

ZHIPING LUO

Curriculum Vitæ



Male, Single, 1986
English, Chinese
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EDUCATION

Feb. 2012 – Jan. 2016 **Ph.D in Computer Graphics**
character deformation
Utrecht University, Netherlands

Sep. 2007 – Jul. 2010 **Master in Computer Science**
image processing and pattern recognition
South China University of Technology

Sep. 2003 – Jul. 2007 **Bachelor in Computer Science**
embedded system
Nanchang university, China

COMPUTER SKILLS

C++ · C# · JAVA · Python · JavaScript
OpenCV · OpenGL · GLSL · CGAL
Matlab · Maya · Adobe After effects
Visual Studio · Eclipse · Latex · Wing IDE
Mac OS X · Windows

CERTIFICATIONS

2006 **Software Architect**, China
2008 **System Analyst**, China

TEACHING ASSISTANT

Sep. 2014 – Nov. 2014 **Game Programming**
Utrecht University

Apr. 2015 – Jul. 2015 **Three-dimensional Modeling**
Utrecht University

HOBBIES

Swimming, Hiking, Fitness

RESEARCH EXPERIENCE

FEB. 2012 – JAN 2016
Ph.D student researcher, Utrecht University, Netherlands

- smooth skinning
- virtual human modeling & simulation via Finite Element Method and Mass-Spring
- elastic deformations via rigidity energy minimization
- space deformations via domain-decomposition and radial basis functions interpolation

- hands-on: SVD, PCA, Least-squares, RBF, Bullet, Collision shapes, Ogre, C++, Python, JAVA, CGAL, OpenGL, GLSL

SEP. 2011 – JAN. 2012
Research Associate, Nanyang Technological University, Singapore

- marker-based leg motion tracking based on OpenCV
- visualized motion trajectory by OpenGL and Vtk

- hands-on: Qt, C++, OpenGL, Vtk, OpenCV

OCT. 2010 – SEP. 2011
Software Engineer, Advanced Digital Sciences Center of University of Illinois Urbana-Champaign, Singapore

- depth+RGB camera rig calibration
- real-time object cutout and background replacement in videos
- kinect-based gesture recognition

- Hands-on: C++, OpenCV, OpenMP

SEP. 2008 – DEC. 2009
Research Intern, Lab for Media Search, National University of Singapore, Singapore

- view filtering for landmark exploration from geo-tagged photos
- web-scale image retrieval benchmark construction

- Hands-on: C#, SVM, K-NN, Bundle adjustment, SIFT, Bag-of-Words, Adobe Flex, MySql

DEC. 2009 – MAR. 2010
Research Fellow, Singapore Management University, Singapore

- developed a tool for product review spam detection

- hands-on: JAVA, MySql

APR. 2010 – OCT. 2010
Software Developer, FairEX International Financial System, Singapore

- developed the front-end and data streaming engine for a forex trading system
- researched charts of stock trading

- hands-on: JAVA, web services, WebORB, Adobe Flex, Apache

PUBLICATION

- Z. Luo, R.C. Veltkamp, A. Egges.: **Volumetric Space Deformations Based on Voxels**. submitted to Journal of Visual Computer.
- Z. Luo, R.C. Veltkamp, A. Egges.: **Fast Multi-Domain Smooth Embedding for Character Deformation**. revision submitted to Journal of Computer Animation and Virtual Worlds.
- Z. Luo, R.C. Veltkamp, A. Egges.: **As-Rigid-As-Possible Character Deformation Using Point Handles**. International Symposium on Visual Computing 2015.
- Z. Luo, R.C. Veltkamp, A. Egges.: **Flexible Point Handles Metaphor for Character Deformation**. ACM Symposium on Virtual Reality Software and Technology 2015.
- Z. Luo, R.C. Veltkamp, A. Egges.: **Volumetric Surface Deformation with Auxiliary Voxel Grids**. Computer Graphics International 2015.
- Z. Luo, R.C. Veltkamp, A. Egges.: **Space Deformation for Character Deformation using Multi-Domain Smooth Embedding**. Computer Animation and Social Agents 2015.
- Z. Luo, N. Pronost, A. Egges.: **Physics-based Human Neck Simulation**. Virtual Reality Interactions and Physical Simulations 2013.
- Z. Luo, H. Li, J. Tang, R. Hong, TS. Chua.: **ViewFocus: explore places of interests on Google maps using photos with view direction filtering**. ACM Multimedia 2009.
- Z. Luo, H. Li, J. Tang, R. Hong, TS. Chua.: **Estimating poses of world's photos with geographic metadata**. Advances in Multimedia Modeling 2010.
- Z. Luo, X. Zhang.: **A Semi-Supervised Learning Based Relevance Feedback Algorithm in Content-Based Image Retrieval**. Chinese Conference on Pattern Recognition, 2008.
- J. Lu, VA. Nguyen, Z. Niu, B. Singh, Z. Luo, MN. Do.: **CuteChat: a lightweight tele-immersive video chat system**. ACM Multimedia 2011.
- TS. Chua, J. Tang, R. Hong, H. Li, Z. Luo, Y. Zheng.: **NUS-WIDE: a real-world web image database from National University of Singapore**. ACM International Conference on Image and Video Retrieval 2009.
- R. Hong, J. Tang, ZJ. Zha, Z. Luo, TS. Chua.: **Mediapedia: Mining web knowledge to construct multimedia encyclopedia**. Advances in Multimedia Modeling 2010.
- Y Wu, M Wang, G Li, Z Luo, TS Chua, X Liu.: **VDictionary: automatically generate visual dictionary via wikimedias**. Advances in Multimedia Modeling 2010.
- RH. Li; Z. Luo; G. Han.: **Pseudo-inverse Locality Preserving Projections**. Computational Intelligence and Security 2009.

PRESENTATION

- "As-Rigid-As-Possible Character Deformation Using Point Handles", 11th International Symposium on Visual Computing (ISVC'15), Las Vegas, Nevada, December 14, 2015.
- "Flexible Point Handles Metaphor for Character Deformation", ACM Symposium on Virtual Reality Software and Technology (VRST'15), Beijing, November 13th, 2015.
- "Volumetric Surface Deformation with Auxiliary Voxel Grids", Computer Graphics International (CGI'15), Strasbourg, France, June 25, 2015.
- "Space Deformation for Character Deformation using Multi-Domain Smooth Embedding", Computer Animation and Social Agents, Singapore (CASA'15), May 13, 2015.
- "Physics-based Human Neck Simulation", 10th Workshop on Virtual Reality Interaction and Physical Simulation, INRIA Lille, November 28, 2013.
- "Real-time Human Neck Animation Using Simulated Blendshapes", GRIS Kolloquium, TU Darmstadt, 10-Oct-2013.
- "ViewFocus: explore places of interests on Google maps using photos with view direction filtering", ACM Multimedia Conference (MM'09), Beijing, Oct, 2009.