

Jiaze Wu

Ph.D, Quantitative Image Processing Group (QIPG), Singapore Bioimaging Consortium (SBIC)

E-Mail: wu_jiaze@sbic.a-star.edu.sg Mobile: (65) 97416069 Office: (65) 64788411

Home page: jiaze-wu.weebly.com

Research Interests

At present, I am focused on medical imaging research and development, such as image registration, geometric modeling, respiratory motion modeling, medical data visualization, and so on. In addition, I am also involved in physically-based modeling, realistic rendering, and real-time rendering in computer graphics

Education

2005/09 - 2011/07 University of Chinese Academy of Sciences Ph. D Computer Applied Technology

2001/09 - 2005/07 Nankai University B.E. Computer Science and Technology

Awards and Scholarships

2010/09 - 2011/07 President Award of Excellence in CAS, **once**; Excellent Graduate in GUCAS, **once**

2005/09 - 2010/07 Paragon of Tri-Ace Students in GUCAS, **once**; Tri-Ace Students in GUCAS, **twice**; Scholarship of GUCAS, **thrice**

2005/07 Excellent Graduate of Nankai University, **one**

2001/09 - 2005/07 Excellent Student of Nankai University, **twice**

Work Experiences

2012/09 - present Research Fellow, Singapore Bioimaging Consortium (SBIC), Agency for Science, Technology and Research (ASTAR)

2011/07 - 2012/08 Assistant Professor, Institute of Software of Chinese Academy of Sciences (ISCAS)

Project Experiences

2013 - Now Multimodal Image Fusion With Biomechanical Soft Tissue Models For Image Guided Robotic Interventions (ASTAR JCO Project Grant), SBIC, Singapore

Duty As lead investigator, responsible for developing surface-based image registration algorithms to align a 3D mesh segmented from MR images to another 3D mesh segmented from 3D TRUS images

2009/08 - 2010/09 Application of Simulation System for Space Probing (National High-tech R&D Program of China - 863 Program), ISCAS, China

Duty As team leader, responsible for designing and developing the simulated-image synthesis subsystem for space probing camera and task planning subsystem

2008/08 - 2009/08 Development for Key Simulation Functions for Space Probing (National High-tech R&D Program of China - 863 Program), ISCAS, China

Duty As team leader, responsible for designing and developing a realistic synthesis subsystem for CCD camera

2008/08 - 2009/08 A Simulation System for Demonstration of Space Probing Task (National High-tech R&D Program of China - 863 Program), ISCAS, China

Duty As team leader, responsible for designing and developing the scenario subsystem, running control subsystem and resource management subsystem

2007/03 - 2007/05 A Demonstration Platform for Satellite Simulation (Knowledge Innovation Project of Chinese Academy of Sciences), ISCAS, China

Duty As key developer, responsible for designing and developing a simulation subsystem for satellite-earth data transportation

Publications

- Journal Papers
- [1] Jiaze Wu, Cheng Li, Su Huang, Feng Liu, Bien Soo Tan, London Lucien Ooi, Haoyong Yu, Jimin Liu, Fast and Robust Extraction of Surrogate Respiratory Signal from Intra-operative Liver Ultrasound Images, International Journal of Computer Assisted Radiology and Surgery (SCI), 2013, DOI: 10.1007/s11548-013-0902-y;
 - [2] Jiaze Wu, Changwen Zheng, Xiaohui Hu, Fanjiang Xu, Rendering Realistic Spectral Bokeh Effect due to Lens Stops and Aberrations, The Visual Computer (SCI), 2013, 29(1): 41-52 ;
 - [3] Jiaze Wu, Changwen Zheng, Xiaohui Hu, Yang Wang, Liqiang Zhang, Realistic Rendering of Bokeh Effect Based on Optical Aberrations, The Visual Computer(SCI), 2010, 26(6): 555-563;
 - [4] Zhijian Huang, Jinfang Zhang, Jiaze Wu, Fanjiang Xu, Adaptive Scale Smoothing for Road Redundancy Region Elimination, Optical Engineering (SCI), 2012, 51(6): 066201-6;

[5] Xiaodan Liu, Jiaze Wu, Changwen Zheng, Parallel KD-Based Adaptive Rendering and Reconstruction, The Visual Computer (SCI), 2012, 28(6-8): 613-623;

Conference Papers

[1] Jiaze Wu, Yanling Chi, Cheng Li, Bien Soo Tan, London Lucien Ooi, Jimin Liu, Automatic and Real-time Identification of Breathing Pattern from Ultrasound Liver Images, MIAR'2013, 2013, 27-34;

[2] Jiaze Wu, Cheng Li, Su Huang, Feng Liu, Bien Soo Tan, London Lucien Ooi, Haoyong Yu, Jimin Liu, A Fast and Robust Method to Extract Respiratory Motion from Liver Ultrasound Images, CARS'2013, 2013, S60-S61;

[3] Jiaze Wu, Changwen Zheng, Xiaohui Hu, Chao Li, An Accurate and Practical Camera Lens Model for Rendering Realistic Lens Effects, CAD/CG' 2011 (EI), 2011, 63-70;

[4] Jiaze Wu, Changwen Zheng, Xiaohui Hu, Fanjiang Xu, Realistic Simulation of Peripheral Vision Using An Aspherical Eye Model, Eurographics 2011 short paper, 2011,37-40;

[5] Jiaze Wu, Changwen Zheng, Xiaohui Hu, Fanjiang Xu, Lens Dispersion Simulation Using Dispersive Lens Model and Spectral Rendering Method, SIGGRAPH ASIA 2010 Posters (EI), 2010;

[6] Chao Li, Changwen Zheng, Jiaze Wu, Liqiang Zhang, A Fast Algorithm of Simulating Star Map for Star Sensor, International Conference on Computer and Network Technology (EI), 2011, 396-399;

Patents

[1] Jiaze Wu, Changwen Zheng, Xiaohui Hu, An Approach for Generating Bokeh Effect in the Image, Chinese National Invention Patent, No: 201010279057.1, 2010;

[2] Jiaze Wu, Changwen Zheng, An Approach for Generating Lens Dispersion Effect, Chinese National Invention Patent, No: 201010562530.7, 2010;

[3] Changwen Zheng, Chao Li, Jiaze Wu, A GPU-Based Algorithm for Star Catalogue, Chinese National Invention Patent, No: 201110164348.0, 2011.

Professional Skills

Dev Language	Proficient in C/C++, Java and OpenCL, strong OO design skills and good coding manner
Dev Tool	Master in Visual Studio and Eclipse
Image Processing	ITK, Matlab and CImg
Graphics	OpenGL, OSG, CUDA and OptiX
Paper Typesetting	Endnote, Mendeley, JabRef, LaTeX and Word

English Skills

CET-6 Certificated in 2004, proficient both in writing and speaking