

## Curriculum Vitae: Jun Ni



### Contact Information

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Department of Radiology, Carver College of Medicine  
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<http://www.healthcare.uiowa.edu/Radiology/faculty-staff/faculty/ni-jun.html>  
Lab: [www.uiowa.edu/mihpclub/](http://www.uiowa.edu/mihpclub/)

### Education

- 1993 **Postdoctoral Research Associate**  
Heat Transfer Lab, School of Mechanical Engineering, Purdue University  
West Lafayette, IN, USA  
(**Supervisor:** Dr. Frank Incropera, Former Head of School of Mechanical Engineering, Purdue; Member of National Academic of Engineering, 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, University of Iowa Distinguished Professor, the University of Iowa, IA, USA)
- 1992 **Postdoctoral Associate**  
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 of Metal Alloys (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** (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  
**Director**, Medical Imaging HPC and Informatics Lab, Department of Radiology
- 2008 Visiting Professor/Research Fellowship (Sabbatical)  
 National Center for Supercomputing Applications (NCSA), University of Illinois at  
 Urbana- Champaign (UIUC), Champaign, IL, USA, Collaborator: with Prof. Thom  
 Dunning, NCSA Director
- 2005- **Adjunct Associate Professor**  
 Department of Computer Science, College of Liberal Arts and Actual Sciences  
 The University of Iowa, Iowa City, IA, USA
- 2005-06 **Research Scientist and Director**  
 Scientific Computing (HPC & Grid Computing), Information Technology Services  
 Research Services, the University of Iowa, Iowa City, IA, USA
- 2006- **Honorable Adjunct Professor**  
 College of Computer Science and Technology, Harbin Engineering University, China  
 College of Computer Science and Technology, Shanghai 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 Mechanical & Industrial Engineering, College of Engineering  
 The University of Iowa, Iowa City, IA, USA
- 2002-04 **Associate Research Scientist/Manager**  
 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
- 1997-04 **President and Founder**  
High Performance Computing Software, 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-CCF-EMT Workshop on Cyberinfrastructure (CI)-based Emerging Models and Petascale Computing for Nanoscience and Nanotechnology, with co-PI, Dr. Thom Dunning (UIUC-NCSA) and Dr. Jack Dongarra (UTK), \$50,000 (awarded date: Sept. 22, 2009-Aug. 31, 2010).
- PI, NSF Fellowship, NSF Summer Institute on Nanomechanics, Nanomaterials and Micro/Nanomanufacturing, \$2,000 (awarded date: May 2009 summer)
- PI, UI-ICRU Grant: Develop an emerging model for computations in biological nanoelectronics devices, \$2,500 (awarded date, Sept. 19, 2008-Oct. 2009)
- PI, NSF-CISE: NSF Workshop on Emerging Models Technologies for Computations in Nanoelectronics \$50,000 (awarded date Aug. 29, 2008 – Aug. 30, 2010)
- PI, NSF-CISE-EMT: A Merging Multi-scale Model for Simulations of Crystallization/Solidification of Nano-structured Materials on Large-scale Parallel Computing Systems, with Co-PI, Dr. Shaoping Xiao, \$240,000 (awarded date: July, 2007-2010),
- 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 \$221,250 (awarded date: July 1, 2006 - June 30, 2008).
- 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 \$30,000 (awarded date: June, 2007)
- 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), \$100,000 (awarded date: June 2005-June 2007)
- 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 (awarded date: 2004-2005)

- Co-PI, University of Iowa Internal Funding Program/Mathematical and Physical Sciences (MPSFP): Finding Genes Responsible for Continuous Traits: A Computer program, with Kai Wang (PI) et al. \$30,000 (awarded Dec. 16, 2004-Nov. 2005)
- 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 Wang<sup>1</sup> (PI), Terry A. Braun<sup>2</sup> (Co-PI), Gregory R Carmichael<sup>3</sup> (Co-PI), Boyd M. Knosp (Co-PI) Jun Ni (Co-PI) Yasar Onel (Co-PI), \$45,608 (awarded date: Dec. 16, 2004- Nov. 2005)
- 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), \$30,000 (awarded date: Dec. 2002 – Nov. 2003),
- 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), \$30,000 (awarded date: Dec. 2002 Nov. 2004)
- 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), \$44,000 (awarded date: June 2002 – July 2003)
- Co-PI, Internal Research Fund: VoluMeasure<sup>TM</sup>: A Portable Java Program for Stereological Volume Measurement, Dr. Ge Wang (PI), Dr. Simon Kao (Co-PI), \$21,000 (awarded date: Oct. 2002- Sept. 31, 2003)
- Co-PI, NSF EAR-9508291, Sedimentation by Dripping Instability in Viscous Fluids in Geophysical System, with Dr. G.W. Bergantz (PI), , \$90,000 (awarded date: awarded 1995-1996)
- PI, Industrial Funds, Da-Gang Petrologic Industrials Inc., Research and development of database system for storage management in petroleum industrial, ¥120,000 (awarded date: 1985-1986)
- Co-PI, Industrial Funds, Hydraulic Transmission for Energy Saving Systems in Steel Foundry, Textile, and Mine Industrials, ¥5,700,000 (awarded date: 1983-1985)

### **Pending Grants**

- PI, NSF-PetaApps: NSF-PetaApps – Emergent Scientific Modeling and Petascale Computing Implementations for the Simulations of Biotransport Phenomena in Nano-biophysical Systems, with Dr. Jack Dongarra (co-PI) (request \$1,009,834.00)
- PI, NIH-R01, Ontological Data Mapping and Domain Modeling in Medical Imaging Informatics, (request \$1,338,000.00)
- Co-PI, NIH-G20, Renovation of Core Facilities to Establish Managed Campus Research Data Center, PI Steve Fleage (request \$ 7,793,952.00)
- PI, NIH-R01, Multiscale Modeling of Biotransports in Nanothermo/Chemo-radiation Therapies (request \$1,000,000.00)
- PI, NIH-R01, Parallelism of Cone-Beam Katsevich Image Reconstruction on GPU/Cell Clusters (request \$1,117,535.00)
- PI, NIH-S10- Acquisition of a High-end, Multi-core Supercomputer for Medical Imaging and Medical Informatics (request \$3,511,299.00)
- PI, Shell Global, Computational, Full-field Modeling and Petascale Simulation of Steam Assisted Gravity Drainage (SCGD)-based Heavy Oil Recovery

## Taught University/College Credit Courses, and Training Workshop

### Lecturer of University of Iowa Credit Courses

- 2008-** **Instructor and Coordinator**, Medical School Education Program, Department of Radiology, Carver College of Medicine, University of Iowa (<http://www.uiowa.edu/~hri/education.html>)  
074:150: EXW: Medical Imaging and Radiology Informatics ([Spring](#) and [Fall](#), 2009)
- 1994-2007** **Instructor**, Department of Mechanical & Industrial Engineering, University of Iowa, Iowa City, IA, USA [Averaged assessment score is 5.4/6.0]  
  
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) (graduate course)
- 1999-2007** **Instructor**, 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 Programming Project - Inverse Problem Solution using Computational Thinking (fall, 2007)  
22C:196, In Individual Programming Project (File Database System for Research)
- 1998-2001** **Instructor**, 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** **Instructor**, 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)

**Iowa High Performance Computing Summer School, Instructor**

August, 2009 Introduction to Parallel Computing, Message Passing Interface (I and II); Introduction to Computational Science and Engineering; Introduction to Multi-core, Multi-thread, and GPU Programming; and Multi-scale Modeling and Simulations

**Iowa Virtual Institute of Computational Science and Engineering, University of Iowa, Coordinator and Instructor**

2009- Online lectures: <http://www.uiowa.edu/~vicse/education.html>

**HPC Workshops, Information Technology Services, University of Iowa (semester-based HPC community training) Coordinator and Instructor,**

1994-present 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.

**Summer Education Program**

Faculty Mentor of the [CIC/Iowa Summer Research Opportunities Program \(SROP\)](#), summer 2009  
Faculty Mentor of NSF-sponsored [Research Experiences for Undergraduates \(REU\) in Nano-science and Nanotechnology](#), summer 2009

**Publications**

Summary: 31 edited or co-edited books or proceedings; 71 peer-reviewed conference papers; 31 journal papers; 348 SCI journal citations to Jun Ni's first-author journal papers (resources: ISI Web of Science, Sept., 2009).

**Journal Papers (31)**

- [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: 224**]
- [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: 27**]
- [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: 29**]

- [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: 43**]
- [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: 19**]
- [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, "VoluMeasure<sup>TM</sup>: 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: 4**]
- [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] 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, 2007
- [18] 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*, Vol. 5, pp. 528-534, 2008
- [19] Shaoping Xiao, Jun Ni, Shaowen Wang, "The Bridging Domain Multiscale Method and its High Performance Computing Implementation," *Journal of Computational and Theoretical Nanosciences*, Vol. 5, No. 7, pp. 1220-1229, 2008
- [20] Fei Gu, Hang Chen, Jun Ni, and Zhengge Huang, "Protein structural class prediction based on an improved statistical strategy," *BMC Bioinformatics* 2008, 9(Suppl 6):S10
- [21] 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* 2008, 9(Suppl 6):S5, 2008
- [22] Guoqing Lu, Jun Ni, Tom Casavant, and Brian Athey, "Highlighting computations in bioscience and bioinformatics: review of the Symposium of Computations in Bioinformatics and Bioscience," *BMC Bioinformatics* 2008, 9(Suppl 6):S1, 2008
- [23] Ying Chen, Chun Zhang, Jia-dong Wang, Zhu-lin Gong, Jun Ni, Lu Zhang, A Data Model for Knowledge-Based Image-Computer-Aided Surgery (ICAS) Systems, Shanghai Jiaotong University Journal, SJTU Press 2008, 13(5): 595-599

- [24] Yanbo Li, Jing Zhang, Jun Ni, "Curvature Extraction in Soft Tissue Self-Collision Detection for Virtual Surgery," Harbin Engineering University Journal (in Press)
- [25] Junjun Deng, Hengyong Yu, Jun Ni, Lihe Wang, and Ge Wang, "Parallelism of Iterative CT Algorithm based on Local Reconstruction," *Journal of Supercomputing*, Springer, Vol. 48, pp. 1-14, 2009
- [26] 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)
- [27] Wang Yuanbiao, Jun Ni, Zhiping Xu, "Effects of Spectral Radius on Echo-State of Neural Network Training," (submitted)
- [28] Yuanbiao Wang, Zhi-ping Xu, Jun Ni, 'Optimization of Weight Matrix in Echo State Network for Training in Recurrent Neuron Network (RNN),' (submitted)
- [29] Xiupeng Wei, Shaoping Xiao, Jun Ni, "Studies of ice melting using molecular dynamics," *Molecular Simulation*, Journal of Experimental NanoScience (accepted)
- [30] Zhang Lifeng, Chen Ying, Zhang Lu, Jun Ni, Laurie Fajado, Detection of Pleomorphic Distributed Clustered Calcifications in Digital Mammograms (submitted)
- [31] Jun Ni, Review of Parallel Computing in Medical Imaging, invited key paper (submitted)

### Peer-reviewed Conference Proceedings (71)

#### 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, TMS 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] Jun Ni 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 Geophysical Union, Vol. 76, No. 46, Nov. 7 Supplement, 1995; presented at 1995 Fall Meeting of American Geophysical Union, San Francisco, CA, Dec. 11-15, 1995

#### 2002-2009

- [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, "VoluMeasure<sup>TM</sup>: 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," 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

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- [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

### Invited Colloquium/Tutorial/Lecture/Seminar/Talk/Presentation/Poster (70)

- [1] Jun Ni, "Modeling and Simulation of Multi-phase, Multi-component Transport Phenomena during Materials Processing," US Department of Energy, 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 2<sup>nd</sup> 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 2<sup>nd</sup> 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 2<sup>nd</sup> 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 2<sup>nd</sup> 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 Saiping 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] Jun Ni, Bo Qiang, and Laurie Fajardo, "Parallel Monte Carlo Algorithm for Simulation of Photon Migration inside Biological Tissues," Radiology Society of North American, RSNA07, Chicago, Nov. 29, 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
- [52] Jun Ni, "Parallel Monte Carlo Algorithm for Simulation of Photon Migration inside Biological Tissues," The Iowa Institute of Biomedical Imaging, Seminar, May 1, 2008
- [53] Jun Ni, "Cyber-enabled HPC for Accelerating Medical Imaging & Informatics Research," presented at National Center for Supercomputing Applications (NCSA), Summer Faculty Fellowship, Opening, June 5, 2008
- [54] Jun Ni, "Parallel Computing for Medical Image Reconstruction," NCSA Faculty Summer Fellowship, UIUC, July 25, 2008
- [55] Jun Ni, "Challenges of Modeling and Computations in Nanoscale Electronics and Applications", Graduate Seminar, Department of Electrical and Computer Engineering, University of Iowa, Sept. 11, 2008.
- [56] Jun Ni, "Cyberinfrastructure for Medical Imaging Informatics and High Performance Computing, Harbin Engineering University, Harbin, China, Oct. 22, 2008
- [57] Jun Ni, "Envision of Radiology Informatics and System Radiology," SJTU-Medical School, Oct. 18, 2008
- [58] Jun Ni, "High Performance Computing for Medical Imaging," Shanghai University, Shanghai, China, Oct. 24, 2008
- [59] Jun Ni, "Emerging Models and Technologies for Multi-scale Modeling and Simulations of Nano-structured Material Formations and Property Predictions," Computer Science Colloquium, The University of Iowa, Jan. 30, 2009

- [60] Jun Ni, "Envisioning Future Radiology Informatics," Radiology Faculty Meeting, Department of Radiology, Caver College of Medicine, University of Iowa, March 24, 2009
- [61] Jun Ni, "Effects of Tumor Orientations and Principal Axis Ratios on the Volumetric Measurements of Tumor Ellipsoidal Model," Radiology Faculty Meeting, Department of Radiology, Caver College of Medicine, University of Iowa, April 14, 2009
- [62] Jun Ni, "Orchestra of Medical Imaging Informatics Research and Education," Iowa Undergraduate Computer Science Consortium Meeting, April 25, 2009.
- [63] Jun Ni, "Multi-scale Model and Simulations of Melting, Crystallization/Solidification, and Saturation in Nano Particle Processing," NSF, Research Experience for Undergraduates (NSF-REU) in Nano-science and Nanotechnology, the University of Iowa, June 11, 2009
- [64] Jun Ni, "Spectrum of Cyber-enabled Radiology Informatics," Minnesota Supercomputing Institute for Advanced Computational Research, University of Minnesota, June 29, 2009
- [65] Jun Ni, "Introduction to Computational Science and Engineering," Iowa HPC Summer School, Aug. 6, 2009
- [66] Jun Ni, "Message Passing Interface Programming I," Iowa HPC Summer School, Aug. 6, 2009
- [67] Jun Ni, "Message Passing Interface Programming II," Iowa HPC Summer School, Aug. 7, 2009
- [68] Jun Ni, "Introduction to Multi-core, Multithread, and GPU Programming," Iowa HPC Summer School, Aug. 7, 2009
- [69] Jun Ni, "Multi-scale Modeling and Simulations in computational science and engineering," Iowa HPC Summer School, Aug. 7, 2009
- [70] Jun Ni, "Introduction to Hawkeye Radiology Informatics," Mayo Clinic, Aug. 10, 2009
- [71] Jun Ni, "Ontological Domain Modeling of Medical Imaging Informatics," Simpson College, Oct. 28., 2009.
- [72] Jun Ni, "Multi-scale Modeling and Large-scale Simulations of Biotransports in Nanothermo/Chemo-radiation Therapies," Iowa Institute for Biomedical Imaging, University of Iowa, Oct. 29, 2009.
- [73] Jun Ni, "A Multi-scale Modeling and Large-scale Computations of Biotransports in Nanothermo/Chemoradiation Therapies," Workshop of High Performance Computing for Nanoscience and Nanotechnology (HPCNano2009) in ACM/IEEE Supercomputing Conference 2009, Portland, OG, Nov. 15, 2009.

## Professional Services and Activities

### USA Government Grant Review

#### NSF, External Reviewer

Directorate for Mathematics & Physical Sciences (MPS) (1996), Directorate for Computer & Information Science & Engineering (CISE) (2008)

#### NSF 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)

**International Government Grant Proposal Reviewer**

Science & Engineering Research Council (SERC) in Singapore  
Government of the Hong Kong Special Administrative Region (GHKSAR) - The Innovation and Technology Commission in Hong Kong

**Federal Plan and Documentation Reviewer**

Federal Plan for Advanced Networking Research and Development, US National Coordination Office for Networking and Information Technology Research and Development (NITRD) for National Science and Technology Council (NSTC), 2007  
Five-Year Strategic Plan for Federal Networking and Information Technology Research & Development Program, US National Coordination Office for Networking and Information Technology Research and Development (NITRD), 2008  
Invited to attend Public Forum of Five-Year Strategic Plan for Federal Networking and Information Technology Research & Development Program, US National Coordination Office for Networking and Information Technology Research and Development (NITRD), 2009

**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](http://www.casc.org)) (2005-present)  
Member, Educause, Association in Advance Higher Education (2006-present)  
Committee Member, National STEM Education Coalition Committee ([www.stemedcoalition.org](http://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)  
Operation Council Member, Virtual School of Computational Science and Engineering, the Great Lakes Consortium for Petascale Computation (2008-)

**Professional Committee**

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

**Local Academic Committee**

Education Committee, Department of Radiology, College of Medicine (2008-)  
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)  
Faculty Member, Education Committee, Department of Radiology, College of Medicine (2008-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 (SCI Impact Factor, 3.62), BMC Genomics, BioMed Central (2007- present)

Special Issue on Computational Biology and Bioinformatics, [BMC Bioinformatics](#), 2008, 7 (Suppl 7): paper S1-S29

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

**Editorial board**

e-Book Editor, Bentham Science Publishers (2009-)

International Journal of Information Retrieval Research (2009-)

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

Journal of Computer Science and Information Technology (2009-present)

Reports in Medical Imaging, [Dove Medical](#) Press (2008-present)

The Journal of Future Generation Information Technology (FGIT) (2009-present)

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

[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)

[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 Paper Referee/Technical Reviewer (for 43 different professional journals)**

Journal of Materials Chemistry, Royal of Society of Chemistry (Impact Factor: 4.28)

BMC Genomics, BMC Central, Open Access Publisher (Impact Factor: 4.03)

Physiological Genomics, American Physiological Society (Impact Factor: 3.79)

Physical Chemistry Chemical Physics, Royal of Society of Chemistry (Impact Factor: 3.62)

BMC Bioinformatics, BMC BioMed Central Publisher (Impact Factor: 3.62)

CrystEngComm, Royal of Society of Chemistry (Impact Factor: 3.47)

BMC Proteome Science, BMC BioMed Central (Impact Factor: 2.63)

IEEE Transaction on Nanotechnology (Impact Factor: 1.91)

International Journal of Heat and Mass Transfer, Elsevier Press (Impact Factor, 1.48)

Modeling and Simulation in Materials Science and Engineering, IOP Publishing (Impact Factor: 1.46)

Metallurgical Transaction A, TMS Press (Impact Factor, 1.37)

Computer Graphics Forum, Blackwell Publishing (Impact Factor: 1.164)  
 Journal of Acoustical Society of America, ASA Press (Impact Factor: 1.433)  
 Numerical Heat Transfer, Taylor & Francis Group (Impact Factor: 0.936)  
 Metallurgical Transaction B, TMS Press (Impact Factor: 0.91)  
 Computers & Graphics, Elsevier-UK (Impact Factor: 0.601)  
 Communications in Numerical Methods in Engineering, Wiley Press (Impact Factor: 0.518)  
 Advances in Engineering Software, Elsevier Science (Impact Factor: 0.432)  
 Journal of Supercomputing, Springer-Kluwer Academic Publisher (Impact Factor: 0.398)  
 Journal Future Generation of Computer Systems, Elsevier Press (Impact Factor: 0.094)  
 Computational Science & Discovery, IOP Press  
 Journal of X-ray Science and Technology, IOP Press  
 Numerical Algorithms, Springer-Kluwer Academic Publisher  
 Open Bioinformatics Journal  
 Popular Science Magazine in Health  
 Eurographics  
 Oxford Briefings in Bioinformatics, Oxford University Press  
 Reviewer of Journal Proposals for Springer Publisher  
 Scientific Journals International (SJI)  
 Journal of Computational Intelligence in Bioinformatics, RIP Publications  
 Journal of Zhejiang University (A), JZUS Press  
 International Journal of Wireless and Mobile Computing, Inderscience Press  
 International Journal of Computational Science and Engineering (IJCSSE), Inderscience Press  
 International Journal of Grid and Utility Computing, Inderscience Press  
 Journal of Pervasive Computing and Communications, Emerald Group Publishing  
 Journal of Autonomic and Trusted Computing, American Scientific Publishers  
 Journal of Ubiquitous and Intelligence, American Scientific Publishers  
 International Journal of Biomedical Imaging, Hindawi Publishing Corporation  
 Society for Modeling and Simulation International (SCS) Journal: Simulation  
 Journal of Universal Computer Science, Know Center  
 International Journal of Euro-graphics  
 Journal of Heat Transfer, ASME Press  
 International Journal of Heat and Mass Transfer, Elsevier Press

**Peer-review Conference Proceeding Referee/Technical Paper Reviewer (for 145 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 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 4<sup>th</sup> 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  
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  
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  
International Conference on Bioinformatics & Computational Biology  
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  
International Conference on Embedded Systems & Applications  
International Conference on Foundations of Computer Science  
International Conference on Genetic and Evolutionary Methods  
International Conference on Grid Computing and Applications

International Conference on Image Processing, Computer Vision, and Pattern Recognition  
International Conference on Information & Knowledge Engineering  
International Conference on Internet Computing  
International Conference on Multimedia Systems and Applications  
International Conference on Parallel and Distributed Processing Techniques and Applications  
International Conference on Scientific Computing  
International Conference on Semantic Web and Web Services  
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  
Performance Computing Symposium  
Second International Workshop on Internet Computing for Sciences and Engineering  
WSEAS International Symposium on Grid Computing  
XMLTech

**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

**2009**

The International Conference on Computational Science  
High Performance Computing  
Computer Applications Symposium, in World Congress on Computer Science and Information Engineering  
International Joint Conferences on Bioinformatics  
Third International Conference on Complex Distributed Systems  
The International Conference on Parallel Processing  
The IAENG International Conference on Scientific Computing  
The International Conference on High Performance Computing and Applications  
The ACIS International Conference on Software Engineering Research, Management and Applications  
International Symposium on Optical Engineering and Photonic Technology  
High Performance Graphics  
IFIP International Conference on Network and Parallel Computing (NPC 2009)

**Academic Book/Textbook Reviewer (23 books for 11 publishers)**

- Artech House Publishers** (2007-08) “High performance computing for high-throughput image reconstruction and analysis,” Chapters: “Intelligent Microscopy Applications,” “Utilizing Parallel Processing in Computational Biology Application,” “Knife-Edge Scanning Microscopy: High-throughput Imaging and Analysis of Massive Volumes of Biological Microstructures”
- 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++
- 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
- Franklin, Beedle & Associates Publisher** (2004-2005) C# Programming
- Blackwell Publishing Inc.** (2003-2005) Bioinformatics and Computational Genomics; Bioinformatics and Molecular Evolution; Bioinformatics
- CRC Press** (2003-2004) Numerical Methods for Engineers
- 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

**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 (GCTA'04) 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 (GCC'04), 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  
 4<sup>th</sup> International Conference on Computer and Information Technology (CIT'04), 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 (HPCA'04), Shanghai, China, August 8-10, 2004  
 International Conference on Virtual-Reality Continuum and its Applications in Industry (VRCAI'04), 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, CLADE'04, 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 SC'05, 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 ICCS'05)  
 Computational Methods for Medical Science, 17<sup>th</sup> 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'05), 11 - 29 April 2005  
 HPCAsian2005, Nov. 30-Dec. 3, 2005, Beijing, China  
 Fourth International Conference on Grid and Collaborative Computing, GCC'05, Nov. 30-Dec 3, 2005, Beijing, China  
 Multi Conference on Computer Science and Information Systems (MCCIS'05)  
 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'05), 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 ICCS'05, May 22-25, 2005  
 High Performance Computing Symposium (HPC'05), 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 (ICITA'05), 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 SC'06, November, 2006, Tampa, Florida, USA

International Conference on Grid Computing and Applications (GCA'06), 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 (CNAN'06) 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 (IMSCCS'06), Zhejiang University, Hangzhou, China, June 20-24, 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'06), University of Reading, UK, May 28-31, 2006

### **Program Committee Member**

IEEE/ACM SC'06, 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'06) in Sorrento, Italy, December 1-4, 2006

International Conference on Computational Science (ICCS|06), University of Reading, UK, May 28-31, 2006.

4th International Workshop on Challenges of Large Applications in Distributed Environments (CLADE'06) 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 (GCC'06), Oct. 21-23, Changsa, China

International Workshop on High Performance Scientific and Engineering Computing (HPSEC'06), (held in conjunction with the International Conference on Parallel Processing – ICPP'06)

7th Workshop on Parallel and Distributed Scientific and Engineering Computing (PDSEC'06) at IPDPS'06

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'06), Vienna University of Technology, Vienna, Austria

14<sup>th</sup> High Performance Computing Symposium (HPC'06) 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  
(HPCNano'07), 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  
(ICSEI'07), in conjunction with (ICCS'07), Beijing, May 2007

International Conference on Artificial Intelligence (ICAI'07), Las Vegas, June, 2007

International Conference on Internet Computing (ICIC'07), Las Vegas, June, 2007

International Conference on Genetic and Evolutionary Methods (ICGEM'07), Las Vegas,  
June, 2007

International Conference on Multimedia Systems and Applications (ICMSA'07), Las Vegas,  
June, 2007

International Conference on Scientific Computing (ICSC'07), Las Vegas, June, 2007

International Conference on Semantic Web and Web Services (ICSEES'07), , June, 2007

International Conference on E-Learning, E-Business, Enterprise Information Systems, and E-  
Government (ICEEISG'07) Las Vegas, June, 2007

International Conference on Foundations of Computer Science (ICFCS'07), June, 2007

International Conference on Information & Knowledge Engineering (ICIKE'07) Las Vegas,  
June, 2007

International Conference on Embedded Systems & Applications (ICESA'07), June, 2007

International Conference on Bioinformatics & Computational Biology (ICBCB'07), Las  
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'07), 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'07), September 18-  
21, 2007, Dalian, China

International Multi-Conference for Engineers and Computer Scientists (IMECS'07), Hong  
Kong, March 21-23, 2007

International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP'  
07), Hangzhou, China, June 11-14, 2007

2007 BioGrid Workshop, in conjunction with the 2007 IEEE CCGrid (CCGrid'07), Rio de  
Janeiro, Brazil, May 14-17, 2007

Performance Computing Symposium (HPC'07) 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/Publicity Chair**

IEEE International Conference on Bioinformatics and Bioengineering, Oct 8-10, 2008, Athens, Greece (BIBE'08)

The 14th IEEE International Conference on Parallel and Distributed Systems in Bioinformatics and Computational Biology (ICPADS'08)

International Multi-symposium of Computer and Computational Sciences (IMSCCS'08), Shanghai Jiaotong University \_Medical School, Shanghai, China

HPC Nanotechnology 2008 (HPCNano'08), in IEEE/CS Supercomputing (SC'08), Austin, Texas, Nov. 12-16, USA)

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**

3rd International Conference on Bio inspired Models of Network, Information and Computing Systems (BIONETICS'08), Awaji Island, Hyogo, Japan, Nov 25-28, 2008

The 6th ACM/IEEE International Workshop on Challenges of Large Applications in Distributed Environments (CLADE'08)

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'08), in the SCS Spring Multi-conference, April 14-16, 2008, Crowne Plaza Ottawa, Ottawa, Ontario, Canada

International Conference on BioMedical Engineering and Informatics (BMEI'08) 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'08), Glasgow, UK, 21-24 July 2008

2nd International Conference on Complex Distributed Systems (CODS'08) , 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 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

IFIP International Conference on Network and Parallel Computing (NPC'08), Shanghai, China

The 7th International Conference on Grid and Cooperative Computing, GCC2'08, Shenzheng, China, Oct. 24-26, 2008

## 2009

### **General/Program Chair/Co-Chair/Vice-chair/Track/Session/Publicity Chair**

NSF Workshop on Petascale computing for Nanoscience and Nanotechnology, University of Illinois, Urbana-Champaign, NCSA, Spring 2010

[HPC Nanoscience and Nanotechnology](#), in IEEE/CS Supercomputing (SC'09), Portland, Oregon, Nov. 14-20, USA

[The Fourth International Conference on Internet Computing in Science and Engineering](#) (ICICSE'09), Harbin Engineering University, Harbin, Dec. 2009, China

Co-Chair of Track of "Bioinformatics and Bio-Inspired Computing," The 5th International Conference on Future Information Technology (FutureTech 2010), May 21-23, 2010, in Jeju, Korea

### **Program Committee**

The International Conference on Computational Science 2009 (ICCS 2009), Center for Computation & Technology at Louisiana State University in Baton Rouge, Louisiana, U.S.A.

High Performance Computing 2009 (HPC), Part of the 2009 Spring Simulation Multi-conference (SpringSim'09), the Society for Modeling and Simulation International (SCS), March 22 - 27, 2009, San Diego, CA, USA

Computer Applications Symposium, in World Congress on Computer Science and Information Engineering (CSIE'09), March 31 - April 2, 2009, Los Angeles/Anaheim, USA

International Joint Conferences on Bioinformatics, Systems Biology and Computational Intelligent (IJCBS) August 3-6, 2009, Tongji University, Shanghai, China

Third International Conference on Complex Distributed Systems (CODS 2009) March 2009 in Leipzig, Germany

The 38th International Conference on Parallel Processing (ICPP'09), Vienna, Austria, September 22-25, 2009

The IAENG International Conference on Scientific Computing, Hong Kong, March 18-20, 2009

The 2009 International Conference on "High Performance Computing and Applications"(HPCA2009), Shanghai University, Shanghai, China

The 7th ACIS International Conference on Software Engineering Research, Management and Applications, SERA2009 is to be held on December 2-4, 2009 in Haikou, Hainan Islands, China

International Symposium on Optical Engineering and Photonic Technology: OEPT 2009, in the context of the 2nd International Multi-Conference on Engineering and Technological Innovation: IMETI 2009, July 10<sup>th</sup> - 13<sup>th</sup>, 2009 – Orlando, Florida, USA

High Performance Graphics 2009, New Orleans Louisiana, Aug. 1-3, 2009

IFIP 6th IFIP International Conference on Network and Parallel Computing (NPC 2009), Oct. 19-21, Gold Coast, Australia

High Performance Medical Imaging (HPMI2009), Orlando, Florida, USA

### **2010**

#### **General/Program/Session Chair**

NSF Workshop on Computational Nanoelectronics, University of Iowa, Spring, 2010

NSF Workshop on Cyberinfrastructure (CI)-based Emerging Models and Petascale Computing for Nanoscience and Nanotechnology, UIUC-NCSA, spring, 2010

International Conference on Internet Computing in Science and Engineering (ICICSE'10), 2010

The Fifth International Conference on Internet Computing in Science and Engineering (ICICSE'10), Harbin Engineering University, Harbin, Dec. 2010, China

Track/Session: BIT's 3rd World Cancer Congress-Inaugurate Conference, Shanghai, China, April 25-27, 2010

### **Program Committee**

The IAENG International Conference on Scientific Computing, Hong Kong, March 17-19, 2010

International Conference on Computational Science, Amsterdam, Netherlands on May 31 - June 2, 2010

## **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**

Project Leader, Ontological data structure and domain model of medical imaging informatics

Project Leader, Tumor volume measurement and stereological analysis (software R&D)

Project Leader, Paralelsim of Cone-Beam Katsevich image reconstruction on GPU/Cell Clusters

Project Leader, Multi-scale Modeling and Simulation of Bio-EM Transports in

Nanothermotherapy

Project Leader, Cyberinfrastructure (CI)-based Emerging Models and Petascale Computing for Nanoscience and Nanotechnology (NSF sponsored)

Project Leader, Large-scale model and simulation of nano-structure crystallization/solidification in materials processing

Project Leader, cyberinfrastructure-enabled petascale computing for medical imaging and medical imaging informatics (2007-)

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

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

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

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

Project Leader, Medical Imaging Informatics Wiki Server for Research and Development (2007- )

### **Completed Projects**

#### **Medical Imaging High Performance Computing and Medical Imaging Informatics**

Project Leader, Parallel Monte Carlo simulation of optical tomography (2007-2009)

Project Leader, Development of protocols of medical imaging and radiology informatics (2007-2009)

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

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

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

Project 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**

Project 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)

Project 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)

Project 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 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)

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

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

Project 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:**

Project 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)

Project 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:**

Project 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)

Project 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**

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

Project 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**

Project Team member, Parallelism of long and short sequence comparison and protein similarity study (2006-2007)

Project 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:**

Project 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, founded by NASA No. COE/97-0104 (1998-99)

**Statistical analysis:**

Project Team 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, supported 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:**

Project 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)

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

Project 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)

Project 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 research was sponsored by DOE under DE-FG02-87ER13579 grant, 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 (PI), 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:**

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

Project 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)

**Fellowships, Honors/ Awards**

- |           |   |
|-----------|---|
| 2009      | <b>NSF Fellowship</b> , NSF Summer Institute on Nanomechanics, Nanomaterials and Micro/Nanomanufacturing, May, 2009   |
| 2008      | <b>Summer Faculty Fellowship</b> , University of Illinois at Urbana-Champaign (UIUC), the National Center for Supercomputing Applications (NCSA), Champaign, Illinois, USA                                  |
| 2008      | <b>Honorary Visiting Professor</b> , School of Computer Science and Technologies, Shanghai University, Shanghai, China  |
| 2008      | <b>Honorary Outstanding Faculty Lecture</b> , Zhejiang University, Zhejiang, China  |
| 2008      | <b>Listed in Who's Who in Medicine Higher Education (WWMHE) Academic-Keys</b>   |
| 2007      | <b>Achievement Award</b> , the World Academy of Science, World Computer Congress, Las Vegas, Nevada, USA  |
| 2006      | <b>Honor Professor</b> , College of Computer Science & Technology, Harbin Engineering University, China   |
| 2006-pres | <b>President</b> , Science Technology Engineering Mathematics (STEM) Education Society, USA   |
| 2006-pres | <b>Honorable Co-Director</b> , High-performance Computing Laboratory, Biomedical Imaging Division, School of Biomedical Engineering & Sciences, Virginia Tech   |
| 2006-pres | <b>University Remarkable Employee</b> , University of Iowa Human Resources Office ( <a href="http://jobs.uiowa.edu/employee_spotlights/index.php">http://jobs.uiowa.edu/employee_spotlights/index.php</a> ) |
| 2006      | <b>Honorary Professor</b> , School of Computer Science and Technologies, Harbin Engineering University, China   |
| 2004      | <b>Achievement Award</b> , 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 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
- 1987-88 **Faculty Fellowship**, Ministry of Education, China
- 1985-86 **President**, Youth Faculty Association, Shanghai Jiao Tong University, Shanghai, China
- 1982-84 **Campus Social Activity Committee**, Graduate Student Society, Shanghai Jiao Tong University, Shanghai, China

### Graduate/Undergraduate Student Mentor

#### 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; 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)
- Juw Won Park (Ph.D. in Computer Science, 204)
- 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; working at University of Utah)
- Horea Rusu (M.S. in Mechanical Engineering, 2007)
- Junjun Deng (Ph.D. in Math, 2008; working at Siemens)
- Bo Qiang (Electrical and Computer Engineering, 2007-08, working at Mayo Clinics,)
- Xiaosen Jiang (M.S. in Computer Science, 2006-2008, SiRF)

##### Former undergraduate student

- Vivia Brook (B.S., major in Speech Hearing, 2006-2007)
- David Jarrett, Summer Research Opportunities Program (SROP, McNair Scholars Program, Graduate College, University of Iowa) (summer, 2009)

##### Current graduate students

- Xuepeng Wei (Ph.D. Mechanical Engineering, 2007-)
- Changming Zhu (Ph.D., Computer science, 2008-)
- Yanbo Li (Ph.D., Computer science, 2008-)
- Anurag Dasgupta (Ph.D., Computer Science, 2009-)

**Current undergraduate students**

Joshua Fajardo-Frink, Electrical & Computer Engineering (2009)  
Jerrett, David (Computer Science, 2009)

**K12 students**

Charles Ni, West High School (summer, 2006-08)  
Seika Xue, West High School (summer, 2008-09)

**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  
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**2001-2007, Supervisor/co- supervisor, Scientific Computing, Research Services, Information Technology Services**

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Puja Das (former technical staff, PTE)  
Nedim Barut (former technical staff, PTE)  
Xiaosen Jiang (former technical staff, PTE)  
Jeff DeReus (current technical FTE staff)

**Visiting Scholars**

Prof. Ji He Wei, Shanghai University, China, 1999-2000  
Prof. Shaobin Huang, Harbin Engineering University, China, 2007  
Prof. Wenbin Yao Harbin Engineering University, China, 2007  
Prof. Wu Yang, Harbin Engineering University, China, 2007  
Dr. Tianyang Lu, Harbin Engineering University, China, 2007  
Prof. Ying Chen, Shanghai Jiaotong University, China, 2007  
Prof. Gong Zhulin, Shanghai Jiaotong University, China, 2008  
Prof. Zhengge Huang, Zhejiang University, China, 2007-2008  
Prof. Jun Duan, Inner Mongolia University of Science and Technology, China, 2008-2009

**Postdoctoral Research fellows**

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

## Personal

US citizen, married, wife and two sons  
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