Dr. Weidong GENG
State Key Lab of CAD&CG, College of Computer Science
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Research Areas/Interests:
Motion captured animation
Motion editing, synthesis and choreography
Computer Assisted Cartoon Animation
Non-photorealistic Computer Graphics
Game development and digital entertainment
Shoe CAD system

Education:

1992- 1995	Zhejiang University, Hangzhou, China
	Ph.D. Computer Science and Engineering
1989-1992	National University of Defence Technology, Changsha, China
	M.Eng. Computer Science and Engineering
1985-1989	Nanjing University, Nanjing, China
	B.Sc. Computer Science

Experience:

Jan 2003-present: *Professor, Deputy Director of State Key Lab of CAD&CG, Head of Digital Media Technology Department, College of Computer Science, Zhejiang University, PR China*

* Project head, “motion editing and synthesis toolkit for 3D animation”, the Key project from Zhejiang Prpvince;
* Principal Investigator, “Construction of game development platform”, the key project from Information Industry Ministry of Central Goverbment;
*Project head, “Novel approaches to cartoon animation”, National Science Foundation of China.

Jan 2002-December 2002: *Visiting Professor, Multimedia Innovation Centre, The Hongkong Polytechnic University, Hong Kong*

*As principal investigator, participated in Kungfu motion synthesis project: Aiming at character animation and video game development, we are building up a platform including database of Chinese Kungfu motion based on Motion Capture system and knowledgebase of Wushu. The major goal of this project is to develop a set of tools that can automatically/semi-automatically generate new Kungfu motions. The technical approach will be knowledge-guided Kungfu-motion creation from captured ones.

March 2000 - Jan 2002:

Research Scientist of Fraunhofer Institute for Media Communication, Germany

* Participated in the EU Project—SoNG (Portals of Next Generation). My major task in this project is to investigate the 3D interaction technology in multi-user environment, and develop a prototype system for e-commerce scenario, which is based on the MPEG-4 platform.

* Participated in the EU SAFIRA (Supporting Affective Interaction for Realtime Application) Project. My task in this project is to explore the affective rendering driven by emotions, and develop its related toolkit in Java platform.

October 1997-March 2000:

Associate Professor, Department of Computer Science & Engineering, Zhejiang University, PR China

*Responsible for a Chinese National Science Foundation project(Project head, 1999-2002), Understanding Engineering Draws by Combining Visual Cognition.

* Responsible for a Chinese National Science Foundation project entitled: intelligent expressive rendering for CAD systems (Project head, 1997-1999).

* Responsible for a cooperative project with EastCom— applying voice-recognition in telephone applications, and developing relevant prototype-products.

* As principal investigator, participated in the project on virtual simulation of touring and architecture planning for city scene (1997-1999).

* As principal investigator, participated in a project on data fusion for wireless communication sensors (1997-1999), which includes recognition of wireless communication platforms, computer supported decision–making and prediction of the result in simulation of electronic war.

July 1995-October 1997:

Assistant Professor, Department of Computer Science & Engineering, Zhejiang University, PR China

* Supervised a group for developing Graphics Software Package of C

and ADA, which includes a module of solid modeling and a module of implementing computer graphics standard ---GKS-3D.

* Participated in a project on imagery-based design cognition, including design-thinking models for intelligent computing and image-based knowledge representation scheme.

Publication:

Recently authored/co-authored more than 50 papers on Multimedia, CG/CAD and Digital Entertainment. The newly published papers are listed below:

MotionMaster: Authoring and Choreographing Kung-fu Motions by Sketch Drawings,ACM SIGGRAPH / Eurographics Symposium on Computer Animation 2006 pp. 233-241

Mocap data editing via movement notations, The ninth international conference on Computer Aided Design and Computer Graphics, 2005. Hong Kong

Motion retrieval based on movement notation language,Computer Animation and Virtual Worlds Volume 16 , Issue 3-4 (July 2005) ,CASA 2005 273 - 282 ,2005,ISSN:1546-4261

Step/stance planning and hit-point repositioning in martial arts choreography. Proceedings of 17th International Conference on Computer Animation & Social Agents, 2004, pp. 95-102

"Perceptual User Interface for Virtual Shopping Environment," The international journal of image and graphics, Volume 3, No2, April 2003, pp 365-377

Reuse of motion capture data in animation: a review. In Lecture notes in computer science 2669 (2003), pp. 620–629.

"Design of Kungfu library for game development," The 2nd International Conference on Application and Development of Computer Games, Hongkong, Jan 2003, pp138-141

"Implementation of runtime motion adjustment for game development," The 2nd International Conference on Application and Development of Computer Games, Hongkong, Jan 2003, pp142-147

“Embedding Visual Cognition in 3D Reconstruction From Multi-view Engineering Drawings”, *Computer Aided Design*, 2002, 34(4), pp 321-336

"Non-photorealistic Rendering based on Regional Geometric Features".”, *Journal of Computer Aided Design and Computer Graphics*,13(5), 2001, pp391-397.

"A Survey of Silhouette Detection Algorithms for Non-Photorealistic Rendering". In Proceedings of *The Sixth International Conference for Young Computer Scientists (ICYCS'2001),* Oct 24-25, 2001, Hangzhou, China, pp1445-1447.

"Interpretation of Engineering Draws Integrated with Visual Cognition", *Journal of Computer,* 24(5), 2001, pp536-543.

"Computer-assisted Cartoon Animation Production", In Proceedings of *The Sixth International Conference for Young Computer Scientists (ICYCS'2001),* Oct 24-25, 2001, Hangzhou, China, pp1284-1287.

“Picture-based Virtual Touring”, *International Journal of Virtual Reality,* 2000, 4(3):29-34.

“Feature-based Synthesis Reasoning for Plant Modeling”, *Journal of Computer Aided Design and Computer Graphics*, 2000, 12(8): 595-600

“Representation of Generation-oriented Aesthetic Layout”, *Journal of Computer Aided Design and Computer Graphics*, 1999, 11(3): 193-195

“Nonphotorealistic Rendering Methods for Pen and Ink Illustration”, *Academic Periodical Abstracts of China*, 1999, 5(3): 392-394

“FBS-based Creative Design Model”, *Journal of Computer Aided Design and Computer Graphics*, 2000, 12(11): 824-826

“Multi-views Reconstruction Based on Cell Primitives”, Proceedings of the International Conference on Imaging Science, System, and Technology, LaS Vegas, Nevada, USA, June 26-29, 2000, pp459-465