Fangde Liu

Sex: Male Born: 08/11/1983

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Address:National Centre for Computer Animation (NCCA)

Media School, Bournemouth University

Poole, Dorset. BH12 5BB

**EDUCATION BACKGROUND**

**PhD(China Scholarship Council funded) NCCA 2008-2012**

Supervised by Prof Jianjun Zhang. Professor of NCCA, Director of Computer Animation Research Centre. Co-founder of Center for Digital Entertainment.

**Master Harbin Institute of Technology (HIT) 2006- 2008**

Supervised by Prof Dianguo Xu. Dean of the School of Electrical Engineering (EE), assistant president of HIT.

**Bachelor Harbin Institute of Technology 2002-2006**

School of Electrical Engineering and Honor School

Honor School

**Research**

**PhD Research**

Physics based adaptive Character Motion Synthesis. Developing a bionic theory for physics based character motion synthesis, which is based on Neural Motor Control Research, Passive Dynamics and Invariant Theory of Group and Topology

**Thesis and Publications**

Motor Invariant Theory and Adaptive Motion Synthesis, Thesis

Character Motion Synthesis By Qualitative Approach, CGVCVIP,2011,Rome

**Graphic Software and Programming Skills**

**Software Mastered**

Maya, Houdini, Nuke and Renderman.

**Programming Skills**

Experience C, C++, python, C# programming

Linux Programming and Windows Programming.

**Plugin Development Experience:**

Mesh based Skeleton Extraction Method

Muscle Plugin and PhysX plugin for Maya.

Bullet Plugin for Houdini

**Experience with Open Source Packages**

Bullet , PhyX and ODE Rigid body Dynamic Engine.

PhysBAM rigid and fluid dynamic Engine.

Cortex-VFX unified plugin development framework for Maya, Houdini, Renderman and Nuke.

**Other Abilities**

Numerical Methods

OpenGL Programming

Embedded Operation System

Script Compiler and Executing Engine

Hardware Design

**Related Work and Other Researchers**

**Robotics**

* **Software Engineer of ABB Robotic Department(2007)**

Developer of the MachiningPowerPac for Robotic Studio 5, the robotic machining programming platform based on CAD model.

Responsible for Path and Tool Calibration Algorithm Development

* **Control Engineer of National Key Lab of Robotics(2006)**

Developing an industry assembly pipeline for teaching purpose, funded by World Bank, and elected as Student Creative Achievement Project of Ministry of Education

Responsible logical programming of the pipeline stations and motion planning of industrial robotics,

**Embedded System**

* **Web-based Embedded Operating System for Control Application**

Developing a network based distributed operation system for embedded devices. The Smartphone Traffic Info System (2004) implemented the GIS and Traffic Guidance functions based Microsoft Smartphone and WebService platform, funded by Microsoft. Wind Farm Monitoring and Control System (2006) was based on WinCE and CAN bus, funded by Microsoft, Global Undergraduate Embedded Competition Project. The low-cost version system and new developed open source operating system is used for controlling the street lamps, became part of the green lighting project funded by Heilong Jiang Province.

* **Software Development Consultant**

Serve as the embedded software development consultant for 863 national key equipment project, the Digital Wielding Machine.

Embedded Application Software Consultant for HIT EDA (Electronics Design Association)