

Vitae: Jun Ni



Contact Information

Email: jun-ni@uiowa.edu

Web Page: www.cs.uiowa.edu/~jni/

Department of Radiology

Caver College of Medicine
University of Iowa Hospital & Clinics (UIHC)
3897 JPP
200 Hawkin Drive
Iowa City, Iowa 52242-1099, USA
(319) 356-4448 (office voice);
(319) 356-3656 (secretary, Mary McBride)
(319) 356-2220 (fax)
<http://radiology.uiowa.edu/>

Research Services, Information Technology Services

2800 University Capital Centre
University of Iowa, Iowa City, IA 52242, USA
(319) 335-5486 (office voice)
(319) 335-5505 (fax)
<http://at.its.uiowa.edu/rs/>

Laboratory of Medical Imaging HPC & Informatics (MiHi Lab)

Department of Radiology, Caver College of Medicine
4318 Westlawn
Iowa City, Iowa 52242, USA
(319) 335-9490 (office voice)
(319) 335-8619 (lab)
www.uiowa.edu/mihplab/

Department of Computer Science

14 MacLean Hall
Department of Computer Science
College of Liberal Arts and Actual Sciences
University of Iowa, Iowa City, IA 52242, USA
www.cs.uiowa.edu/~jni/

Education

- 1993 **Postdoctoral Research Associate**
Heat Transfer Lab, School of Mechanical Engineering, Purdue University
West Lafayette, IN, USA
(Supervisor: Dr. Frank Incropera, Former Purdue Professor, current Professor and
Past Dean of Engineering College, University of Notre Dame, IN, USA)
- 1992 **Postdoctoral Associate**
Department of Mechanical Engineering, the University of Iowa
Iowa City, IA, USA
(Supervisor: Dr. Christoph Beckermann, Distinguished Professor, the University of
Iowa, IA, USA)
National Center of Speech Pathology and Audiology
The University of Iowa, Iowa City, IA, USA
(Supervisor: Dr. Fary Alipour, Research Scientist, the University of Iowa, IA USA)
- 1991 **Ph.D. in Mechanical Engineering**
Department of Mechanical Engineering
The University of Iowa, Iowa City, IA, USA
Thesis Title: Development of a Two-Phase Model of Transport Phenomena during
Equiaxed Solidification (sponsored by NSF, NASA Glenn Research Center, Alcoa
Technical Center)
(Ph.D. Dissertation Advisor: Dr. Christoph Beckermann, University of Iowa
Distinguished Professor, the University of Iowa, Iowa City, IA, USA)
- 1984 **M.S. in Mechanical Engineering**
Department of Power Machinery Engineering
Shanghai Jiao Tong University, Shanghai, China
M.S. Thesis Title: Reversing Hydraulic Transmission Systems in Marine Engineering
(M.S. Thesis Advisor: Professor Zhuying Tong)
- 1981 **B.S. in Naval Architecture**
Department of Naval Architecture and Ship Building
Harbin Engineering University (Harbin Shipbuilding Engineering Institute), Harbin,
China

Professional Positions

- 2007- **Associate Professor** (Tenure Track, Primary appointment)
Department of Radiology, Carver College of Medicine
Associate Professor (Secondary appointment)
Department of Mechanical & Industrial Engineering, College of Engineering
Department of Biomedical Engineering, College of Engineering
The University of Iowa, Iowa City, IA, USA
- 2006- **Director**
Scientific Computing (HPC, Grid Computing, Cyberinfrastructure)
Information Technology Services - Research Services
The University of Iowa, Iowa City, IA, USA
- 2006- **Honorable Co-Director**
High-performance Computing Laboratory
Biomedical Imaging Division, School of Biomedical Engineering & Sciences,
Virginia Tech
- 2003- **Lab Director**
Medical Imaging HPC and Informatics Research Lab ([MIHPC Lab](#)), Department of

- Radiology, College of Medicine, University of Iowa
Hawkeye Radiology Informatics, Department of Radiology, College of Medicine,
University of Iowa
HPC Nanotechnology Research Lab ([HPCNano Lab](#)), Department of Mechanical
Engineering, College of Engineering, University of Iowa
- 2006-07 **Research Scientist and Director**
Scientific Computing (HPC & Grid), Information Technology Services –Research
Services, the University of Iowa, Iowa City, IA, USA
- 2005-06 **President**
Science, Technology, Engineering, Mathematics (STEM) Education Society
(STEMES), High Performance Computing Software Inc. (HPCSoft)
- 2006- **Visiting Professor**
College of Computer Science & Technology, Harbin Engineering University, China
- 2003-06 **Honorable Visiting Professor**
College of Life and Biomedical Science
Shanghai Jiao Tong University, Shanghai, China
- 2005-06 **Adjunct Associate Professor**
Department of Computer Science, College of Liberal Arts and Actual Sciences
Department of Mechanical & Industrial Engineering, College of Engineering
The University of Iowa, Iowa City, IA, USA
- 2002-06 **Manager/Associate Research Scientist**
Scientific Computing and High Performance Computing
Academic Technologies-Research Services, Information Technology Services
- Lab Co-Director**
Nano-Science Technology Research Lab (STRES Lab)
Department of Mechanical & Industrial Engineering, College of Engineering
Micro CT Research Lab, Department of Radiology, College of Medicine
The University of Iowa, Iowa City, IA, USA
- 2006-07 **Senior Scientist**
Digital Artefacts L.L.C., Oakdale Research Park, Iowa City, IA 52252, USA
- 1994-04 **Adjunct Assistant Professor, Ph.D. Dissertation Advisor**
Department of Mechanical & Industrial Engineering, College of Engineering
Department of Computer Science, College of Liberal Arts, The University of Iowa,
Iowa City, IA, USA
- 1994-01 **Senior Computing Consultant**
Advanced Research Computing Services
Information Technology Services/Weeg Computing Center, The University of Iowa,
Iowa City, IA, USA
- 1994-96 **President and Founder**
High-Quality Computing Consultants (HQC Consultants), Iowa City, IA, USA
- 1993-94 **Postdoctoral Research Associate**
Heat Transfer Lab, School of Mechanical Engineering
Purdue University, West Lafayette, IN, USA
- 1992-93 **Postdoctoral Associate**
National Center for Voice and Speech, Department of Mechanical Engineering
The University of Iowa, Iowa City, IA, USA
- 1987-91 **Research/Teaching Assistant**
Department of Mechanical Engineering, the University of Iowa, Iowa City, IA, USA
- 1984-86 **Research Associate and Lecturer**
Department of Power Machinery Engineering, Shanghai Jiao Tong University,
Shanghai, China

Research Grants

Awarded

- PI**, NSF-EMT: A Merging Multi-scale Model for Simulations of Crystallization/Solidification of Nano-structured Materials on Large-scale Parallel Computing Systems, with Co-PI, Shaoping Xiao (awarded date July, 2007-2010), \$240,000
- PI**, NIH-NIBIB-R21, A Large-scale Parallel Katsevich Algorithm for 3D Cone-beam CT Image Reconstruction, with Dr. Ge Wang, and Dr. Hengyong Yu (awarded NIH grant, awarded date: July 1, 2006 - June 30, 2008), \$221,250
- PI**, Intel, Technology Initiatives: HPC Hardware Solution for UI-IMHPC Lab's Medical Imaging Research and Medical Image Informatics, (awarded date: Nov. 2006), \$500,000
- PI**, Microsoft and UI-MIHPC Lab collaborative project, medical imaging HPC and large-scale biomedical imaging informatics (June, 2007), \$30,000
- Co-PI**, NSF: NER/SNB: Haenessing the Spin-Stabilized Motion of a Multi-walled Carbon Nanotube for Memory-cell Operation, with Ray Han (PI), M. Asghar Bhatti (co-PI), David Andersen (co-PI), Shaoping Xiao (co-PI), Lihe Wang (co-PI), (awarded date: June 2005-June 2006), \$100,000
- Co-PI**, University of Iowa Internal Funding Program/Mathematical and Physical Sciences (MPSFP): Establishing a Compact Muon Solenoid Grid-based Tier-2 National Computing Center and NSF Shared Cyber-infrastructure Tier-2C Program at The University of Iowa, Yasar Onel, PI, Gregory R. Carmichael, Co-PI, Ge Wang, Co-PI, Shaowen Wang, co-PI, \$115,000
- Co-PI**, University of Iowa Internal Funding Program/Mathematical and Physical Sciences (MPSFP): Finding Genes Responsible for Continues Traits: A Computer program, with Kai Wang (PI) et al. (awarded Dec. 16, 2004) \$30,000
- Co-PI**, University of Iowa Internal Funding Program/Mathematical and Physical Sciences (MPSFP): Prototyping, Testing, and Operating an Intra-campus Research Grid – HawkGrid: an Application-Driven Approach, with Shaowen Wang¹ (PI), Terry A. Braun² (Co-PI), Gregory R Carmichael³ (Co-PI), Boyd M. Knosp (Co-PI) Jun Ni (Co-PI) Yasar Onel (Co-PI) (awarded date: Dec. 16, 2004), \$45,608
- PI**, NSF National TeraGrid: Computation in Transport Phenomena during Material Processing, 300,000 SUs award, with Shaowen Wang (Co-PI), and Boyd Knosp (Co-PI) (awarded date: March 20, 2004)
- PI**, NCSA National Center for Supercomputing Applications Small Allocation Application, 10,000 SUs awarded, with Dr. Ching-long Lin (Co-PI) (awarded date: April 2003)
- PI**, University of Iowa Internal Funding Program/Mathematical and Physical Sciences (MPSFP): Lattice Boltzmann Simulation of Fluid under Grid Computing Environment, Dr. Ching-long Lin (Co-PI) (awarded date: Dec. 2002), \$30,000
- Co-PI**, University of Iowa Internal Funding Program/Iowa Informatics Initiative (III): A Prototype Genetics Likelihood Visualization Utility, Dr. Mark Logue (PI), Dr. Veronica Vieland, (Co-PI), Dr. Alberto Segre (Co-PI), Dr. James Cremer (Co-PI), Steve Beck (Co-PI), Boyd Knosp (Co-PI) (awarded date: Dec. 2002), \$30,000
- Co-PI**, The Development of a Proof-of-Concept Physics Grid Tier-2 Center, the University of Iowa Vice president for Research Fund with Yasar Onel (PI), Boy M. Knosp (Co-PI) (awarded date: June 2002), \$44,000
- Co-PI**, Internal Research Fund: VoluMeasureTM: A Portable Java Program for Stereological Volume Measurement, Dr. Ge Wang (PI), Dr. Simon Kao (Co-PI) (awarded date: Oct. 2002), \$21,000

Co-PI, NSF EAR-9508291, Sedimentation by Dripping Instability in Viscous Fluids in Geophysical System, with Dr. G.W. Bergantz (PI), (awarded date: awarded 1995-1996), \$90,000

PI, Da-Gang Petrologic Industrials Inc., Research and development of database system for storage management in petroleum industrial, (awarded date: 1985-1986), ¥120,000

Pending Grants

Co-PI, NSF-EMT/NANO: Multiscale Modeling and Simulation of Nanotube-reinforced Polymer Composites with the Aid of High-Performance Computing, **PI**, Shaoping Xiao (request \$447,066; March 4, 2008)

Co-PI, NSF-EMT/NANO: Cyberinfrastructure-enabled multiscale modeling and simulation of nanotube-based devices, **PI**, Shaoping Xiao (request \$958,026, March 4, 2008)

Co-PI, NSFC-Biomedical Engineering, Multi-variable decision-making mechanism in knowledge-based, early-stage breast cancer diagnoses systems, **PI**, Zhang Lu (Shanghai Jiao Tong University, Medical School), **Co-PIs**, Yajia Gu, M.D. (Shanghai Cancer Hospital), Ying Zhen, Zhulin Gong (SJTU), Dr. Laruie Fajardo, M.D. (University of Iowa, College of Medicine) (request RMB 350,800 ; submitted Feb. 25, 2008)

Teaching Course & Curriculums, and Workshop Training

Lecturer of Graduate Credit Courses

1994-2007, Department of Mechanical & Industrial Engineering, University of Iowa, Iowa City, IA, USA [Averaged assessment score is 5.4/6.0., <http://www.cs.uiowa.edu/~jni/courses.html>]

58/145 Intermediate Heat Transfer (fall, 2007) (graduate course)

58/111 and 55/111 Numerical Methods in Engineering (summer, 1994, summer, 1996, summer, 1997, summer, 1998, summer, 2000, summer, 2001, summer, 2002, summer, 2003)

1999-2007, Department of Computer Science, University of Iowa, Iowa City, IA, USA [Averaged assessment score is 5.4/6.0; <http://www.cs.uiowa.edu/~jni/courses.html>]

22C:196, Medical Imaging Informatics (fall, 2007)

22C:177/22M178, Parallel Computing and Grid Computing (fall, 2005)

22C:096, Programming in C# in .Net (spring, 2004)

22C:144, Database Management System (spring, 2003 and summer, 2003)

22C:020/114, Computer Science II (summer, 2002)

22C:016/106, Computer Science I (spring, 2001)

22C:013/114, Java Programming Language (fall, 2000, summer, and fall, 2001, and spring, 2002)

22C:012/112, C++ Programming Language (summer, 1999, summer, 2000, and fall, 2002)

22C:196, Individual Programming Projects (summer, 2000, fall, 2000, spring, 2000, fall, 2001, spring 2002, spring 2003, summer, 2003, fall, 2005, spring 2005, summer, 2005, fall, 2005, spring, 2006, summer 2006, fall, 2006)

22C:196, Individual Project -- Computational Thinking (fall, 2007)

1998-2001, Kirkwood Community College, Undergraduate-level Credit Course

Division of Computer Education, Iowa City, IA, USA [Averaged assessment score is excellent]

Courses: C Programming (spring, summer, and fall, 1998); Java Programming (spring and fall, 1999); JavaScript (spring, 2000); Dynamics Web Design (fall, 2000); C++ Programming; Object Oriented Programming (spring, 2001)

**1984-1986, Lecturer, Mechanical Engineering Undergraduate-Level Credit Courses
Department of Power Machinery Engineering, Shanghai Jiao Tong University, Shanghai,
P. R. China**

Energy Saving Systems (fall, 1984); Hydraulic Driving Transmission Systems (spring, 1985,
fall, 1985, spring, 1986)

**1994-present, Coordinator and Instructor of High performance computing and
visualization related workshop/training courses, The University of Iowa, Iowa City, USA**

[Summary: Total 14 topics in 29 workshops]

High Performance Computing, Parallel Programming with MPI, Supercomputing, F90/95 and
HPF, Multiprocessing, Timing and Optimizing in HPC, Computational Chemistry,
Gaussian95/98, Parallel Programming with PVM, Scientific Data Visualization, OpenGL,
Introduction to C, Advanced C, VRML, JavaScript, and How to build a LINUX cluster.

Publications

Summary: editing or co-editing 30 books; 60 peer-reviewed, conference papers; 23 peer-reviewed journal papers; 263 SCI journal paper citations to Jun Ni's first-author journal papers (resources: ISI Web of Science, September, 2007).

Edited Books (30)

- [1] Hamid R. Arabnia (Editor) and G. A. Gravvanis, Xiangjian He, Tom Hintz, Kazuki Joe, Seon Ho Kim, Dan Liu, Mario Nakamori, Jun Ni, Gilbert Young (Associate Editors), *Proceedings of The International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'04)*, Vol. III, ISBN: 1-932415-25-4, CSREA Press, 2004
- [2] Hamid R. Arabnia (Editor) and G. A. Gravvanis, Xiangjian He, Tom Hintz, Kazuki Joe, Seon Ho Kim, Dan Liu, Mario Nakamori, Jun Ni, Gilbert Young (Associate Editors), *Proceedings of The International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'04)*, Vol. I, ISBN: 1-932415-23-8, CSREA Press, 2004
- [3] Minglu Li, Xian-He Sun, Qianni Deng, and Jun Ni (Editors), *Grid and Cooperative Computing, Part II: Second International Workshop (GCC'03)*, Shanghai, China, December 7-10, 2003, Lecture Notes in Computer Science, Volume 3033, ISBN: 3-540-21988-9, Springer-Verlag Heidelberg, Germany, 2004
- [4] Minglu Li, Xian-He Sun, Qianni Deng, and Jun Ni (Editors.), *Grid and Cooperative Computing, Part I: Second International Workshop (GCC'03)*, Shanghai, China, December 7-10, 2003, Lecture Notes in Computer Science, Volume 3032, ISBN: 3-540-
- [5] Hamid R. Arabnia and Jun Ni (Editors) and G. A. Gravvanis, Xiangjian He, Tom Hntz, Kazuki Joe, Seon Ho Kim, Dan Liu, Mario Nakamori, Gilbert Young (Associate Editors), *Proceedings of The International Conference on Parallel and Distributed processing Techniques and Applications (PDPTA'04)*, Vol. II, ISBN: 1-932415-24-6, CSREA Press, 2004, 21988-9, Springer-Verlag Heidelberg, Germany, 2004
- [6] Hamid R. Arabnia and Rose Joshua (Editors), and Victor Clincy, Olaf Droegehorn, Joan Lu, Yungsong Mun, and Jun Ni (Associate Editors), *Proceeding of the International Conference on Internet Computing (ICOMP'05)*, ISBN: 1-932415-69-6, CSREA Press, 2005
- [7] Hamid R. Arabnia and Jun Ni (Editors), and Shaowen Wang (Associate Editor), *Proceeding of the 2005 International Conference on Grid Computing and Applications (GCA'05)*, ISBN 1-932415-57-2, CSREA Press, 2005
- [8] Hengtao Shen, Jinbao Li, Minglu Li, Jun Ni, Wei Wang (Eds.): *Advanced Web and*

- Network Technologies, and Applications, APWeb 2006 International Workshops: XRA, IWSN, MEGA, and ICSE, Harbin, China, January 16-18, 2006, Proceedings, Lecture Notes in Computer Science 3842 Springer 2006, ISBN 3-540-31158-0
- [9] Hamid R. Arabnia (Editor), Jun Ni, Laurence T. Yang (Associate Editor), Proceedings of the International Conference on Pervasive Systems and Computing PSC'06, June 26-29, 2006, Las Vegas, Nevada, CSREA Press, 2006 ISBN: 1-60132-018-3
- [10] Hamid R. Arabnia (Editor), Jun Ni, Shivakumar Sastry, Laurence T. Yang (Associate Editor), Proceedings of the International Conference on Embedded Systems and Applications ESA'06, June 26-29, 2006, Las Vegas, Nevada, CSREA Press, 2006 ISBN: 1-60132-017-5
- [11] Hamid R. Arabnia (Editor), Ashu M.G. Solo, Jun Ni (Associate Editor), Proceedings of the International Conference on Semantic Web and Web Services SWWS'06, June 26-29, 2006, Las Vegas, Nevada, CSREA Press, ISBN: 1-60132-016-7
- [12] Hamid R. Arabnia (Editor), John R. Boisseau, George A. Gravvanis, Jun Ni (Associate Editor), Proceedings of the International Conference on Grid Computing and Applications GCA'06, June 26-29, 2006, Las Vegas, Nevada, CSREA Press, 2006 ISBN: 1-60132-014-0
- [13] Hamid R. Arabnia (Editor), Jun Ni (Associate Editor), Computing in Nanotechnology CNAN'06, CSREA Press, 2006
- [14] Hamid R. Arabnia (Editor), Kamal K. Mehta, Jun Ni, Himanshu Thapliyal (Associate Editor), Proceedings of the International Conference on Computer Design CDES'06, June 26-29, 2006, Las Vegas, Nevada, CSREA Press, 2006 ISBN: 1-60132-009-4
- [15] Jun Ni, Jack Dongarra, Yao Zheng, Guochang Gu, Gentsch Wolfgang, and Hai Jin, First International Multi-Symposium of Computer and Computational Sciences (IMSCCS'06), Vol. 1 and Vol. 2, IEEE/Computer Society Press, ISBN: 0-7695-2581-4, 2006
- [16] Jun Ni, Jack Dongarra, Shaoping Xiao, Deepak Srivastava, and Meyya Meyyappan (eds.), Advanced Computations in Nanotechnology, IEEE Proceeding of the First International Workshop of High Performance Computing in Nanotechnology (HPCNano05), IEEE/Computer Society Press, 2008 (in press)
- [17] Jun Ni, Thom Dunning, Jack Dongarra, and Andrew Canning (eds.), Advanced Computations in Nanotechnology, IEEE Proceeding of the Second International Workshop of High Performance Computing in Nanotechnology (HPCNano06), IEEE/Computer Society Press, 2008 (in press)
- [18] Jun Ni, James Cremer, Ed. Seidel, Jack Dongarra, Tom Casavant, Shaoping Huang, Guochang Gu, Proceeding of the Second International Multi-Symposium of Computer and Computational Sciences (IMSCCS'07), IEEE/Computer Society Press, ISBN 0-7695-3039-7, ISBN 978-0-7695-3039-0, 2007
- [19] Hamid R. Arania (Editor), Nikilaos G. Bourbakis, Halil Ceylan, Yuehui Chen, George A. Demetriou, David Dodds, Laura L. Elnitski, Okan K. Ersoy, David de Fuente, Joydeep Ghost, Petter M. LaMonica, Guo-Zheng Li, Raymond A. Liuzzi, Jun Ni, Andrzej Niemierko, Jose A. Olivas, Bill Rand, Gene Simmons, Ashu M. G. Solo, Andrew Sung, Sule Tildirim, Yangqiang Zhang, Mattias Dehmer, Frank Emmert-Streib (Associate Editor), Proceeding of 2007 International Conference on Artificial Intelligence, Vol. I, Worldcomp'07, CSREA Press, ISBN: 1-60132-0230X, 1-60132-024-8 (1-60132-025-6)
- [20] Hamid R. Arania (Editor), Nikilaos G. Bourbakis, Halil Ceylan, Yuehui Chen, George A. Demetriou, David Dodds, Laura L. Elnitski, Okan K. Ersoy, David de Fuente, Joydeep Ghost, Petter M. LaMonica, Guo-Zheng Li, Raymond A. Liuzzi, Jun Ni, Andrzej Niemierko, Jose A. Olivas, Bill Rand, Gene Simmons, Ashu M. G. Solo, Andrew Sung, Sule Tildirim, Yangqiang Zhang, Mattias Dehmer, Frank Emmert-Streib (Associate Editor), Proceeding of 2007 International Conference on Artificial Intelligence, Vol. II, Worldcomp'07, CSREA Press, ISBN: 1-60132-0230X, 1-60132-024-8 (1-60132-025-6)

- [21] Hamid R. Arabnia, Victor A. Clincy, Joan Lu, Jan Smid (Editor), Azita Bahrami, Olaf Droegehorn, George A. Gravvanis, Sandra Haseloff, Jun Ni, Ashu M. G. Solo, Salim Zabir (Associate Editor), Proceeding of 2007 International Conference on Internet Computing, Worldcomp'07, CSREA Press, ISBN: 1-60132-044-2
- [22] Hamid R. Arabnia, Jack Yang, Mary Qu Yang (Editor), Jun Ni, Ashu M.G. Solo, Mathias Dehmer, Frank Emmert-Streib (Associate Editor), Proceeding of 2007 International Conference on Genetic and Evolutionary Methods, Worldcomp'07, CSREA Press, ISBN: 1-60132-0388
- [23] Hamid R. Arabnia, Laurence T. Yang (Editor), George A Gravvanis, Jun Ni, Ashu M. Solo (Associate Editor), Proceeding of 2007 International Conference on Multimedia Systems and Applications, Worldcomp'07, CSREA Press, ISBN: 1-60132-0477
- [24] Hamid R. Arabnia, Jack Yang, mary Yang (Editor), George A. Gravvanis, Jun Ni, Ashu M. Solo, Mathias Dehmer, Frank Emmert-Streib (Associate Editor), Proceeding of 2007 International Conference on Scientific Computing, Worldcomp'07, CSREA Press, ISBN: 1-60132-037X
- [25] Hamid R. Arabnia (Editor), George A. Gravvanis, Jun Ni, Ashu M. G. Solo, Salim Zabir (Associate Editor), Proceeding of 2007 International Conference on Semantic Web and Web Servcies, Worldcomp'07, CSREA Press, ISBN: 1-60132-0454
- [26] Hamid R. Arabnia, Azita Bahrami (Editor), Jun Ni, Ashu M. G. Solo (Associate Editor), Proceeding of 2007 International Conference on E-Learning, E-Business, Enterprise Information Systems, and E-Government, Worldcomp'07, CSREA Press, ISBN: 1-60132-0515
- [27] Hamid R. Arabnia, P. L. Zhou (Editor), mark Burgin, George A. Gravvais, Jun Ni, Ashu M. G. Solo (Associate Editor), Proceeding of 2007 International Conference on Foundations of Computer Sceince, Worldcomp'07, CSREA Press, ISBN: 1-60132-0230X, 1-60132-0493
- [28] Hamid R. Arabnia, Ray R. Hashemi (Editor), Shahin Keynoush, Jun Ni, Cyrus R. Sabri, Ashu M. G. Solo (Associate Editor), Proceeding of 2007 International Conference on Information & Knowledge Engineering, Worldcomp'07, CSREA Press, ISBN: 1-60132-0507
- [29] Hamid R. Arabnia and Laurence T. Yang (Editor), Jun Ni, Ashu M. G. Solo (Associate Editor), Proceeding of 2007 International Conference on Embedded Systems & Applications, Worldcomp'07, CSREA Press, ISBN: 1-60132-0523
- [30] Hamid R. Arania, Mary Qu Yang, Jack Yang (Editor), Philip E. Bourne, Yuehui Chen, Jun Dong, A. Keith Dunker, Laura L. Elnitski, Steve Horvath, Yufang Jin, Guo-Zheng Li, Yunlong Liu, Zuojie Luo, Jun Ni, Andrzej Niemierko, Ashu M. G. Solo, My T. Thai, Yufeng Wang, Yangqiang Zhang, Mathias, Mattias Dehmer, Frank Emmert-Streib (Associate Editor), Proceeding of 2007 International Conference on Bioinformatics & Computational Biology, Vol. I, II, Worldcomp'07, CSREA Press, ISBN: 1-60132-0418

Books and Book Chapters

- [1] Shaoping Xiao, Jun Ni and Shaowen Wang, "The Bridhing Domain Multiscale Method and Its High Performance Computing Implementation," In *Cyberinfrastructure Technologies and Applications*, Junwei Cao (Ed.), Nova Science Publishers, Inc. 2008 (in press)
- [2] Jun Ni, "Grid Computing for Medical Imaging," (invited chapter), Taylor & Francis (2008)
- [3] Jun Ni, "High Performance Computing for Nanotechnology," Springer-Verlag Heidelberg, Germany (2008)
- [4] Jun Ni, "Cyberinfrastructure and Grid Computing for Radiology Informatics," (invited chapter), IGI Global (2008)

Peer-reviewed Conference Proceedings (60)

1989-1995

- [1] Ni, Jun, and Beckermann, C., "Natural Convection in a Vertical Enclosure Filled with Anisotropic Porous Media," in *Natural Circulation in Single-Phase and Two-Phase Flow*, ed. F. B. Cheung and M. S. El-Genk, ASME, HTD-Vol. 115, New York, pp. 15-21, 1989
- [2] Ni, Jun, Feller, R. J., and Beckermann, C., "A Two-Phase Model for Transport Phenomena during Solidification," in *Modeling of Casting, Welding and Advanced Solidification Processes -V*, ed. M. Rappaz, M. R. Ozgu and K. W. Mahin, TMS, Warrendale, TSM Publishing, Pennsylvania, pp. 675-682, 1990
- [3] Beckermann, C. and Ni, Jun, "Micro-Macroscopic Modeling of Transport Phenomena during Solidification," XXII ICHMT International Symposium on Manufacturing and Materials Processing, Dubrovnik, Yugoslavia, Aug. 1990
- [4] Ni, Jun and Beckermann, C., "A Two-Phase Model for Mass, Momentum, Heat and Species Transport during Solidification," in *Transport Phenomena in Material Processing*, ed. M. Charmichi, M. K. Chyu, Y. Joshi, and S. M. Walsh, ASME Publication, New York, HTD-Vol. 132, pp. 45-56, 1990
- [5] Alipour, F. and Ni, Jun, "Numerical Simulation of Laryngeal Flow," presented at the 12th Meeting of the Acoustical Society of America, October 31 to November 4, 1992, New Orleans, LA; also in *Journal of Acoustic Soc. of American*, Vol. 92, No 4, Part II, pp. 2391, 1992
- [6] Ahuja, S., Ni, Jun, and Beckermann, C., "Solid/liquid Interfacial Drag in Equiaxed Solidification," TMS Annual Meeting, San Diego, California, March 1-5, 1992
- [7] Beckermann, C. and Jun Ni, "Modeling of Sedimentation in Equiaxed Alloys Solidification," in *TMS/ASM Materials Week 93 (or 93's TMS Fall Annual Meeting)*, October 18-21, 1993, Pittsburgh, Pennsylvania
- [8] Ni, Jun, Knaack, J., and Fan, C., "Geometrical Animation and Numerical Visualization for CAD and CFD of Hydraulic Coupling," in *New Advances in Computer Aid Design and Computer Graphics*, Vol. 1, International Academic Publishers, pp. 855-860; also presented at the 3rd International Conference Proceedings of CAD/Graphics'93, Beijing, China, Aug. 1993
- [9] Ni, J. and Alipour, F., "Animation and Numerical Simulation of Laryngeal Airflow," in *New Advances in Computer Aid Design and Computer Graphics*, Vol. 1, International Academic Publishers, pp. 849-854, 1993; also presented at the 3rd International Conference Proceedings of CAD/Graphics'93, Beijing, China, Aug. 1993
- [10] Ni, Jun, Beckermann, C., and Smith, T.F., "Effect of an Electromagnetic Field on Natural Convection in Porous Media," in *Fundamentals of Heat Transfer in Electromagnetic, Electrostatic, and Acoustic Fields*, eds., Y. Bayazitoglu and V.S. Arpaci, HTD-Vol. 248, pp.23-33, ASME Publication, New York, NY, 1993; also presented at the 29th National Heat Transfer Conference, Atlanta, Georgia, Aug. 8-11, 1993
- [11] Beckermann, C. and Ni, Jun, "Modeling of Equiaxed Solidification with Convection," in *Proceedings of First International Conference on Transport Phenomena Processing*, ed. S. I. Guceri, Technomic Publishing Company, Inc., Lancaster, Pennsylvania, pp. 308-317, 1993
- [12] George W. Bergantz, Jim Mancino, and Jun Ni, "Two-phase of Igneous and Metamorphic Transport Processes: Linking Kinetics, Crystal Growth, Convection and Sedimentation," *EOS, Transactions, American Geophysic Union*, Vol. 76, No. 46, Nov. 7 Supplement, 1995; presented at 1995 Fall Meeting of American Geophysic Union, San Francisco, CA, Dec. 11-15, 1995

2002-2007

- [13] Jun Ni: "Science and Engineering Online Solution Library for Education," WebNet2000, pp. 972-973, Gordon Davies, Charles B. Owen (Eds.): Proceedings of WebNet 2000 - World Conference on the WWW and Internet, San Antonio, Texas, USA, October 30 - November 4, 2000. AACE 2000, ISBN 1-880094-40-1, 2000
- [14] Lili Huang, Ge Wang, S. Kao, and Jun Ni, "VoluMeasureTM: A Portable Java program for Stereological Volume Measurement," Education Exhibition, Radiological Society of North American Scientific Assembly and Annual Meeting, Chicago, and December 1-6. 2002
- [15] Shaowen Wang, Boyd Knosp, Jun Ni, Alexi Mestvirishvili, Yasar Onel, Ahmet Sedat Ayan, Jonathan Olson, and Ugur Akgun, "Building Collaborative Environments for Grid-based Large Hadron Collider Analysis - Efforts at the University of Iowa," in Workshop on Large Hadron Collider (LHC) Global Science – Developing Proposals and Plans for Building the Environment for a Global Collaborative Science Community, Lawrence Berkeley National Laboratory, Berkeley, CA, USA, November 12-13, 2002
- [16] Xiang Li, Jun Ni, Ge Wang, "Parallel Iterative CT Image Reconstruction on a Linux Cluster of Legacy Computers," to High Performance Computing and Applications (HPCA2004), Shanghai, China, August 8-10, 2004, accepted and being published in Lecture Note in Computer Science (LNCS), Springer-Verlag Heidelberg, Germany, ISBN 3-540-25785-3, 2004
- [17] Xiang Li, Tao He, Jun Ni, Ge Wang, "P2P-enhanced Distributed Parallel Iterative Cone Beam CT Image Reconstruction," Radiology Society of North America, the 90th Assembly and Annual Meeting (RSNA2004), Nov. 28 - Dec. 3, 2004, McCormick Place, Chicago, Illinois, USA
- [18] Jun Ni, Tao He, Xiang Li, Shaowen Wang, Ge Wang, "Internet-based Distributed Computing System for EM Medical Image Reconstruction," the third International Grid and Cooperative Computing (GCC2004), Wuhan, China, Oct. 21-24, Lecture Note in Computer Science (LNCS), Vol. 3251, pp 495-501, Springer-Verlag Heidelberg, Germany, 2004
- [19] Xiang Li, Tao He, Shaowen Wang, Ge Wang, and Jun Ni, "P2P-enhanced Distributed Computing in Medical Image EM Reconstruction," presented and published at the 2004 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'04), Las Vegas, Nevada, USA, June 21-24, 2004, Hamid R. Arabnia and Jun Ni (Eds.), pp. 822-828, Vol. II, ISBN: 1-932415-24-6, CSREA Press, 2004
- [20] Shaowen Wang, A. Padmanabham, Y. Liu, R. Briggs, Jun Ni, Tao He, Boyd Knosp, and Y. Onel, "A Multi-agent System Architecture for End-user Grid Monitoring Using Geographic information Systems (MAGGIS): Architecture and Implementation," *Lecture Note in Computer Science*, Vol. 3032, pp. 536 – 543, ISBN: 3-540-21988-9, Springer-Verlag Heidelberg, 2004
- [21] Tao He, Jun Ni, Shaowen Wang, and Boyd Knosp, "Java Grid Computing Library --- A Distributed Programming Solution for Grid Computing," in the conference proceeding of 2nd International Workshop of Grid and Cooperative Computing (GCC2003), Shanghai, China, 2003, *Lecture Note in Computer Science*, Volume 3032, pp. 428 – 435, 2004, ISBN: 3-540-21988-9, Springer-Verlag Heidelberg, 2004
- [22] Logue MW, Park J, Ni J, Cremer J, Segre A, Knosp B, Beck S, Vieland V., "Interactive visualization tools for genetic data," ASHG 54th Annual Meeting, American Society of Human Genetics, 2004. p528.
- [23] Juwon Park, Jun Ni, James Cremer, Mark Logue, "Multidimensional Multivariate Visualization: Directed Visualization on Linkage Analysis, International Conference on Bioinformatics and its Applications (ICBA'04), December 16-19, 2004, Nova Southeastern University, Fort Lauderdale, Florida, USA

- [24] Xiaoxu Han, Jun Ni, James Cremer, Xiaoqian Jiang, "An Improved Protein-Folding Algorithm In the HP Model," submitted to International Conference on Bioinformatics and its Applications (ICBA'04), December 16-19, 2004, Nova Southeastern University, Fort Lauderdale, Florida, USA
- [25] Juwon Park, Mark Logue, Jun Ni, James Cremer, Alberto Segre, Veronica Vieland, "Scientific Visualization of Multidimensional Data: Genetic Likelihood Visualization," presented at High Performance Computing and Applications (HPCA2004), Shanghai, China, August 8-10, 2004, *Lecture Note in Computer Science*, Springer-Verlag Heidelberg, Germany, ISBN 3-540-25785-3, 2004
- [26] Jun Ni, Ge Wang, Shaowen Wang, Tiange Zhuang, Weiqin Tong, "Grid-enhanced International Digital Library (GridIDL) for Medical Imaging," submitted to High Performance Computing and Applications (HPCA2004), Shanghai, China, August 8-10, 2004, *Lecture Note in Computer Science*, Springer-Verlag Heidelberg, Germany, ISBN 3-540-25785-3, 2004
- [27] Xiaoxu Han, Jun Ni, Zhihong Wang, Xiaoqian Jiang, "P-LZB, A Real-Time Parallel Local Z-Buffer Rendering Algorithm of Large Geometric Datasets," submitted to High Performance Computing and Applications (HPCA2004), Shanghai, China, August 8-10, 2004, *Lecture Note in Computer Science*, Springer-Verlag Heidelberg, Germany, ISBN 3-540-25785-3, 2004
- [28] Xiaoxu Han, James Cremer, Zhihong Wang, Jun Ni, "LZB, A Hybrid Algorithm of Local Ray-casting and Z-buffering for Large Geometric Datasets," presented at the International Workshop on Visualization and Visual Steering (VVS'04), in conjunction with GCC2004, Wu Han, China, Oct. 21-24, 2004 GCC2004, *Lecture Note in Computer Science*, Vol. 3252, pp 720-727, Springer-Verlag Heidelberg, Germany, 2004
- [29] Jun Ni, Chinglong Lin, Yongxiang Zhang, Tao He, Shaowen Wang, Boyd Knosp, "Parallelism of Lattice Boltzmann Method (LBM) for Lid-driven Cavity Flows," High Performance Computing and Applications (HPCA2004), Shanghai, China, August 8-10, 2004, *Lecture Note in Computer Science*, Springer-Verlag Heidelberg, Germany, ISBN 3-540-25785-3, 2004
- [30] Jun Ni, Tao He, Lili Huang, Shaowen Wang, Boyd Knosp, and C Lin, "Distributed Computation for Diffusion Problem in a P2P-Enhanced Computing System," in the conference proceeding of 2nd International Workshop of Grid and Cooperative Computing (GCC2003), Shanghai, China, 2003; *Lecture Note in Computer Science*, Volume 3032, pp. 428 – 435, 2004, ISBN: 3-540-21988-9, Springer-Verlag Heidelberg, 2004
- [31] Jun Ni, Ching-long Lin, Yongxiang Zhang, Tao He, Shaowen Wang, and Boyd M. Knosp "Performance Evaluation of a Parallel Lattice Boltzmann Method for Cavity Flows Using Cluster Computing," The 2004 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'04), Las Vegas, Nevada, USA, June 21 - 24, 2004, pp. 10-16, Vol. I, ISBN: 1-932415-23-8, CSREA Press, 2004
- [32] Jun Ni, Tao He, Ge Wang, Shaowen Wang, and Boyd Knosp, "Scenario of Application Layers for Grid-enhanced International Digital Library in Medical Imaging," The 2005 International Conference on Grid Computing and Applications (GCA'05), The 2005 World Congress in Applied Computing, Las Vegas, June, 2005, (GCA'05), ISBN 1-932415-57-2, CSREA Press, 2005
- [33] Shaowen Wang, Shaoping Xiao, and Jun Ni, "A Grid-based Bridging Domain Multiple-scale Method for Computational Nanotechnology," presented at The First International Workshop On Computational Nano-science and Technology, 2005 (CNST'05), *Lecture Note in Computer Science (LNCS)*, ISBN: 0302-9743, vol. 3516, pp. 326, Springer-Verlag Heidelberg, Germany, 2005

- [34] Jun Ni, Tao He, Joe DeMaria, Shaowen Wang, and Boyd Knosp, "Parallel Numerical Integration on a P2P/Grid Computing Environment," The 2005 International Conference on Grid Computing and Applications (GCA'05), The 2005 World Congress in Applied Computing, Las Vegas, June, 2005, (GCA'05), ISBN 1-932415-57-2, CSREA Press, 2005.
- [35] Shaowen Wang, Marc P. Armstrong, Jun Ni, Yan Liu, "GISolve: A Grid-based Problem Solving Environment for Computationally Intensive Geographic Information Analysis," in IEEE/NSF's Challenges of Large Applications in Distributed Environments (CLADE|05), July 24, 2005, Research Triangle Park, NC, USA.
- [36] Shaowen Wang, Marc P. Armstrong, Jun Ni, Yan Liu, "GISolve: A Grid-based Problem Solving Environment for Computationally Intensive Geographic Information Analysis," submitted to Challenges of Large Applications in Distributed Environments 2005, CLADE 2005, in conjunction with HPDC held in Research Triangle Park, NC, in July 2005
- [37] Nianmin Yao, Wenbin Yao, Shaobin Cai, and Jun Ni, "A New Scheduling Algorithm for Servers," IMSCCS|06, J. Ni, J. Dongarra, Y. Zheng, G. Gu, W. Gentsch, and H. Jin (eds.), IEEE Computer Society Press, Los Alamitos, California, USA, 2006, ISBN: 0-7695-2581-4.
- [38] Wenbin Yao, Nianmin Yao, Shaobin Cai, and Jun Ni, "A Verification Environment for CMP Architecture Design," IMSCCS|06, J. Ni, J. Dongarra, Y. Zheng, G. Gu, W. Gentsch, and H. Jin (eds.), IEEE Computer Society Press, Los Alamitos, California, USA, 2006, ISBN: 0-7695-2581-4.
- [39] Tao He, Jun Ni, and Ge Wang, "A Heterogeneous Windows Cluster System for Medical Image Reconstruction," in the *Processing of the First International Multi-symposiums on Computer and Computational Sciences* (IMSCCS|06), IEEE Computer Society Press, Los Alamitos, California, USA, ISBN 0-7695-2581-4, Vol. 1, pp. 410-415, 2006
- [40] Tao He, Jun Ni, Junjun Deng, Hengyong Yu, and Ge Wang, "Deployment of One-Sided Communication Technique for Parallel Computing in Katsevich CT Image Reconstruction," in the *Processing of the First International Multi-symposiums on Computer and Computational Sciences* (IMSCCS|06), IEEE Computer Society Press, Los Alamitos, California, USA, ISBN 0-7695-2581-4, Vol. 1, pp. 416-423, 2006
- [41] Jun Ni, Junjun Deng, Hengyong Yu, Tao He, and Ge Wang, "Analysis of Performance Evaluation of Parallel Katsevich Algorithm for 3-D CT Image Reconstruction," in the *Processing of the First International Multi-symposiums on Computer and Computational Sciences* (IMSCCS|06), IEEE Computer Society Press, Los Alamitos, California, USA, ISBN 0-7695-2581-4, Vol. 1, pp. 258-265, 2006
- [42] Shaoping Xiao, Jun Ni, and Shaowen Wang, "The Need of High-performance Computing in Computational Nano- Mechanics and Materials Science," in Proceeding of The Second Workshop of High Performance Computing for Nanotechnology," IEEE Computer Society Press, Los Alamitos, California, USA (in Press), 2006
- [43] Jun Ni, Shaoping Xiao, and Shaowen Wang, "Modeling and Simulations of Nanostructure Materials Processing," in Proceeding of the First Workshop of High Performance Computing for Nanotechnology," IEEE Computer Society Press, Los Alamitos, California, USA (In Press), 2006
- [44] Daming Xu and Jun Ni, "A Numerical Approach of Direct-SIMPLE deduced Pressure Equations to Simulations of Transport Phenomena during Shaped Casting," in the *Processing of the First International Multi-symposiums on Computer and Computational Sciences* (IMSCCS|06), IEEE Computer Society Press, Los Alamitos, California, USA, ISBN 0-7695-2581-4, Vol. 2.
- [45] Ransom Briggs, Shaowen Wang, Sukumar Ghosh, Eric Shook, Anand Padmanabhan, Shaoping Xiao, Jun Ni, "A High-Throughput Virtual Organization Job Execution System

- (VOJES): Using the Open Science Grid for Reliability Analyses of Carbon Nanotubes,” in Challenges of Large Applications in Distributed Environments (CLADE 2007), Monterey Bay, California, USA
- [46] Wang, T., Ni J., “Speedup Analysis for Parallel Implementation of Model of Response Accuracy and Response Time in Computerized Testing,” ICCS 2007, Part III, *Lecture Note in Computer Science*, Vol. 4489, pp. 34-41, Springer-Verlag Berlin Heidelberg Publisher (2007)
- [47] Yanxia Wu, Guochang Gu, Kehui Wang, Jun Ni, “Control Flow Checking Algorithm using Soft-based Intra-/Inter-block Assigned-Signature,” Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 412-415.
- [48] Song Han, Guochang Gu, and Jun Ni, “A Mobile Ad hoc Network with Mobile Satellite Communication Base Station,” Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 512-516.
- [49] Xianbo Lang, Guochang Gu, Hongxun Yao, and Jun Ni, “An Image Classification Method Based on a SK Sub-Vector Multi-Hierarchy Clustering Algorithm,” Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, pp. 182-186.
- [50] Chen Ying, Guochang Gu, Tianyang Lv, Shaobin Huang, Jun Ni, “The Linear Correlation Analysis of Numeric Attributes for Government Data,” Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 521-524.
- [48] Chunna Cao, Wenbin Yao, Jun Ni, “An Improved RED Algorithm Combines with Queue Length and Sending Rate Inspection,” Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 421-424.
- [49] Linzhi Ning, Wenbin Yao, Jun Ni, Nianmin Yao, “Fault-Tolerance CMP Architecture based on SMT Technology,” Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 425-429.
- [52] Fei Gu, Hang Chen, Jun Ni, and Zhengge Huang, “Protein Structural Class Prediction by Combining Conditional Probability with Information Content,” Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 38-43.
- [54] Yongqiang Zhao, Minglu Li, and Jun Ni, “Adaptive Nonlinear Diffusion Model for Vessel Image Enhancement,” Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 170-176.
- [55] Ying Chen, Jiadong Wang, Jun Ni, and Lu Zhang, “Octree Data Structure in Image-based CAS for Noise Surgery in Otolaryngology,” Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa,

- Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 123-128.
- [56] Tingjun Yang, Zhengge Huang, Xingsheng Lin, Jianjun Chen, and Jun Ni, "A Parallel Algorithm for Binary-Tree-Based String Rewriting in L-system," Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 245-252.
- [57] Tao He, Jun Ni, Alberto M Segre, Shaowen Wang, and Boyd M. Knosp, "SkipMard: A Multi-attribute Peer-to-Peer Resource Discovery Approach, Proceeding of the Second International Multi-symposiums of Computer and Computational Sciences (IMSCCS|07), University of Iowa, Iowa City, USA, Aug. 13-15, 2007, IEEE Computer Society Press, Los Alamitos, California, USA, Vol. 1, pp. 266-273.
- [58] Bo Qiang, Jun Ni, and Laurie Fajardo, "Parallel Monte Carlo Algorithm for Simulation of Photon Migration inside Biological Tissues," RSNA|07, Chicago, USA, Scientific Paper, Nov. 25-30, 2007, SSQ16-02, pp. 596
- [59] Haiwei Pan, Qilong Han, Guisheng Yin, Wei Zhang, Jianzhong Li, Jun Ni, "A ROI-Based Mining Method with Medical Domain Knowledge Guidance," ICICSE|08, IEEE CS Press, 2008 (in press)
- [60] Yingjie Xia, Guanghua Song, Yao Zheng, Jun Ni, Mingzhe Zhu, "A Small World Overlay P2P Transfer System with Role-based and Reputation-based Access Control Policies, ICICSE|08, IEEE CS Press, 2008 (in press)

Journal Papers (24)

- [1] Jun Ni and Christoph Beckermann, "A Volume Averaged Two-Phase Model for Transport Phenomena during Solidification," *Metall. Trans. B*, Vol. 22B, pp. 349-361, June, 1991 [SCI-ISI: Web of Science: **Journal Citation: 176**]
- [2] Jun Ni and Christoph Beckermann, "Natural Convection in a Vertical Enclosure Filled with Anisotropic Porous Media," *ASME Journal of Heat Transfer*, Vol. 113, pp. 1033-1037, 1991 [SCI-ISI: Web of Science: **Journal Citation: 20**]
- [3] Fari Alipour, and Jun Ni, "Numerical Simulation of Laryngeal Flow," *Journal of Acoustic Soc. of American*, Vol. 92, No. 4, Part II, pp. 2391, 1992
- [4] Jun Ni and Christoph Beckermann, "Modeling of Globulitic Alloy Solidification with Melt Convection," *J. of Materials Processing & Manufacturing Science*, Vol. 2, No. 2, pp. 217-231, 1993
- [5] Jun Ni and Christoph Beckermann, "Two-Phase Model and its Numerical Simulation of Metal Alloy Solidification," *J. of Acta Metallurgica Sinica*, Vol. 30, No 9, 1994
- [6] Jun Ni and Frank P., Incropera, "Extension of the Continuum Model for Transport Phenomena Occurring during Metal Alloy Solidification, Part II: Microscopic Considerations," *Int. J. of Heat and Mass Transfer*, Vol. 38, No. 7, pp. 1285-1296, 1995. [SCI-ISI: Web of Science, **Journal of Citation: 22**]
- [7] Jun Ni and Frank P., Incropera, "Extension of the Continuum Model for Transport Phenomena Occurring during Metal Alloy Solidification, Part I: The Conservation Equations," *Int. J. of Heat and Mass Transfer*, Vol. 38, No. 7, pp. 1271-1284, 1995. [SCI-ISI: Web of Science, **Journal Citation: 35**]
- [8] Kent Lee, Jun Ni, Tom Halverson, Eric Van Wyk, and Judith Brown, "Is MVE the Right Environment for Your Visualization Application," *Computer Graphics*, Vol. 29, No. 2, May 1995, pp. 49-51
- [9] Christoph Beckermann and Jun Ni, "Simulations of Sedimentation in Globulitic Alloy Solidification," *Int. Communication Journal of Heat and Mass Transfer*, Vol. 23, No. 3, pp.315-324, 1996 [SCI-ISI: **Web of Science, Citation: 2**]
- [10] George W. Bergantz and Jun Ni, "A Numerical study of sedimentation by dripping

- instabilities in viscous fluids,” *International Journal of Multiphase Flow*, Vol. 25, pp. 307-320, 1999 [**SCI-ISI: Web of Science, Citation: 10**]
- [11] Youping Deng, Jun Ni and Chaoyang Zhang, “Development of computations in bioscience and bioinformatics and its application,” *BMC Bioinformatics*, 2006, 7 (Suppl 4): S19
- [12] Longde Yin, Chun-Hsi Huang, Jun Ni, “Clustering of Gene Expression Data: Performance and Similarity Analysis,” *BMC Bioinformatics*, 2006, 7 (Suppl 4): S1
- [13] Lili Huang, Ge Wang, S. Kao, and Jun Ni, “VoluMeasureTM: A Portable Java program for Stereological Volume Measurement,” *Radiology*, November 2002, Vol. 225 (P)
- [14] Xiang Li, Jun Ni and Ge Wang, “Parallel Iterative Cone Beam CT Image Reconstruction on a PC Cluster,” *Journal of X-Ray Science and Technology*, 13(2005) 1-10.
- [15] Junjun Deng, Hengyong Yu, Jun Ni, Shiyi Zhao, Lihe Wang, and Ge Wang, “A Parallel Katsevich algorithm for 3-D CT Image Reconstruction,” *Journal of Supercomputing*, Volume 38, Number 1/October, 2006, pp. 35–47, Springer/Kluwer Academic Publisher [**SCI-ISI: Web of Science, Citation: 1**]
- [16] Jun Ni, Xiang Li, Ge Wang, “Parallel Computing Techniques for Computed Tomography,” *Current Medical Imaging Reviews*, 2006, Vol. 2, No. 4, pp. 1-10, Bentham Science Publishers
- [17] Jun Ni, Junjun Deng, Hengyong Yu, Tao He, Ge Wang, “Analytical Model for Performance Evaluation of Parallel Katsevich Algorithm for 3-D CT Image Reconstruction,” *Int. Journal on Computational Science and Engineering*, Inderscience Publisher (accepted)
- [18] Junjun Deng, Hengyong Yu, Jun Ni, Lihe Wang, and Ge Wang, “Parallelism of Iterative CT Algorithm based on Local Reconstruction,” *Journal of Supercomputing*, Springer (in press)
- [19] Shaoping Xiao, Shaowen Wang, Jun Ni, Ransom Briggs, Maciej Rysz, “Reliability Analysis of Carbon Nanotubes Using Molecular Dynamics with the Aid of Grid Computing,” *Journal of Computational and Theoretical Nanosciences* (in press)
- [20] Shaoping Xiao, Jun Ni, Shaowen Wang, “The Bridging Domain Multiscale Method and its High Performance Computing Implementation,” *Journal of Computational and Theoretical Nanosciences* (in press)
- [21] Bo Qiang, Jun Ni, and Laurie Fajardo, “Parallel Monte Carlo Algorithm for Simulation of Photon Migration inside Biological Tissues,” *RSNA/07*, Chicago, USA, Scientific Paper, Nov. 25-30, 2007, SSQ16-02, pp. 596
- [22] Fei Gu, Hang Chen, Jun Ni, and Zhengge Huang, “Protein structural class prediction based on an improved statistical strategy,” *BMC Bioinformatics* (supple), 2008 (in press)
- [23] Hiroyuki Mishima, Andrew C. Lidral, and Jun Ni, “Application of the Linux-based Cluster for Exhaustive Window Haplotype Analysis Computation using FBAT and Unphased Programs,” *BMC Bioinformatics* (supple), 2008 (in press)
- [24] Guoqing Lu and Jun Ni, Highlighting computations in bioscience and bioinformatics, *BMC Bioinformatics* (supple), 2008 (in press)

Published Application Software (3)

- [1] Jun Ni, “Web Enhanced Scientific Computing: Science and Engineering online Solution Libraries,” presented at CIC Tech Forum, NCSA, 1998
- [2] Jun Ni, Lili Huang, Ge Wang, and S. Kao, “VoluMeasureTM: A Portable Java program for Stereological Volume Measurement,” Education Exhibition, Radiological Society of North American Scientific Assembly and Annual Meeting, Chicago, Nov. 2002
- [3] Instructional software, “Stereotactic Atlas of the Macaca Mulatta Thalamus and Adjacent Basal Ganglia Nuclei,” I. A. Ilinsky, K. K. Ilinsky, and Boyd Knosp, Kluwer Academic/Plenum Publishers, 2002

Colloquium/Tutorial/Lecture/Seminar/Talk/Presentation/Poster (50)

- [1] Jun Ni, "Modeling and Simulation of Multi-phase, Multi-component Transport Phenomena during Materials Processing," DOE AMES Lab, Iowa, 1995
- [2] Jun Ni, "Web enhanced scientific computing: Science and Engineering online Solution Libraries," presented at CIC Tech Forum, NCSA, 1998
- [3] Jun Ni, "Internet2 Powered Tele-immersive Virtual Applications Using OpenGL and Cave Library," NSC-NSF Joint Conference on NGI Applications, TANets, Taiwan, 1999
- [4] Jun Ni and Lili Huang, "Hybrid High Performance Networking and High Performance Computing with Java Client/Server Enhanced Technology," poster, Supercomputing Conference 2001 (SC2001), IEEE/Computer Society, Denver, Colorado, Nov. 2001
- [5] Shaowen Wang and Jun Ni, "Grid-empowered Knowledge Discovery," Presentation Series for University Faculty Members Who are Interested in Grid computing, University of Iowa, Iowa City, IA, U.S.A, September, 2002
- [6] Shaoping Xiao and Jun Ni "Multiscale Methods (QM/MM/CM) at Nanoscale," UI research booth, Supercomputing 2003
- [7] Jun Ni, John Zhang, Ching-Long Lin, and Shaowen Wang, "Parallelization of a Lattice Boltzmann Method for Lid-Driven Cavity Flow," UI research booth, Supercomputing 2003
- [8] Jun Ni, Tao He, John Zhang, Shaowen Wang, and Boyd Knosp, "P2P Parallel Computing using MCMS Architecture," UI research booth, Supercomputing 2003
- [9] Jun Ni, Lili Huang, Edward He, John Zhang, Shaowen Wang, and Boyd Knosp, "Distributed Computation for Diffusion Problems in a Grid Computing System," UI research booth, Supercomputing 2003
- [10] Shaoping Xiao, and Jun Ni, "Grid-enhanced Molecular Dynamics Simulation," UI research booth, Supercomputing 2003
- [11] Shaoping Xiao and Jun Ni, "Multiscale Methods (QM/MM/CM) at Nanoscale, Poster presentation, Symposium on Nanoscience and Nanotechnology, University of Iowa, , Iowa City, USA, Nov 12, 2003
- [12] Shaoping Xiao and Jun Ni, "Grid-enhanced Molecular Dynamics Simulation," poster presentation, Symposium on Nanoscience and Nanotechnology, University of Iowa, , Iowa City, USA, Nov 12, 2003.
- [13] Jun Ni, "Multi-scale Modeling and Simulation of Nano-materials Process of Monodispersed Particles," poster presentation, Symposium on Nanoscience and Nanotechnology, University of Iowa, Iowa City, USA, Nov 12, 2003
- [14] Jun Ni, Tao He, L. Huang, S. Wang, B. Knosp, and C Lin, "Distributed Computation for Diffusion Problem in a P2P-Enhanced Computing System," in the conference proceeding of 2nd International Workshop of Grid and Cooperative Computing (GCC2003), Shanghai, China, 2003
- [15] Jun Ni, "NanoGrid: New Computational Infrastructure for Nano-Science and Technologies," poster presentation, Symposium on Nanoscience and Nanotechnology, University of Iowa, Iowa City, USA, Nov 12, 2003
- [16] Tao He, J. Ni, S. Wang, and B. Knosp, "Java Grid Computing Library: A Distributed Programming Solution for Grid Computing," in the conference proceeding of 2nd International Workshop of Grid and Cooperative Computing (GCC2003), Shanghai, China, 2003
- [17] Shaowen Wang, A. Padmanabham, Y. Liu, R. Briggs, J. Ni, T. He, B. Knosp, and Y. Onel, "A Multi-agent System Architecture for End-user Grid Monitoring Using Geographic Information Systems (MAGGIS): Architecture and Implementation," in the conference proceeding of 2nd International Workshop of Grid and Cooperative Computing (GCC2003), Shanghai, China, 2003

- [18] Jun Ni, "Grid Computing in Medical Image Analysis and Processing," Shanghai Jiao Tong University, Shanghai, China, Dec. 2003
- [19] Jun Ni, "Applications of Research Computing at UI," Zhejiang University, Zhejiang, China, Dec., 2003
- [20] Jun Ni, "Grid Computing and Application Scenarios," Shanghai University, China, Dec. 2003
- [21] Tao He, Jun Ni, Shaowen Wang, and Boyd Knosp, "Java Grid Computing Library --- A Distributed Programming Solution for Grid Computing," in the conference proceeding of 2nd International Workshop of Grid and Cooperative Computing (GCC2003), Shanghai, China, 2003
- [22] Jun Ni, Tao He, and Ge Wang, "Maximum Likelihood Iterative Algorithm for Medical Image Reconstruction on a P2P Distributed Computing Environment," in Midwest Numerical Analysis Conference, sponsored by NSF and The Institute for Mathematics and its Applications (IMA), May 20-22, 2005, Iowa City, USA
- [23] Shaoping Xiao, Deepak Srivastava (NASA), Dr. Meyya Meyyappan (NASA), Jun Ni, "Computational Domains for Explorations in Nanoscience and Technology," invited tutorial on International Conference on Computational Science (ICCS'05), Atlanta, Georgia, USA, May 22-24, 2005
- [24] Shaoping Xiao, Jun Ni, Deepak Srivastava (NASA), and Dr. Meyya Meyyappan (NASA), "Computational Domains for Explorations in Nanoscience and Technology," The First Int. Workshop on High Performance Computing for Nanotechnology (HPCNano|06), Nov. 16, 2005, IEEE/ACM SC2005 (Tutorial)
- [25] Shaoping Xiao and Jun Ni, "Computational Nanoscience and Technology," NASA Ames Research Center, April 2006. (Invited talk)
- [26] Jun Ni, "How to prepare conference paper and paper submission," IMSCCS|06, June 20-24, 2006 (Tutorial)
- [27] Jun Ni and Shaoping Xiao, "Computational Nanoscience and Technology," IMSCCS|06, June 20-24, 2006 (tutorial)
- [28] Youping Deng and Jun Ni, "Introduction to Bioinformatics," IMSCCS|06, June 20-24, 2006 (tutorial)
- [29] Jun Ni, "Spotlight on UI-Based HPC Applications in Medical Imaging," Research Academic Computing, UITS, Indiana University, Oct. 11, 2006
- [30] Jun Ni, "Spotlight on HPC Applications in Medical Imaging," Computer Science, Colloquium, University of Iowa, Oct. 20, 2006
- [31] Jun Ni, "Spotlight on HPC Applications in Medical Imaging," Department of Electrical and Computer Engineering, Seminar, University of Iowa, Nov. 9, 2006
- [32] Jun Ni, "Spotlight on HPC Applications in Medical Imaging," Pacific Northwest National Lab, Department of Energy, Dec. 13, 2006
- [33] Jun Ni, "A Object-Oriented, Geometrical Description about Academic Research Computing," Dartmouth College, March 30, 2007
- [34] Jun Ni, "Large-scale High Performance Computing for Medical Imaging," Center for Computation & Technology, Louisiana State University, April 4, 2007
- [35] Jun Ni, "Cyberinfrastructure-enabled Radiology Informatics," Department of Radiology, University of Iowa, April 24, 2007
- [36] Jun Ni, "Parallel Implementation of Model of Response Accuracy and Response Time in Computerized Testing," ICCS|07, Beijing, May 28, 2007
- [37] Jun Ni, "Scholar Gates at Harvard University: Introduction to Harvard College," Harbin Engineering University, June 1, 2007
- [38] Jun Ni, "High Performance Computing in Medical Imaging," Harbin Engineering University, June 1, 2007

- [39] Jun Ni, "HPC-enhanced Computations in Nanotechnology," Harbin Engineering University, June 1, 2007
- [40] Jun Ni, "Cyberinfrastructure-Enabled Petascale Computing for Nanotechnology (cPCN)," Great Lake Consortium-Petascale computing workshop, July 14, Northwestern University, 2007
- [41] Jun Ni and Laurie Fajardo, "Cyberinfrastructure-Enabled Medical Imaging Informatics," Great Lake Consortium-Petascale computing workshop, July 14, Northwestern University, 2007
- [42] Jun Ni and Shaoping Xiao, "Computational Domains for Explorations in Nano-science and Technology," Int. Multi-symposiums on Computer and Computational Sciences, 2007, Aug. 15, 2007
- [43] Jun Ni, "Integration and Implementation of Cyberinfrastructure," National Science Foundation (NSF)-Office of Cyberinfrastructure (OCI), Aug. 20, 2007
- [44] Jerry Shnoor and Jun Ni, "Cyberinfrastructure-Enabled Computational Thinking Machine for Environmental Science," Oct. 4, 2007, CyberEnviroNetr meeting, University of Iowa
- [45] Jun Ni, "The Role of Large-Scale Computation and Cyber-Enabled Discovery in Multi-scale Simulations of Nanostructured Materials," Multi-Scale Modeling (MSM), NSF Nanoelectronics Workshop, Washington, DC, October 15-16, 2007
- [46] Jun Ni and Saioping Xiao, "The Role of Large-Scale Computation and Cyber-Enabled Discovery in Multi-scale Simulations of Nanostructured Materials," Workshop on NSF Nanoelectronics: Circuits, Systems, and CAD Tools, Oct. 15-16, 2007
- [47] Jun Ni, Invited feature talk, "HPC-enabling Technology for Medical Imaging and Informatics in Integrated Medical Image Informatics Systems," First Annual Microsoft HPC Summit, in IEEE/ACM SC07, Reno, NV, USA
- [48] Jun Ni, "Cyber infrastructure-enabled Computations for the Discovery of Innovative Technology in Medical Imaging through Nanotechnology," HPCNano07, in IEEE/ACM Supercomputing 2007, Reno, NV, USA
- [49] Bo Qiang, Jun Ni, and Laurie Fajardo, "Parallel Monte Carlo Algorithm for Simulation of Photon Migration inside Biological Tissues," RSNA|07, Chicago, USA, Scientific Paper, Nov. 25-30, 2007
- [50] Jun Ni, "Vision of Cyberinfrastructure for Biomedical Imaging," ECE Graduate Seminar and the Iowa Institute of Biomedical Imaging, Feb. 7, 2008
- [51] Jun Ni, "Modeling of biotransport in biophysics systems using petascale computing and medical imaging," NSF invited workshop on Biological Communications and Molecular Communications, Feb. 20-21, 2008

Professional Services and Activities

USA Government Grant Review

NSF, External Reviewer

Directorate for Mathematics & Physical Sciences (MPS) (1996)

NSF, External Reviewer/Panelist

Directorate for Computer & Information Science & Engineering (CISE) (2007)

NSF, invited presenter and participant in NSF workshops to discuss and identify grant research challenges for NSF future funding programs

NSF's Nano-electronics Workshop, in Computer and Information Science and Engineering (CISE) Directorate (2007)

NSF's Molecular Communication: Biological Communication Technology, in Computer and Information Science and Engineering (CISE) Directorate (2008)

National Institute of Health, External Reviewer

University Grant, External Reviewer

Research Enhancement Program in Computational Biology and Clinic Translation Science Award (CTSA) Program, Wayne State University (2007)

Federal Plan and Documentation Reviewer

Federal Plan for Advanced Networking Research and Development invited by USA National Coordination Office for Networking and Information Technology Research and Development (NITRD) for National Science and Technology Council (NSTC)

National and Local Committee

National Committee or Government Relations and Outreach

Member, Coalition for Academic Scientific Computation (CASC) for University of Iowa (www.casc.org) (2005-present)

Member, Educause

Committee Member, National STEM Education Coalition Committee (www.stemedcoalition.org) for USA K12 Education (2006-present)

Committee Member, ASME Government Relation Team for K12 Science, Technology, Engineering and Math Education (2005-2006)

Professional Committee

Faculty Tenure Evaluation Committee Member, Tenure and Promotion Review Committee, Department of Computer Science, University of Akron, Ohio (2006)

Local Academic Committee

Iowa Institute for Medical Imaging, Computational Imaging Group Leader (2007-)

Executive Committee and Core Faculty Member, Nano-science Nanotechnology Institute (NNI), University of Iowa (2006-present)

Affiliated Faculty Member, Center of Bioinformatics and Computational Biology (CBCB), University of Iowa (2004-present)

Faculty Member, Group Leader, Computational Imaging Group, The Iowa Institute for Biomedical Imaging (2007-pres)

Editorial Services

Founding Editor-in-Chief

Journal of Medical Imaging and Radiology Informatics (JMIRI), American Scientific Publishers (2007-present)

Journal of Computational Biosciences and Bioinformatics (JCBB), American Scientific Publishers (2007- present)

Associate Editor, Science Letters, American Scientific Publishers (2007- present)

Supplemental Issue Editor, BMC Bioinformatics, BMC Genomics, BioMed Central (2007-present)

Special Issue on Computational Biology and Bioinformatics, BMC Bioinformatics, 2008, 7 (Suppl X): paper S1-S29 (in press)

Special Issue on Computational Biology and Bioinformatics, BMC Bioinformatics, 2006, 7 (Suppl 4): paper S1-S28

Editorial Board Member

[International Journal of Computational Science and Engineering](#), Inderscience Publishers (2003- present)

[International Journal of Grid and Utility Computing](#), Inderscience Publishers (2003- present)

Journal of Computational Intelligence in Bioinformatics, RIP Publications (2007- present)

[Journal of Computational and Theoretical Nanoscience](#), American Scientific Publishers (2007-present)

[Journal of Supercomputing](#), Springer/Kluwer Academic Publishers (2004- present)

[Frontiers of Mechanical Engineering in China](#), Springer/Kluwer Academic Publishers (2007-present)

[Scientific Journals International](#) (2007-present)

Guest Editor/Associated Guest Editor

Special Issue on Journal of Computational and Theoretical Nanotechnology, 2007

Special issue on “Computations Biomedical Engineering: Medical Imaging, and Medical Data Processing,” Int. Journal of Computational Science and Engineering (IJCSE), Inderscience Publisher, 2007 (in press)

Special Issue on Computational Methods and Techniques for Nanoscale Technology Computer Aided Design, International Journal of Computational Science and Engineering (IJCSE), Volume 2 - Issue 3/4 – 2006

Journal Referee/Technical Paper Reviewer (for 33 journals)

Physical Chemistry Chemical Physics, Journal of Royal of Society of Chemistry

Journal of Materials Chemistry, Journal of Royal of Society of Chemistry

Open Bioinformatics Journal

Popular Science Magazine in Health

Eurographics

Oxford Briefings in Bioinformatics, Oxford University Press

Reviewer of Journal Proposal for Springer Publisher

BMC Bioinformatics, MBC Central, Open Access Publisher

BMC Genomics, MBC Central, Open Access Publisher

Scientific Journals International (SJI)

Journal of Computational Intelligence in Bioinformatics, RIP Publications

Journal of Zhejiang University (A), JZUS Press

Advances in Engineering Software, Elsevier Science

Modeling and Simulation in Materials Science and Engineering, Institute of Physics and IOP Publishing

International Journal of Wireless and Mobile Computing, Inderscience

Journal of Pervasive Computing and Communications

Journal of Autonomic and Trusted Computing

Journal of Ubiquitous and Intelligence

Physiological Genomics, Journal

International Journal of Biomedical Imaging

Society for Modeling and Simulation International (SCS) Journal: Simulation

International Journal of Computational Science and Engineering (IJCSE)

Journal of Supercomputing, Springer-Kluwer Academic Publisher

Computer & Graphics Journal (An International Journal of Systems & Applications in Computer Graphics), Elsevier Press

Journal of Universal Computer Science, Know Center

International Journal of Grid and Utility Computing, Inter-science Publishers

Journal Future Generation of Computer Systems (FGCS), Elsevier Press

Computer Graphics Forum, Blackwell Publishing

International Journal of Euro-graphics

Journal of Acoustical Society of America, ASA Press

Journal of Heat Transfer, ASME Press

International Journal of Heat and Mass Transfer, Elsevier Press

Numerical Heat Transfer, Taylor & Francis Group

Metallurgical Transaction, TMS Press

Peer-review Proceeding Referee/Technical Paper Reviewer (for 133 conferences)

Before 2002

iGrid2002 Conference (2002)
ASME Conference Proceedings (1994)
National Heat Transfer Conference (1993)
International Heat Transfer Conference (1993)
TMS Conference (1993)

2003

The 2003 International Conference on Parallel and Distributed Processing Techniques and Applications
The Second International Grid and Cooperative Computing 2003 Conference
IEEE/ACM SIGGRAPH Conference

2004

Bioinformatics and its Applications
The International Symposium on Computational and Information Sciences
Second International Symposium on Parallel and Distributed Processing and Applications
The International Workshop on Visualization and Visual Steering
Third Workshop on Hardware/Software Support for High Performance Scientific and Engineering Computing
The 4th International Conference on Computer and Information Technology
International Symposium on High Performance Computational Science and Engineering, High Performance Computing and Applications
International Conference on Virtual-Reality Continuum and its Applications in Industry
The 6th Workshop on High Performance Scientific and Engineering Computing
Challenges of Large Applications in Distributed Environments
Grid Computing Technology and Applications
The 2004 International Conference on Parallel and Distributed Processing Techniques and Applications
The Third International Grid and Cooperative Computing 2004 Conference
The Fourth International Conference on Computer and Information Technology
The International Symposium on Computational and Information Sciences
International Conference on Parallel and Distributed Processing Techniques and Applications
The Sixth Workshop on High Performance Scientific and Engineering Computing with Applications
Challenges of Large Applications in Distributed Environments
International Conference on Virtual-Reality Continuum and its Applications in Industry

2005

The IEEE/ACM International Workshop on High Performance Computing for Nano-science and Technology
IADIS Bioinformatics
HPCAsian
The Fourth International Conference on Grid and Collaborative Computing
Scientific Committee Member: Multi Conference on Computer Science and Information Systems
Third International Symposium on Parallel and Distributed Processing and Applications
International Workshop on Computational Nano-Science and Technology
International Conference on Computational Science
International Conference on Grid Computing and Applications
IEEE Workshop on High Performance Computing in Medicine and Biology
Challenges of Large Applications in Distributed Environments
International Workshop on Bioinformatics and Application
International Conference on Computational Science

17th IMACS World Congress Scientific Computation, Applied Mathematics and Simulation
High Performance Computing Symposium
Grid Computing Technology and Applications
The International Conference on Parallel and Distributed Processing Techniques and Applications
The third International Conference on Information Technology and Applications
The 2005 International Workshop on XML Technology
The Seventh Asia Pacific Web Conference

2006

The IEEE/ACM International Workshop on High Performance Computing for Nano-science and Technology
The First Workshop on High Performance Computing in Genomic Proteomic and Transcriptomics
International Conference on Computational Science
The 4th International Workshop on Challenges of Large Applications in Distributed Environments
The 5th International Conference on Grid and Cooperative Computing
International Workshop on High Performance Scientific and Engineering Computing
The 7th Workshop on Parallel and Distributed Scientific and Engineering Computing
International Conference on Grid Computing and Applications
Computations in Bioinformatics and Bioscience
High Performance Computing Technology and Applications
Data, Signal, and Image Processing
Distributed Systems and Data Distributions
Network Security (NSNS|06); Service Computing and Grid Computing
Computer Graphics, Version, and Visualization
Wireless, Mobile, and Sensor Technology
Software and Software Engineering
Database Management and Information Systems
Algorithms, Numerical Methods, Simulations, Computations
Optimization and Artificial Intelligent and Neural Networks
Data Mining and Computations in Statistics
Computer System, Structure, and Architecture
Computations and Simulations in Mechanical Engineering
Internet Computing and Language Semantics, etc
ACM SIGGRAPH International Conference on Virtual Reality Continuum and Its Applications
The Second IEEE Workshop on High Performance Computing in Medical and Biology
International Conference of Computing in Nanotechnology
Second International Workshop on XML Technology and Applications
International Workshop on Computational Nano-Science and Technology
International Multi-symposium of Computer and Computational Sciences
Computational Nanotechnology with the Enhancement of High-Performance Computing
14th High Performance Computing Symposium
International Workshop on Web-based Internet Computing for Computational Science and Engineering
The 8th Asia Pacific Web Conference

2007

International Conference on Algorithms and Architectures for Parallel Processing
BioGrid Workshop, in conjunction with the 2007 IEEE CCGrid
IEEE 7th International Symposium on BioInformatics and BioEngineering

IAENG International Conference on Computer Science
IEEE International Symposium on Bioinformatics and Life Science Computing
IFIP International Conference on Network and Parallel Computing
International Conference on Algorithms and Architectures for Parallel Processing
International Conference on Artificial Intelligence (ICAI|07) in conjunction with Worldcomp'07
International Conference on Bioinformatics & Computational Biology (ICBCB|07) in conjunction with Worldcomp'07
International Conference on Complex Open Distributed Systems
International Conference on Computational Science
International Conference on Computer Design
International Conference on Computer Graphics and Virtual Reality
International Conference on E-Learning, E-Business, Enterprise Information Systems, and E-Government (ICEEISG|07) in conjunction with Worldcomp'07
International Conference on Embedded Systems & Applications (ICESA|07), in conjunction with Worldcomp'07
International Conference on Foundations of Computer Science (ICFCS|07), in conjunction with Worldcomp'07
International Conference on Genetic and Evolutionary Methods (ICGEM|07), in conjunction with Worldcomp'07
International Conference on Grid Computing and Applications
International Conference on Image Processing, Computer Vision, and Pattern Recognition
International Conference on Information & Knowledge Engineering (ICIKE|07), in conjunction with Worldcomp'07
International Conference on Internet Computing (ICIC|07), in conjunction with Worldcomp'07
International Conference on Multimedia Systems and Applications (ICMSA|07), in conjunction with Worldcomp'07
International Conference on Parallel and Distributed Processing Techniques and Applications
International Conference on Scientific Computing (ICSC|07), in conjunction with Worldcomp'07
International Conference on Semantic Web and Web Services (ICSEES|07), in conjunction with Worldcomp'07
International Multi-Conference for Engineers and Computer Scientists
International Multi-symposium of Computer and Computational Sciences
International Workshop on High Performance Computing for Nano-science and Technology (HPCNano07), in conjunction with IEEE/ACM SC07
Performance Computing Symposium (HPC 2007) in conjunction with the Spring Simulation Multi-conference
Second International Workshop on Internet Computing for Sciences and Engineering
WSEAS International Symposium on Grid Computing
XMLTech07

2008

IEEE International Conference on Parallel and Distributed Systems in Bioinformatics and Computational Biology
International Multi-symposium of Computer and Computational Sciences
HPC Nanotechnology
International Conference on Internet Computing in Science and Engineering
IEEE International Symposiums on Electronic Commerce and Security
ACM/IEEE International Workshop on Challenges of Large Applications in Distributed Environments
International Conference on Biocomputation, Bioinformatics, and Biomedical Technologies
International Conference on Computational Science
High Performance Computing and Simulation MultiConference
International Conference on BioMedical Engineering and Informatics

IEEE 8th International Conference on Computer and Information Technology
Systemics and Informatics World Congress
International Conference on Adaptive Business Systems
International Conference on Bioinformatics and Systems Biology
International Conference on Complex Open Distributed Systems
International Conference on Computer Systems Engineering
International Conference on Mobile Communications and Computing
International Conference on Networking and Internet Technologies
International Conference on Self-organization and Self-management in Computing and
Communications
IFIP International Conference on Network and Parallel Computing

Book Reviewer (23)

Addison-Wesley Publishing Company (2000-2003) Computer Science I; Computer Science II; Introduction to Java Programming; C# Programming; Fundamentals of Modern Computer Science Using C#
McGraw-Hill Publishing (2001-2003) Java for Programmers; Introduction to Object-Oriented Programming with Java
Morgan Kaufmann Publishers (2001-2003) Parallel Programming
Scott/Jones Publishing Company (2002-2003) Advanced Java
CRC Press (2003-2004) Numerical Methods for Engineers
Franklin, Beedle & Associates Publisher (2004-2005) C# Programming
Blackwell Publishing Inc. (2003-2005) Bioinformatics and Computational Genomics; Bioinformatics and Molecular Evolution; Bioinformatics
Prentice Hall Publishers (2001-2006) Introduction to Java; Computer Science I; Computer Science II; Java Programming; C# Programming Language
Jones and Bartlett Publisher (2006) Programming and Problem Solving with Java
Artech House Publishers (2007) High performance computing for high-throughput image reconstruction and analysis: intelligent microscopy applications
John Wiley & Sons, Inc. (2001-2007) Handbook of Computer Networks, Chapter: Grid Computing Implementation; Chapter: Utility Computing and Global Grids; Encyclopedia of Computer Science; Data Structures Using C++

International Conference/Workshop Services

2003

General Chair/Co-Chair/Program Chair/Co-Chair

Second International Workshop of Grid and Cooperative Computing (GCC2003), Shanghai, China, Dec. 7-10, 2003

BOF Session/Workshop for Business Process Grid Working Group, Global Grid Forum (GGF), Oct. 7, Chicago, 2003, Subcommittee Leader, GGF Life Science Grid (LSG),

Medical Imaging Sub-committee, Global Grid Forum (GGF), BOF Session/Workshop for Business Process Grid Working Group, Global Grid Forum (GGF), Oct. 7, Chicago, 2003

Program Committee Member

The 2003 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'03), The 2003 International Multi-conference in Computer Science & Computer Engineering Monte Carlo Resort, Las Vegas, Nevada, USA, June 23 - 25, 2003

2004

General Chair/Co-Chair/Program Chair/Co-Chair

International Workshop on Visualization and Visual Steering (VVS'04), in GCC2004, Wu Han, China, Oct. 21-24, 2004

Session/Workshop of Grid Computing Technology and Applications (GCTA04) in conjunction with the 2004 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'04), Las Vegas, Nevada, USA, June 21 - 24, 2004

Third Workshop on Hardware/Software Support for High Performance Scientific and Engineering Computing, Antibes Juan-les-Pins, France, September 29-October 3, 2004
International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'04), Las Vegas, Nevada, USA, June 21 - 24, 2004

Program Committee Member

3rd International Conference on Grid and Cooperative Computing (GCC2004), Wu Han, China, Oct. 21-Oct. 24, 2004
International Conference on Bioinformatics and its Applications (ICBA'04), December 16-19, 2004, Nova Southeastern University, Fort Lauderdale, Florida, USA
International Symposium on Computational and Information Sciences, Shanghai, China (CIS'04), December 16 - 18, 2004
Second International Symposium on Parallel and Distributed Processing and Applications (ISPA'2004), Hong Kong, China, Dec. 13-15, 2004
4th International Conference on Computer and Information Technology (CIT2004), Wuhan, China, September 14-16, 2004
International Symposium on High Performance Computational Science and Engineering, (HPCSE-04), Toulouse, France, August 22-27, 2004
High Performance Computing and Applications (HPCA2004), Shanghai, China, August 8-10, 2004
International Conference on Virtual-Reality Continuum and its Applications in Industry (VRCAI 2004), NTU, Singapore, June 16-18, 2004
6th Workshop on High Performance Scientific and Engineering Computing, HPSEC-04, in conjunction with the 2004 International Conference on Parallel Processing (ICPP-04), Montreal, Canada, Aug. 15-18, 2004
Challenges of Large Applications in Distributed Environments 2004, CLADE 2004, in conjunction with HPDC, Honolulu, HI, USA, June 7, 2004

2005

General Chair/Co-Chair/Program Chair/Co-Chair

IEEE/ACM International Workshop on High Performance Computing for Nano-science and Technology (HPCNano05), in conjunction with IEEE/ACM SC2005, Nov.12-18, Seattle, USA
International Workshop on Computational Nano-Science and Technology (CNST'05), Emory University Atlanta, USA, May 22-25, 2005 (in conjunction with ICCS05)
Computational Methods for Medical Science, 17th IMACS World Congress Scientific Computation, Applied Mathematics and Simulation, Paris, France, July 11-15, 2005
International Workshop on XML Technology (XML Tech'05), June 27-30, 2005, Monte Carlo Resort, Las Vegas, Nevada, USA
International Conference on Grid Computing and Applications (GCA'05), June 21-24, 2005, Las Vegas, USA

Program Committee Member

IADIS Bioinformatics 2005 Conference with IADIS Virtual Multi Conference on Computer Science and Information Systems (MCCSIS 2005), 11 - 29 April 2005
HPCAsian2005, Nov. 30-Dec. 3, 2005, Beijing, China
Fourth International Conference on Grid and Collaborative Computing, GCC2005, Nov. 30-Dec 3, 2005, Beijing, China
Multi Conference on Computer Science and Information Systems (MCCIS 2005)
Third International Symposium on Parallel and Distributed Processing and Applications (ISPA'05), November 2-5, 2005, Nanjing, China
IEEE Workshop on High Performance Computing in Medicine and Biology (HiPCoMB-2005), in conjunction with The 11th International Conference on Parallel and Distributed Systems (ICPADS-05), July 20 - 22, 2005, Fukuoka Institute of Technology, Japan
Challenges of Large Applications in Distributed Environments 2004, CLADE 2005, Research Triangle Park, NC, in July 2005
International Workshop on Bioinformatics and Application, Emory University Atlanta, USA, May 22-25, 2005, in the conjunction with ICCS05, May 22-25, 2005
High Performance Computing Symposium (HPC05), San Diego, California, USA, April 2-8,

2005

- International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'05), Las Vegas, Nevada, USA, June 21 - 24, 2005
Third International Conference on Information Technology and Applications, July 4-7, 2005, Sydney, Australia
Seventh Asia Pacific Web Conference (APWeb'05), Shanghai, China, March 29-April 1, 2005

2006

General Chair/Co-Chair/Program Chair/Co-Chair

- International Workshop on High Performance Computing for Nano-science and Technology (HPCNano06), in conjunction with IEEE/ACM SC2006, November, 2006, Tampa, Florida, USA
International Conference on Grid Computing and Applications (GCA06), in conjunction with The 2006 World Congress in Computer Science, Computer Engineering, and Applied Computing, June 26-29, 2006 Las Vegas, Nevada, USA
Computations in Bioinformatics and Bioscience (SCBB|06), in conjunction with IMSCCS|06
International Conference of Computing in Nanotechnology (CNAN06) in conjunction with The 2006 World Congress in Computer Science, Computer Engineering, and Applied Computing, June 26-29, 2006, Monte Carlo Resort, Las Vegas, USA
Second International Workshop on XML Technology and Applications (XML Tech'06), June 26-29, 2006, Monte Carlo Resort, Las Vegas, Nevada, USA
International Multi-symposium of Computer and Computational Sciences (IMSCCS06), Zhejiang University, Hangzhou, China, June 202-24, 2006
Computational Nanotechnology with the Enhancement of High-Performance Computing at the 7th World Congress on Computational Mechanics (WCCM VII), which will be held in Los Angeles, California, July 16-22, 2006
International Workshop on Web-based Internet Computing for Computational Science and Engineering (ICSE'06), in conjunction with APWeb'06, the 8th Asia Pacific Web Conference, 16-18 January 2006 in Harbin, China
International Workshop on Computational Nano-Science and Technology (CNST'06), in the conjunction with International Conference on Computational Science (ICCS 2006), University of Reading, UK, May 28-31, 2006

Program Committee Member

- IEEE/ACM SC2006, November 2006, Tampa, Florida, USA
First Workshop on High Performance Computing in Genomic Proteomic and Transcriptomic, held in conjunction with The International Symposium on Parallel and Distributed Processing and Applications (ISPA 2006) in Sorrento, Italy, December 1-4, 2006
International Conference on Computational Science 2006 (ICCS|06), University of Reading, UK, May 28-31, 2006.
4th International Workshop on Challenges of Large Applications in Distributed Environments (CLADE06) in conjunction with the 15th International Symposium on High Performance Distributed Computing (HPDC-15) on June 2006 in Paris, France
5th International Conference on Grid and Cooperative Computing (GCC2006), Oct. 21-23, Changsa, China
International Workshop on High Performance Scientific and Engineering Computing (HPSEC06)," (held in conjunction with the International Conference on Parallel Processing – ICPP06)
7th Workshop on Parallel and Distributed Scientific and Engineering Computing (PDSEC'06) at IPDPS 2006
ACM SIGGRAPH International Conference on Virtual Reality Continuum and Its Applications VRCIA 2006, June 14-17, Hong Kong

Second IEEE Workshop on High Performance Computing in Medical and Biology
(HiPCoMB-2006), Vienna University of Technology, Vienna, Austria
14th High Performance Computing Symposium (HPC) 2006 with the 2006 Spring Simulation
Multi-conference, April 2-6, 2006, Huntsville AL, US
8th Asia Pacific Web Conference (APWeb'06), 16-18 January 2006 in Harbin, China

2007

General/Program Chair/Co-Chair/Vice-Chair

International Multi-symposium of Computer and Computational Sciences (IMSCCS|07),
August, Iowa City, Iowa, USA
IEEE 7th International Symposium on Bioinformatics and Bioengineering, Harvard University,
USA
International Workshop on High Performance Computing for Nano-science and Technology
(HPCNano07), in conjunction with IEEE/ACM SC07, November, 2007 Reno, USA
International Conference on Parallel and Distributed Processing Techniques and Applications
(PDPTA'07)
IAENG International Conference on Computer Science (IAENG, ICCS'07), Hong Kong,
March 21-23, 2007
The Second International Workshop on Internet Computing for Sciences and Engineering
(ICSE|07), in conjunction with (ICCS|07), Beijing, May 2007
International Conference on Artificial Intelligence (ICAI|07) in conjunction with
Worldcomp'07 Les Vegas, June, 2007
International Conference on Internet Computing (ICIC|07), in conjunction with
Worldcomp'07 Les Vegas, June, 2007
International Conference on Genetic and Evolutionary Methods (ICGEM|07), in conjunction
with Worldcomp'07 Les Vegas, June, 2007
International Conference on Multimedia Systems and Applications (ICMSA|07), in
conjunction with Worldcomp'07 Les Vegas, June, 2007
International Conference on Scientific Computing (ICSC|07), in conjunction with
Worldcomp'07 Les Vegas, June, 2007
International Conference on Semantic Web and Web Services (ICSEES|07), in conjunction
with Worldcomp'07 Les Vegas, June, 2007
International Conference on E-Learning, E-Business, Enterprise Information Systems, and E-
Government (ICEEISG|07) in conjunction with Worldcomp'07 Les Vegas, June, 2007
International Conference on Foundations of Computer Science (ICFCS|07), in conjunction
with Worldcomp'07 Les Vegas, June, 2007
International Conference on Information & Knowledge Engineering (ICIKE|07), in
conjunction with Worldcomp'07 Les Vegas, June, 2007
International Conference on Embedded Systems & Applications (ICESA|07), in conjunction
with Worldcomp'07 Les Vegas, June, 2007
International Conference on Bioinformatics & Computational Biology (ICBCB|07) in
conjunction with Worldcomp'07 Les Vegas, June, 2007

Program Committee Member

WSEAS International Symposium on Grid Computing (ISGC|07), Beijing, China, Sept. 2007
International Conference on Complex Open Distributed Systems (CODS'2007), China, 22-24
July 2007
International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP'07,
Wuhan, China
XMLTech07, June 26-29, 2007 Las Vegas, Nevada, USA
IEEE International Symposium on Bioinformatics and Life Science Computing (BLSC-07)
May 21-23, 2007, Ontario, Canada
IFIP International Conference on Network and Parallel Computing (NPC 2007), September
18-21, 2007, Dalian, China

International Multi-Conference for Engineers and Computer Scientists (IMECS 2007), Hong Kong, March 21-23, 2007
International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP 2007), Hangzhou, China, June 11-14, 2007
2007 BioGrid Workshop, in conjunction with the 2007 IEEE CCGrid, Rio de Janeiro, Brazil, May 14-17, 2007
Performance Computing Symposium (HPC 2007) in conjunction with the Spring Simulation Multi-conference 2007 on March 26-29, 2007 in Norfolk, VA, USA
International Conference on Computational Science 2007 (ICCS|07), Beijing, in May 2007

2008

General/Program Chair/Co-Chair/Vice-chair

The 14th IEEE International Conference on Parallel and Distributed Systems in Bioinformatics and Computational Biology (ICPADS 2008)
International Multi-symposium of Computer and Computational Sciences (IMSCCS'08)
HPC Nanotechnology 2008 (HPCNano'08)
International Conference on Internet Computing in Science and Engineering (ICICSE'08), Harbin, China, Jan. 28-29, 2008
IEEE International Symposiums on Electronic Commerce and Security 2008, Aug. 2008

Program Committee Member

The 6th ACM/IEEE International Workshop on Challenges of Large Applications in Distributed Environments (CLADE 2008)
International Conference on Biocomputation, Bioinformatics, and Biomedical Technologies (Biotechno|08), June 29 - July 5, 2008 - Bucharest, Romania
International Conference on Computational Science (ICCS'08), Kraków, Poland June 23-25, 2008
High Performance Computing and Simulation (HPCS), in the SCS Spring Multi-conference, April 14-16, 2008, Crowne Plaza Ottawa, Ottawa, Ontario
International Conference on BioMedical Engineering and Informatics (BMEI 2008) on May 28-30, 2008, Sanya, Hainan, China
IEEE 8th International Conference on Computer and Information Technology, University of Technology, Sydney, Australia, July 8-11, 2008
Systemics and Informatics World Congress (SIWN 2008), Glasgow, UK, 21-24 July 2008
International Conference on Adaptive Business Systems (ABS'08), Glasgow, UK, 21-24 July 2008
International Conference on Bioinformatics and Systems Biology (BSB'08), Glasgow, UK, 21-24 July 2008
International Conference on Complex Open Distributed Systems (CODS'08), Glasgow, UK, 21-24 July 2008
International Conference on Computer Systems Engineering (CSE'08), Glasgow, UK, 21-24 July 2008
International Conference on Mobile Communications and Computing (MCC'08), Glasgow, UK, 21-24 July 2008
International Conference on Networking and Internet Technologies (NIT'08), Glasgow, UK, 21-24 July 2008
International Conference on Self-organization and Self-management in Computing and Communications (SSCC'08), Glasgow, UK, 21-24 July 2008
2008 IFIP International Conference on Network and Parallel Computing (NPC2008), Shanghai, China
The 7th International Conference on Grid and Cooperative Computing, GCC2008, Shenzheng, China, Oct. 24-26, 2008

Professional Association Members and Activities

Members

Institute of Electrical and Electronics Engineers (IEEE); IEEE Computer Society (IEEE/CS)
American Association for the Advancement of Science (AAAS); Society for Imaging Informatics
in Medicine (SIIM); Federation of American Scientists (FAS); American Society of Mechanical
Engineering (ASME); Associate Member of Radiology Society of North American (RSNA)

Research Projects

Ongoing Projects

Technical Leader, Multi-scale model and simulations of biotransport phenomena using petascale computing and medical imaging (2007-)

Technical Leader, Parallel computing in modeling and simulation of nano-structured materials formation (sponsored by NSF, 2007-2010)

Technical Leader, Parallel computing for medical imaging (sponsored by NIH, 2002-present)

Technical Leader, GPU accelerators on HPC system for medical imaging (sponsored by Intel, 2007-)

Technical Leader, Parallel Monte Carlo simulation of optical tomography (2007-)

Technical Leader, Development of protocols of medical imaging and radiology informatics (2007-)

Technical Leader, Wiki-based radiology medical training system for medical students (2007-)

Completed Projects

Medical Imaging

Technical Leader, Research and development of distributed medical image displayer (dMID), a software to pass and display medical images on local multiple workstations or cross Internet, project members: Tao He, Xiaosen Jiang (2007)

Technical Leader, Medical imaging anisotropic diffusion enhancement, project members: Yongqiang Zhao (2007)

Technical Leader, Parallel local reconstruction for CT images, project members: Junjun Deng, Ge Wang, Lihe Wang (sponsored by NIH, 2006-07)

Technical Leader, Stereological volume measurement of cancer/tumor size for radiologists; this project is funded by Department of Radiology, College of Medicine, project members: Dr. Ge Wang, Dr. Simon Kao, and Lili Huang (2002-03)

Distributed and Grid computing

Team Member, development of Compact Muon Solenoid (CMS) Physics Grid Tier-2 Center; this project is funded by University of Iowa Research Vice President for Research, project members: Boyd Knosp, and Shaowen Wang (project leader) (2002-04)

Technical Leader, Build Linux cluster for parallel computing using recycled PCs and building a distributed peer-to-peer system for internet computing using Mac with MacOSX, team members: Edward Tao He, James Hunsaker, and John Zhang (2003-05)

Team Member, establish and develop a Grid Research and education@ioWa (GROW) group that provides research services and leadership at The University of Iowa for conducting research, education, and outreach on Grid computing Shaowen Wang (project leader) (2003-05)

Project Technical Leader, Java-enhanced client-server distributed computing systems for Grid computing; the system called H3S system, project members: Edward He and Lili Huang (2003-05)

Team Member, scientific computing using GlobusToolkit™ for Grid computing, team member (2003-05)

Technical Leader, Grid computing in medical imaging (2004-06)

Technical Co-Leader, Parallel computing and Grid computing in nanostructure materials property predictions, project members: Dr. Shaoping Xiao, Dr. Shaowen Wang, and Wenyi Hou (2004-06)

Software development:

Technical Leader, Stereological volume measurement of cancer/tumor size for radiologists; this project is funded by Department of Radiology, College of Medicine, project members: Dr. Ge Wang, Dr. Simon Kao, and Lili Huang (2002-03)

Technical Leader, Stereotactic Atlas of the Macaca Mulatta Thalamus and Adjacent Basal Ganglia Nuclei, with Drs. I. A. Ilinsky, K. K. Ilinsky, and Boyd Knosp, Department of Anatomy, College of Medicine, University of Iowa (2001)

Data visualization and graphics:

Technical Leader, 3-D visualization and animation of genetic data for disease, with Dr. V. Vieland and Dr. Mark Logue, Genetics Research Center, Department of Biostatistics, College of Public Health, University of Iowa (2001-03)

Technical Leader, 3-D visualization and animation of mesh-free and unstructured grids in soil mechanical systems, with Dr. J. S. Chen, Department of Mechanical Engineering, College of Engineering, University of Iowa (2000-01)

Senior Consultant, 2-D visualization of equiaxed crystal growth over the melt flow, with Dr. C. Beckermann, Department of Mechanical Engineering, College of Engineering, University of Iowa (1999-00)

Senior Consultant, 2-D visualization and animation of shock wave propagation in vehicle airbag, work with Dr. Barry Butler, Department of Mechanical Engineering, College of Engineering, University of Iowa (1996-97)

Computational Fluid Dynamics

Technical Leader, Multi-phase, multi-component based CFD modeling and simulations for dam breaking and river flooding in environmental study (2006)

Technical Leader, Lattice Boltzmann simulation of fluid in a grid computing environment; this project is funded by University of Iowa Internal Funding Program/Mathematical and Physical Sciences (MPSFP), Project members: Dr. Chinlong Lin, Dr. John Zhang and Tao He (2003-05)

Bioinformatics

Technical member, parallelism of long and short sequence comparison and protein similarity study (2006-2007)

Technical co-leader, Software development in genetic linkage (2005)

Team Member, HPC algorithms in bioinformatics, including DNA/RNA sequencing, searching, and mapping, genetic linkage software development (2003-05)

Virtual reality:

Team Member, Developed visual reality applications using OpenGL and Cave library, participated in project of "Tele-immersive visualization of the environment," worked with Judy Brown and Marc Armstrong, funded by NASA No. COE/97-0104 (1998-99)

Statistical analysis:

Technical Member: Parallel Implementation of Model of Response Accuracy and Response Time in Computerized Testing, University of Iowa, (2007)

Program Developer, Multi-variables regression of statistical data from NYSE, Department of Finance, College of Business, University of Iowa, (1999-00)

Senior Consultant, Statistical simulation of Iowa Test Basic Skill (ITBS), Department of Education, College of Education, (2000)

Campus-wide computing consulting:

Project Leader, support University of Iowa campus-wide HPC-related scientific and research computing. The project has several sub-projects, including providing services of scientific computing to campus researchers, coordinating HPC workshops, and helping faculty to apply for external grants. (2003-06)

HPC Application Group Leader, High performance computing and parallel computing; CT image processing in radiology; biomedical organ modeling; quantum mechanics and computational chemistry; bioscience, thermal science, geographical data visualization; image mapping, research data visualization, graphics using OpenGL (1996-01)

Off-site HPC technical liaison/or off-site consultant between University of Iowa and National Center for Supercomputing Applications (NCSA), Cornell Theory Center (CTC) at Cornell

University (Smart Node Program member), San Diego Supercomputing Center (SDSC), and Pittsburgh Supercomputing Center (PSC) (1994-00)

High performance computing:

Technical Leader, Intel-Microsoft-UI collaborative project, a HPC System dual-operated by Window Compute Cluster system configuration, sponsored by Intel and Microsoft, project members: Tao He, Richard Libby (Intel), Brain Hammond (Microsoft), Michael Zebrowski (X-ISS) (2006-2007)

Technical Leader, High performance computing and grid computing in modeling and simulations of transport phenomena during nano-structured materials processing (2005-2006)

Technical Leader, exploration of grid computing technology for scientific research such as various grid architectures and systems, project members: Boyd Knosp, and Shaowen Wang (2001-02)

Team Member, Participated in NSF project in "teaching parallel computing in parallel programming education," worked with Judy Brown and Dr. Ted Rus, founded by NSF 9551183 (1997-98)

Research in transport phenomena in geological systems:

Consultant, Sedimentation by dripping instability in viscous fluids in geophysical system, with Dr. G.W. Bergantz, PI, Department of Geological Science, University of Washington, Seattle, under award of NSF EAR-9508291 (1995-96)

Research in transport phenomena in materials processing:

Member, new algorithms and numerical methods of HPC in simulation of transport phenomena during the processing of nano-structured materials and/or biomaterials, project members: Dr. Shaoping Xiao (project leader) and Dr. Ned Brown. (2003-04)

Member, developing a continuum model for transport phenomena during solidification of metal alloys; several important issues between two-phase model and continuum model of solidification have been clarified and model has been implemented into CFD programming for simulation. The study was financially supported by Department of Energy under DE-FG02-87ER13579, worked with Dr. Frank Incropera, PI, Purdue University, West Lafayette, IN (1993-94)

Member, Developed a two-phase CFD code to simulate sedimentation of dendritic crystals, solidification of a binary copper-aluminum alloy, supported by NSF CBT 8808888, and CTS-8957149, NASA, and ALCOA Technical Center, worked with Dr. C. Beckermann, University of Iowa (1992-93)

Member, Participated in research of solidification in metal alloys, and develop two-phase model of transport phenomena during solidification. The double convective and diffusive effects in dendritic crystal sedimentation, coupling between micro-macroscopic phenomena. The project was financially supported by NSF CBT 8808888 and CTS-8957149, NASA NCC3-289, and ALCOA Technical Center, worked with Dr. C. Beckermann (PI), University of Iowa (1987-92)

Larynx fluid flow in human speech pathology:

Member, CFD study of unsteady flow in larynx of human glottal system, project was supported by NIDCD DC0083101A2, with Dr. Fari Alipour, University of Iowa (1992-93)

Database design and management system:

Technical Leader, International digital library for CT image analysis (7 international institutions and 11 departments), project members: Dr. Ge Wang, and Lili Huang (2002)

Technical Leader, Research and development in data structure and database system applied to system of business and management in petroleum industrial, Jun Ni, PI, Department of Power Machinery Engineering, Shanghai Jiao University, funded by Da-Gang Petrologic Industrials, with Y. Xia and J. Zhang, (1985-86)

Mechanical design of fluid driving systems:

Member, Research and development in fluid couplings or torque converters used for marine and energy saving systems in mine industry, textile industry, and marine propulsion systems, with

Prof. Z. Ying, and Prof. S.W. Zhu, Department of Power Machinery Engineering, Shanghai Jiao University (1984-85)

Awards and Honors

- 2007 Achievement Award of The World Academy of Science, World Computer Congress, Las Vegas, Nevada, USA, 2007
- 2006 University of Iowa Human Resources Office selected “Remarkable Employee” (http://jobs.uiowa.edu/employee_spotlights/index.php)
- 2006 Honorary Guest Professor, School of Computer Science and Technologies, Harbin Engineering University, China
- 2004 Achievement Award of The World Academy of Science, awarded at The 2004 International Multi-conference in Computer Science and Computer Engineering, Las Vegas, Nevada, USA, June 21, 2004
- 2003 Honorary Guest Professor, School of Bioscience and Technology, Shanghai Jiao Tong University, Shanghai, China
- 2002 Award of Faculty/Staff International Travel Funds, International Program, University of Iowa, Iowa City, IA, USA
- 2001 Award of Mary Jo Small Fellowship, Office Staff Development, University of Iowa, Iowa City, IA, USA
- 1997 Award of Faculty/Staff International Travel Funds, International Program, University of Iowa, Iowa City, IA, USA
- 1995-96 President, Chinese Faculty and Professionals Association, University of Iowa, Iowa City, IA, USA
- 1988-89 Vice President, Chinese Student and Scholars Friendship Association, University of Iowa, Iowa City, IA, USA
- 1985-86 President, Youth Faculty Association, Shanghai Jiao Tong University, Shanghai, China

Graduate/Undergraduate Student Supervision

Ph.D. Dissertation /Master Thesis/Graduate Student Advisor

Former graduate students

- James Hunsaker (M.S. in Computer Science, graduated in 2005)
- John Zhang (Ph.D. in Civil Engineering, and Computer Science, graduated in 2002)
- Xiang Li (Ph.D. in Biomedical Engineering, graduated in 2005; Current scientist in GE Health Science Division)
- Hairong Tang (M.S. in Computer Science, graduated in 2002)
- Lili Huang (M.S. in Computer Science, graduate in 2005)
- Fan Yang (Electrical and Computer Engineering, 2006)
- Meenal Vijay Kashikar (M.S. in Computer Science, 2006)
- Das Poja (Ph.D. in Computer Science, 2006)
- Nedim Barut (MBA, Business Management Science, 2006)
- Tao He (Computer Science, 2007, University of Utah)
- Horea Rusu (M.S. in Mechanical Engineering, 2007)
- Junjun Deng (Ph.D. in Math, 2008; Siemens)

Former undergraduate student

- Vivia Brook (B.S., major in Speech Hearing, 2006-2007)

Current graduate students

- Xiaosen Jiang (M.S. in Computer Science, 2006-2008, SiRF)

Xuepeng Wei (Ph.D. Mechanical Engineering, 2007-)
Bo Qiang (Electrical and Computer Engineering, 2007-)

Ph.D. Dissertation /Master Thesis Committee Member

Xiaoxu Han, Ph.D. in Computer Science
Anand Padmanabhan, Ph.D. in Computer Science
Juw Won Park, Ph.D. in Computer Science
Tatsuki Matsui, Ph.D. in Physics
Seyitrida Tigrek, Ph.D. in Mechanical Engineering
Tao He, Ph.D. in Computer Science
Yan Liu, Ph.D. in Computer Science
Amlan Bhattacharya, Ph.D. in Computer Science
Ransom Briggs, Ph.D. in Computer Science

Professional Staff Supervision

Postdoctoral research fellows

John Zhang (2002-2003)
Yongqiang Zhao (current research fellow, 2007-2008)

1994-2000, Co- supervisor, Advanced Research Computing Services (ARCS), Weeg Computing Center University of Iowa

Kent Lee (former ARCS technical staff, and current Faculty in Computer Science, Luther College in Iowa)
Tom Halverson, (former ARCS technical staff, and current Dean of College of Business and Information Systems and Associate Professor in Computer Science, Dakota State University)
Eric Van Wyk (former ARCS technical staff, and technical staff, current Assistant Professor in Computer Science, University of Minnesota)
Esmail Bonakdarian (former ARCS technical staff, and Professor in Computer Science, Oberlin College)
Shaowen Wang (former ARCS technical staff, and current Assistant Professor of Geography, University of Illinois at Urbana-Champaign)
Barbara A Zilles (former ARCS technical staff, FTE)
Diane Eglseder (former ARCS technical staff, FTE)

2001-present, Supervisor/co- supervisor, Scientific Computing, Research Services, Information Technology Services

Lili Huang (former technical staff)
Tao He (former technical staff)
Meenal Kashikar (former technical staff)
Puja Das (former technical staff)
Nedim Barut (former technical staff)
Xiaosen Jiang (current technical staff)
Daniel_Langstraat (current technical staff, FTE)
Amir_Bozorgzadeh (current technical staff, FTE)
Jeff DeReus (current technical staff)

Personal

US citizen, married, wife and two sons
Hobby: fine arts, martial arts, ship models, stamps collections, classic music

Linguistic languages: English, Chinese, Japanese

References

External

Dr. David Skorton, Ph.D. and M.D., President of Cornell University
Professor in Internal Medicine, Professor in Biomedical Engineering
Office of the President
300 Day Hall
Cornell University
Ithaca, NY 14853
Telephone: (607) 255-5201
Fax: (607) 255-9924
E-mail: president@cornell.edu

Dr. Jack Dongarra, Distinguished Professor, Member of National Academy of Engineering
[University of Tennessee](#), [Department of Computer Science](#)
Distinguished Research Staff
[Oak Ridge National Laboratory](#); [Computer Science and Mathematics Division](#)
Director
[Innovative Computing Laboratory](#); [Center for Information Technology Research](#)
Computer Science Department
1122 Volunteer Blvd.
University of Tennessee
Knoxville, TN 37996-3450
E-mail: dongarra@cs.utk.edu
Office: 865-974-8295
<http://www.netlib.org/utk/people/JackDongarra/>

Dr. Ge Wang, Samuel Reynolds Pritchard Professor
Department of Biomedical Engineering
College of Engineering, Virginia Tech
114 Randolph Hall
Virginia Polytechnic Institute & State University
Blacksburg, Virginia 24061
<http://www.sbes.vt.edu/Faculty/VT/wang%20ge.html>
E-mail: wangg@vt.edu

Dr. Hamid R. Arabnia, Ph.D.
Professor of Computer Science
Editor-in-Chief, Journal of Supercomputing
421 Boyd Graduate Studies Research Center
Department of Computer Science
University of Georgia
415 GSRC, Computer Science, UGA, Athens GA, 30602-7404
E-mail: hra@cs.uga.edu
Office: (706) 542-3480

Internal

Dr. P Barry Butler, Dean of College of Engineering

Professor of Mechanical & Industrial Engineering
3100 [SC](#)
Dean Office, College of Engineering
The University of Iowa, Iowa City, 52242
E-mail: patrick-butler@uiowa.edu
Office: 319-335-5672

Dr. Laurie Fajardo, M.D., Professor and Head
Department of Radiology, Caver College of Medicine
University of Iowa Hospital & Clinics (UIHC)
3966A JPP
200 Hawkin Drive
Iowa City, Iowa 52242-1099, USA
Office: (319) 356-3372
Fax: (319) 356-2220
E-mail: l-fajardo@uiowa.edu

Dr. Lea-Der Chen, Department Chair and Professor
Department of Mechanical Engineering & Industrials
The University of Iowa, Iowa City, 52242
2416B [SC](#)
E-mail: lea-der-chen@uiowa.edu
Office: 1 319-335 5674

Dr. James F Cremer, Department Chair and Professor
Department of Computer Science
The University of Iowa, Iowa City, 52242
14 MLH
The University of Iowa, Iowa City, 52242
E-mail: cremer@cs.uiowa.edu
Office: 1 319-335 1713