STEPHEN THOMAS

PERSONAL INFORMATION

- Location: Auckland, New Zealand
- Email: s.thomas@auckland.ac.nz

ACADEMIC BACKGROUND

2008 - *Doctor of Philosophy (Electrical and Electronic)*
The University of Auckland Auckland, New Zealand

2006 – 2008 *European Master of Science (Computer Vision and Robotics)*
Heriot Watt University Edinburgh, Scotland
Universitat de Girona Girona, Spain
Universite de Bourgogne Le Creusot, France
First Class with distinction (A grade average, ranked 1st)

2002 – 2005 Bachelor of Engineering (Computer Systems)
The University of Auckland Auckland, New Zealand
First Class with distinction (A+ grade average, ranked 1st)

1997 – 2001 Secondary Education
Massey High School Auckland, New Zealand
New Zealand Bursaries (A Bursary, overall score of 399)

Project/Dissertation Titles:

- An unmanned aerial vehicle for low-altitude remote sensing
- Real-time stereo-vision simulataneous localisation and mapping
- Implementation and performance analysis of a chaos-based multi-user communication system in DSP technology
- Digital holography for 3D reconstruction of transparent objects
- Execution monitors for embedded systems security

Teaching and Service:

- Mentor at The University of Auckland
- Tutor for undergraduate engineering laboratories and tutorials

SCHOLARSHIPS AND AWARDS

- The University of Auckland Doctoral Scholarship - 2008
- ERASUMS MUNDUS European Masters Scholarship – 2006

- Senior Prize in Computer Systems Engineering – 2004
- IEE Prize in Computer Systems Engineering – 2004
- Maurice Paykel Undergraduate Scholarship – 2004
- Waitakere Licensing Trust Scholarship – 2002
- ASB Bank Scholarship - 2002

PROFESSIONAL EXPERIENCE

The University of Auckland
Date: April 2006 - September 2006
Position/Title: Researcher and Tutor
Responsibilities:
Conducting research on the application of formal verfication and validation methods to security in real-time embedded systems. In addition, the position involved producing and supervising undergraduate laboratories and tutorials.

Compac Sorting Equipment
Date: November 2005 – April 2006
Position/Title: Vision Systems R&D Engineer
Responsibilities:
Developing improvements to the exisiting 'inVision' system which grades and sorts fruit based on precision weighing, optical sizing and colour and blemish assessment. The software I developed extended the current system by using the images acquired of the rotating fruit to create a 3D model. Constructing a 3D model of each fruit enables more accurate mapping and tracking of surface features, improved classification of blemishes, and more accurate macro-fruit measurement. I worked on this project autonomously and developed valuable computer vision, problem solving and programming knowledge and skills.

Fisher & Paykel Appliances
Date: November 2004 - February 2005
Position/Title: Product Development Engineer (undergraduate)
Responsibilities:
As a member of the product development team I was assigned a number of different projects including: debugging/testing embedded software for intelligent interfaces, developing an application to remotely control and monitor a climate chamber and data logging equipment, developing PDA applications for servicing of refrigerator controllers, designing and constructing motor testing equipment for the production line, constructing and testing prototypes.

EXTRACURRICULAR ACTIVITIES

- Involved in many sports both competitively and socially including soccer, squash, sailing, surfing, tramping and kayaking