

Sakrapee (Paul) Paisitkriangkrai

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EDUCATION

2006–2010	PhD School of Computer Science & Engineering The University of New South Wales, Sydney, AUSTRALIA Thesis: Efficient and effective object detection using boosting classifier
1999–2003	Master of Engineering - Biomedical Engineering Bachelor of Engineering - Computer Engineering The University of New South Wales, Sydney, AUSTRALIA Thesis: Image Retrieval Framework for high resolution computerized tomography(HRCT) images using texture contents Achieved Distinction average results (Graduated with class 1 honours)
1997–1998	Higher School Certificate Brisbane Boys' College <ul style="list-style-type: none">Overall Position (OP) 2 (Top 2% of the state)

CAREER OBJECTIVE

My career objective is to put into practice the skills and knowledge I have learned and acquired in the hope that it will make a significant impact directly or indirectly to the larger community.

RESEARCH INTERESTS

Computer vision, pattern classification and applications of machine learning in vision

PUBLICATIONS

Journals

S. Paisitkriangkrai, C. Shen and A. van den Hengel, "Large-margin Learning of Compact Binary Image Encodings", IEEE Transactions on Image Processing (**TIP**), Accepted conditionally: Feb 2014 (Impact factor: 3.32, 2nd out of 101 by Eigenfactor in Computer Science, Artificial Intelligence by ISI).

S. Paisitkriangkrai, C. Shen and A. van den Hengel, "Asymmetric pruning for learning cascade detectors", IEEE Transactions on Multimedia (**TMM**), Accepted: June 2013 (Impact factor: 1.75)

S. Paisitkriangkrai, C. Shen and A. van den Hengel, "A scalable stage-wise approach to large-margin multi-class loss based boosting", IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**), Published online at IEEE on 21 October 2013 (Impact factor: 3.76)

S. Paisitkriangkrai, C. Shen, Q. Shi and A. van den Hengel, "RandomBoost: Simplified multi-class boosting through randomization", IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**), Published online at IEEE on 18 October 2013 (Impact factor: 3.76)

C. Shen, P. Wang, S. Paisitkriangkrai, and A. van den Hengel, "Training effective node classifiers for cascade classification", International Journal of Computer Vision (**IJVC**), 103(3): 326-347, 2013 (Impact factor: 3.62)

S. Paisitkriangkrai, C. Shen and J. Zhang, "Incremental training of a detector using online sparse eigen-decomposition" In: IEEE Transactions on Image Processing (**TIP**), 20(1):213-226, 2011(Impact factor: 3.32)

C. Shen, S. Paisitkriangkrai, and J. Zhang, "Efficiently learning a detection cascade with sparse eigenvectors", In: IEEE Transactions on Image Processing (**TIP**), 20(1):22-35, 2011(Impact factor: 3.32)

S. Paisitkriangkrai, T. Mei, J. Zhang and X.-S. Hua, "Clip-based hierarchical representation for near-duplicate video detection". Int. Journal of Computer Mathematics 88(18): 3817-3833, 2011.

S. Paisitkriangkrai, C. Shen and J. Zhang, "Fast pedestrian detection using a cascade of boosted covariance features", In IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), 2008.

S. Paisitkriangkrai, C. Shen and J. Zhang, "Performance Evaluation of Local Features in Human Classification and Detection", **IET Journal Computer Vision**, 2008.

Referred Conference Papers

S. Paisitkriangkrai, C. Shen and A. van den Hengel, "Strengthening the effectiveness of pedestrian detection with spatially pooled features", Submitted to ECCV 2014

S. Paisitkriangkrai, C. Shen and A. van den Hengel, "Efficient pedestrian detection by directly optimizing the partial area under the ROC curve", in Proceedings of IEEE International Conference on Computer (**ICCV**), 2013, Sydney, Australia (This conference is ranked in the top 5% of all computer science journals and conferences)

S. Paisitkriangkrai, C. Shen and A. van den Hengel, "Sharing Features in Multi-class Boosting via Group Sparsity", in Proc. IEEE Conf. Comp. Vis. Patt. Recogn. (**CVPR**), 2012 (This conference is ranked in the top 5% of all computer science journals and conferences)

S. Paisitkriangkrai, Tao Mei, J. Zhang and Xian-Sheng Hua, "Scalable Clip-based Near-duplicate Video Detection with Ordinal Measure", ACM CIVR 2010.

S. Paisitkriangkrai, C. Shen and J. Zhang, "Face detection with effective feature extraction", in Proc. Asian Conference on Computer Vision (**ACCV**), 2010.

S. Paisitkriangkrai, C. Shen and J. Zhang, “Efficiently training a better visual detector with sparse eigenvectors”, in Proc. IEEE Conf. Comp. Vis. Patt. Recogn. (**CVPR**), Miami, Florida, June 2009.

C. Shen, S. Paisitkriangkrai and J. Zhang, “Face detection from few training examples”, In: IEEE International Conference on Image Processing (**ICIP**), San Diego, California, USA, October 2008. IEEE Press.

S. Paisitkriangkrai, C. Shen and J. Zhang, “An experimental study on pedestrian classification using local features”, In IEEE International Symposium on Circuits and Systems (**ISCAS**), Seattle, Washington, USA, May 2008. IEEE Press.

S. Paisitkriangkrai, C. Shen and J. Zhang, “An experimental evaluation of local features for pedestrian classification”, International Conference on Digital Image Computing - Techniques and Applications (**DICTA**), Adelaide, Australia, December 2007. IEEE Press. (**Best Paper Award**)

Workshop papers/Posters

J. Zhang, S. Paisitkriangkrai, C. Shen, "An overview of fast pedestrian detection: feature selection and cascade framework of boosted features", IEEE International Conference on Multimedia and Expo, 2009.

S. Paisitkriangkrai, C. Shen and J. Zhang, “Real-time Pedestrian Detection Using a Boosted Multi-layer Classifier”, The Eighth International Workshop on **Visual Surveillance**, in conjunction with **ECCV** 2008.

S. Paisitkriangkrai, C. Shen and J. Zhang, “Pedestrian detection in surveillance video”, **EII** Workshop for Video Signal Processing & Communication, 2007, Gippsland School of IT, Monash University

KEY SKILLS

- Proficiency in C/C++, Experience on both Microsoft Windows and Linux platform
- Experience in Java (Programming, Networking, Graphics using AWT/Swing, JDBC, Servlet) and application development in Object Oriented Design
- Experience in Matlab
- Experience in functional programming languages e.g. Haskell, Erlang, etc.
- Some experience in C# .NET, VB .NET, Qt framework, Java Smartcard
- SQL, PL/SQL (MySQL, PostgreSQL)

ACHIEVEMENT AND AWARDS

2008 – 2010	School of Computer Science Incentive Travel Funding
2008	Travel and accommodation support to attend Machine Learning Summer School 2008 at Kioloa Coastal Campus, Australian National University
2007	Australian Pattern Recognition Society (APRS) Best Paper Prize . Awarded by Digital Image Computing: Techniques and Applications

	(DICTA) 2007 committee for the paper "An experimental evaluation of local features for pedestrian classification".
2007	Travel and accommodation support to attend EII Workshop for Video Signal Processing & Communication
2006 – 2009	National ICT Australia (NICTA) Research Scholarship
2006 – 2009	Faculty of Engineering Supplementary Engineering Award (SEA)
2006 – 2009	Australian Postgraduate Award (APA)
1997 – 1998	The Australian Mathematics Competition Prize

WORK EXPERIENCE

AUG 2010 – PRESENT	<p>Postdoctoral Research fellow – Full time The University of Adelaide</p> <ul style="list-style-type: none"> ▪ Project: Computer vision based automated train simulation ▪ Responsibilities: Research on multi-class classification for automated train simulation. The project is a joint work between ACVT and Sydac Pty Ltd.
NOV 2009 – JAN 2010	<p>Research Intern – Full time Microsoft Research Asia, Beijing, R. P. China</p> <ul style="list-style-type: none"> ▪ Project: Near-duplicate videos detection ▪ Responsibilities: Investigated existing work and proposed a new clip-based approach. The paper based on ‘Scalable near-duplicate detection with ordinal measure’ was accepted to CIVR 2010 and Internal Journal of Computer Mathematics.
DEC 2008 – JAN 2009	<p>Software Developer – Part time Pakgon Co. Ltd., Bangkok, Thailand</p> <ul style="list-style-type: none"> ▪ Project: smartcard/proximity card ▪ Responsibilities: Implemented Java-based software to be run on smart cards (Java card 3.0 specification) and developed the software framework for PC (PC/SC specification).
DEC 2007 – JAN 2008	<p>Software Developer – Part time Pakgon Co. Ltd., Bangkok, Thailand</p> <ul style="list-style-type: none"> ▪ Project: Secure file transfer encryption ▪ Responsibilities: Developed program using latest symmetric and asymmetric algorithms to replace the current weak encryption system.
2004 – 2005	<p>Software Developer – Full Time Iomniscient Pty. Ltd., Sydney, Australia</p> <ul style="list-style-type: none"> ▪ Project: Investigate and improve the current object tracking algorithm (especially when objects merge and split) and working on related products e.g. counting application, directional alarm, etc. ▪ Responsibilities: I helped the researchers improve the current object tracking algorithm. My work involves searching for the information, writing the literature review, implementing the program in matlab, converting the code to C++ and optimizing the final code, etc.
NOV 2001– FEB 2002	<p>Research Assistant Trainee – Full Time National Electronics and Computer Technology Center, Thailand</p>

Medical Informatics Division

- **Project:** Developing Picture Archiving and Communication Systems (PACS) used in the major hospitals.
- **Responsibilities:** I helped the researchers implemented the Graphical User Interface using Java language in object-oriented manner. The program I developed could be run as a stand alone application (using java) or through the web browser (using Netscape, Internet Explorer or Opera).

1998 – 2002

Private Tutor

- **Responsibilities:** I helped and guided high-school students in their maths homework, motivated them to perform to higher standards and helped them prepare for their HSC exam.

PROFESSIONAL MEMBERSHIPS

2007 –2011 Student member of IEEE
 2012 – PRESENT Member of IEEE

Program Committee: ACCV 2014

Reviewer for Journals: Pattern Recognition, IEEE TKDE, IEEE TIP, IEEE Systems, Man and Cybernetics Part B (IEEE TSMCB), IEEE TCSVT, Multimedia Systems, Image and Vision Computing Journal, Neurocomputing.

Reviewer for Conferences: ACCV 2014, ACCV 2012, ICVNZ 2012, CBMI 2011, DICTA 2010, ICIP 2010, CIVR 2010

REFEREES

A/Prof. Chunhua Shen	School of Computer Science The Australian Centre for Visual Technology (ACVT) The University of Adelaide Ph: +61 477 323 654 Email: chunhua.shen@adelaide.edu.au
A/Prof. Jian Zhang	School of Computer Science and Engineering The University of Technology Sydney Ph: +61 2 9514 3829 Email: jian.zhang@uts.edu.au
Dr. Tao Mei	Relationship: PhD Thesis Supervisor Microsoft Research Asia Ph: +86 10 5917 3036 Email: tmei@microsoft.com Relationship: Internship Mentor

PERSONAL INFORMATION

Marital Status: Single
 Languages: **English** (fluent oral and written)/**Thai** (fluent oral and written)
 Citizenship: Australian