# Curriculum Vitae

*Xianhang Zhang*

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| Personal Information | **Address:** 1423 NE 63rd St, Seattle, WA, 98115<br>**Phone:** (206) 422 2888<br>**E-mail:** xianhang@u.washington.edu |
| Academic History | <ul><li>2006 - Present: **PhD** in Industrial Engineering<br>(Advisor: Prof. Tom Furness)<br>*University of Washington*, Seattle WA</li><li>2004 – 2005: **1st Class Honours** in Computer Science<br>(Advisor: Dr. Bernhard Hengst)<br>*University of New South Wales*, Sydney Australia</li><li>2002 – 2004: **BSc** in Computer Science<br>*University of New South Wales*, Sydney Australia</li><li>2003: Exchange Program<br>*Chinese University of Hong Kong*, Hong Kong SAR</li></ul> |
| Research Work | PhotoGuardian: We are building a novel method of access control from online photo sharing applications which rely on the ability of users to answer shared knowledge questions like "what is the name of our dog. The results of our user studies indicate that such shared knowledge are a better fit for users' desired privacy and are both easy to generate and reasonably secure.<br><br>JITC3: We developed an Augmented Reality platform for the Department of Homeland Security called the Just In Time Command, Control & Communications Centre (JITC3) that aids co-ordination and communication in a disaster situation and provides a common operating picture to all parties. Our research focus was on the visual analytics of dynamic, geographical situations and on using augmented, physical markers to manage complex data by exploiting spatial cognition.<br><br>Tabletop: I investigated how the introduction of time pressure affected how people collaborate and interact on a tabletop environment. I made the distinction between applications in which time is merely a factor for performance from ones in which the situation is dynamic and showed that users have drastically different performance in the latter case.<br><br>Honours thesis: I developed an algorithm for simultaneously localisation and mapping of an unstructured scene using a single, hand held camera. My contributions included a novel algorithm for the estimation of the 6 DOF pose of the camera that showed better tolerance to error than the current state of the |

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| | art.<br><br>Sym Transform: A computer vision platform for automatically detecting and classifying road signs from an uncalibrated video sequence using radial symmetry transform and a 2 layer neural network<br><br>Colour Classifier: Machine Learning platform for colour classification on the Sony AIBO robots<br><br>OCCES: AI Expert System to aid naive users in purchasing or upgrading their computer systems. |
| **Published**<br>Works | Full & Short Papers:<br>• X. Zhang. "Intentional Unusabilty: Supporting deniability through unorthodox design", Computer Human Interaction, 2008 **(CHI Note, To appear)**<br>• X. Zhang, M. Takatsuka. "Put that there NOW: Group Dynamics of Tabletop Interaction under Time Pressure", Proceedings of Tabletop 2007, pp. 31 - 35, 2007<br>• X. Zhang. "Pose Estimation using L-Infinity", Proceedings of the Image and Vision Computing New Zealand, pp. 596-604, 2005<br>• X. Zhang. "A method for determining the pose of a handheld webcam", Proceedings of the Third Australian Undergraduate Students' Computing Conference, pp 82 – 89, 2005<br>Posters & Workshops:<br>• D. Belcher, X. Zhang, A. Vijayakantan, T.Furness. "JITC3: Just-In-Time Augmented Reality Command & Control Center", Computer Human Interaction, 2008 **(To appear)**<br>• M. Toomim, X. Zhang. "Using Shared Knowledge Questions for Authentication and Access Control", Computer Human Interaction, 2008 **(To appear)**<br>• M. Toomim, X. Zhang. "Using Shared Knowledge for Online Photo Access Control", Proceedings of User Interface Software & Technologies extended abstracts, pp. 71 – 73, 2007 |
| Skills | • Languages: **C#** (GUI development, database), **C++** (Game programming, OO programming), **C** (systems/kernel programming), **Java**, **Perl**, **Haskell** (functional programming), **Erlang** (distributed programming)<br><br>• Toolkits: Used **OpenCV** extensively for a number of projects. Helped implement two medium sized games using **OpenGL** and the **ODE physics engine** and have experience with vector math. Worked with **OpenSceneGraph** and am proficient in the **.NET platform**. |

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