EXTERNAL EXAMINER for Interactive Software Technology

Dr. Yap Moi Hoon
BSc(Hons) MSc PhD MBCS MIEEE FACSCoder FHEA

Profile

An experienced research scientist and lecturer for Higher Education with transferable skills, knowledge and capabilities applicable to research, teaching and administration. A hard-working, adaptable self-starter, with the ability to work confidently and pro-actively under pressure to tight deadlines. Able to develop and gain support as well as confidently speak to and influence people at many levels.

Skills

Managing students – mentoring, guidance, imparting advice, and cultivate active learning
Communications at all levels – verbal, presentation and written
High degree of technical competency
Ability in developing wide range of course modules in information technology
Developing websites (example: www.rsc-em.ac.uk)
Preparing proposals for funding application
Ability to remain neutral and independent and quickly establish strong, effective relationships in challenging situations
Handling projects from conception, co-ordinating development, delivery and closure

Handling cross-disciplinary projects (working with psychologists, radiologists, engineers, and computer scientists)

Projects

Facial Analysis for Real Time Profiling (April 2009 – current): funded by EPSRC
To combine and build on several research areas to develop a real-time dynamic passive profiling technique to assist the United Kingdom Border Agency (UKBA) as a decision aid.
Interviewer Software (January 2011 – current): Industrial project
To develop a prototype to analyse the facial behavioural of an interviewee and to provide useful feedback to improve his/her performance during interview.

Towards the Development of an Efficient Integrated 3D Face Recognition System (Sep 2009 – current): An efficient integrated 3D face recognition system based on curvature analysis, gender classification, and facial expressions.
Development of a 3D User Interface for Intelligent Data Browsing (March 2011 – Current): collaboration project with UK industrial partner, Imagination Technologies
To develop a new hierarchical method of browsing data resources which intelligently combines the search results into a meaningful sequence of text, images, videos, and 3D content, in order to provide a high level overview of the content.
Hair Analysis Application (March 2010 – May 2010): collaboration project with UK industrial partner, Croda
Developed a system to analyse the characteristic, behaviour, and movement of the hair.
Generic Infrastructures for Medical Informatics (GIMI) (December 2006 – March 2009)**:** funded by TSB
Worked on a TSB funded 2-years project entitled: —Mammography Auditing and Intelligent Training Environmentll. This was a joint project with Oxford University and University College London.
Enhanced Algorithms for Lesion Detection & Recognition in Ultrasound Breast Images (October 2005 – December 2008): PhD project funded by the Department of Computer Science, Loughborough University. Enhanced the image processing algorithms in an existing CAD system and investigated the effects of computer vision to human performance.
PERFORMS Digital Imaging Group (December 2007 – March 2009): funded by NHS Breast Screening Programme
Technical advisor in digital aspects of PERFORMS.
East Midlands Regional Support Centre website http://www.rsc-em.ac.uk (November 2005 – June 2007): developed and maintained the website.
Master project - E-learning: Web-based application to make learning easy
Image-based Ultrasound Breast Cancer Detection (June 2002 – December 2003)**:** funded by Multimedia University
This project was funded by Multimedia University Internal funding. The project involved collaboration with University Hospital (Malaysia), I was the main investigator.

Intelligent Multimedia Convocation System (2002): Multimedia University (MMU) graduation system.

Employment History

Sept 2014 – Present: Senior Lecturer, Manchester Metropolitan University

Nov 2011 – September 2014: Lecturer, Manchester Metropolitan University

April '09 – Oct 2011: Postdoctoral Research Assistant; University of Bradford, Bradford

- Research project: Facial Analysis for Real-time Profiling
- Proposals writing for project funding applications
- Delivering lectures and tutorials
- Supervising and mentoring PhD students
- Participating and presented at national and international conferences and meetings
- University invigilator

Dec '06 – March '09: Research Associate; Loughborough University, Loughborough

- Research project: Generic Infrastructure for Medical Informatics (GIMI)
- Assisted in proposal writing for project funding application
- Delivered tutorials
- University invigilator
- Supervised and mentored Master students
- Participated and presented at national and international conferences and meetings

March '01 – Sep '05: Lecturer; Multimedia University, Malaysia

- Developed new modules for undergraduates
- Delivered lectures and tutorials

- Supervised and mentored final year students
- Chairman in Staff Social Committee, member in Credit Transfer Committee and Industrial Training Committee
- Proposals writing for project funding applications
- Participated and presented at national and international conferences and meetings

June '99 – Feb '01: Lecturer; Tunku Abdul Rahman College, Malaysia

- Developed new modules for undergraduates
- Delivered lectures and tutorials
- Supervised and mentored final year students

Education Profile

2009 -2011 PGCHEP; University of Bradford, Bradford, UK

Postgraduate Certificate in Higher Education Programme.

2005 -2009 PhD Computer Science; Loughborough University, Loughborough, UK

Research Project: Enhanced Algorithms for Lesion Detection & Recognition in Ultrasound Breast Images

1999 – 2001 MSc Information Technology; University Putra Malaysia, Malaysia

CGPA: 3.773 out of 4

1996 - 1999 BSc(Hons) Statistics; University Putra Malaysia, Malaysia

2:1 with Honours; Upper Second Class

Professional Membership

Member of the British Computer Society (MBCS)
Member of IEEE (MIEEE)
Fellow of Higher Education Academy (FHEA)

Facial Action Coding System certified coder (FACS Coder)

Professional/work Training

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- Facial Action Coding System (FACS) Coder (2010)
- Winning grant proposal, Costing your grant (September 2009), University of Bradford.
- Tutorial Sessions on ―Geometric Algebra for Computer Graphics‖ and ―Real-Time individualised Virtual Humans‖, International Conference on Cyberworlds 2009.

- Professional Client Development with RCP (May 2008) Eclipse Training Alliance, Industrial TSI Holland
- Life after PACS Course (Dec 2007) The Hammersmith Hospitals NHS Trust, UK
- Covering the World of Breast Diagnosis Course (Aug 2007) Teaching course in mammography – Professor Laszlo Tabar , Sweden
- Clinical Computer Workstations – Functions and Ergonomics (April 2007)
- Movements of the Human Eye: Theories, Methods and Practical Implications (March 2007) Applied Cognitive Research Unit Tehcnische Universitat Dresden, Germany

Research Grant Application

- Assisted Professor Hassan Ugail in gathering ideas and preparing proposal for funding application (2010).
- Assisted Professor Alastair Gale (Principal Investigator) in EPSRC Grant Application (Dec 2008) Collaboration with Professor Mike Brady (Oxford), and Andrew Simpson (Oxford). Role: provide technical aspect and software development advices
- Assisted Professor Alastair Gale in funding application with Dr Phil Cook (May 2008) Role: feasibility study in software development.
- Loughborough University PhD Scholarship (2005)
- Multimedia University Internal Funding (2003): RM8,000 on the project Image-based breast cancer detection. Role: Principal investigator

Honours and Awards

- The Professor Ondrej Sykora Remembrance Prize, Loughborough University, 2008.
- The best student in Bachelor Science (hons), Statistics, Universiti Putra Malaysia (UPM), 1999.

Supervision

- PhD student: Helen Han (2009-current)
- Interviewer Software: Jamal S. Zraqou (Jan 2011 – current)
- 10 Final Year Projects supervision (1999-2005)

Computer Skills

- Extensive design and programming experience in C++, C# and Java in medical applications
- Significant experience in website design (dynamic web, content based management, html, asp, VB Scripts, Java Scripts, CSS style)
- Extensive training and application development in Technology Enhanced Learning, and Virtual Learning Environment (Blackboard)
- Competent in the use of Database: SQL, DB2, and Apache Derby.
- Detailed knowledge of Microsoft office package
- Sound knowledge in Multimedia programming, i.e. Maya and Flash

Additional Skills and Information

- Computer literate with MS Windows software; Word, PowerPoint, Outlook, basic Excel and FrontPage
- Advanced conversational and writing in Mandarin, Malay, advanced conversational Cantonese and Hokkien
- Conducted a session in a WORKSHOP at SPIE Medical Imaging 2009: ―Observer-Based Methodologies for Experiments in Medical Image Perception‖, **M.H. Yap**, H.J. Scott, A.G. Gale.
- **Program Committee** in International Conference Cyberworlds 2009
- **Program Committee** in M2USIC 2005.
- **Reviewer** for IET Computer Vision Journal.
- **Reviewer** for book entitled ―Applied Signal and Image Processing: Multidisciplinary Advancements,‖ ed. Rami Qahwaji, Roger Green and Evor Hines.
- A week **Internship** (7th – 11th December 2009) **in MIRALab** (founder: Prof Nadia-Thalmann), University of Geneva, Switzerland.

Publications

- **M.H. Yap**, E.A. Edirisinghe, H.E. Bez. ―A Novel Algorithm for Initial Lesion Detection in Ultrasound Breast Images‖, Journal of Applied Clinical Medical Physics, 9(4): 181-199, Fall 2008, ISSN: 15269914.

- **M.H. Yap**, E.A. Edirisinghe, H.E. Bez. ―Processed Images in Human Perception: A Case Study in Ultrasound Breast Imaging‖, European Journal of Radiology, Elsevier, 73(3): 682-687, 2010, ISSN 0720-048X.

- **M.H.Yap**, E.A.Edirisinghe, H.E.Bez. "Computer Aided Detection and Recognition of Lesions in Ultrasound Breast Images", International Journal of Computational Models and Algorithms in Medicine, 1(2): 53-83, 2010, ISSN: 1947-3133.

- **M.H.Yap**, H.Ugail, ―Facial Image Processing in Computer Vision‖, *Applied Signal and Image Processing: Multidisciplinary Advancements*, ed. Rami Qahwaji, Roger Green and Evor Hines, 2011, IGI Publisher.

- **M.H. Yap**, H. Ugail, R. Zwiggelaar, B. Rajoub, V. Doherty, S. Appleyard, G. Huddy, ―Facial Image Processing in Facial Analysis for Real-Time Profiling‖, IEEE International Carnahan Conference on Security Technology (ICCST 2010), 5-8 October 2010, San Jose, California, USA.

- **M.H. Yap**, H. Ugail, R. Zwiggelaar, B. Rajoub, V. Doherty, S. Appleyard, G. Huddy, ―A Short Review of Methods for Face Detection and Multifractal Analysis‖, 2009 International Conference on Cyberworlds, 7-11 September 2009, University of Bradford, UK, IEEE Computer Society. ISBN: 978-0-7695-3791-7

- A. Simpson, M. Slaymaker, **M.H. Yap**, A.G. Gale, D. Power and D. Russell. ―On the Utilisation of a service-oriented infrastructure to support radiologist training‖, CBMS 2009, The 22nd IEEE International Symposium on Computer-Based Medical Systems, 3-4 August, Albuquerque, New Mexico, USA.

- **M.H.Yap**, A.G.Gale. "Individualised grid-enabled mammographic training system", Proc. SPIE 7264, 72640V (2009) SPIE Medical Imaging Conference, 7th-12th February 2009.

- **M.H.Yap**, E.A.Edirisinghe, H.E.Bez. "A comparative study in ultrasound breast imaging classification", Proc. SPIE 7259, 72591S (2009), SPIE Medical Imaging Conference,

  7th-12th February 2009.

- **M.H.Yap**, E.A.Edirisinghe, A.G.Gale, H.E.Bez. "The Effects of Computer Processed Images in Human Performance", Radiological Society of North America (RSNA), Scientific Poster Presentation, 01 Dec 2008.

- H.J.Scott, **M.H.Yap**, A.G.Gale. "Individualised Grid-based Training and Self-assessment in Breast Screening", Radiological Society of North America (RSNA), Scientific Poster Presentation, 01 Dec 2008.

- **M.H. Yap**, A.G.Gale, H.J.Scott. ―Generic Infrastructure for Medical Informatics (GIMI): The Development of a Mammographic Training System‖, E.A. Krupinski (ed.): IWDM 2008, LNCS 5116, pp. 577-584, Springer-Verlag Berlin Heidelberg 2008.

- **M.H. Yap**, A.G.Gale. ―Grid-enabled mammographic auditing and training system‖, Proc. SPIE Vol. 6919, 69190A (Mar. 11, 2008)

- **M.H. Yap**, E.A. Edirisinghe, A.G.Gale, H.E. Bez. ―Evaluation of the Effects of Processed Images in Human Performance: A Case Study in Ultrasound Breast Imaging‖, IET The 4th Visual Information Engineering Conference, 25-27th July 2007, London, ISBN 978-0-86341-830-3.

- **M.H. Yap**, E.A. Edirisinghe, H.E. Bez. ―Fully Automatic Lesion Boundary Detection in Ultrasound Breast Images‖, SPIE Medical Imaging Conference,Proc. SPIE 6512, 65123I, 17th-22nd February,2007, San Diego, CA, US.

- **M.H. Yap**, E.A. Edirisinghe, H.E. Bez. ―Object Boundary Detection in Ultrasound Images‖, crv p.53,Third Canadian Robotics and Machine Vision Conference (CRV'06), 2006. (DOI: http://doi.ieeecomputersociety.org/10.1109/CRV.2006.51)

- **M.H. Yap**, E.A. Edirisinghe, H.E. Bez. ―Initial Lesion Detection in Ultrasound Breast Images‖, Visualization,

Imaging, and Image Processing, VIIP 2006 (28-30th Aug), pp

215-220.

- **M.H. Yap**, E.A. Edirisinghe, H.E. Bez, H.T. Ewe, —Initial Lesion Detection and Region of interest Labeling in Ultrasound Breast Images‖, International Conference on Vision Information Engineering, VIE 2006 (26-28th Sep), pp 333-338, ISBN 0 86341 671 3/9.

- **M.H. Yap**, E.A. Edirisinghe, H.T. Ewe and H.E. Bez, "Multifractal Analysis: A Novel Approach to Ultrasound Breast Imaging", Proceedings of the 12th Chinese Automation & Computing Society Conference in the UK, 12th Chinese Automation & Computing Society Conf. in the UK, Loughborough, UK, 2006, pp 150-155, ISBN 0 9533890 9 X.

- **M.H. Yap**, H.T. Ewe. —Region of Interest (ROI) detection in Ultrasound Breast Images‖. Proc. MMU International Symposium on Information and Communications Technologies (M2USIC), (2005).

- **M.H. Yap**, H.T. Ewe. (2004). Comparative Study in Breast Cancer Detection Techniques. 3rd SEACOMP and 4th AOCOMP. Kuala Lumpur. (Abstract in Australasian Phys. Eng. Sci. Med. Vol 27, No 2, 2004, pg 88).

- **M.H. Yap**, M. Bister, H.T. Ewe, —Gaussian Blurring-Deblurring for Improved Image Compression‖, Digital Image Computing, Techniques and Application (DICTA2003),10-12th Dec2003 in Macquarie University, Sydney, pp.165—174.

REFERENCES AVAILABLE ON REQUEST.