance Reservations*, K. Aida, H. Casanova, in the *Cluster Computing Journal*, 12(2), 205–220, **2009**.
29. *Scheduling Parallel Task Graphs on (Almost) Homogeneous Multi-cluster Platforms*, P.-F. Dutot, T. N'takpé, F. Suter, H. Casanova, in the *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 20(7), 940–952, **2009**.
28. *Scheduling Task Parallel Applications for Rapid Application Turnaround on Enterprise Desktop Grids*, D. Kondo, A. Chien, H. Casanova, in the *Journal of Grid Computing*, 5(4), 379–405, **2007**.
27. *Benefits and Drawbacks of Redundant Batch Requests*, H. Casanova, in the *Journal of Grid Computing*, 5(2), 235–250, **2007**.
26. *Characterizing Resource Availability in Enterprise Desktop Grids*, D. Kondo, G. Fedak, F. Cappello, H. Casanova, in the *Journal of Future Generation Computer Systems*, 23(7), 888–903, **2007**.
25. *Steady-State Scheduling of Multiple Divisible Load Applications on Wide-Area Distributed Computing Platforms*, L. Marchal, Y. Yang, H. Casanova, Y. Robert, in the *International Journal of High Performance Computing Applications (IJHPCA)*, 20(8), 365–381, **2006**.
24. *Interference-Aware Scheduling*, B. Kreaseck, L. Carter, H. Casanova, J. Ferrante, S. Nandy, in the *International Journal of High Performance Computing Applications (IJHPCA)*, 20(2), 45–59, **2006**.
23. *New Grid Scheduling and Rescheduling Methods in the GrADS Project*, F. Berman, H. Casanova, A. Chien, K. Cooper, H. Dail, A. Dasgupta, W. Deng, J. Dongarra, L. Johnsson, K. Kennedy, C. Koelbel, B. Liu, X. Liu, A. Mandal, G. Marin, M. Mazin, J. Mellor-Crummey, C. Mendes, A. Olugbile, M. Patel, D. Reed, Z. Shi, O. Sievert, H.

- Xia, A. YakKhan, in the *International Journal of Parallel Programming*, 33(2), 209–229, **2005**.
22. *Network Modeling Issues for Grid Application Scheduling*, H. Casanova, in the *International Journal of Foundations of Computer Science (IJFCS)*, 16(2), 145–162, **2005**.
  21. *Multi-Round algorithms for Scheduling Divisible Workloads*, Y. Yang, K. van der Raadt, H. Casanova, *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 16(11), 1092–1102, **2005**.
  20. *Scheduling Divisible Loads on Star and Tree Networks: Results and Open Problems*, O. Beaumont, H. Casanova, A. Legrand, Y. Robert, Y. Yang, *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 16(3), 207–218, **2005**.
  19. *The Encyclopedia of Life Project: Grid Software and Deployment*, W. Li, R. Byrnes, J. Hayes, V. Reyes, A. Birnbaum, A. Shabab, C. Mosley, D. Pekurovsky, G. Quinn, I. Shindyalov, H. Casanova, L. Ang, F. Berman, M. Miller, P. Bourne, in the *Journal of New Generation Computing on Grid Systems for Life Sciences*, 22(2), 127–136, **2004**.
  18. *A Simple MPI Process Swapping Architecture for Iterative Applications*, O. Sievert, H. Casanova, *The International Journal of High Performance Computing Applications (IJHPCA)*, 18(3), 341–352, **2004**.
  17. *The Virtual Instrument: Support for Grid-enabled Scientific Simulations*, H. Casanova, et al., *The International Journal of High Performance Computing Applications (IJHPCA)*, 18(1), 3–17, **2004**.
  16. *Resource Allocation Strategies for Guided Parameter Space Searches*, M. Faerman, A. Birnbaum, F. Berman, H. Casanova, *The International Journal of High Performance Computing Applications (IJHPCA)*, 17(4), 383–402, **2003**.
  15. *Adaptive Computing on the Grid Using AppLeS*, F. Berman, R. Wolski, H. Casanova, W. Cirne, H. Dail, M. Faerman, S. Figueira, J. Hayes, G. Obertelli, J. Schopf, G. Shao, S. Smallen, N. Spring, A. Su, D. Zagorodnov, *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 14(4), 369–382, **2003**.
  14. *A Decoupled Scheduling Approach for Grid Application Development Environments*, H. Dail, F. Berman, H. Casanova, *Journal of Parallel and Distributed Computing (JPDC)*, Special issue on Grid Computing, 63(5), 505–524, **2003**.
  13. *Using TOP-C and AMPIC to Port Large Parallel Applications to the Computational Grid*, G. Cooperman, H. Casanova, J. Hayes, T. Witzel, *The International Journal on Future Generation Computer Systems (FGCS)*, 19(4), 587–596, **2003**. Extended version of the paper in Proceedings of the 2nd IEEE International Symposium on Cluster Computing and the Grid (CCGrid’02).
  12. *Applying Scheduling and Tuning to On-line Parallel Tomography*, S. Smallen, H. Casanova, F. Berman, *Scientific Programming*, 10(4), **2003**. Extended version of the paper in Proceedings of Super Computing 2001 (SC’01).
  11. *Innovation of the NetSolve Grid Computing System*, D. Arnold, H. Casanova, J. Don-garra, *Concurrency and Computation: Practice and Experience (CCPE)*, 14(13-15), 1457–1479, **2002**.

10. *Middleware for the Use of Storage in Communication*, M. Beck, D. Arnold, A. Bassi, F. Berman, H. Casanova, J. Dongarra, T. Moore, G. Obertelli, J. Plank, M. Swany, S. Vadhiyar, R. Wolski, *Parallel Computing*, 28(12), 1773–1787, **2002**.
9. *Distributing MCell Simulations on the Grid*, H. Casanova, T. Bartol, J. Stiles, F. Berman, *The International Journal of High Performance Computing Applications (IJHPCA)*, Vol. 14(3), 243–257, Fall **2001**. Extended version of the paper in Proceedings of the Workshop on Clusters and Computational Grids for Scientific Computing (WC-CGSC'00).
8. *The AppLeS Parameter Sweep Template: User-Level Middleware for the Grid*, H. Casanova, G. Obertelli, F. Berman, R. Wolski, *Scientific Programming*, Vol. 8, Num. 3, 111–126, **2001**. Extended version of the paper in Proceedings of Super Computing 2000 (SC'00), best paper finalist.
7. *Adaptive Scheduling for Task Farming with Grid Middleware*, H. Casanova, M. Kim, J. Plank, J. Dongarra, *The International Journal of Supercomputer Applications and High Performance Computing (IJHPCA)*, Vol. 13, 231–240, **1999**.
6. *Logistical Quality of Service in NetSolve*, M. Beck, H. Casanova, J. Dongarra, T. Moore, J. Plank, F. Berman, R. Wolski, *Computers and Communications*, Vol. 22, Issue 11, 1034–1044, **1999**.
5. *Deploying Fault tolerance and Task Migration with NetSolve*, J. Plank, H. Casanova, M. Beck, J. Dongarra, *The International Journal on Future Generation Computer Systems (FGCS)*, Vol. 15, 745–755, **1999**.
4. *Stochastic Performance Prediction for Iterative Algorithms in Distributed Environments*, H. Casanova, M. Thomason, J. Dongarra, *Journal of Parallel and Distributed Computing (JPDC)*, Vol. 58, Num. 1, 68–91, **1999**.
3. *Using agent-based software for scientific computing in the NetSolve system*, H. Casanova, J. Dongarra, *Parallel Computing*, Vol. 24, 1777–1790, **1998**.
2. *Java Access to Numerical Libraries*, H. Casanova, D. Doolin, J. Dongarra, *Concurrency: Practice and Experience (CPE)*, Vol. 9, Num. 11, 1279–1291, **1997**.
1. *NetSolve: A Network-Enabled Server for Solving Computational Science Problems*, H. Casanova, J. Dongarra, *The International Journal of Supercomputer Applications and High Performance Computing (IJHPCA)*, Vol. 11, Num. 3, 212–223, Fall **1997**. Extended version from the paper in Proceedings of Super Computing 1996 (SC'96).

## Refereed Conference and Workshop Proceedings

60. *Resource Allocation for Multiple Concurrent In-network Stream-processing Applications*, A. Benoit, H. Casanova, V. Rehn-Sonigo, Y. Robert, in Proceedings of the 7th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar), Delft, The Netherlands, **best paper award**, August **2009**.
59. *Heuristics for Continuity Editing of Cinematic Computer Graphics Scenes*, K. Kar-

- dan, H. Casanova, in Proceedings of the Games Papers (Sandbox) track of the ACM SIGGRAPH conference, New Orleans, Louisiana, August **2009**.
58. *Characterizing Fault Tolerance in Genetic Programming*, D. Lombraa F. Fernandez de Vega, H. Casanova, in Proceedings of the Workshop on Bio-Inspired Algorithms for Distributed Systems (BDAS'09), Barcelona, Spain, June **2009**.
  57. *Resource Allocation using Virtual Clusters*, M. Stillwell, D. Schanzenbach, F. Vivien, H. Casanova, in Proceedings of the 9th IEEE Symposium on Cluster Computing and the Grid (CCGrid'09), Shanghai, China, May **2009**.
  56. *Resource Allocation Strategies for Constructive In-Network Stream Processing*, A. Benoit, H. Casanova, V. Rhen-Sonigo, Y. Robert, in Proceedings of the 10th Workshop on Advances on Parallel and Distributed Processing Symposium (APDCM), Rome, Italy, May **2009**.
  55. *Virtual Cinematography of Group Scenes using Hierarchical Lines of Actions*, K. Kardan, H. Casanova, in Proceedings of the ACM SIGGRAPH Sandbox Symposium, Los Angeles, California, August **2008**.
  54. *Scheduling Mixed-Parallel Applications with Advance Reservations*, K. Aida, H. Casanova, in Proceedings of the 17th IEEE International Symposium on High Performance Distributed Computing (HPDC-17), Boston, Massachusetts, June **2008**.
  53. *SimGrid: a Generic Framework for Large-Scale Distributed Experimentations*, H. Casanova, A. Legrand, M. Quinson, in Proceedings of Tenth International Conference on Computer Modeling and Simulation (UKSim), Cambridge, U.K., April **2008**.
  52. *Probabilistic Allocation of Synchronous Tasks to Desktop Grid Resources*, J. Wingstrom, H. Casanova, in Proceedings of Workshop on Desktop Grids and Volunteer Computing Systems (PCGrid), Miami, Florida, April **2008**.
  51. *Speed and Accuracy of Network Simulation in the SimGrid Framework*, K. Fujiwara, H. Casanova, in Proceedings of First International Workshop on Network Simulation Tools (NSTools), Nantes, France, October **2007**.
  50. *Automatic Resource Specification Generation for Resource Selection*, R. Huang, A. Chien, H. Casanova, in Proceedings of SC'07, Reno, Nevada, November **2007**.
  49. *A Comparison of Scheduling Approaches for Mixed-Parallel Applications on Heterogeneous Platforms*, T. N'Takpé, F. Suter, H. Casanova, in Proceedings of the 6th International Symposium on Parallel and Distributed Computing (ISPDC), Hagenberg, Austria, July **2007**.
  48. *On Resource Volatility in Enterprise Desktop Grids*, D. Kondo, G. Fedak, F. Cappello, H. Casanova, in Proceedings of e-Science 2006, Amsterdam, Netherlands, December **2006**.
  47. *Improving Grid Resource Allocation via Integrated Selection and Binding*, Y.-S. Kee, K. Yocum, A. Chien, H. Casanova, in Proceedings of SC'06, Tampa, Florida, November **2006**.
  46. *Measuring the Performance and Reliability of Production Computational Grids*, O.

- Khalili, J. He, C. Olschanowsky, A. Snavely, H. Casanova, in Proceedings of the 7th IEEE/ACM International Conference on Grid Computing (Grid'06), Barcelona, Spain, September **2006**.
45. *On the Harmfulness of Redundant Batch Requests*, H. Casanova, in Proceedings of the 15th IEEE International Symposium on High Performance Distributed Computing (HPDC-15), Paris, France, June **2006**.
  44. *An Evaluation of Job Scheduling Strategies for Divisible Loads on Grid Platforms*, Y. Cardinale, H. Casanova, in Proceedings of the High Performance Computing & Simulation Conference (HPC&S'06), Bonn, Germany, May **2006**.
  43. *Scalable Grid Application Scheduling via Decoupled Resource Selection and Scheduling*, Y. Zhang, A. Mandal, C. Koelbel, K. Kennedy, H. Casanova, A. Chien, in Proceedings of the 6th IEEE Symposium on Cluster Computing and the Grid (CCGrid'06), Singapore, May **2006**.
  42. *Using Virtual Grids to Simplify Application Scheduling*, R. Huang, H. Casanova, A. Chien, in Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'06), Rhodes, Greece, April **2006**.
  41. *Efficient Resource Description and High Quality Selection for Virtual Grids*, Y.-S. Kee, D. Logothetis, R. Huang, H. Casanova, A. Chien, in Proceedings of the 5th IEEE Symposium on Cluster Computing and the Grid (CCGrid'05), Cardiff, U.K., May **2005**.
  40. *Practical Divisible Load Scheduling on Grid Platforms with APST-DV*, K. van der Raadt, Y. Yang, H. Casanova, in Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'05), Denver, Colorado, April **2005**.
  39. *A Realistic Network/Application Model for Scheduling Divisible Loads on Large-Scale Platforms*, L. Marchal, Y. Yang, H. Casanova, Y. Robert, in Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'05), Denver, Colorado, April **2005**.
  38. *On the Feasibility of Running Entity-Level Simulations on Grid Platforms*, A. Su, F. Berman, H. Casanova, in Proceedings of the Grid'04 workshop, Pittsburgh, Pennsylvania, November **2004**.
  37. *Resource Management for Short-Lived Applications on Enterprise Desktop Grids*, D. Kondo, A. Chien, H. Casanova, in Proceedings of SC'04, Pittsburgh, Pennsylvania, November **2004**.
  36. *Realistic Modeling and Synthesis of Resources for Computational Grids*, Y.-S. Kee, H. Casanova, A. Chien, in Proceedings of SC'04, Pittsburgh, Pennsylvania, November **2004**.
  35. *From Heterogeneous Task Scheduling to Heterogeneous Mixed Data and Task Parallel Scheduling*, F. Suter, F. Desprez, H. Casanova, in Proceedings of Euro-Par, 230–237, (LCNS volume 3149), Pisa, Italy, August **2004**.
  34. *GridSpeed: A Web-based Grid Portal Generation Server*, T. Suzumura, H. Nakada, S. Matsuoka, H. Casanova, in Proceedings of the 7th International Conference on High Performance computing and Grid in Asia Pacific Region (HPC Asia), July **2004**.

33. *Grid workflow software for High-Throughput Proteome Annotation Pipeline*, A. Birnbaum, J. Hayes, W. Li, M. Miller, P. Bourne, H. Casanova, in Proceedings of the First International Workshop on Life Science Grid (LSGRID2004), June **2004**.
32. *The MicroGrid: Using Emulation to Predict Application Performance in Diverse Grid Network Environments*, H. Xia, H. Dail, H. Casanova, A. Chien, in Proceedings of the Workshop on Challenges of Large Applications in Distributed Environments (CLADE'04), Honolulu, June **2004**.
31. *Characterizing and Evaluating Desktop Grids: An Empirical Study*, D. Kondo, M. Taufer, C. L. Brooks, H. Casanova, A. Chien, in Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'04), Santa Fe, April **2004**.
30. *Recent Experiments with GrADS Software*, K. Cooper, A. Dasgupta, K. Kennedy, C. Koelbel, A. Mandal, G. Marin, M. Mazina, J. Mellor-Crummey, F. Berman, H. Casanova, A. Chien, H. Dail, X. Liu, A. Olugbile, O. Sievert, H. Xia, L. Johnson, B. Liu, M. Patel, D. Reed, W. Deng, C. Mendes, Z. Shi, A. YarKhan, J. Dongarra, in Proceedings of the NSF Next Generation Systems Program Meeting, Santa Fe, April **2004**.
29. *On the Interference of Communication on Computation*, B. Kreaseck, L. Carter, H. Casanova, J. Ferrante, in Proceedings of the workshop on Performance Modeling, Evaluation, and Optimization of Parallel and Distributed Systems, Santa Fe, April **2004**.
28. *Benchmark Probes for Grid Assessment*, G. Chun, H. Dail, H. Casanova, A. Snively, in Proceedings of the High-Performance Grid Computing Workshop, Santa Fe, April **2004**.
27. *Policies for Swapping MPI Processes*, O. Sievert, H. Casanova, in Proceedings of the 12th IEEE Symposium on High Performance and Distributed Computing (HPDC-12), Seattle, June **2003**.
26. *RUMR: Robust Scheduling for Divisible Workloads*, Y. Yang, H. Casanova, in Proceedings of the 12th IEEE Symposium on High Performance and Distributed Computing (HPDC-12), Seattle, June **2003**.
25. *Clustering Hosts in P2P and Global Computing Platforms*, A. Agrawal, H. Casanova, in Proceedings of the Workshop on Global and Peer-to-Peer Computing on Large Scale Distributed Systems, Tokyo, Japan, April **2003**.
24. *Performance Modeling for Entity-level Simulations*, A. Su, F. Berman, H. Casanova, in Proceedings of the Parallel and Distributed Scientific and Engineering Computing with Applications Workshop, Nice, France, April **2003**.
23. *Scheduling Distributed Applications: The SIMGRID Simulation Framework*, A. Legrand, L. Marchal, H. Casanova, in Proceedings of the Third IEEE International Symposium on Cluster Computing and the Grid (CCGrid'03), Tokyo, Japan, May **2003**.
22. *Autonomous Protocols for Bandwidth-Centric Scheduling of Independent-task Applications*, B. Kreaseck, L. Carter, H. Casanova, J. Ferrante, in Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'03), Nice, France, April **2003**.

21. *UMR: A Multi-Round Algorithm for Scheduling Divisible Workloads*, Y. Yang, H. Casanova, in Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'03), Nice, France, April **2003**.
20. *Resource Allocation for Steerable Parallel Parameter Searches*, M. Faerman, A. Birnbaum, H. Casanova, F. Berman, in Proceedings of the Grid Computing Workshop, Baltimore, 157–169, November **2002**.
19. *An Overview of GridRPC: A Remote Procedure Call API for Grid Computing*, H. Nakada, S. Matsuoka, K. Seymour, J. Dongarra, C. Lee, H. Casanova, in Proceedings of the Grid Computing Workshop, 274–279, Baltimore, November **2002**.
18. *A Decoupled Scheduling Approach for the GrADS Environment*, H. Dail, H. Casanova, F. Berman, in Proceedings of Super Computing 2002 (SC'02), Baltimore, November **2002**.
17. *Using TOP-C and AMPIC to Port Large Parallel Applications to the Computational Grid*, G. Cooperman, H. Casanova, J. Hayes, T. Witzel, in Proceedings of the 2nd IEEE International Symposium on Cluster Computing and the Grid (CCGrid), Berlin, Germany, May **2002**.
16. *Models and Scheduling Mechanisms for Global Computing Applications*, D. Kondo, H. Casanova, E. Wing, F. Berman, in Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS), Fort Lauderdale, April **2002**.
15. *Utilizing DAG Scheduling Algorithms for Entity-Level Simulations* A. Su, H. Casanova, F. Berman, in Proceedings of the 10th Symposium on High Performance Computing 2002 (HPC'02), San Diego, April **2002**.
14. *Applying Scheduling and Tuning to On-line Parallel Tomography*, S. Smallen, H. Casanova, F. Berman, in Proceedings of Super Computing 2001 (SC'01), Denver, **Best student paper award**, November **2001**.
13. *A Study of Deadline Scheduling for Client-Server Systems on the Computational Grid*, A. Takefusa, H. Casanova, S. Matsuoka, F. Berman, in Proceedings of the 10th IEEE Symposium on High Performance and Distributed Computing (HPDC'01), San Francisco, 406–415, August **2001**.
12. *Logistical Computing and Internetworking: Middleware for the Use of Storage in Communication*, M. Beck, D. Arnold, A. Bassi, F. Berman, H. Casanova, J. Dongarra, T. Moore, G. Obertelli, J. Plank, M. Swany, S. Vadhiyar, R. Wolski, in Proceedings of the 3rd Annual International Workshop on Active Middleware Services, San Francisco, August **2001**.
11. *Simgrid: A Toolkit for the Simulation of Application Scheduling*, H. Casanova, in Proceedings of the 1st IEEE International Symposium on Cluster Computing and the Grid (CCGrid'01), Brisbane, Australia, 430–437, May **2001**.
10. *Network-Enabled Server Systems: Deploying Scientific Simulations on the Grid*, H. Casanova, S. Matsuoka, J. Dongarra, in Proceedings of High Performance Computing 2001 (HPC'01), Seattle, 83–91, April **2001**.
9. *The AppLeS Parameter Sweep Template: User-Level Middleware for the Grid*, H.

- Casanova, G. Obertelli, F. Berman, R. Wolski, in Proceedings of Super Computing 2000 (SC'00), best paper finalist, November **2000**.
8. *Heuristics for Scheduling Parameter Sweep Applications in Grid Environments*, H. Casanova, A. Legrand, D. Zagorodnov, F. Berman, Proceedings of the 9th Heterogeneous Computing Workshop (HCW'00), Cancun, Mexico, 349–363, May **2000**.
  7. *NetSolve: A Network Enabled Server, Examples and Users*, H. Casanova, J. Dongarra, Proceedings of the Heterogeneous Computing Workshop (HCW'98), Orlando, Florida, 19–28, March **1998**.
  6. *The Use of Java in the NetSolve Project*, H. Casanova, J. Dongarra, 791–796. 15th IMACS'97 (International Mathematics and Computer Science) World Congress, Berlin, Vol. 4, *Artificial Intelligence and Computer Science*, Edited by Achin Sydow, Wissenschaft and Technik Verlag, Berlin, 791–796, August **1997**.
  5. *Network Enabled Solvers for Scientific Computing Using the NetSolve System*, H. Casanova, J. Dongarra, Proceedings of the 3rd International Conference on Algorithms and Architectures for Parallel Processing, Melbourne, Australia, *World Scientific*, Edited by A. Gossinski, M. Hobbs, W. Zhou, February **1997**.
  4. *NetSolve: A Network-Enabled Server for Solving Computational Science Problems*, H. Casanova, J. Dongarra, in Proceedings of Supercomputing (SC'96), Pittsburgh, Pennsylvania, November **1996**.
  3. *Providing Uniform Dynamic Access to Numerical Software*, H. Casanova, J. Dongarra, Vol. 105 of the IMA Volumes in Mathematics and its Applications, Algorithms for Parallel Processing, Edited by M. Heath, A. Ranade, R. Schrieber, 345–355, Springer-Verlag, **1996**.
  2. *Providing Access to High Performance Computing Technologies*, H. Casanova, S. Browne, J. Dongarra in Proceedings of the 3rd International Workshop PARA'96. *Lecture Notes in Computer Science*, edited by J. Waśniewski, J. Dongarra, K. Madsen, D. Olesen, Springer Verlag #1184, p. 123–133, August **1996**.
  1. *The Performance of PVM on MPP Systems*, H. Casanova, J. Dongarra, W. Jiang, Proceedings of the PVM User's Meeting, Santa Fe, February **1996**.

### Invited Articles

9. *Models and Modeling Infrastructures for Global Computational Platforms*, R. Wolski, D. Nurmi, J. Brevik, H. Casanova, A. Chien, in Proceedings of the Workshop on Next Generation Software, Denver, Colorado, April **2005**.
8. *Modeling Large-Scale Platforms for the Analysis and the Simulation of Scheduling Strategies*, H. Casanova, in Proceedings of the 6th Workshop on Advances in Parallel and Distributed Computational Models, April **2004**.
7. *Benchmarks for Grid Computing: A Review of Ongoing Efforts and Future Directions*, A. Snavely, G. Chun, H. Casanova, R. Van der Wijngaart, M. Frumkin, SIGMETRICS Performance Evaluation Review, 30(4), 27–32, March **2003**.

6. *Optimizing Performance and Reliability in Distributed Computing Systems Through Wide Spectrum Storage*, J. Plank, M. Beck, J. Dongarra, R. Wolski, H. Casanova, in Proceedings of the Workshop on Next Generation Software, Nice, France, April **2003**.
5. *Algorithms and Software to Schedule and Deploy Independent Tasks in Grid Environments*, H. Casanova, J. Hayes, Y. Yang, in Proceedings of the 2002 workshop on Distributed Computing, Metacomputing, and Resource Globalization, Aussois, France, December **2002**.
4. *Distributed Computing Research Issues for Grid Computing*, H. Casanova, Quarterly Newsletter for the ACM Special Interest Group on Algorithms and Computation Theory (SIGACT News), 33(2), September **2002**.
3. *Distributing MCell Simulations on the Grid*, H. Casanova, T. Bartol, J. Stiles, F. Berman, in Proceedings of the Workshop on Clusters and Computational Grids for Scientific Computing (WCCGSC'00), Lyon France, September **2000**.
2. *Applying NetSolve's Network Enabled Solvers*, H. Casanova, J. Dongarra, *IEEE Computational Science & Engineering*, Vol. 5, Num. 3, 57–67, July-September **1998**.
1. *Network-Enabled Servers and the NetSolve Project*, H. Casanova, J. Dongarra, K. Moore, in *SIAM News*, Vol. 31, Num. 1, January **1998**.

## Books

1. *Parallel Algorithms*, H. Casanova, A. Legrand, Y. Robert, Chapman & Hall, **2008**.

## Book Chapters

6. *Scheduling in the Grid Application Development Software Project*, H. Dail, O. Sievert, F. Berman, H. Casanova, A. Yarkhan, S. Vadhiyar, J. Dongarra, C. Liu, L. Yang, D. Angulo, I. Foster, chapter in *Grid Resource Management, State of the Art and Future Trends*, J. Nabrzyski, J. Schopf, J. Weglarz editors, Kluwer Academic Publishers, **2003**.
5. *Application-Level Tools*, H. Bal, H. Casanova, J. Dongarra, S. Matsuoka, chapter in *Grid 2: Blueprint for a New Computing Infrastructure*, I. Foster, C. Kesselman editors, M. Kaufmann Publishers, Inc., 2nd edition, **2003**.
4. *Parameter Sweeps on the Grid with APST*, H. Casanova, F. Berman, chapter 33 in *Grid Computing: Making the Global Infrastructure a Reality*, F. Berman, G. Fox, T. Hey editors, Wiley Publishers, Inc., **2003**.
3. *Problem-Solving environments*, E. Houstis, A. Catlin, N. Dhanjani, J. Rice, J. Dongarra, H. Casanova, D. Arnold, G. Fox, chapter in *The Parallel Computing Sourcebook*, J. Dongarra, I. Foster, G. Fox, W. Gropp, K. Kennedy, L. Torczon, A. White editors, M. Kaufmann Publishers, Inc., **2002**.
2. *Parallel and Distributed Scientific Computing: A Numerical Linear Algebra Problem Solving Environment Designer's Perspective*, A. Petitot, H. Casanova, J. Dongarra, Y. Robert, R. C. Whaley, chapter in *Handbook on Parallel and Distributed Processing*, International Handbook on Information Systems Vol. 3, J. Blazewicz, K. Ecker, B. Plateau, D. Trystram Editors, Springer Verlag, **2000**.
1. *Application-Specific Tools* J. Dongarra, H. Casanova, C. Johnson, M. Miller, chapter in *Computational Grids: Blueprint for a New Computing Infrastructure*, I. Foster, C. Kesselman editors, M. Kaufmann Publishers, Inc., **1999**.

## Misc. Publications and White Papers

5. *Generating Grid Resource Requirement Specifications*, R. Huang, H. Casanova, A. Chien, 2-page poster in Proceedings of the 16th IEEE International Symposium on High Performance Distributed Computing (HPDC-16), Monterey, California, June **2007**
4. *Robust Resource Allocation for Large-scale Distributed Shared Resource Environments*, Y.-S. Kee, K. Yocum, A. Chien, and H. Casanova, 2-page poster in Proceedings of the 15th IEEE International Symposium on High Performance Distributed Computing (HPDC-15), Paris, France, June **2006**
3. *The SIMGRID Project: Simulation and Deployment of Distributed Applications*, A. Legrand, M. Quinson, H. Casanova, K. Fujiwara, 2-page poster in Proceedings of the 15th IEEE International Symposium on High Performance Distributed Computing (HPDC-15), Paris, France, June **2006**
2. *A Brief Overview of the APST Project*, H. Casanova, J. Hayes, F. Berman, Newsletter

of the Korean Institute of Science and Technology Information (KISTI), August **2002**.

1. *Network-Enabled Server Systems and the Computational Grid*, S. Matsuoka, H. Casanova, White Paper for the Grid Forum (<http://www.gridforum.org>), July **2000**.

### Selected Technical Reports

5. *On the Complexity of Multi-Round Divisible Load Scheduling*, Y. Yang, H. Casanova. M. Drozdowski, M. Lawenda, A. Legrand, Institut National de Recherche en Informatique Appliquée (INRIA), report RR-6096, January 2007.
4. *NP-Completeness of the Divisible Load Scheduling Problem on Heterogeneous Star Platforms with Affine Costs*, Y. Yang, A. Legrand, H. Casanova, Dept. of Computer Science and Engineering, University of California, San Diego, report CS2005-0818, March 2005.
3. *Computing the Optimal Makespan for Jobs with Identical and Independent Tasks Scheduled on Volatile Hosts*, D. Kondo, H. Casanova, Dept. of Computer Science and Engineering, University of California, San Diego, report CS2004-0796, July, 2004.
2. *A Network Model for Simulation of Grid Applications*, H. Casanova, L. Marchal, École Normale Supérieure de Lyon, France, report RR2002-40, October **2002**.
1. *DAGSim: A Simulator for DAG Scheduling Algorithms*, A. Jarry, H. Casanova, F. Berman, École Normal Supérieure de Lyon, France, report RR2000-46, December **2000**.

### INVITED PRESENTATIONS, TUTORIALS, and COLLOQUIA

- *Flexible Cluster Sharing*, Institut de Recherche en Informatique de Toulouse, Toulouse, France, November 2008.
- *Parallel resource sharing: Shortcomings, Cheats, and Perspectives*, Dept. of Computer Science, University of Bologna, Bologna, Italy, June 2008.
- *Scheduling Mixed-Parallel Applications with Advance Reservations*, Workshop on scheduling for large scale distributed platforms, Aussois, France, May 2008.
- *Simulation for Large-Scale Distributed Computing Research*, tutorial at the 8th IEEE International Symposium on Cluster Computing and the Grid (CCGrid'08), Lyon, France, May 2008.
- *Grid Computing: Technology and Applications*, invited plenary presentations at Telecom'05, Hawai'i TeleCommunication Association, Honolulu, Hawai'i, October 2005.
- *Scheduling and Deploying Applications on Large-Scale Platforms*, invited lecture at the Departamento de Informática, Centro Universitario de Mérida, Mérida, Spain, June 2005.
- *Simulation for Grid Computing*, **keynote address** at the second International Grid Performance Workshop, Edinburgh, United Kingdom, June 2005.
- *Grid Computing: Principles, Software, Applications, and Tools*, **keynote address** at the 2nd Workshop on New Frontiers of Bioinformatics in Latin America – Griding Biology, Merida, Venezuela, November 2004.

- *Grid platform modeling issues for scheduling research* , Workshop on scheduling for large scale distributed platforms, Aussois, France, August 2004.
- *Grid Technology, Application, and Research*, presentation to the IEEE Society, University of California, La Jolla, California, May 2004.
- *Deploying Applications on the Grid: Engineering and Research*, University of San Diego, San Diego, California, September 2003.
- *Divisible Workload Scheduling*, Paris XI University, Orsay, France, June 2003.
- *UMR and RUMR: Algorithms to Schedule Divisible Workloads*, the Tokyo Institute of Technology (TITECH), Tokyo, Japan, May 2003.
- *MCell on the Grid: applications, software, research, and impact*, Plenary presentation at the National Partnership for Advanced Computing Infrastructure All-Hands Meeting (NPACI-AHM), La Jolla, California, March 2003.
- *From Parameter Sweep Applications to Divisible Workloads*, Workshop on Distributed Computing, Metacomputing, and Resource Globalization, Aussois, France, November 2002.
- *An Introduction to Grid Computing*, the Salk Institute, La Jolla, California, November 2002.
- *Processor Swapping for Enterprise Computing*, Workshop on Cluster and Computational Grids for Scientific Computing, Faverges, France, September 2002.
- *Deploying and Scheduling Parameter Sweep Applications*, Entropia Inc., San Diego, California, March 2002.
- *From Grid to Global Computing: Deploying and Scheduling Parameter Sweep Applications*, Organization for Parallel Computing Research (ORAP), Saclay, France, March 2002.
- *The Virtual Instrument Project*, National Science Foundation Workshop on Information Technology Research and Education, Palo Alto, California, March 2002.
- *APST and its Uses on Clusters*, IEEE Cluster 2001 Conference, Cluster Application Panel, Newport Beach, California, October 2001.
- *Promoting the Grid with APST*, 1st US/UK Grid Workshop, San Francisco, California, August 2001.
- *Simulation for Application Scheduling*, Monash University, Melbourne, Australia, May 2001.
- *The AppLeS Parameter Sweep Template: User-Level Middleware for the Grid*, NASA IPG workshop, NASA Ames Research Center, September 2000.
- *Internet-wide Scientific Software Access with NetSolve*, **keynote address** at the Workshop on Internet Accessible Mathematical Computation, Vancouver, July 1999.
- *Network-enabled Servers*, SIAM Annual Meeting 1999, Atlanta, May 1999.
- *NetSolve: Current and Future Deployment*, Workshop on Global and Cluster Computing, Tsukuba, Japan, March 1998.

- *NetSolve: Concepts and Applications*, Danish Computing Centre for Research and Education, Lungby, Denmark, December 1996.
- *Introduction to the NetSolve Project*, Mathematics and Computer Science Department of Emory University, Atlanta, October 1996.

## FUNDING AWARDS

- \$31,764 / 3 years (co-PI), National Science Foundation, 06/09 - 05/12  
*DiRT: A Testbed for Distributed Research*  
Univ. of Hawai'i.
- \$500,000 / 3 years (co-PI), National Science Foundation, 10/05 - 09/08  
*Designing Large-Scale Distributed Systems for Realistic Failure Models*  
UCSD, Univ. of Hawai'i.
- \$5,400,000 / 5 years (co-PI), National Science Foundation, 10/03 - 09/08  
*Virtual Grid Application Development Software (VGrADS)*  
Rice U., UCSD, U. of Houston, UCSB, UTK, ISI.
- \$500,000 / 3 years (PI), National Science Foundation, 07/03 - 06/06  
*Models to Support Performance-Engineering of Global Computations*  
UCSB, UCSD.
- \$48,000 / 3 years (co-PI), National Science Foundation / Institut National de Recherche en Informatique et en Automatique, 07/03 - 06/06  
*Algorithms and Simulations for Scheduling on Large-Scale Distributed Platforms*  
UCSD.
- \$450,000 / 3 years (co-PI), National Science Foundation, 01/03 - 12/05  
*Autonomous Scheduling on Large Distributed Systems*  
UCSD.
- \$235,000 / 1 year (PI), National Science Foundation, FY 2004  
*National Partnership for Advanced Computational Infrastructure (NPACI)*  
UCSD.
- \$750,000 / 3 years (co-PI), National Science Foundation, 09/02 - 08/05  
*Data Intensive Grid Benchmarks*  
UCSD.
- \$792,000 / 3 years (co-PI), National Science Foundation, 10/02 - 09/05  
*Optimizing Performance and Reliability in Distributed Computing Systems Through Wide Spectrum Storage Services*  
UTK, UCSD, UCSB.
- \$270,000 / 1 year (PI), National Science Foundation, FY 2003  
*National Partnership for Advanced Computational Infrastructure (NPACI)*  
UCSD.
- \$700,000 / 2 years (co-PI), National Science Foundation, 07/02 - 06/04  
*GridSolve: A System for Grid-enabling General Purpose Problem Solving Environments*

UTK, UCSD.

- \$280,000 / 1 year (PI), National Science Foundation, FY 2002  
*National Partnership for Advanced Computational Infrastructure (NPACI)*  
UCSD.
- \$2,500,000 / 3 years (co-PI), National Science Foundation, 09/00 - 08/03  
*Virtual Instruments: Scalable Software Instruments for the Grid*  
UCSD, Salk Institute, UTK, UCSB, PSC.
- \$1,300,000 / 3 years (co-PI), National Science Foundation, 08/99 - 07/02  
*Logistical QoS through Application-driven Scheduling of Remote Storage*  
UTK, UCSD, UCSB.

## **GRADUATE STUDENT ADVISING**

Kaveh Kardan, Ph.D., expected 2010

Mark Stillwell, Ph.D., expected 2010

David Schanzenbach, M.S., expected 2010

Joshua Wingstrom, Ph.D., obtained 2009

Richard Huang, Ph.D., obtained 2007

Kayo Fujuwara, M.S., obtained 2007

Derrick Kondo, Ph.D., obtained 2005

Yang Yang, Ph.D., obtained 2005

Krijn van der Raadt, M.S., obtained 2004

Charles Wurster, M.S., obtained 2004

Gregory Chun, M.S., obtained 2003

Alan Su, Ph.D., obtained 2003 (co-adviser)

Otto Sievert, M.S., obtained 2003

Marcio Faerman, Ph.D., obtained 2003 (co-adviser)

Nadya Williams, M.S., obtained 2002 (co-adviser)

Holly Dail, M.S., obtained 2002 (co-adviser)

Shava Smallen, M.S., obtained 2001 (co-adviser)

## **POSTDOCTORAL STUDENT ADVISING**

Arnaud Legrand, 2005

Gilles Fédak, 2004

Frédéric Suter, 2003

Yudith Cardinale, 2003

## TEACHING

- UH, Fall 2009, ICS412: “Operating Systems” (UG)
- UH, Fall 2009, ICS690: “Graduate Seminar” (G)
- UH, Spring 2009, ICS312: “Machine-Level and Systems Programming” (UG)
- UH, Spring 2009, ICS690: “Graduate Seminar” (G)
- UH, Fall 2008, ICS432: “Concurrent and High-Performance Programming” (UG)
- UH, Fall 2008, ICS632: “Principles of High Performance Computing” (G)
- UH, Spring 2008, ICS431: “Computer Architecture” (UG)
- UH, Fall 2007, ICS632: “Principles of High Performance Computing” (G)
- UH, Fall 2007, ICS312: “Machine-Level and Systems Programming” (UG)
- UH, Spring 2007, ICS491: “Concurrent and High-Performance Programming” (UG)
- UH, Fall 2006, ICS431: “Computer Architecture” (UG)
- UH, Fall 2006, ICS691: “Principles of High Performance Computing” (G)
- UH, Spring 2006, ICS491: “Introduction to High Performance Computing” (UG)
- UH, Fall 2005, ICS691: “Parallel & Distributed Computing Seminar” (G)
- UCSD, Spring 2005, CSE130: “Programming Languages” (UG)
- UCSD, Fall 2004, CSE260: “Parallel Computing” (G)
- UCSD, Spring 2004, CSE130: “Programming Languages” (UG)
- UCSD, Spring 2003, CSE130: “Programming Languages” (UG)

## AWARDS / HONORS

- Best paper award at HeteroPar, August 2009.
- Best student paper award at SC, November 2001, Denver, Colorado (M.S. adviser of Shava Smallen).
- R&D 100 Award for designing and developing the NetSolve project, 1999.

## PROFESSIONAL SERVICES

### University Services

- Spring 2009 - present: Chair of the Computer Science Graduate Program, University of Hawai‘i at Manoa.

### Conference Chairing

2009

- **Program Co-Chair** for the ACM/IEEE International Symposium on High Perfor-

mance Distributed Computing (HPDC-18), Garching, Germany, June 2009.

- **Program Vice-Chair** for the 9th IEEE Symposium on Cluster Computing and the Grid (CCGrid'09), Shanghai, China, May 2009.

2008

- **Co-organizer** of the NSF/INRIA *Workshop on Scheduling Algorithms for Large-Scale Distributed Platforms*, Aussois, France, May 2008.
- **Program co-Chair** for the 9th IEEE/ACM International Conference on Grid Computing (Grid 2008), Tokyo, Japan, November 2008.
- **General Chair** for the Heterogeneous Computing Workshop (HCW'08), Miami, Florida, April 2008.
- **Publicity Chair** for the 8th IEEE Symposium on Cluster Computing and the Grid (CCGrid'08), Lyon, France, May 2008.

2007

- **Program Topic Chair** for the Euro-Par 2007 conference (“Scheduling and Load Balancing” topic), Rennes, France, August 2007.
- **Program Chair** for the Heterogeneous Computing Workshop (HCW'07), Long Beach, California, March 2007.

2005

- **Program Committee Vice-Chair** for the 6th International Workshop on Grid Computing (Grid'05), Seattle, Washington, November 2005.
- **Co-organizer** of the NSF/INRIA *Workshop on Scheduling Algorithms for Large-Scale Distributed Platforms*, San Diego, California, November 2005.

2004

- **General Chair** for the *IEEE Conference on Cluster Computing (Cluster'04)*, San Diego, September 2004.
- **Co-organizer** of the NSF/INRIA *Workshop on Scheduling Algorithms for Large-Scale Distributed Platforms*, Aussois, France, August 2004.

2003

- Invited Speaker Chair for the International Conference for High Performance Computing and Communications (SC'03), Phoenix, Arizona, November 2003.

## Journals

- 2006: **Guest Editor** for a special issue of the *International Journal of High Performance Computing and Applications*.
- 2005: **Guest Editor** for the a special issue of the *IEEE Transactions on Parallel and Distributed Systems (TPDS)*.
- 2004-2009: Member of the **Editorial Board** of the *Future Generation Computer Systems* journal.

## Conference Program Committees

2010

- Program Committee member for the International Conference for High Performance Computing, Networking, Storage, and Analysis (SC), New Orleans, Louisiana, November 2010.
- Program Committee member for the 19th IEEE Symposium on Higher-Performance Distributed Computing (HPDC-19), Chicago, Illinois, June 2010.
- Program Committee member for the 19th IEEE Symposium on Higher-Performance Distributed Computing (HPDC-19), Chicago, Illinois, June 2010.
- Program Committee member for the IEEE Computer Society’s Technical Committee on Parallel Processing’s second Ph.D. Forum at IPDPS, May 2010.
- Program Committee member for the 4th Workshop on Desktop Grids and Colunteer Computing Systems (PCGrid), Melbourne, Australia, May 2010.
- Program Committee member for the 10th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid), Melbourne, Australia, May 2010.

2009

- Program Committee member for the International Conference for High Performance Computing, Networking, Storage, and Analysis (SC), Portland, Oregon, November 2009.
- Program Committee member for the workshop on Scheduling for Parallel Computing, Krakow, Poland, September 2009.
- Program Committee member for the 8th International Symposium on Parallel and Distributed Computing (ISPDC), Lisbon, Portugal, June 2009.
- Program Committee member for the Workshop on Grids, Clouds and Virtualization (WGCV), Geneva, Switzerland, May 2009.
- Program Committee member for the Fourth Workshop on System Management Tools for Large-Scale Parallel Systems (SMTPS), Rome, Italy, May 2009.
- Program Committee member for the 8th IEEE International Symposium on Cluster Computing and the Grid (CCGrid), Shanghai, China, May 2009.
- Program Committee member for the 3rd Workshop on Desktop Grids and Colunteer Computing Systems (PCGrid), Rome, Italy, May 2009.
- Program Committee member for the IEEE Computer Society’s Technical Committee on Parallel Processing’s second Ph.D. Forum at IPDPS, May 2009.
- Program Committee member for the 2009 ACM Symposium on Applied Computing (SAC), Honolulu, Hawaii, U.S.A., March 2009.

2008

- Program Committee member for the High Performance Data Grid (HPDataGrid’08) workshop, Dunedin, New Zealand, December 2008.

- Program Committee member for the 1st International Workshop on Robust Scheduling (RobShed’08), Melbourne, Australia, December 2008.
- Program Committee member for the 14th IEEE International Conference on Parallel and Distributed Systems (ICPADS’08), Melbourne, Australia, December 2008.
- Program Committee member for the International Symposium on Parallel and Distributed Processing and Applications (ISPA’08), Sydney, Australia, September 2008.
- Program Committee member for the 17th IEEE Symposium on Higher-Performance Distributed Computing (HPDC-17), Boston, Massachusetts, June 2008.
- Program Committee member for the 1st Workshop on Assessing Models of Networks and Distributed Computing Platforms, Lyon, France, May 2008.
- Program Committee member for the 8th IEEE Symposium on Cluster Computing and the Grid (CCGrid’08), Lyon, France, May 2008.
- Program Committee member for the International Symposium on Parallel Algorithms, Architectures, and Networks (ISPAN), Sydney, Australia, May 2008.
- Program Committee member for the Third Workshop on System Management Tools for Large-Scale Parallel Systems (SMTPS), Miami, Florida, April 2008.
- Program Committee member for the 41st Hawai‘i International Conference on System Sciences (HICSS), Software Technology Mini-Track on Grid Computing: Adaptive Software, Tools and Applications, O‘ahu, Hawaii, January 2008.

2007

- Program Committee member for the International Conference on Parallel Processing (ICPP), Xi’an, China, September 2007.
- Program Committee member for the 1st Workshop on Scheduling for Parallel Computing, Gdansk, Poland, September 2007.
- Program Committee member for the 16th International Conference on Computer and Networks (ICCCN), O‘ahu, Hawai‘i, August 2007.
- Program Committee member for the International Conference on Distributed Computing Systems (ICDCS), Toronto, Canada, June 2007.
- Program Committee member for the 16th IEEE Symposium on High Performance and Distributed Computing (HPDC-16), Monterey, California, June 2007.
- Program Committee member for the 7th workshop on Global and Peer-to-Peer Computing (GP2PC), Rio de Janeiro, Brazil, May 2007.
- Proposal Reviewer and Panel Participant, National Science Foundation, Washington D.C., April 2007.
- Program Committee member for the Third Workshop on System Management Tools for Large-Scale Parallel Systems (SMTPS), Long Beach, California, March 2007.

2006

- Program Committee member for the 12th IEEE International Conference on Parallel and Distributed Systems (ICPADS’06), Minneapolis, Minnesota, July 2006.

- Program Committee member for the 15th IEEE Symposium on High Performance and Distributed Computing (HPDC-15), Paris, France, June 2006.
- Proposal Reviewer and Panel Participant, National Science Foundation, Washington D.C., April 2006.
- Program Committee member for the Third High Performance Grid Computing Workshop (HPGCW'06), Rhodes, Greece, April 2006.
- Program Committee member for the Heterogeneous Computing Workshop (HCW'06), Rhodes, Greece, April 2006.
- Program Committee member for the Second Workshop on System Management Tools for Large-Scale Parallel Systems (SMTPS), Rhodes, Greece, April 2006.
- Program Committee member for the 5th Workshop on Global and Peer-to-Peer Computing (WGP2PC'06), Singapore, April 2006.

2005

- Program Committee member for the International Conference for High Performance Computing and Communications (SC'05), Seattle, Washington, November 2005.
- Program Committee for the 1st International Workshop on Parallel Bioinspired Algorithms, Oslo, Norway, June 2005
- Program Committee member for the IEEE International Conference on Pervasive Services (ICPS 2005), Santorini, Greece, June 2005.
- Program Committee member for the 4th Workshop on Global and Peer-to-Peer Computing (WGP2P'05), Cardiff, U.K., May 2005.
- Program Committee member for the First Workshop on System Management Tools for Large-Scale Parallel Systems, Denver, Colorado, April 2005.
- Program Committee member for the Heterogeneous Computing Workshop (HCW'05), Denver, Colorado, April 2005.
- Program Committee member for the High Performance Grid Computing Workshop, Denver, Colorado, April 2005.

2004

- Program Committee member for the International Conference for High Performance Computing and Communications (SC'04), Pittsburgh, Pennsylvania, November 2004.
- Program Committee member for the 17th International Conference on Parallel and Distributed Computing Systems (PDCS 2004), San Francisco, California, September 2004.
- Program Committee member for the 13th IEEE Symposium on High Performance and Distributed Computing (HPDC-13), Honolulu, Hawai'i, June 2003.
- Program Committee member for the 3rd Workshop on Global and Peer-to-Peer Computing (WGP2P'04), Chicago, Illinois, April 2004.

2003

- Program Committee member for the International Conference for High Performance Computing and Communications (SC’03), Phoenix, Arizona, November 2003.
- Proposal Reviewer and Panelist, National Science Foundation, Washington, DC., October 2003.
- Program Committee member for Euro-Par 2003, Klagenfurt, Austria, August 2003.
- Program Committee member for the Workshop on Innovative Solutions for Grid Computing (InnoGrid’03), Melbourne, Australia, June 2003.
- Program Committee member for the 12th IEEE Symposium on High Performance and Distributed Computing (HPDC-12), Seattle, Washington, June 2003.
- Program Committee member for the ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP), San Diego, California, June 2003.
- Program Committee member for the 3rd IEEE Symposium on Cluster Computing and the Grid (CCGrid’03), Tokyo, Japan, May 2003.
- Program Committee member for the 3rd Workshop on Global and Peer-to-Peer Computing (WGP2P’03), Tokyo, Japan, May 2003.
- Program Committee member for the International Parallel and Distributed Processing Symposium (IPDPS’03), Nice, France, April 2003.

2002

- Program Committee member for the 3rd International Workshop on Grid Computing (Grid’02), Baltimore, Maryland, November 2002.
- Program Committee member for the International Conference for High Performance Computing and Communications (SC’02), Baltimore, Maryland, November 2002.
- Program Committee member for the 11th IEEE Symposium on High Performance and Distributed Computing (HPDC-11), Edinburgh, U.K., August 2002.
- Program Committee member for the 2nd Workshop on Global and Peer-to-Peer Computing (WGP2P’02), Berlin, Germany, May 2002.

2001

- Program Committee member for the 2nd International Workshop on Grid Computing (Grid’01), Denver, Colorado, November, 2001.
- Program Committee member for the Metacomputing Systems and Applications Workshop (MSA’01), Valencia, Spain, September 2001.
- Program Committee member for Euro-Par’2001, Manchester, U.K., August 2001.
- Program Committee member for High Performance Computing (HPC’01), Seattle, Washington, April 2001.

1999

- Organizer of a mini-symposium on “Network-enabled Servers” at the SIAM Annual Meeting 1999, Atlanta, Georgia, May 1999.