GUO, Yu update: 06/06/2016

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Irvine, CA, US

Sept. 2016 – present

CURRENT POSITION

University of California, Irvine (UCI)

Ph.D Student in Computer Science

Advisor: ZHAO Shuang Interests: Computer Graphics

EDUCATION

University of Chinese Academy of Sciences (UCAS)

Beijing & Shenzhen, China Sept. 2010 – Jul. 2013

M.S. in Computer Science

Thesis: GPU-based Soft Body Deformation with Nonlinear Finite Element Method.

Advisor: HENG Pheng-Ann (CUHK)

Major courses: Combinatorial Mathematics; Matrix Analysis; Stochastic Process; Computer Aided

Geometric Design; Computer Graphics; Computer Vision; Visualization.

Central South University (CSU)

Changsha, China

B.S. in Mathematics and Applied Mathematics

Sept. 2006 - Jul. 2010

Thesis: Forces Distribution with Fractal Theory in High Velocity Compaction Technology.

Major courses: Mathematical Analysis; Linear Algebra; Spatial and Analytical Geometry; Real Analysis & Functional Analysis; Modern Algebra; Topology; Partial Differential Equation; Optimal Theory.

Publications

Derric Eng, Belle Yick, **Yu Guo**, Hong Xu, Miriam Reiner, Tat-Jen Cham, Annabel Chen. "**Holistic and featural processing for 2D and 3D face recognition**". The 11th Asia-Pacific Conference on Vision (APCV 2015), Singapore, July 10-12, 2015

Ping Liu, Lin Shi, Defeng Wang, Yu Guo, Jianying Li, Jing Qin, Pheng-Ann Heng. "GPU Accelerated CBCT Reconstruction from Few Views with SART and TV Regularization". The Sixth International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI 2013), Nagoya, Japan, Sep.22-26, 2013

Jiang Guo, Jun Cheng, Jianxin Pang, Yu Guo. "Real-time Hand Detection Based on Multistage HOG-SVM Classifier". 2013 IEEE International Conference on Image Processing (ICIP 2013), Melbourne, Australia, Sep.15-18, 2013

Yu Guo, Jianying Li, Ping Liu, Qiong Wang, Jing Qin. "A GPU-Accelerated Finite Element Solver for Simulation of Soft-Body Deformation". 2013 IEEE International Conference on Information and Automation (ICIA 2013), Yinchuan, China, Aug.26-28, 2013

Yu Guo, Jing Qin. "A Survey on Simulation of Soft Tissue Deformation in Virtual Surgery" (In Chinese). Journal of Integration Technology, 2013

Yu Guo. "Fall over or Sliding down?" ACM SIGGRAPH Asia 2012, Poster, Singapore, Nov.28-Dec.1, 2012

Jianying Li, Yu Guo, Heye Zhang, Yongming Xie. "A Master-Slave Robotic Simulator Based on GPUDirect". *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2012)*, Vilamoura, Algarve, Portugal, Oct.7-12, 2012

RESEARCH EXPERIENCES

Nanyang Technological University (NTU)

Singapore

Research Associate at Institute for Media Innovation (IMI)

- Project in BeingThere Centre, (BTC-NTU & BTC-ETH) June 2014 Mar. 2016
 Major works:
 Collaborators: Tobias MARTIN (ETH Zürich), Pierre-Yves LAFFONT (ETH Zürich)
- Project in BeingThere Centre, (BTC-NTU & BTC-ETH) Oct. 2013 May 2014
 Major works: Physical-based video manipulating; Video segmentation (foreground subtraction);
 Multi-view 3D reconstruction (structure from motion); 3D pose estimation.
 Collaborators: Jean-Charles BAZIN (Disney Zürich), Tobias MARTIN (ETH Zürich), Claudia PLÜSS (ETH Zürich)
- Project in BeingThere Centre, (BTC-NTU & HSS-NTU)
 Major works: 2D and stereo face rendering.
 Collaborators: Miriam REINER (Technion), Belle Yee Ying YICK (NTU)

Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences (CAS)

Shenzhen, China

- Research project related to thesis

 Major works: Soft body deformation; Mesh simplification; Delaunay tetrahedralization; Loop subdivision; Displacement mapping using GLSL; Finite Element Analysis; CUDA implementation; 6 DOF haptic device.
- Project granted by Shenzhen government
 Aug. 2012 Feb. 2013
 Major works: Volume/Surface rendering; CT reconstruction with CUDA implemented.

Central South University (CSU)

Changsha, China

Project leader in National University Student Innovation Program.
 Sept. 2008 – Dec. 2009
 Major works: Calculation of fractal dimension; Visualization of fractal graphics; Simulation of force distribution in High Velocity Compaction.

Honours & Awards

2nd class prize in 4th ACM CSU Collegiate Programming Contest. CSU, China 2010 1st class prize in 3rd CSU Mathematical Contest in Modeling. CSU, China 2008 1st class prize in National High School Student Mathematics Competition. China 2005

USEFUL TOOLS **Programming Tools:** C/C++, CUDA, MATLAB, Python

CG & CV: OpenGL, GLSL, Meshlab, OpenCV, Visual SFM, Kinect, Faceshift

Others: Mendeley, Git, LATEX