

# Huy Tho Ho

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RESEARCH INTERESTS      

- Computer Vision and Image Processing
- Statistical Pattern Recognition
- Computer Graphics

EDUCATION      **University of Maryland at College Park**, Maryland, USA  
*Department of Electrical and Computer Engineering*  
**Ph.D. Candidate** (August 2009 - Present)

- Advisor: Prof. Rama Chellappa

**University of Adelaide**, Adelaide, South Australia, Australia  
*School of Electrical and Electronic Engineering*  
**Master of Applied Science** (March 2008 - July 2009)

- Master Thesis: “3D Surface Matching from Range Images using Multiscale Local Features”.
- Advisors: Dr. Danny Gibbins and Prof. Doug Gray

**Bachelor of Computer Engineering with 1st Class Honours** (July 2003 - July 2007)

- Honours Thesis: “Object Recognition using Template Matching”.
- Advisor: Dr. Danny Gibbins

HONOURS AND AWARDS      

- Distinguished Graduate Fellowship from the Clark School of Engineering, UMCP, 2009-2010
- DICTA2008 Best Student Paper Award
- CVPR2008 Student Volunteer and Student Travel Grant
- Master by Research Scholarship from the University of Adelaide, 2008-2009
- CISRA High Quality Colour Imaging Prize at DICTA2007
- VisHCI2007 Student Award
- IEEE South Australia Student Travel Award, 2007
- Summer Research Scholarship at the Australian National University, 2006-2007
- Dean’s Merit Certificate for Outstanding Academic Achievement, 2006
- Adelaide Achiever International Scholarship for Undergraduate Study, 2003-2007

ACADEMIC EXPERIENCE      *Graduate Research Assistant*      August 2009 - Present  
Center for Automation Research (CFAR), University of Maryland at College Park

- Research on face alignment and pose-invariant face recognition

*Graduate Research Assistant*      March 2008 - July 2009  
Sensor Signal Processing Group (SSP), University of Adelaide

- Performed research on 3D object recognition techniques and terrain reconstruction using LADAR data
- Developed a feature extraction framework for 3D surfaces and point clouds using local surface curvature

*Graduate Teaching Assistant*      July 2008 - November 2008  
School of EEE, University of Adelaide

- ELEC ENG 7060: Image Sensors and Processing

*Visiting Student* August 2007 - January 2008  
Research School of Information Sciences and Engineering (RSISE), Australian National University

- Developed a framework for estimating the optical flows of image sequences using the Fourier-Mellin Transform (FMT)
- Supervisor: Dr. Roland Goecke

*Undergraduate Research Assistant* February 2007 - July 2007  
Sensor Signal Processing Group (SSP), University of Adelaide

- Performed research on localization algorithms using ultrasonic sensors
- Supervisor: Prof. Doug Gray.

*Summer Research Scholar* November 2006 - January 2007  
Research School of Information Sciences and Engineering (RSISE), Australian National University

- Developed a framework for image completion using Markov Random Fields and Belief Propagation
- Supervisor: Dr. Roland Goecke

## PUBLICATIONS

### Journals

- H.T. Ho and D. Gibbins, "A Curvature Based Approach for Multi-scale Feature Extraction from 3D Meshes and Unstructured Point Clouds", *IET Computer Vision Journal*, Dec 2009 (*Special Issue on DICTA 2008*)

### Refereed Conferences

- H.T. Ho and D. Gibbins, "Multi-scale Feature Extraction for 3D Surface Registration using Local Shape Variation", *Proceedings of Image and Vision Computing New Zealand (IVCNZ)*, Christchurch, New Zealand, 26-28 November 2008
- H.T. Ho and D. Gibbins, "Multi-scale Feature Extraction for 3D Models using Local Surface Curvature", *Proceedings of Digital Image Computing: Techniques and Applications (DICTA)*, Canberra (ACT), Australia, 1-3 December 2008. (**Best Student Paper Award**)
- H.T. Ho and R. Goecke, "Optical Flow Estimation using Fourier Mellin Transform", *Proceedings of the 2008 IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, Anchorage (AK), USA, 24-26 June 2008
- H.T. Ho and R. Goecke, "Quaternion Potential Functions for a Color Image Completion Method using Markov Random Fields", *Proceedings of Digital Image Computing: Techniques and Applications (DICTA)*, Adelaide (SA), Australia, 3-5 December 2007. (**CISRA High Quality Colour Imaging Prize**)
- H.T. Ho and R. Goecke, "Automatic Parametrisation for an Image Completion Method based on Markov Random Fields", *Proceedings of the 2007 IEEE International Conference on Image Processing (ICIP2007)*, San Antonio (TX), USA, 16-19 September 2007

## PROFESSIONAL ACTIVITIES

- Reviewer for: IEEE Transactions on Circuits and Systems for Video Technology, Pattern Recognition, IET Computer Vision, Image and Vision Computing

## COMPUTER SKILLS

- Languages: C/C++, Matlab, Python
- Operating Systems: Linux, Windows
- Software Packages: OpenCV, CGAL, VTK, Eigen

## REFERENCES

Provided upon requested