

## The Department of Computer Science

### Stefan Marks

"After finishing my master's degree in Computer-Human Interaction in Germany in September 2005, I wanted to combine my dream of going to New Zealand with my pursuit of a career in academia. So I searched the staff list of the University of Auckland for a supervisor candidate and found somebody who matched my interests - computer graphics, game engines, simulation, and virtual reality.

I wrote an email asking about the possibility of doing a PhD and was then granted a three-year doctoral scholarship by the Department of Computer Science. In February 2007, my wife and I moved to New Zealand, quickly settled down and I started my PhD studies.

My original PhD topic of 'Using Game Engines for Surgical Simulation' has undergone some slight changes over the last three years. Now I am working on a Virtual Environment training tool for medical students that is based on a game engine. This engine is very powerful and has flexible software that can not only deliver a highly realistic and fascinating game experience, but that can also be harnessed to allow students to collaboratively work on a team task in a virtual environment. My specific focus is on the support of nonverbal communication (e.g., facial expression, head movement) - a very important aspect especially in medical teams.

The last three years of my research have been very interesting for a number of reasons. First, with such a cross-departmental topic (Computer Science and Medicine), it is inevitable that you will learn a lot about the neighbouring disciplines. Secondly, the University strongly supports the integration of students into the everyday life at University. Especially helpful for me was the doctoral morning tea, a monthly meeting of PhD students, where you quickly learn that you are not the only one with your problem, your question, your deadline, your financial situation, etc. Thirdly, as PhD student, you automatically develop a great toolset of invaluable skills, among them time management, self-discipline, self-motivation.

PhD research is a highly demanding, but also highly rewarding experience. If I could go back in time, my decision to do a PhD would not change."

