Curriculum Vitae

YUEN, Pong Chi

Professor
Department of Computer Science
Hong Kong Baptist University
Hong Kong

E-mail: pcyuen@comp.hkbu.edu.hk Tel: (852)-3411-7811 Fax: (852)-3411-7892

Educational Qualification

1993 Ph.D.

Department of Electrical and Electronic Engineering

The University of Hong Kong

1989 B.Sc. (Hons) in Electronic Engineering with First Class Honours

Department of Electronic Engineering

City Polytechnic of Hong Kong

Working Experience

7/05 – Present Professor

Department of Computer Science Hong Kong Baptist University

Hong Kong

7/18 – Present Associate Dean

Faculty of Science

Hong Kong Baptist University

Hong Kong

10/07 – Present Honorary Professor

Sun Yat-Sen University

China

7/17 – 1/18 Visiting Professor

ETH, Zurich Switzerland

9/11 - 8/17 Head

Department of Computer Science Hong Kong Baptist University

Hong Kong

9/93 – 6/05 Lecturer/Assistant Professor/Associate Professor

Department of Computer Science

Hong Kong Baptist University

Hong Kong

7/05 - 1/06 Visiting Professor

INRIA Rhope Alpes

France

2/98 – 7/98 Visiting Scholar

Computer Vision laboratory, UMIACS/CFAR

University of Maryland at College Park

USA

5/96 - 6/96 Visiting Scholar

Imaging Science and Engineering Laboratory

Department of Electrical Engineering

The University of Sydney

Australia

Current Research Interests

Video surveillance, Face recognition, Biometric system security and data privacy, Medical informatics

Scholarly and Professional Activities/Awards

IAPR Fellow 2018
 Outstanding Editorial Board Service Award
 IEEE Transactions on Information Forensics and Security

 Second Prize Natural Science Award, Ministry of Education, China

• First Prize Natural Science Award, Guangdong Province, China

2018

2018

Editorial Board Member

Pattern Recognition 2006 – present

Associate Editor

IEEE Transactions on Information, Forensic and Security 2014 – 2018

Associate/Senior Editor

SPIE Journal of Electronic Imaging 2012 – present

• GRF Engineering Panel Member

Hong Kong Research Grant Council 2014 – present

• Accreditation Panel Member

Hong Kong Institute of Engineerings

2016 - 2018

• Vice President (Technical Activities)

IEEE Biometrics Council

2017 - present

• Specialist for Programme Accreditation

Hong Kong Council for Accreditation of Academic and Vocational Qualifications 2017 – 2018

2020

• Program Co-Chair

International Conference on Pattern Recognition and Artificial Intelligence, 2020

2019

• Program Committee Member

Thirty-Second AAAI Conference on Artificial Intelligence, Feb 2019

• Program Committee Member

IEEE International Conference on Image Processing (ICIP), 2019

• Program Committee Member

IEEE International Conference on Biometrics: Theory, Applications And Systems (BTAS), 2019

• School Director

IAPR/IEEE Winter School on Biometrics 2019

2018

• Program Co-Chair

The 10th IEEE International Workshop on Information Forensic and Scurity (WIFS), Dec 2018

• Program Co-Chair

International Conference on Pattern Recognition and Artificial Intelligence, May 2018

Area Chair

International Conference on Pattern Recognition (ICPR), 2018

• Senior Program Committee Member

International Joint Conference on Artifical Intelligence (IJCAI), 2018

• General Co-Chair

International Workshop on Biometrics and Forensics, June 2018

• Program Committee Member

Thirty-Second AAAI Conference on Artificial Intelligence, Feb 2018

• Program Committee Member

IEEE Winter Conference on Applications on Computer Vision (WACV) 2018

• Program Committee Member

IEEE Biometric Council Conference on Identity, Security and Behavior Analysis (ISBA), 2018

• Program Committee Member

IEEE and IAPR International Conference on Biometric (ICB), 2018

• School Director

IAPR/IEEE Winter School on Biometrics 2018

2017

• Program Committee Member

Thirty-First AAAI Conference on Artificial Intelligence 2017

• Program Committee Member

IAPR Conference on Machine Vision and Application (MVA), 2017

• Program Committee Member

IEEE Winter Conference on Applications on Computer Vision (WACV) 2017

• Program Committee Member

IEEE Biometric Council Conference on Identity, Security and Behavior Analysis (ISBA), 2017

School Director

IAPR/IEEE Winter School on Biometrics 2017

2016

Program Chair

IEEE Biometric Council Conference on Identity, Security and Behavior Analysis (ISBA), 2016

• Area Chair and Programme Committee Member

IAPR International Conference on Pattern Recognition (ICPR), 2016

• Program Committee Member

IEEE and IAPR International Conference on Biometric (ICB), 2016

• Program Committee Member

IEEE International Conference on Image Processing (ICIP), 2016

• Program Committee Member

IEEE International Conference on Biometrics: Theory, Applications And Systems (BTAS), 2016

• Program Committee Member

IEEE International Workshop on Privacy Issues in Multimedia (PIM'16)2016

2015

Program Committee Member
 IAPR Conference on Machine Vision and Application (MVA), 2015

• Program Committee Member

IEEE Winter Conference on Applications on Computer Vision 2015

Program Committee Member

- IEEE and IAPR International Conference on Biometric (ICB), 2015
- Program Committee and Organizing Member, IEEE Biometric Council Conference on Identity, Security and Behavior Analysis, 2015
- Program Committee Member IEEE International Conference on Image Processing (ICIP), 2015
- Advisory Board Member and Program Committee Member IEEE Fifth International Conference On Biometrics: Theory, Applications And Systems (BTAS), 2015

2014

- Program Committee Member IEEE International Conference on Image Processing (ICIP), 2014
- Program Committee Member IEEE and IAPR International Joint Biometric Conference, 2014
- Program Committee Member
 The International Conference on Control, Automation, Robotics and Vision (ICARCV)
 2014

2013

- Program Committee Member IEEE International Conference on automatic Face and Gesture Recognition (FG) 2013
- Program Committee Member IEEE and IAPR International Conference on Biometric (ICB), 2013
- Program Committee Member
 IAPR Conference on Machine Vision and Application (MVA), 2013
- Program Committee Member IEEE International Conference on Image Processing (ICIP), 2013
- Program Committee Member IEEE Fifth International Conference On Biometrics: Theory, Applications And Systems (BTAS), September 2013

<u>2012</u>

- Program Co-Chair

 IEEE Fifth International Conference On Biometrics: Theory, Applications And Systems
 (BTAS), September 2012
- General Co-Chair

 The 7th Chinese Conference on Biometric Recognition (CCBR 2012), Dec 2012
- Program Committee Member
 IEEE and IAPR International Conference on Biometric (ICB), March 2012
- Program Committee Member

- IAPR International Conference on Pattern Recognition (ICPR), Nov 2012
- Program Committee Member IEEE International Conference on Image Processing (ICIP), September 2012
- Program Committee Member
 The Tenth International Conference on Control, Automation, Robotics and Vision (ICARCV) Nov 2012
- Program Committee Member ECCV Workshop on Benchmarking Facial Image Analysis Technologies, 2012

2011

- Program Committee Member ICCV Workshop on Benchmarking Facial Image Analysis Technologies, 2011
- Program Committee Member IEEE and IAPR International Joint Conference on Biometric (IJCB), September 2011
- Program Committee Member
 IEEE International Conference on Image Processing (ICIP), September 2011
- Program Committee Member International Conference on Wavelet, Applications and Pattern Recognition, 2011.
- Program Committee Member SPIE Conference on Biometric Technology for Human Identification VIII, April 2011
- Program Committee Member
 IEEE International Conference on automatic Face and Gesture Recognition (FG11) April 2011
- Program Committee Member IAPR Conference on Machine Vision and Application (MVA), May 2011

2010

- Organizing Committee IEEE International Conference on Image Processing (ICIP), September 2010
- Program Committee Member

 The Tenth International Conference on Control, Automation, Robotics and Vision

 (ICARCV) Dec 2010
- Program Committee Member
 2nd KES International Symposium on Intelligent Decision Technologies, July 2010
- Program Committee Member IEEE Fourth International Conference On Biometrics: Theory, Applications And Systems (BTAS), September, 2010
- Program Committee Member Pacific Rim International Conference on Artificial Intelligence, August, 2010
- Program Committee Member

 International Conference on Bio-Science and Bio-Technology (BSBT 2010), December 2010
- Program Committee Member International Conference on Pattern Recognition, August 2010
- Program Committee Member

The Seventh International Symposium on Neural Networks (ISNN), June 2010.

<u>2009</u>

• Program Committee Member

IEEE and IAPR International Conference on Biometric (ICB), June 2009

• Program Committee Member

International Conference on Bio-Science and Bio-Technology (BSBT 2009), December 2009

• Program Committee Member

International Conference on Wavelet, Applications and Pattern Recognition, July 2009.

2008

• Program Committee Member

International Conference on Pattern Recognition (ICPR), December 2008

• Program Committee Member

The Tenth International Conference on Control, Automation, Robotics and Vision (ICARCV) Dec 2008

• Program Committee Member

International Conference on Bio-Science and Bio-Technology (BSBT 2008), December 2008

• Program Committee Member

The International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS), December 2008

• Program Committee Member

Biometrics Consortium Conference, September 2008

• Program Committee Member

The 8th International Conference on automatic Face and Gesture Recognition (FG08), September 2008

• Program Committee Member

International Conference on Visualization, Imaging and Image Processing, (VIIP) September 2008

• Program Committee Member

The Sixth International Conference on Wavelet Analysis and Pattern Recognition, August 2008

• Program Committee Member

The 9th International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing August 2008

Program Committee Member

International Conference on Medical Biometrics (ICMB), Jan 2008

2007

Track Chair

Pacific-Rim Conference on Multimedia (PCM2007) December 2007

• Program Committee Member

The International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS), Nov/Dec 2007

• Program Committee Member

International Conference on Wavelet Analysis and Pattern Recognition, Nov, 2007

• Program Committee Member

Biometric Symposium Conference, September 2007

• Best Poster Paper Award Committee Member

IEEE and IAPR International Conference on Biometric (ICB), August 2007

Program Committee Member

IEEE and IAPR International Conference on Biometric (ICB), August 2007

• Program Committee Member

International Conference on Visualization, Imaging and Image Processing, (VIIP) August 2007

• Advisory Peer Group Member

The Open University of Hong Kong, April 2007 – March 2010

• Program Committee Member

The 9th International Conference on Visual Information Systems, June 2007

• Croucher ASI Director

Croucher Advanced Study Institute on "Biometric data security and privacy", January 2007

Accessor

Research Grant Council (RGC), Hong Kong 2007

Accessor

Australian Research Council (ARC), Australia 2007

2006 and before

Area Chair

The Ninth International Conference on Control, Automation, Robotics and Vision (ICARCV) Dec 2006

• Program Committee Member

The Ninth Pacific Rim International Conference on Artificial Intelligence, Aug 2006

• Program Committee Member

The 7th International Conference on automatic Face and Gesture Recognition (FG06), April 2006

• Program Co-chair

The 18th International Conference on Pattern Recognition (ICPR06), Aug 2006

• Program Committee Member

IAPR International Conference on Biometric (ICB), 2006

• Program Committee Member

International Symposium on Intelligent Signal Processing and Communication Systems, Dec 2005

Program Committee Member

ICCV Workshop on Biometric Recognition Systems, 2005

Accessor

Research Grant Council (RGC), Hong Kong 2005, 2006,

• Organizing Committee Member (Tutorial Chair)

International Symposium on Intelligent Signal Processing and Communication Systems, Dec 2005

Croucher ASI Director

Croucher Advanced Study Institute on "Recent Development on Biometric Authentication", 2004

Accessor

IT Excellence Awards 2004

Accessor

Australian Research Council (ARC), Australia 2004, 2006,

• Program Committee Member

International Symposium on Intelligent Multimedia, Video & Speech Processing, 2004

• Program Committee Member and Organizing Committee Member The 4th Chinese National Conference on Biometric Recognition, 2004

• Program Committee Member

The 7th International Eurographics Workshop on Multimedia, 2004

• Program Committee Member

International Conference on Biometric Authentication (ICBA), 2004

• Program Committee Member

The 6th International Conference on automatic Face and Gesture Recognition (FG 04), 2004

• Program Committee Member

The 4th International Conference on Audio and Video Based Personal Authentication (AVBPA), 2003

• Program Committee Member

The First International Conference on Machine Learning and Cybernetics (ICMLC), 2002.

• External Examiner

The Open University of Hong Kong, 2001-2004, 2004-2006, 2006-2009

• Program Co-chair

The Sixth International Computer Science Conference: Active Media Technology, 2001.

• Program Co-chair

The 2nd International Conference on Wavelet Analysis and its Applications, 2001.

• Committee Member

IT Contest 2001, Coorganized by ITSD, ACM and PolyU

Program Committee Member

The Second Asia Pacific Conference on Intelligent Agent, 2001.

Guest Co-editor

International Journal of Pattern Recognition and Artificial Intelligence, 2000

• Program Committee Member

The 3rd International Conference on Multimodal Interface, Beijing, 2000.

• Organizing Chair, Local Arrangement Chair and Program Committee Member, The First Asia Pacific Conference on Intelligent Agent, 1999.

• Program and Organizing Committee Member,

ACM-HK Postgraduate Student Conference, 1999.

Organizing and Program Committee Member, Session Chairman,

The 2nd International Conference on Multimodel Interface (ICMI), 1999.

• Organizing Committee Member,

17th International Conference on Computer Processing of Oriental Languages (ICCPOL), 1997.

Award of University Staff Fellowship 1995-96

Major Administrative Duties at Hong Kong Baptist University

- Associate Dean of Science Faculty 2018 present
- Head of Computer Science Department 2011 2017
- Convenor of University Data Analytics and Artificial Intelligence in X 2017 present
- Undergradute Regulations Committee (URC) [former Academic Regulations and Review Committee] Member 2004 2016, 2018 present
- Undergradauate Admission Committee (UAC) 2018 present
- Quality Assurance Committee (QAC) Member 2018 present
- Senate Member, 2004 2006, 2011 2017
- Student Affair Committee 2013 2017
- Honorary Degrees Committee 2013 2015
- IT committee 2011 2017
- Department-level staff review panel member 2005 present
- Faculty-level staff review panel member 2006 2007, 2010 present
- Academic and Professional Standards Committee (APSC) Member, 2005 2006
- Teaching Development Grant Committee Member 2005 2006
- Chinese Medicine & Science Specialist Panel Member 2006 2008
- Science Faculty Course Board Member 1993–1998
- Science Faculty Examination Board Member 1998–2007
- Course planning team member, B.A. (Hons) in Visual Arts, 2004 2005
- Course management team member, B.A. (Hons) in Visual Arts, 2005 2011
- Course Coordinator, B.Sc. (Hons) in Computer Science, 1998 2007
- Foundation Year Coordinator, 2007 2011
- Four-year Curriculum Departmental Representative, 2007 2011
- Computer Science Minor Program Coordinator, 2006 2011
- Chair of Programme planning team, *B.Sc. (Hons) in Computer Science and Technology*, (offered in HKBU Zhuhai Campus), 2004 2005
- Student Exchange Coordinator 2002 2003
- Science Faculty Safety Committee Member 1993 1994
- Applied Computing Year II Tutor 1994 1998
- Computer Interfacing Laboratory Manger 1994 -1998

Publications (*my research student/staff)

Journal Papers

- 1. X Lan*, M Ye*, R Shao*, B Zhong, P C Yuen, H Zhou, "Learning Modality-Consistency Feature Templates: A Robust RGB-Infrared Tracking System", In press, *IEEE Transactions on Industrial Electronics*, 2019.
- 2. M Ye*, J W Li*, A J Ma*, L Zheng, P C Yuen, "Dynamic Graph Co-Matching for Unsupervised Video-based Person Re-Identification", In Press, *IEEE Transactions on Image Processing (TIP)*, 2019.
- 3. G C Mai*, K Cao, P C Yuen and A K Jain, "On the Reconstruction of Face Images from Deep Face Templates", *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol. 41, No. 5, pp. 1188-1202, 2019.
- 4. B Y Yang*, A J Ma* and P C Yuen, "Body Parts Synthesis for Cross-Quality Pose Estimation" *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, Vol. 29, No. 2, pp. 461-474, 2019.
- 5. Wong, Grace; Ma, Andy*; Deng, Huiqi*; Ching, Jessica; Wong, Vincent; Tse, Y.K.; Yip, Terry; Lau, Louis; Liu, Henry; LEUNG, Chi Man; Tsang, Steven; Chan, Chung-Wing; Lau, James Y.; Yuen, Pong-Chi; Chan, Francis, "Machine Learning Model to Predict Recurrent Ulcer Bleeding in Patients with History of Idiopathic Gastroduodenal Ulcer Bleeding", Accepted for publication, *Alimentary Pharmacology and Therapeutics (APT)*, 2018.
- 6. X Lan*, M Ye*, S Zhang, H Zhou, PC Yuen, "Modality-Correlation-Aware Sparse Representation for RGB-Infrared Object Tracking", *Pattern Recognition Letters (PRL)*, In Press, 2018
- 7. R Shao*, X Lan*, PC Yuen, "Joint Discriminative Learning of Deep Dynamic Textures for 3D Mask Face Anti-spoofing", *IEEE Transactions on Information Forensics and Security* (TIFS), Vol. 14, No. 4, pp. 923-938, 2019.
- 8. B Y Yang*, J H Ma* and P C Yuen, "Learning Domain-Shared Group-Sparse Representation for Unsupervised Domain Adaptation", *Pattern Recognition (PR)*, Vol. 81, pp.615-632, 2018
- 9. J W Li*, A Ma* and P C Yuen, "Semi-Supervised Region Metric Learning for Person Reidentification", *International Journal of Computer Vision (IJCV)*, Vol. 126, No. 8, pp. 855-874, 2018.
- 10. X Y Lan*, S P Zhang*, P C Yuen and R Chellappa, "Learning Common and Feature Specific Patterns: A Novel Multiple-Sparse-Representation-based Tracker", *IEEE Transactions on Image Processing (TIP)*, Vol. 27, No. 4, pp. 2022-2037, 2018.
- 11. S P Zhang, Y K Qi, X Y Lan*, P C Yuen, H Y Zhou, "Point-to-set distance metric learning on deep representations for visual tracking", *IEEE Transactions on Intelligent Transportation Systems(TITS)*, Vol. 19, No. 1, pp. 187-198, 2018.
- 12. Y Wang, J Wan, J Guo, Y M Cheung and P C Yuen, "Inference-Based Similarity Search in Randomized Montgomery Domains for Privacy-Preserving Biometric Identification", *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol. 40, No. 7, pp.1611-1624, 2018.
- 13. Y C Chen*, W S Zheng, J H Lai and P C Yuen, "An asymmetric distance model for crossview feature mapping in person re-identification", *IEEE Transactions on Circuit Systems and Video Technology (TCSVT)*, Issue 8, pp. 1661-1675, Aug 2017

- 14. T Yip, A Ma*, V Wong, Y K Tse, H Chan, P C Yuen, G Wong, "Laboratory parameter-based machine learning model for excluding non-alcoholic fatty liver disease (NAFLD) in the general population", *Alimentary Pharmacology and Therapeutics*, June, 2017.
- 15. S H Zhang, X Y Lan*, Y Qi and P C Yuen, "Robust visual tracking via basis matching", *IEEE Transactions on Circuit Systems and Video Technology (TCSVT)*, Vol. 27, No. 3, pp.421-430, 2017
- 16. G C Mai*, M H Lim* and P C Yuen, "Fusing Binary Templates for Multi-biometric Cryptosystems", *Image and Vision Computing*, Vol. 58, pp. 254-265, 2017.
- 17. M H Lim*, S Verma, G C Mai* and P C Yuen, "Learning discriminability-preserving histogram representation from unordered features for multibiometric feature-fused-template protection", *Pattern Recognition (PR)*, Vol. 60, pp.706-719, 2016
- 18. E S L Ho, C P Chan, C K Chan, P H Shum, Y M Cheung and P C Yuen, "Improving Posture Classification Accuracy for Depth Sensor-based Human activity monitoring in smart environments", *Computer Vision and Image Understanding*, Volume 148, pp. 97–110, July 2016.
- 19. P G Chen*, X M Zhang and P C Yuen, "Combine spatio-temporal and transform domain for sparse occlusion estimation by optical flow", *Neurocomputing*, Vol. 214, pp. 368-375, 2016
- 20. M H Lim* and P C Yuen, "Entropy measurement for biometric verification systems", *IEEE Transactions on Cybernetics (TC)*, Vol. 46, No. 5, pp. 1065-1077, May 2016.
- 21. X Y Lan*, J H Ma*, P C Yuen and R Chellappa, "Joint sparse representation and robust feature-level fusion for multi-cue visual tracking", *IEEE Transactions on Image Processing (TIP)*, Vol. 24, No. 12, pp. 5826-5841, 2015
- 22. Y Zhang, J H Lai and P C Yuen, "Text string detection for loosely constructed characters with arbitrary orientations", *Neurocomputing*, Vol. 168, pp. 970-978, Nov 2015.
- 23. Y Wang, L Wang, Y M Cheung and P C Yuen, "Learning binary compact codes for hash-based fingerprint indexing", *IEEE Transactions on Information Forensics and Security* (TIFS), Vol. 10, No. 8, pp. 1603-1616, 2015.
- 24. J H Ma*, J W Li*, P C Yuen and P Li, "Cross-domain person re-identification using domain adaptation ranking SVMs", *IEEE Transactions on Image Processing (TIP)*, Vol. 24, No. 5, pp. 1599-1613, 2015.
- 25. Y Zong, J H Lai, P C Yuen and X Xie, "Salient region preservation for image deformation", *SPIE Journal of Electronic Imaging*, Vol. 23, No. 6, December 2014.
- 26. Y Liang*, J. H. Lai, P C Yuen, W W. Zou, Z Cai, "Face hallucination with imprecise-alignment using iterative sparse representation", *Pattern Recognition*, Volume 47, Issue 10, pp. 3327–3342, October 2014
- 27. J H Ma* and P C Yuen, "Reduced analytic dependency modeling: Robust fusion for visual recognition", *International Journal of Computer Vision (IJCV)*, Vol. 109, Issue 3, pp. 233-251, September 2014.
- 28. Y C Feng*, M H Lim* and P C Yuen, "Masquerade attack on transform-based binary-template protection based on perceptron learning", *Pattern Recognition*, Vol. 47, Issue 9, pp. 3019-3033, September, 2014
- 29. E S L Ho, H P H Shum, Y M Cheung and P C Yuen, "Topology aware data-driven inverse kinematics", *Computer Graphics Forum (Proceedings of Pacific Graphics 2013)*, vol 32(7), Oct 2013
- 30. Q Y Wang*, P C Yuen and G C Feng, "Semi-supervised metric learning via topology preservation based on multiple semi-supervised assumptions", *Pattern Recognition*, Vol 46, Issue 9, Pages 2576 2587, September 2013.

- 31. J H Ma*, P C Yuen, W W Zou* and J H Lai, "Supervised spatio-temporal neighborhood topology learning for action recognition", *IEEE Transactions on Circuit Systems and Video Technology (TCSVT)*, Vol. 23, No. 8, pp. 1447-1460, August 2013.
- 32. J H Ma*, P C Yuen and J H Lai, "Linear dependency modeling for classifier fusion and feature combination", *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol. 35, No. 5, pp. 1135-1148, May 2013.
- 33. W W Zou*, P C Yuen, R Chellappa, "Low-resolution face tracker robust to illumination variations", *IEEE Transactions on Image Processing (TIP)*, Vol. 22, No. 5, pp. 1726-1739, May 2013
- 34. Y Liang*, P C Yuen and J H Lai, "Image super-resolution by textural context constrained visual vocabulary", *Signal Processing: Image Communication*, Volume 27, Issue 10, pp. 1096 1108, November 2012.
- 35. Y C Feng* and P C Yuen, "Binary discriminant analysis for generating binary face template", *IEEE Transactions on Information Forensics and Security (TIFS)*, Vol. 7, No. 2, pp. 613-624, 2012.
- 36. W W Zou* and P C Yuen, "Very low resolution face recognition problem", *IEEE Transactions on Image Processing (TIP)*, Vol. 21, No.1, pp. 327 340, 2012.
- 37. B B Pan, J H Lai and P C Yuen, "Learning low-rank Mercer kernels with fast-decaying spectrum", *Neurocomputing*, Vol. 74, Issue 17, pp. 3028-3035, October 2011.
- 38. W S Chen, P C Yuen and X Xie, "Kernel machine-based rank-lifting regularized discriminant analysis method for face recognition", *Neurocomputing*, Volume 74, Issue 17, pp. 2953-2960, October 2011.
- 39. C Liu* and P C Yuen, "A boosted co-training algorithm for human action recognition", *IEEE Transactions on Circuit Systems and Video Technology (TCSVT)*, Vol. 21, No. 9, pp. 1203 1213, 2011.
- 40. X Xie, W S Zheng, J H Lai, P C Yuen and C Y Suen, "Normalization of face illumination based on large- and small-scale features", *IEEE Transactions on Image Processing (TIP)*, Vol. 20, No. 7, PP.1807 1821. 2011.
- 41. W W Zou* and P C Yuen, "Discriminability and reliability indexes: Two new measures to enhance multi-image face recognition", *Pattern Recognition*, Vol. 43, No. 10, pp. 3483-3493, 2010.
- 42. X Wu*, J H Lai and P C Yuen, "Video-shot transition detection: A spatio-temporal saliency approach", *International Journal on Pattern Recognition and Artificial Intelligence*, Vol. 24, Issue 8, pp. 1295-1309, Dec, 2010.
- 43. W S Zhang*, J H Lai and P C Yuen, "Penalized pre-image learning in Kernel principal component analysis", *IEEE Transactions on Neural Network*, Vol. 21, No. 4, pp. 551-570, 2010.
- 44. Y C Feng*, P C Yuen and A K Jain, "A hybrid approach for generating secure and discriminating face template", *IEEE Transactions on Information Forensic and Security* (*TIFS*), Vol. 5, No. 1, pp. 103 117, 2010.
- 45. C Liu* and P C Yuen, "Human action recognition from boosting Eigenactions", *Image and Vision Computing*, Vol. 28, No. 5, pp. 825 835, 2010.
- 46. G Qiu and P C Yuen, "Interactive imaging and vision ideas, algorithms and applications", *Pattern Recognition*, Vol. 43, No.2, pp. 431-433, 2010
- 47. X Z Liu*, P C Yuen, G C Feng and W S Chen, "Learning Kernel in Kernel-based LDA for face recognition under illumination variations", *IEEE Signal Processing Letters*, Volume 16, Issue 12, pp.1019 1022, Dec, 2009.
- 48. C Liu*, P C Yuen and G Qiu, "Object motion detection using information theoretic spatio-temporal saliency", *Pattern Recognition*, Vol. 42, No. 11, pp. 2897-2906, 2009.

- 49. W S Zheng*, J H Lai, P C Yuen and S Li, "Perturbation LDA: Learning difference between the class empirical mean and its expectation", *Pattern Recognition*, Vol. 42, No. 5, pp. 764-779, 2009.
- 50. B Chen, P C Yuen, J H Lai and W S Chen, "Image segmentation and selective smoothing based on variational framework", *Journal of Signal Processing Systems*, Vol. 54, No. 1, pp. 145 158, 2009.
- 51. H T Zhao* and P C Yuen, "Incremental Linear Discriminant Analysis for Face Recognition", *IEEE Transactions on Systems, Man and Cybernetics, Part B (TSMC-B)*, Vol. 38, No. 1 pp. 210 221, 2008.
- 52. J Huang*, P C Yuen, W S Chen and J H Lai, "Choosing parameters for kernel subspace LDA for recognition of face images under pose and illumination variations", *IEEE Transactions on Systems, Man and Cybernetics, Part B(TSMC-B)*, Vol. 37, No. 4, pp. 847 862, 2007.
- 53. D Q Dai and P C Yuen, "Face recognition by regularized discriminant analysis", *IEEE Transactions on Systems, Man and Cybernetics, Part B(TSMC-B)*, Vol. 37, No. 4, pp. 1080 1085, 2007.
- 54. P C Yuen and C H Man*, "Human face image searching system using sketch", *IEEE Transactions on Systems, Man and Cybernetics, Part A(TSMC-A)*, Vol. 37, No. 4, pp. 493 504, July 2007.
- 55. O Brdiczka, P C Yuen, S Zaidenberg, P Reignier and J L Crowley, "ASiMo: Automatic acquisition of situation models", *eMinds: International Journal on Human-Computer Interaction*, Vol. 1, No. 2, pp. 3-16, 2006.
- 56. J Huang*, P C Yuen, W S Chen, J H Lai and X You, "Combining linear and nonlinear features for face recognition", *International Journal of Wavelets, Multiresolution and Information Processing*, Vol. 4, No. 4 pp. 659-676, Dec 2006.
- 57. J H Lai and P C Yuen, "Face and eye detection from head & shoulder images on mobile devices", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 20, Number 7, pp. 1053 1075, Nov 2006.
- 58. H T Zhao*, P C Yuen and J Kwok, "A novel incremental principal component analysis and its application for face recognition", *IEEE Transactions on Systems, Man and Cybernetics*, Part B(TSMC-B), Vol. 36, No. 4, pp. 873-886, 2006.
- 59. W S Chen, P C Yuen, B Fang, J Huang, "Two-step single parameter regularization Fisher discriminant method for face recognition", *International Journal of Pattern Recognition and Artificial Intelligence*, (Special issue on the selected paper from ICIC 2005) Vol. 20, No. 2, pp. 189 208, 2006.
- 60. D Q Dai and P C Yuen, "Wavelet based discriminant analysis for face recognition", *Applied Mathematics and Computation*, No. 175, pp. 307 318, 2006.
- 61. W S Zheng*, J H Lai and P C Yuen, "GA-Fisher: A new LDA-based face recognition algorithm with selection of principal components", *IEEE Transactions on Systems, Man and Cybernetics, Part B (TSMC-B)*, Vol. 35, No.5, pp. 1065 1078, 2005.
- 62. W S Chen*, P C Yuen and J Huang*, "A new regularized linear discriminant analysis methods to solve small sample size problems", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 19, No 7, pp. 917 935, 2005.
- 63. W S Chen*, P C Yuen, J Huang* and D Q Dai, "Kernel machine-based one-parameter regularized Fisher discriminant method for face recognition", *IEEE Transactions on Systems, Man and Cybernetics, Part B (TSMC-B)*, Vol. 35, No. 4, pp 659-669, 2005.
- 64. J Huang*, P C Yuen, W S Chen and J H Lai, "Component-based Subspace LDA method for face recognition with one training sample", *SPIE Optical Engineering*, Vol 44, No.5, 2005.

- 65. K K Lau*, P C Yuen and Y Y Tang, "Recovery of writing sequence of static images of handwriting using UWM", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 19, No. 5, pp. 603 630, 2005
- 66. K K Lau*, P C Yuen and Y Y Tang, "Directed connection measurement for evaluating reconstructed stroke sequence in handwriting images", *Pattern Recognition*, Vol. 38, No. 4, pp. 323-339, 2005
- 67. H Zhao*, P C Yuen and J Yang, "Optimal subspace analysis for face recognition", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol 19, No. 3, pp. 375-394, 2005
- 68. J Huang*, P C Yuen, J H Lai and C H Li, "Face recognition using local and global features", *Applied Signal Processing, Special issue on Biometric signal processing*, Vol. 4, pp. 530-541, 2004.
- 69. J H Lai, P C Yuen and D G Deng, "Generalized spectroface for face recognition", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 18, No. 2, pp. 211-228, 2004.
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- 1. J Liu, X Wang, P C Yuen, M C Desmarais and J K Y Ng, "Evidential inference with embedded pattern classifiers: Towards an improved early cancer diagnostic method", Faculty Research Grant 93-94, Category II, 1994 (completed).
- 2. P C Yuen, J Liu and J K Y Ng, "Recognition of non-rigid objects using dominant points and belief network", *Faculty Research Grant 93-94*, *Category II*, 1994 (completed).
- 3. P C Yuen, "Development of a fast version of Modified Split and Merge algorithm for image coding", *Faculty Research Grant 94-95*, *Category II*, 1994 (completed).
- 4. J Liu, P C Yuen and J K Y Ng, "Design and prototyping of a visually-guided autonomous robot with applications to self-navigation and operation in hazardous environments", *RGC Research Grant*, 1995 (completed).
- 5. P C Yuen. "Development of a robust object representation scheme for recognition", Faculty Research Grant 95-96, Category II, 1996 (completed).
- 6. P C Yuen, "Locating human face boundary in cluttered scene", *Faculty Research Grant* 96-97, *Category II*, 1997 (completed).
- 7. P C Yuen, "Performance evaluation between independent component analysis and principal component analysis on face recognition", *Faculty Research Grant* 97-98, *Category II*, 1998 (completed).
- 8. P C Yuen, Z H Kuang, W Wu, Y T Wu, "Tongue Diagnosis: An Image Processing Approach", *Faculty Research Grant 98-99, Category II*, 1999 (completed).
- 9. P C Yuen, "Development of a bank check processing system", Faculty Research Grant 98-99, Category II, 1999 (completed).
- 10. P C Yuen and C H Li, "Multimedia content delivery, security and copyright protection", *Faculty Research Grant 99-00, Category II*, 2000. (The original PI was Dr. C H Li) (Completed)
- 11. P C Yuen, "Face recognition based on classifier combination", *Faculty Research Grant 99-00, Category II*, 2000 (completed).
- 12. P C Yuen, "Facial Feature Detection", *IT Research Center, Omron Corporation, Japan*, 2000 (completed).
- 13. P C Yuen, "Human Face Recognition Using Regularized Discriminant analysis", *Faculty Research Grant 01-02, 2001* (Completed)
- 14. P C Yuen, "Facial Feature State Estimation", *IT Research Center, Omron Corporation, Japan*, 2002 (completed).
- 15. P C Yuen, "Human Face Image Analysis Algorithms for MPEG-4 Face Animation Phase I", Faculty Research Grant 02-03. (completed)
- 16. P C Yuen and D Q Dai, "Regularized Linear Discriminant Analysis for Face Recognition", *CERG Grant 2003–04*. (completed)
- 17. Croucher Advanced Study Institute on "Recent Development on Biometric authentication", Funded by Croucher Foundation 2004 (completed)
- 18. P C Yuen, "Incremental appearance-based face recognition algorithm", *Faculty Research Grant 04-05*, 2005. (completed)
- 19. P C Yuen, "A study of kernel functions for KDA on face recognition", *Faculty Research Grant*, 2006. (completed)
- 20. P C Yuen, "A study of information theoretic filtering for feature extraction in video", FRG/06-07/II-33, *Faculty Research Grant*, 2007. (completed)
- 21. P C Yuen and W S Chen, "A Study of Kernel function and its parameters for Kernel Discriminant Analysis on Face Recognition", *CERG Grant 2006–07*. (completed)

- 22. P C Yuen, "A study of Face Biometric Template Security", FGR/07-08/II-67, Faculty Research Grant, 2008. (completed)
- 23. P C Yuen and A K Jain, "Generating Discriminative and Cancelable Face Templates", *CERG Grant 2008-09* (completed).
- 24. P C Yuen, "A study of vision-based human activity categorization", FRG2/08-09/078, *Faculty Research Grant, 2009* (completed).
- 25. P C Yuen, "Very low face recognition problem", FRG2/09-10/065, *Faculty Research Grant*, 2010 (completed).
- 26. P C Yuen, "Learning Features Dependency for Human Action Recognition", FRG2/10-11/077, *Faculty Research Grant*, 2011 (completed).
- 27. P C Yuen, H Zhang, Y M Cheung, "Recognition of very low-resolution face images (超低分辨率人脸识别)", National Nature Science Foundation of China, 国家自然科学基金-面上项目, 2012. RMB 600,000 (completed).
- 28. P C Yuen and J H Lai, "Person identification and activity recognition from low quality surveillance videos (低质量视频监控环境下人的身份验证和行为理解)", *National Nature Science Foundation of China*, **国家自然科学基金** 海外与港澳学者合作, 2012. RMB 200,000 (completed)
- 29. P C Yuen and A Ross, "Multimodal biometric template protection: Template security and recognition performance", *General Research Grant (GRF)* Jan 2013 Dec 2015. HK\$ 700,000 (completed).
- 30. P C Yuen, "Robust information fusion and its application to video surveillance", *General Research Grant (GRF)* Oct 2013 Sept 2016. HK\$645,500 (completed).
- 31. P C Yuen, "Weakly supervised domain adaptation for video surveillance in large-scale camera networks", *General Research Grant (GRF)* Jan 2015 Dec 2017. HK\$875,000 (completed).
- 32. P C Yuen and G Y Zhao, "Face anti-spoofing to combat mask attacks: A remote photoplethysmography approach", *General Research Grant (GRF)*, Jan 2016 Dec 2018 HK\$696,029.
- 33. P C Yuen and Rama Challeppa, "Two Research Issues in Long-Term Visual Tracking: Target Re-detection and Robustness", *General Research Grant (GRF)*, Jan 2017 Dec 2019.
- 34. P C Yuen and D Xu, "Unsupervised Domain Adaptation without Source Data and Its Application to Visual Recognition, *General Research Grant (GRF)*, Oct 2018 Sept 2021.

Supervised Reseach Students

- 1. Dr. G C Feng (PhD. 1999)
- 2. Mr. Henry C H Man (M.Phil. 2005)
- 3. Dr. K K Lau (Ph.D. 2005)
- 4. Dr. J Huang (Ph.D. 2006)
- 5. Mr. Y C Feng (M.Phil 2007)
- 6. Dr. C Liu (Ph.D. 2010)
- 7. Dr. Wilman W W Zou (Ph.D. 2012)
- 8. Dr. Y C Feng (Ph.D. 2012)
- 9. Dr. J H Ma (Ph.D. 2013)
- 10. Dr. X Y Lan (Ph.D. 2016)
- 11. Dr. J W Li (Ph.D. 2018)
- 12. Dr. G C Mai (Ph.D. 2018)
- 13. Dr. B Y Yang (Ph.D. 2018)