

Jing Hua

Department of Computer Science
Wayne State University
5143 Cass Ave, 458 State Hall
Detroit, Michigan 48202
Office: (313) 577-9004
Fax: (313) 577-6868
Email: jinghua@cs.wayne.edu
URL: <http://www.cs.wayne.edu/~jinghua>

RESEARCH INTERESTS

Computer Graphics and Visualization

-(vision graphics, shape analysis, geometric and physically-based modeling, hybrid visualization algorithms)

3D Image Analysis and Informatics

-(geometric/graphical/visualization techniques for 3D image analysis, learning and mining algorithms for image informatics, biomedical applications)

EDUCATION

Ph.D. in Computer Science, 2004

State University of New York at Stony Brook

Dissertation: DIVE: Dynamic Inhomogeneous Volumetric Environment for
Graphics and Visualization

Advisor: Hong Qin

M.S. in Computer Science, 2002

State University of New York at Stony Brook

M.E. in Pattern Recognition and Artificial Intelligence, 1999

Institute of Automation, Chinese Academy of Sciences (CAS)

B.E. in Electrical Engineering, 1996

Huazhong University of Science and Technology (HUST)

PROFESSIONAL EXPERIENCE

Assistant Professor

8/2004 - present

Wayne State University (WSU), Department of Computer Science, Detroit, Michigan, USA

Research Assistant

5/2001 - 7/2004

SUNY at Stony Brook, Department of Computer Science, Stony Brook, New York, USA

Summer Internship Research

6/2000 - 8/2000

Symbol Technology, Inc., R&D Lab, Holtsville, New York, USA

Research Assistant

9/1997 - 6/1999

Chinese Academy of Sciences, Institute of Automation, Beijing, CHINA

Research Assistant

6/1995 - 6/1996

Huazhong Univ. of Science and Technology, Dept. of Electrical Engineering, Wuhan, CHINA

RESEARCH FUNDING

1. **Principal Investigator** (Leading). Collaborative Research: Integrated Modeling and Learning of Multimodality Data across Subjects for Brain Disorder Study. National Science Foundation (NSF). 9/01/2007-8/31/2010, \$450,000 (Co-PIs: Ming Dong, Xianfeng Gu).
2. **Co-Principal Investigator**. Geometry-guided and Knowledge-enhanced Learning of Large-scale Visual Data. National Science Foundation (NSF). 5/1/2008-4/30/2011. \$300,000. (PI: Ming Dong, other Co-PIs: Farshad Fotouhi, E. Mark Haacke).
3. **Principal Investigator**. Virtual Histology with Volumetric Computerized Tomography. Michigan Technology Tri-Corridor. 9/01/2005-8/31/2008, \$401,809 (including WSU match) (other Co-PIs: Weiping Ren, Paul Wooley).
4. **Co-Principal Investigator**. Electrical, Molecular and Clinical Correlates of Human Interictal Spiking. National Institutes of Health (NIH). 1R01NS058802-01A2. 7/1/2008-6/30/2013. \$1,990,685. (PI: Jeffrey Loeb, other Co-PIs: Aashit Shah, Darren Fuerst). (CS portion: \$300,000)
5. **Co-Principal Investigator**. Software Tool for Neuroimaging in Epilepsy. Michigan Technology Tri-Corridor. 9/1/2005-8/31/2008, \$475,881 (including WSU match) (PI: Otto Muzik, other Co-PI: Shiyong Lu).
6. **Co-Principal Investigator**. HyperEye: Susceptibility Weighted Imaging-based Informatics Tools for Brain Tumor Studies. 21st Century Jobs Funds. 1/01/2007-12/31/2009, \$1,174,404 (including WSU match) (PI: Ming Dong, other Co-PIs: E. Mark Haacke, Vivek Segal).
7. **Co-Principal Investigator**. A Computational Model of Human Epilepsy. WSU Research Enhancement Foundation. 5/31/2007-4/30/2008, \$292,609. (PI: Jeff Loeb, and other Co-PIs: Shiyong Lu, Farshad Fotouhi, etc.).
8. **Principal Investigator**. Visual Neuro-Analytics: A Computational Thinking Framework for Neuroimaging and Neuroscience Applications. WSU-GRA Competition. \$33,000, 9/1/2007-8/31/2008.
9. **Co-Principal Investigator**. Visual Informatics. WSU-GRA Competition. \$33,000, 9/1/2007-8/31/2008. (PI: Ming Dong, Co-PI: E. Mark Haacke).
10. **Principal Investigator**. A Computational Modeling and Statistical Learning Framework for Brain Disorder Study. WSU-GRA Competition. \$33,000, 9/1/2007-8/31/2008.
11. **Co-Principal Investigator**. Brain Tumor Informatics: Visualization and Mining of High-order Heterogeneous Data. WSU-GRA Competition. \$33,000, 9/1/2007-8/31/2008. (PI: Ming Dong, Co-PI: E. Mark Haacke).
12. **Co-Principal Investigator**. SWI-based Informatics Tools for Brain Tumor Studies. WSU-GRA Competition. \$33,000, 9/1/2006-8/31/2007. (PI: Ming Dong, Co-PI: E. Mark Haacke).
13. **Principal Investigator**. A novel computational framework for quantitative analysis of fiber tract connections in the living human brain. WSU-GRA Competition. 9/1/2005-8/31/2006, \$33,000.
14. **Principal Investigator**. Multivariate Simplex Spline for Advanced Engineering Design. WSU Faculty Research Funds. 5/1/2005-4/30/2006, \$10,000.

PUBLICATIONS AND TECHNICAL REPORTS

Peer-Reviewed Journal Papers

- 1 Y. Chen, M. Rege, M. Dong, and J. Hua. Nonnegative Matrix Factorization for Semi-supervised Data Clustering. *Knowledge and Information Systems*, 2008. (To appear)
- 2 Yuanhong Li, Ming Dong, and Jing Hua. Localized Feature Selection for Clustering. *Pattern Recognition Letters*, Vol. 29, No. 1, pp. 10 - 18, 2008.
- 3 Yunhao Tan, Jing Hua, and Ming Dong. 3D Reconstruction from 2D Images with Hierarchical Continuous Simplicies. *The Visual Computer*, Vol. 23, No. 9, 905-914, 2007.
- 4 Yuanhong Li, Ming Dong, and Jing Hua. A Gaussian Mixture Model to Detect Clusters Embedded in Feature Subspace. *Communications in Information and Systems*, 2007.
- 5 Otto Muzik, Diane Chugani, Guangyu Zou, Jing Hua, Yi Lu, Shiyong Lu, Ashi Asano, and Harry Chugani. Multimodality Data Integration in Epilepsy, *International Journal of Biomedical Imaging*, 2007.
- 6 Cui Lin, Shiyong Lu, Xuwei Liang, and Jing Hua. "Cocluster Analysis of Thalamo-Cortical Fiber Tracts Extracted from Diffusion Tensor MRI," *International Journal of Data Mining and Bioinformatics*, 2007. (Invited)
- 7 Greg Heckenberg, Yongjian Xi, Ye Duan, and Jing Hua. "Brain Structure Segmentation from MRI by Geometric Surface Flow," *International Journal of Biomedical Imaging*, Vol. 2006, pp. 1 - 6.
- 8 Weiping Ren, Bin Wu, Xin Peng, Jing Hua, Hsiao-Nan Hao, and Paul H. Wooley. "Implant Wear Induces Inflammation, But Not Osteoclastic Bone Resorption, In RANK -/- Mice," *Journal of Orthopaedic Research*, 2006.
- 9 Ye Duan, Jing Hua, and Hong Qin, "Interactive Shape Modeling Using Lagrangian Surface Flow," *The Visual Computer*, Vol. 21, No. 5, 2005.
- 10 Jing Hua, Ying He, and Hong Qin, "Trivariate Simplex Splines for Inhomogeneous Solid Modeling in Engineering Design," *ASME Transactions: Journal of Computing and Information Science in Engineering*, Vol. 5, No. 2, 2005. (Invited)
- 11 Jing Hua and Hong Qin, "Haptics-based Dynamic Implicit Solid Modeling," *IEEE Transactions on Visualization and Computer Graphics*, Vol. 10, No. 5, pp. 574 - 586, 2004.
- 12 Jing Hua and Hong Qin, "Scalar-Field-Guided Adaptive Shape Deformation and Animation," *The Visual Computer*, Vol. 20, No. 1, pp. 47 - 66, 2004.
- 13 Xiaohu Guo, Jing Hua, and Hong Qin, "Scalar-Function-Driven Local and Global Editing on Point Set Surfaces," *IEEE Computer Graphics and Applications*, Vol. 24, No. 4, pp. 43 - 52, 2004.
- 14 Xiaohu Guo, Jing Hua, and Hong Qin, "Enhancing Interactive Editing on Point Set Surfaces Through Touch-based Haptics," *IEEE Computer Graphics and Applications*, Vol. 24, No. 6, pp. 31 - 39, 2004.
- 15 Ye Duan, Jing Hua, and Hong Qin, "HapticFlow: PDE-Based Mesh Editing with Haptics," *Journal of Computer Animation and Virtual Worlds*, Vol. 15, No. 3&4, pp. 193 - 200, 2004.
- 16 Jing Hua, Guiying Xu, and Yongji Wang, "A Dynamic Matrix Control Algorithm Applied to Long Time Delay Processes," *J. of Metallurgical Industry Automation*, May 1999.

- 17 Jing Hua and Guiying Xu, "A Single-Chip Computer based Control System for Distributed Electronic Heating Systems," *J. of Computing Technology and Automation, Special Issue, October 1996*.

Peer-Reviewed Conference Papers

- 1 Manjeet Rege, Ming Dong, and Jing Hua. Graph Theoretical Framework for Simultaneously Integrating Visual and Textural Features for Efficient Web Image Clustering. In *Proceedings of the 17th International World Wide Web Conference (WWW)*, 2008 (Regular full paper).
- 2 Yanhua Chen, Manjeet Rege, Ming Dong, and Jing Hua. Incorporating User Provided Constraints into Document Clustering, In *Proceedings of IEEE Conference on Data Mining (ICDM)*, 2007 (Regular Paper).
- 3 Guangyu Zou, Jing Hua, and Ming Dong. Integrative Information Visualization of Multimodality Neuroimaging Data. In *Proceedings of the 15th Pacific Graphics Conference (PG)*, 2007.
- 4 Manjeet Rege, Ming Dong, and Jing Hua. Clustering Web Images with Multimodal Features. In *Proceedings of ACM Multimedia (ACMMM)*, 2007.
- 5 Yuanhong Li, Ming Dong, and Jing Hua. Localized Feature Selection for Clustering and Its Application in Image Grouping. In *Proceedings of International Conference on Multimedia & Expo (ICME)*, 2007.
- 6 Guangyu Zou, Jing Hua, and Otto Muzik. Non-rigid Surface Registration Using Spherical Thin-plate Splines. In *Proceedings of the 10th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, 2007.
- 7 Cui Lin, Shiyong Lu, Danqing Wu, Jing Hua, and Otto Muzik. Coclustering Based Parcellation of Human Brain Cortex Using Diffusion Tensor MRI. In *Proceedings of International Symposium on Bioinformatics Research and Applications (ISBRA)*, 2007.
- 8 Yunhao Tan, Jing Hua, and Ming Dong. Feature Curve-Guided Volume Reconstruction from 2D Images. In *Proceedings of IEEE International Symposium on Biomedical Imaging*, 2007.
- 9 Danqing Wu, Chang Liu, Guangyu Zou, Jing Hua, and Otto Muzik. Contour Mapping for Neurosurgery Outcome Evaluation. In *Proceedings of IEEE International Symposium on Biomedical Imaging*, 2007.
- 10 Yunhao Tan, Jing Hua, and Ming Dong. 3D Reconstruction from 2D Images with Hierarchical Continuous Simplicies. In *the 25th Computer Graphics International Conference*, June 2007. (The journal version included in *The Visual Computer*).
- 11 Darshan Pai, Guangyu Zou, Jing Hua, Xianfeng Gu, Ming Dong, and Otto Muzik. A Conformal and Statistical Surface Mapping Method for 3D PET Image Analysis. In *Proceedings of the Ninth International Conference on Computer Graphics and Imaging*, 2007.
- 12 Changbo Yang, Ming Dong, and Jing Hua. Region-Based Image Annotation Using Asymmetrical Support Vector Machine-Based Multiple-Instance Learning. In *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, New York, NY, 2006.
- 13 Guangyu Zou, Jing Hua, Xianfeng Gu, and Otto Muzik. An Approach for Intersubject Analysis of 3D Brain Images based on Conformal Geometry. In *Proceedings of International Conference on Image Processing*, 2006.
- 14 Chang Liu, Jing Hua, Lixin Wang, and Ruwei Dai. An Integrative Neural Network System with Feedback Control for Classification. In *Proceedings of International Joint Conference on Neural Network*, 2006.

- 15 Guangyu Zou, Yongjian Xi, Greg Heckenberg, Ye Duan, Jing Hua, and Xianfeng Gu. Integrated Modeling of PET and DTI Information based on Conformal Brain Mapping. In *Proceedings of SPIE: Medical Imaging*, Vol. 6143, 614321, 2006.
- 16 Yongjian Xi, Ye Duan, and Jing Hua. Iso-surface Extraction by Front propagation. In *Proceedings of the 13th Pacific Graphics Conference*, pp. 172 - 174, 2005.
- 17 Greg Heckenberg, Yongjian Xi, Ye Duan, Jing Hua, and Otto Muzik, "Thalamus Segmentation from MRI Images by Lagrangian Surface Flow," in *Proceedings of 27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE-EMBS05)*, 2005.
- 18 George Liang, Jing Hua, and Weiping Ren, "Volumetric Histology Data Visualization and Quantitative Analysis," in *Proceedings of 2005 NAFIPS Annual Conference on Soft Computing for Real World Applications*, June 2005.
- 19 Darshan Pai, Jiafeng Jiang, Jing Hua, Ye Duan, Otto Muzik, and Shiyong Lu, "Segmentation of Brain Structures Using PDE-Driven Dynamic Growing," in *Proceedings of 2005 NAFIPS Annual Conference on Soft Computing for Real World Applications*, June 2005.
- 20 Jing Hua, Ye Duan, and Hong Qin, "Design and Manipulation of Polygonal Models in a Haptic, Stereoscopic Virtual Environment," in *Proceedings of International Conference on Shape Modeling and Applications*, June 2005.
- 21 Jing Hua, Ying He, and Hong Qin, "Multiresolution Heterogeneous Solid Modeling and Visualization Using Trivariate Simplex Splines," in *Proceedings of the Ninth ACM Symposium on Solid Modeling and Applications*, pp. 47 – 58, Genova, Italy, June 2004. (**Best Paper Award**)
- 22 Ye Duan, Jing Hua, and Hong Qin. "Direct Sketching of 3D Shapes on Polygonal Models". In *the Proceedings of the Eighth Conference on Geometric Design and Computing*, 2004.
- 23 Ye Duan, Jing Hua, and Hong Qin, "*HapticFlow*: PDE-Based Mesh Editing with Haptics," in *the 17th International Conference on Computer Animation and Social Agents (CASA 2004)*, Geneva, Switzerland, July 7-9, 2004.
- 24 Xiaohu Guo, Jing Hua, and Hong Qin, "Point Set Surface Editing Techniques based on Level-Sets," in *Proceedings of Computer Graphics International*, pp. 52 – 59, Hersonissos, Crete, Greece, June 2004.
- 25 Jing Hua and Hong Qin, "Free-Form Deformations via Sketching and Manipulating Scalar Fields," in *Proceedings of the Eighth ACM Symposium on Solid Modeling and Applications*, pp. 328 - 333, Seattle, WA, June 2003.
- 26 Hui Xie, Jianning Wang, Jing Hua, Hong Qin, and Arie Kaufman, "Piecewise C^1 Continuous Surface Reconstruction of Noisy Point Clouds via Local Implicit Quadric Regression," in *IEEE Visualization '03 Conference Proceedings*, pp.91 - 98, Seattle, WA, October 2003.
- 27 Jing Hua, "Modeling, Manipulating, and Visualizing Continuous Volumetric Data: A Novel Spline-based Approach," in *2003 IBM Graphics and Visualization Student Symposium*, IBM TJ Watson Research Center, New York, November 2003. (Invited)
- 28 Jing Hua and Hong Qin, "Haptics-based Volumetric Modeling Using Dynamic Spline-based Implicit Functions," in *Proceedings of IEEE/ACM SIGGRAPH Symposium on Volume Visualization and Graphics (VolVis '02)*, pp. 55 - 64, Boston, MA, October 2002.
- 29 Jing Hua and Hong Qin, "Dynamic Implicit Solids with Constraints for Haptic Sculpting," in *Proceedings of International Conference on Shape Modeling and Applications (Shape Modeling International)*, pp. 119 - 128, Banff, Alberta, Canada, May 2002.

- 30 Jing Hua and Hong Qin, "Haptic Sculpting of Volumetric Implicit Functions," in *Proceedings of the Ninth Pacific Conference on Computer Graphics and Applications (Pacific Graphics)*, pp. 254 - 264, Tokyo, Japan, October 2001.
- 31 Lixin Wang, Jing Hua, and Ruwei Dai, "An Integrated Pattern Recognition System and Its Application," in *Proceedings of the Fifth International Conference on Document Analysis and Recognition*, pp. 245 - 248, Bangalore, India, September 1999.
- 32 Jing Hua, Yue Fei, and Ruwei Dai, "A System to the Analysis of Sentences based on the Syntax-Semantics Concurrent Model," in *Proceedings of International Conference on Information Processing*, pp. 258 - 263, Beijing, China, 1998.
- 33 Jing Hua, Guiying Xu, and Yongji Wang, "An Auto-Tuning PI Predictive Controller and Its Applications," In *Proceedings of National Conference on Intelligent Automation*, pp. 550 - 555, 1998.

Refereed Workshop Papers and Extended Abstracts

1. Otto Muzik, Darshan Pai, Malek Makki, Anita Dias, Jing Hua and Harry Chugani. Application of Probabilistic Fiber Tracking for the Quantitative Assessment of the Connectivity Pattern between Basal Ganglia and Frontal Cortex in Children with Tourette Syndrome. In *Proceedings of 2008 Annual Meeting of International Society for Magnetic Resonance in Medicine (ISMRM)*, 2008.
2. Otto Muzik, Darshan Pai, Csaba Juhasz, Eishi Asano, Malek Makki, Jing Hua, and Harry Chugani. Integrative Analysis of Functional, Anatomical and Electrophysiological Data in Pediatric Epilepsy. In the Epilepsy Congress, 2008.
3. Artem Chebotko, Cui Lin, Xubo Fei, Zhaoqiang Lai, Shiyong Lu, Jing Hua, and Farshad Fotouhi. VIEW: a VISual SciEntific Workflow management system. In *Proceedings of the first IEEE International Workshop on Scientific Workflows (SWF 07)*, in conjunction with the IEEE 2007 International Conference on Web Services (ICWS'07), July 9-13, 2007, Salt Lake City, Utah, USA.
4. Daniel Pandian, Ming Dong, Jing Hua, and E. Mark Haacke. Brain Tumor Detection Using Scale Invariant Feature Transform. In *Proceedings of 2007 Annual Meeting of International Society for Magnetic Resonance in Medicine (ISMRM)*, 2007.
5. Daniel T. Barkmeier, Thomas L. Beaumont, Jing Hua, Aashit Shah, and Jeffrey A. Loeb. Mapping Epileptic Borders and Activity-Dependent Molecular Markers onto Anatomic Structures in Human Epileptic Neocortex. In the 61st Annual Meeting of the American Epilepsy Society, 2007.
6. Yunhao Tan, Jing Hua, and Weiping Ren. Correlation Analysis between 3D Histology and microCT Imaging for Non-invasive Diagnosis of Osteolysis. In the Annual Joint Molecular Imaging Conference, 2007.
7. Changbo Yang, Daniel Pandian, Ming Dong, Jing Hua, and E. Mark Haacke. Automatic Tumor Detection and Recognition in 3D MR Imaging. In the Annual Joint Molecular Imaging Conference, 2007.
8. Weiping Ren, Otto Muzik, Tom Mongner, Pulak Chakraborty, Yunhao Tan, Bin Wu, and Jing Hua. Assessing Implant Wear-Induced Inflammation Using PET [11C] PK11195 Imaging in a Rat Model of Knee Joint Replacement. In the 53rd Annual Meeting of the Orthopaedic Research Society, 2007.

9. Guangyu Zou, Darshan Pai, Jing Hua, and Otto Muzik. Objective Detection of Cortical Abnormalities from Multimodality Imaging: A Statistical Approach. In the Annual Joint Molecular Imaging Conference, 2007.
10. Cui Lin, Shiyong Lu, Xuwei Liang, and Jing Hua. GCA: A Co-clustering Algorithm for Thalamo-Cortical Connectivity Analysis. *IEEE ICDM 2006 Workshop on Data Mining in Bioinformatics*, 2006.
11. Xing Peng, Weiping Ren, Bin Wu, Mao Li, Jing Hua and Paul H. Wooley. Rat Root Apical Bone Resorption Model: A New Aseptic Loosening Model. In the Annual Meeting of Society for Biomaterials, Pittsburgh, PA, April 2006.
12. Jing Hua, Hui Xie, and Hong Qin. Sketch-based Adaptive Free-Form Deformation. In the Eighth SIAM Conference on Geometric Design and Computing, Seattle, WA, November 2003.
13. Xiaohu Guo, Jing Hua, and Hong Qin. Dynamic Points: A Real-time Sculpting System on Point Set Surfaces. In the Eighth SIAM Conference on Geometric Design and Computing, Seattle, WA, November 2003.
14. Ye Duan, Jing Hua, and Hong Qin. Explicit Geometric Surface Flow for Mesh Editing. In the Eighth SIAM Conference on Geometric Design and Computing, Seattle, WA, November 2003.
15. Hui Xie, Jing Hua and Hong Qin. Optimization-driven Subdivision Surface Design. In the Eighth SIAM Conference on Geometric Design and Computing, Seattle, WA, November 2003.
16. Jing Hua and Hong Qin. Real-time Volume Sculpting System Using Implicit Functions. In the Seventh SIAM Conference on Geometric Design and Computing, pp. 30 - 31, Sacramento, CA, November 2001.

Thesis and Technical Reports

- 1 Jing Hua, "DIVE: Dynamic Inhomogeneous Volumetric Environments for Graphics and Visualization," *Ph.D. Thesis*, Computer Science, SUNY at Stony Brook, August 2004.

PROFESSIONAL PRESENTATIONS

- "Dynamic Volumetric Simplex Splines with Applications in Biomedicine", in *ACM Symposium on Solid and Physical Modeling*, 2008.
- "Visualization of Shape Evolution", *Invited talk at the Department of Electrical and Computer Engineering of the Wayne State University, April 2008.*
- "Advanced Volume Visualization of 3D Medical Data", *Invited talk at the Department of Biomedical Engineering of the Wayne State University, February 2008.*
- "Geometric Approaches for 3D Medical Image Analysis", *Invited talk at the University of Michigan at Dearborn, 2007.*
- "Novel Computational Techniques for Neuroimaging Data Modeling and Visualization", Jing Hua, *Invited talk at CLAS Neuroscience DataBlitz 2006, January 2006.*
- "Design and Manipulation of Polygonal Models in a Haptic, Stereoscopic Virtual Environment," Jing Hua, Ye Duan, and Hong Qin, in *International Conference on Shape Modeling and Applications, June 2005.*
- "Visual Computing", Jing Hua, *Invited talk at University of Michigan at Dearborn, 2005.*
- "Graphics and Visualization Research for Medical Applications", Jing Hua, *Invited talk at Department of Neurological Surgery, Wayne State University, November 2004.*

- “Hierarchical Simplex Spline-based Graphical Modeling and Visualization”, Jing Hua, *Invited talk at the Computer Science Departmental Seminar, Wayne State University, October 2004.*
- “Computer Graphics and Visualization Research at Wayne State University”, Jing Hua, *Invited talk at NCSSMST STUDENT CONFERENCE, University of Michigan at Dearborn, October 2004.*
- “DIVE: Dynamic Inhomogeneous Volumetric Environments for Graphics and Visualization,” Jing Hua, *Ph.D. Dissertation Defense, SUNY at Stony Brook, June 2004.*
- “Dynamic Inhomogeneous Volumetric Environment for Graphics and Visualization,” Jing Hua, *Toyota Technological Institute, May 2004. (Invited)*
- “New Heterogeneous Volumetric Techniques for Visualization,” Jing Hua, *Guest Lecture, SUNY at Stony Brook, May 2004.*
- “DIVE: Dynamic Inhomogeneous Volumetric Environment for Graphics and Visualization,” Jing Hua, *Computer Science Department, University of Texas at Dallas, April 2004. (Invited)*
- “Dynamic Inhomogeneous Volumetric Environment for Graphics and Visualization,” Jing Hua, *Computer Science Department, George Mason University, April 2004. (Invited)*
- “DIVE: Dynamic Inhomogeneous Volumetric Environment for Graphics and Visualization,” Jing Hua, *Computer Science Department, Wayne State University, February 2004. (Invited)*
- “DIVE: Dynamic Inhomogeneous Volumetric Environments for Computer Graphics and Visualization,” Jing Hua, *Preliminary Ph.D. Thesis Proposal, Computer Science, SUNY at Stony Brook, December 2003.*
- “Modeling, Manipulating, and Visualizing Continuous Volumetric Data: A Novel Spline-based Approach,” Jing Hua, in *the 2003 IBM Graphics and Visualization Student Symposium, IBM TJ Watson Research Center, New York, November 2003. (Invited)*
- “Free-Form Deformations via Sketching and Manipulating Scalar Fields,” Jing Hua and Hong Qin, in *the Eighth ACM Symposium on Solid Modeling and Applications, Seattle, WA, June 2003.*
- “Haptics-based Volumetric Modeling Using Dynamic Spline-based Implicit Functions,” Jing Hua and Hong Qin, in *IEEE/ACM SIGGRAPH Symposium on Volume Visualization and Graphics (VolVis '02), Boston, MA, October 2002.*
- “Dynamic Implicit Models for Computer Graphics,” Jing Hua, *Ph.D. Research Proficiency Examination Report, Computer Science, SUNY at Stony Brook, September 2002.*
- “Dynamic Implicit Solids with Constraints for Haptic Sculpting,” Jing Hua and Hong Qin, in *International Conference on Shape Modeling and Applications (Shape Modeling International), Banff, Alberta, Canada, May 2002.*
- “A System to the Analysis of Sentences based on the Syntax-Semantics Concurrent Model,” Jing Hua, Yue Fei, and Ruwei Dai, in *International Conference on Information Processing, Beijing, China, 1998.*

TEACHING EXPERIENCE

Interactive Data Visualization	1/2008 – 5/2008
Wayne State University, Department of Computer Science, Detroit, Michigan, USA	
Computer Graphics II	1/2008 – 5/2008

Wayne State University, Department of Computer Science, Detroit, Michigan, USA
Computer Graphics I 8/2007 – 12/2007
Wayne State University, Department of Computer Science, Detroit, Michigan, USA
Computer Graphics II 1/2007 – 5/2007
Wayne State University, Department of Computer Science, Detroit, Michigan, USA
Advanced Visual Computing 1/2007 – 5/2007
Wayne State University, Department of Computer Science, Detroit, Michigan, USA
Computer Graphics I 8/2006 – 12/2006
Wayne State University, Department of Computer Science, Detroit, Michigan, USA
Computer Graphics II 1/2006 – 5/2006
Wayne State University, Department of Computer Science, Detroit, Michigan, USA
Computer Graphics I 8/2005 – 12/2005
Wayne State University, Department of Computer Science, Detroit, Michigan, USA
Computer Graphics II 1/2005 – 5/2005
Wayne State University, Department of Computer Science, Detroit, Michigan, USA
Computer Graphics I 8/2004 – 12/2004
Wayne State University, Department of Computer Science, Detroit, Michigan, USA
Geometric Modeling and Physical Simulation (Seminar Coordinator) 1/2001 - 1/2002
SUNY at Stony Brook, Department of Computer Science, Stony Brook, New York, USA
Foundations of Computer Science (Teaching Assistant) 9/1999 - 5/2001
SUNY at Stony Brook, Department of Computer Science, Stony Brook, New York, USA

AWARDS AND HONORS

- Marquis Who's Who, 2008
- Wayne State University Faculty Research Award, 2005
- Best Paper Award from ACM Symposium on Solid Modeling and Applications, 2004
- Outstanding Teaching Assistant Award, SUNY at Stony Brook, 2001
- Outstanding Teaching Assistant Award, SUNY at Stony Brook, 2000
- Graduate Student Scholarship, SUNY at Stony Brook, 1999 ~ present
- Best Graduate Award, Institute of Automation, CAS, 1999
- "Academia Sinica Huawei Fellowship" awarded by CAS, 1998
- Honor Student Award. Institute of Automation, CAS, 1998
- "Mr. Dong Jianhua Fellowship" - Graduate School of CAS, 1997
- Best Graduate Award, HUST, 1996
- "Success Award" in the 2nd National College Student Electronics Design Contest, 1995
- "Mr. Zhao Shimei Fellowship" awarded by HUST, 1995
- "Jinling Fellowship" awarded by HUST, 1995
- Outstanding Student Scholarship, HUST, 1995
- Honor Student Award, HUST, 1995
- "Guanghua Fellowship" awarded by HUST, 1994
- Outstanding Student Scholarship, HUST, 1994
- Honor Student Award, HUST, 1994
- Outstanding Student Scholarship, HUST, 1993
- Honor Student Award, HUST, 1993

PROFESSIONAL ACTIVITIES

NSF Panelist and Reviewer
Editorial Board Member of International Journal of Technology Enhanced Learning, 2007 – present
Editorial Board Member of Scientific Journals International, 2008 - present

Session Chair of ICME 2007
Program Committee Member of SMI 2008
Program Committee Member of IEEE HAVE 2007
Program Committee Member of CAD/Graphics 2007
Program Committee Member of SWF 2007
Program Committee Member of SIBGRAPI 2007
Program Committee Member of ASM 2007
Program Committee Member of ISCAMP 2007
Program Committee Member of SIBGRAPI 2006
Program Committee Member of IEEE Volume Graphics 2005
Program Committee Member of SIBGRAPI 2005

Referee for

Journals

IEEE Transactions on Visualization and Computer Graphics
IEEE Computer Graphics & Applications
ACM Transactions on Computer
IEEE Multimedia
Journal of Computing and Information Science in Engineering
IEEE Transactions on Automation Science and Engineering
Springer Virtual Reality Journal
International Journal of Computational Geometry & Applications
Computer-Aided Design
Pattern Analysis & Applications

Conferences

ACM Symposium on Solid Modeling and Applications
IEEE Visualization
IEEE Virtual Reality
Eurographics Workshop on Computer Animation and Simulation
ASME International Design Engineering Technical Conferences
Pacific Graphics
IEEE Computer Animation
IEEE Volume Graphics
SIBGRAPI
Eurographics

Memberships: IEEE and ACM

UNIVERSITY SERVICES

Michael Conrad Award Committee Member, 2005
Scholarship Awards Committee Member, 2005 – 2006.
Social Committee Member, 2005 – present
Computer Science Department Graduate Committee Member, 2006 – present
Undergraduate Honor Advisor, 2006 – present

CURRENT PH.D. ADVISEES:

Guangyu Zou (class of 2005),
Chang Liu (class of 2005),

Yunhao Tan (class of 2005),
Darshan Pai (class of 2005),
Jiaxi Hu (class of 2006),
Zhaoqiang Lai (class of 2006),
Vahid Taimouri (class of 2007)

CURRENT M.S. ADVISEES:

Vishal Mitesh Shah

GRADUATED MASTER STUDENTS:

Xuwei Liang, M.S., "Visual Analytics in Diffusion Tensor Imaging," 2006. (U Kentucky)
Danqing Wu, M.S., "Constrained Conformal Surface Mapping and Registration," 2007.
(Autodesk, Inc.)
Neha Chandila, M.S., "Constraint Based Region Growing with Local Shape Fitting," 2007.
()

DIRECTED UNDERGRADUATE PROJECTS:

Martin Alther, "Virtual Prototype Modeling and Simulation of a Real-World Environment",
2007.
Gus Nassar, "Algorithms for Dynamic Rainbow Effect Removal in Video", 2005.