Yixuan YUAN

PERSONAL INFORMATION

Assistant Professor since April 9, 2018
Department of Electrical Engineering
City University of Hong Kong, Hong Kong

Telephone: (852) 3442 7803
Email: yxyuan.ee@cityu.edu.hk
Web: `http://www.ee.cityu.edu.hk/~yxyuan`

RESEARCH INTERESTS

Biomedical image analysis including image pre-processing and abnormality recognition, Saliency detection, Video summarization, Deep learning.

EDUCATION

The Chinese University of Hong Kong, Hong Kong — Aug. 2012 - Jul. 2016
Ph.D. in Biomedical Engineering
Supervisor: Prof. Max, Q.-H Meng, GPA: 3.821/4

Northwestern Polytechnical University, Xi'an, China — Sep. 2006 - Jun. 2010
B.E. in Information Countermeasure
GPA: 3.68/4 (top 1%)

PREVIOUS WORK EXPERIENCE

Stanford University, Palo Alto, United States — Mar. 2017 - Mar. 2018
Postdoctoral Fellow in Department of Radiation Oncology
Supervisor: Prof. Lei Xing

The Chinese University of Hong Kong, Hong Kong — Aug. 2016 - Feb. 2017
Postdoctoral Fellow in Department of Electronic Engineering
Supervisor: Prof. Max, Q.-H Meng

Stanford University, Palo Alto, United States — Sep. 2014 - Feb. 2015
Visiting Student in Department of Radiology
Supervisor: Prof. Daniel Rubin

Northwestern Polytechnical University (NPU), Xi'an, China — Sep. 2010 - Jun. 2012
Ph.D. Student in Pattern Recognition and Intelligent System
Supervisor: Prof. Lei Guo and Prof. Tianming Liu

SELECTED AWARDS

- **Outstanding Teacher Award 2018/19 (Level 4 Course, 2st Prize)**, Electronic Engineering, CityU — May 2019
- **2017 Young Scientist Award**, Hong Kong Institute of Science — Dec. 2017
- **School of Medicine Dean's Postdoctoral Fellowship**, Stanford University — Jun. 2017
- **Student Research Award**, Hong Kong Medical and Healthcare Device Industries Association — Nov. 2015

- **Global Scholarship Programme for Research Excellence**, CUHK (Top 1%) May 2014
- **Overseas Research Attachment Program**, CUHK (Top 5%) Apr. 2014
- **Toshio Fukuda Best Paper in Mechatronics**, ICMA Committee (Top 1%) Aug. 2013
- **Hong Kong PhD Fellowship Scheme**, Research Grants Council Aug. 2012 - Jul. 2016
  - The Highest Honor for a PhD Student in Hong Kong (Top 3%)
- **Outstanding Diploma Thesis Award**, NPU (Top 5%) Jun. 2010
- **National Scholarship**, China Ministry of Education (Top 1%) Nov. 2008
  - The Highest Honor for a Student in China
- **YueGangAo Special Scholarship**, NPU (Top 3%) Nov. 2007
- **Excellent League Member**, NPU Jun. 2007
- **First-class Student Award**, NPU Nov. 2007 - Nov. 2009

PUBLICATIONS

Book Chapters

1. **Yixuan Yuan**, Max Q.-H. Meng. "CAD of GI Diseases with Capsule Endoscopy." *Computer-aided Diagnosis and Therapy: Emerging Techniques for Medical Image Analysis and Applications*. pp 285-301.

Journal Papers

1. Zhen Chen, Xiaoqing Guo, Peter Y. M. Woo, **Yixuan Yuan**. "Super-Resolution Enhanced Medical Image Diagnosis with Sample Affinity Interaction." *IEEE Transactions on Medical Imaging*, 2021. (Impact Factor: 6.685, rank: 94.037%)
2. Yuxuan Liu, **Yixuan Yuan**, Ming Liu, "Ground-aware Monocular 3D Object Detection for Autonomous Driving." *IEEE Robotics and Automation Letters (RA-L)*, 2021. (Impact Factor: 3.608, rank: 80.357%)
3. Xiaoqing Guo, Chen Yang, Yajie Liu, **Yixuan Yuan**. "Learn to Threshold: ThresholdNet with Confidence-Guided Manifold Mixup for Polyp Segmentation." *IEEE Transactions on Medical Imaging*, DOI: 10.1109/TMI.2020.3046843, 2020. (Impact Factor: 6.685, rank: 94.037%)
4. Xiaohan Xing, **Yixuan Yuan***, Max Q.-H. Meng*. "Zoom in Lesions for Better Diagnosis: Attention Guided Deformation Network for WCE Image Classification." *IEEE Transactions on Medical Imaging*, 39(2):4047-4059, 2020. (Impact Factor: 6.685, rank: 94.037%)
5. Yuqi Fang, Delong Zhu, Jianhua Yao, **Yixuan Yuan***, Kai-yu Tong*. "ABC-Net: Area-Boundary Constraint Network with Dynamical Feature Selection for Colorectal Polyp Segmentation." *IEEE Sensors Journal*, DOI: 10.1109/JSEN.2020.3015831, 2020. (Impact Factor: 3.073, rank: 72.656%)
6. Xiaoqing Guo, **Yixuan Yuan**. "Semi-supervised WCE Image Classification with Adaptive Aggregated Attention." *Medical Image Analysis*, 10733, 2020. (Impact Factor: 11.148, rank: 98.88%)
7. Xiao Jia*, Xiaohan Xing*, **Yixuan Yuan***, Lei Xing, Max Q.-H. Meng. "Wireless Capsule Endoscopy: A New Tool for Cancer Screening in the Colon with Deep Learning-Based Polyp

Recognition." *Proceedings of the IEEE*, 108(1):178 - 197, 2020. (Co-first author, Impact Factor: 10.252, rank: 97.18%)

8. Xiao Jia, Xiaochun Mai, Yi Cui, **Yixuan Yuan**, Hyunseok Seo, Lei Xing, Max Q.-H. Meng. "Automatic Polyp Recognition in Colonoscopy Images Using Deep Learning and Two-Stage Pyramidal Feature Prediction." *IEEE Transactions on Automation Science and Engineering (**TASE**)*, 17(3): 1570-1584, 2020. (Impact Factor: 4.938, rank: 80.159%)

9. M. Kholiavchenko, I. Sirazitdinov, K. Kubrak, R. Badrutdinova, R. Kuleev, **Yixuan Yuan**, T. Vrtovec, Bulat Ibragimov. "Contour-Aware Multi-Label Chest X-Ray Organ Segmentation." *International Journal of Computer Assisted Radiology and Surgery (**IJCARS**)*, 15:425-436, 2020. (Impact Factor: 2.473, rank: 67.381%)

10. **Yixuan Yuan**, Wenjian Qin, Bulat Ibragimov, Guanglei Zhang, Bin Han, Max, Q.-H. Meng, Lei Xing. "Densely Connected Neural Network with Unbalanced Discriminant and Category Sensitive Constraint for Polyp Recognition." *IEEE Transactions on Automation Science and Engineering (**TASE**)*, 17(2):574-583, 2020. (Impact Factor: 4.938, rank: 80.159%)

11. Bulat Ibragimov, Diego AS Toesca, Daniel T Chang, **Yixuan Yuan**, Albert C Koong, Lei Xing. "Automated hepatobiliary toxicity prediction after liver stereotactic body radiation therapy with deep learning-based portal vein segmentation." *Neurocomputing*, 392:181-188, 2020. (Impact Factor: 4.438, rank: 79.927%)

12. Bulat Ibragimov, Diego AS Toesca, Daniel T Chang, **Yixuan Yuan**, Albert C Koong, Lei Xing, Ivan R Vogelius. "Deep learning for identification of critical regions associated with toxicities after liver stereotactic body radiation therapy." *Medical Physics*, 47(8):3721-3731, 2020. (Impact Factor: 3.317, rank: 75.746%)

13. Sirazitdinov Ilyas, Kholiavchenko Maksym, Mustafaev Tamerlan, **Yixuan Yuan**, Kuleev Ramil, Ibragimov, Bulat. "Deep neural network ensemble for pneumonia localization from a large-scale chest x-ray database." *Computers and Electrical Engineering*, 78:388-399, 2019. (Impact Factor: 2.663, rank: 63.208%)

14. Jian Liu Jingjing Cui, Fei Liu, **Yixuan Yuan**, Feng Guo, Guanglei Zhang. "Multi-subtype classification model for non-small cell lung cancer based on radiomics: SLS mode." *Medical Physics*, 46(7):3091 - 3100, 2019. (Impact Factor: 3.317, rank: 75.746%)

15. Bulat Ibragimov, Diego AS Toesca, **Yixuan Yuan**, Albert C Koong, Daniel T Chang, Lei Xing. "Neural networks for deep radiotherapy dose analysis and prediction of liver SBRT outcomes." Accepted by *IEEE Journal of Biomedical and Health Informatics (**JBHI**)*, 23(5):1821-1833, 2019. (Impact Factor: 5.223, rank: 98.148%)

16. **Yixuan Yuan**, Wenjian Qin, Mark Buyyounouski, Bulat Ibragimov, Steve Hancock, Bin Han, Lei Xing. "Prostate Cancer Classification with Multi-parametric MRI Transfer Learning Model." *Medical Physics*, 46(2):765 - 756, 2019. (Impact Factor: 3.317, rank: 75.746%)

17. Hui Liu, Haiou Wang, **Yixuan Yuan**, Caiming Zhang. "Models for multiple attribute decision making with picture fuzzy information." *Journal of Intelligent and Fuzzy Systems*, 2019. (Impact Factor:1.851, rank: 41.971%)

18. **Yixuan Yuan**, Dengwang Li, Max Q.-H. Meng. "Automatic Polyp Detection via A Novel Unified Bottom-up and Top-down Saliency Approach." *IEEE Journal of Biomedical and Health Informatics (**JBHI**)*, 22(4):1250 - 1260, 2018. (Impact Factor: 5.223, rank: 98.148%)

19. **Yixuan Yuan**, Xiwen Yao, Junwei Han, Lei Guo, Max Q.-H. Meng. "Discriminative Joint-feature Topic Model with Dual Constraints for WCE Classification." *IEEE Transaction on Cybernetics*

(TCYE), 48(7):2074 - 2085, 2018. (Impact Factor: 11.079, rank: 96.715%)

20. Bulat Ibragimov, Diego Toesca, Daniel Chang, **Yixuan Yuan**, Albert Koong, Lei Xing. "Development of deep neural network for individualized hepatobiliary toxicity prediction after liver SBRT." *Medical Physics*, 45(10):4763 - 4774, 2018. (Impact Factor: 3.317, rank: 75.746%)

21. Wenjian Qin, Jia Wu, Fei Han, **Yixuan Yuan**, Wei Zhao, Bulat Ibragimov, Jia Gu, Lei Xing. "Superpixel-based and boundary-sensitive convolutional neural network for automated liver segmentation." *Physics in Medicine and Biology*, 63(9): 095017, 2018. (Impact Factor: 2.883, rank: 66.045%)

22. **Yixuan Yuan**, Max Q.-H. Meng. "Deep Learning for Polyp Recognition in Wireless Capsule Endoscopy Images." *Medical Physics*, 44(4):1379-1389, 2017. (Impact Factor: 3.317, rank: 75.746%) (One of the four highest quality articles in Apirl 2017 issue (from 50 articles) chosen by the editor to feature at the Editors Picks Column as Open-Access article.)

23. **Yixuan Yuan**, Baopu Li, Max Q.-H. Meng. "WCE Abnormality Detection based on Saliency and Adaptive Locality-constrained Linear Coding." *IEEE Transactions on Automation Science and Engineering (**TASE**)*, 14(1):149 - 159, 2017. (Impact Factor: 4.938, rank: 80.159%)

24. **Yixuan Yuan**, Baopu Li, Max Q.-H. Meng. "Bleeding Frame and Region Detection in the Wireless Capsule Endoscopy Video." *IEEE Journal of Biomedical and Health Informatics **(JBHI)***, 20(2):624 - 630, 2016. (Impact Factor: 5.223, rank: 98.148%)

25. **Yixuan Yuan**, Baopu Li, Max Q.-H. Meng. "Improved Bag of Feature for Automatic Polyp Detection in Wireless Capsule Endoscopy Images." *IEEE Transactions on Automation Science and Engineering **(TASE)***, 13(2):529-535, 2016. (Impact Factor: 4.938, rank: 80.159%)

26. **Yixuan Yuan**, Jiaole Wang, Baopu Li, Max Q.-H. Meng. "Saliency based Ulcer Detection for Wireless Capsule Endoscopy Diagnosis." *IEEE Transactions on Medical Imaging **(TMI)*** 34(10):2046-2057, 2015. (Impact Factor: 6.685, rank: 94.037%)

27. **Yixuan Yuan**, Max Q.-H. Meng. "Hierarchical Key Frame Extraction for Wireless Capsule Endoscopy Video Based on the Saliency Map." *International Journal of Mechatronics and Automation **(IJMA)*** 4(4):259-268, 2014.

28. **Yixuan Yuan**, Xi Jiang, Dajiang Zhu, Hanbo Chen, Kaiming Li, Peili Lv, Xiang Yu, Xiaojin Li, Shu Zhang, Tuo Zhang, Xintao Hu, Junwei Han, Lei Guo, Tianming Liu. "Meta-Analysis of Functional Roles of DICCCOLs." *Neuroinformatics* 11(1):47-63, 2013. (Impact Factor: 3.300, rank: 64.679%)

29. Hanbo Chen, Kaiming Li, Dajiang Zhu, Xi Jiang, **Yixuan Yuan** and Peili Lv, Tuo Zhang, Lei Guo, Dinggang Shen, Tianming Liu. "Inferring Group-wise Consistent Multimodal Brain Networks via Multi-view Spectral Clustering." *IEEE Transactions on Medical Imaging (**TMI**)* 32(9):1576-1586, 2013. (Impact Factor: 6.685, rank: 94.037%)

30. Dajiang Zhu, Kaiming Li, Lei Guo, Xi Jiang, Tuo Zhang, Degang Zhang, Hanbo Chen, Fan Deng, Carlos Faraco, Changfeng Jin, Chong-Yaw Wee, **Yixuan Yuan**, Peili Lv, Yan Yin, Xiaolei Hu, Lian Duan, Xintao Hu, Junwei Han, Lihong Wang, Dinggang Shen, L Stephen Miller, Lingjiang Li, Tianming Liu. "DICCCOL: Dense Individualized and Common Connectivity-based Cortical Landmarks." *Cerebral Cortex* 23(4):786-800, 2013. (Impact Factor: 5.043, rank: 81.434%)

31. Jingxin Nie, Lei Guo, Kaiming Li, Yonghua Wang, Guojun Chen, Longchuan Li, Hanbo Chen, Fan Deng, Xi Jiang, Tuo Zhang, Ling Huang, Carlos Faraco, Degang Zhang, Cong Guo, Pew-Thian Yap, Xintao Hu, Gang Li, Jinglei Lv, **Yixuan Yuan**, Dajiang Zhu, Junwei Han, Dean Sabatinelli, Qun Zhao, L Stephen Miller, Bingqian Xu, Ping Shen, Simon Platt, Dinggang Shen,

Xiaoping Hu, Tianming Liu. "Axonal Fiber Terminations Concentrate on Gyri." *Cerebral Cortex* 22(12): 2831-2839, 2012. (Impact Factor: 5.043, rank: 81.434%)

32. Kaiming Li, Lei Guo, Carlos Faraco, Dajiang Zhu, Hanbo Chen,**Yixuan Yuan** Jinglei Lv, Fan Deng, Xi Jiang, Tuo Zhang, Xintao Hu, Degang Zhang, L. Stephen Miller, Tianming Liu. "Visual analytics of brain networks." *NeuroImage* 61(1):82-97, 2012. (Impact Factor: 5.902, rank: 96.429%)

Conference Papers

1. Zhen Chen, Jun Zhang, Shuanlong Che, Junzhou Huang, Xiao Han*, **Yixuan Yuan***. "Diagnose Like A Pathologist: Weakly-Supervised Pathologist-Tree Network for Slide-Level Immunohistochemical Scoring." *The Thirty-Fifth AAAI Conference on Artificial Intelligence **(AAAI-21)***.
2. Zhen Chen, Xiaoqing Guo, Chen Yang, Bulat Ibragimov, **Yixuan Yuan**. "Joint Spatial-Wavelet Dual-Stream Network for Super-Resolution." *The 22nd International Conference on Medical Image Computing and Computer Assisted Intervention **(MICCAI 2020)***, Lima, Peru.
3. Qiushi Yang, **Yixuan Yuan**. "Learning Dynamic Convolutions for Multi-Modal 3D MRI Brain Tumor Segmentation." *Brain Lesion (BrainLes) workshop of The 23nd International Conference on Medical Image Computing and Computer Assisted Intervention*, Lima, Peru, 2020.
4. Xiaohan Xing, **Yixuan Yuan***, Q.-H. Meng*. "Diagnose like a Clinician: Third-order Attention Guided Lesion Amplification Network for WCE Image Classification." *2020 IEEE/RSJ International Conference on Intelligent Robots and Systems **(IROS 2020)***, Las Vegas, USA.
5. Xiaoqing Guo, Zhen Chen, **Yixuan Yuan**. "Complementary Network with Adaptive Receptive Fields for Melanoma Segmentation." *IEEE International Symposium on Biomedical Imaging 2020 **(ISBI 2020)***, Iowa City, Iowa.
6. Wenjian Qin, Zhibo Xiao, Yaoqin Xie, **Yixuan Yuan**. "Self-Paced Learning for Automatic Prostate Segmentation on MR Images with Hierarchical Boundary Sensitive Network." *The 2020 IEEE International Conference on Real-time Computing and Robotics **(IEEE RCAR 2020)***, Asahikawa, Japan.
7. Xiaoqing Guo, Chen Yang, Pak Lun Lam, Peter YM Woo, **Yixuan Yuan**. "Domain Knowledge Based Brain Tumor Segmentation and Overall Survival Prediction." *Brain Lesion (BrainLes) workshop of The 22nd International Conference on Medical Image Computing and Computer Assisted Intervention*, Shenzhen, China, 2019.
8. Xiaoqing Guo, **Yixuan Yuan**. "Triple ANet: Adaptive Abnormal-aware Attention Network for WCE Image Classfication." *22th International Conference on Medical Image Computing and Computer Assisted Intervention **(MICCAI 2019)***, Shenzhen, China, 2019 (Early Accept).
9. Yuqi Fang, Cheng Chen, Delong Zhu, **Yixuan Yuan***, Kai Yu Raymond Tong*. "Selective Feature Aggregation Network with Area-boundary Constraints for Polyp Segmentation." *22th International Conference on Medical Image Computing and Computer Assisted Intervention **(MICCAI 2019)***, Shenzhen, China, 2019 (Early Accept).
10. Xiaohan Xing, **Yixuan Yuan***, Xiao Jia, Max Q.-H. Meng*. "A Saliency-Aware Hybrid Dense Network for Bleeding Detection in Wireless Capsule Endoscopy Images." *IEEE International Symposium on Biomedical Imaging **(ISBI 2019)***, Venice, Italy, 2019.
11. **Yixuan Yuan**, Wenjian Qin, Xiaoqing Guo, Buyyounouski Mark, Steve Hancock, Lei Xing. " Prostate Segmentation with Encoder-Decoder Densely Connected Convolutional Network (ED-

DenseNet)." *IEEE International Symposium on Biomedical Imaging* ***(ISBI 2019)***, Venice, Italy, 2019.

12. **Yixuan Yuan**, Wenjian Qin, Bulat Ibragimov, Bin Han, Lei Xing. "RIIS-DenseNet: Rotation-Invariant and Image Similarity Constrained Densely Connected Convolutional Network for Polyp Detection." *21th International Conference on Medical Image Computing and Computer Assisted Intervention* ***(MICCAI 2018)***, Granada, Spain, 2018.
13. Bulat Ibragimov, Diego AS Toesca, **Yixuan Yuan**, Albert C Koong, Daniel T Chang, Lei Xing. "Deep 3D dose analysis for prediction of outcomes after liver stereotactic body radiation therapy." *21th International Conference on Medical Image Computing and Computer Assisted Intervention* ***(MICCAI 2018)***, Granada, Spain, 2018.
14. **Yixuan Yuan**, Wenjian Qin, Mark Buyyounouski, Steve Hancock, H.P. Bagshaw, Bin Han, Lei Xing. "Automatic Prostate Segmentation using Deep Learning and MR Images." *Annual Meeting of the American Society for Radiation Oncology* ***(ASTRO 2018)***, Chicago, United States, 2018.
15. Bin Han, **Yixuan Yuan**, Steve Hancock, H.P. Bagshaw, Mark Buyyounouski, Lei Xing. "Prostate Cancer Staging and Radiation Treatment Planning Using Deep Learning on MR." *Annual Meeting of the American Society for Radiation Oncology* ***(ASTRO 2018)***, Chicago, United States, 2018.
16. **Yixuan Yuan**, Max Q.-H. Meng, Wenjian Qin, Lei Xing. "Liver Lesion Detection based on Two-Stage Saliency Model with Modified Sparse Autoencoder." *20th International Conference on Medical Image Computing and Computer Assisted Intervention* ***(MICCAI 2017)***, Quebec, Canada, 2017.
17. **Yixuan Yuan**, Max Q.-H. Meng. "A Novel Global and Local Saliency Coding Method for Polyp Recognition in WCE Videos." *IEEE/RSJ International Conference on Intelligent Robots and Systems* ***(IROS 2016)***, Daejeon, Korea, 2016.
18. **Yixuan Yuan**, Assaf Hoogi, Christopher F. Beaulieu, Max Q.-H. Meng and Daniel L. Rubin. "Weighted Locality-Constrained Linear Coding for Lesion Classi-fication in CT Images." *The 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society* ***(EMBC 2015)***, Milano, Italy, 2015.
19. **Yixuan Yuan**, Max Q.-H. Meng. "Automatic Bleeding Frame Detection in the Wireless Capsule Endoscopy Images." *IEEE International Conference on Robotics and Automation* ***(ICRA 2015)***, Seattle, United States, 2015.
20. **Yixuan Yuan**, Max Q.-H. Meng. "A Novel Feature for Polyp Detection in Wireless Capsule Endoscopy images." *IEEE/RSJ International Conference on Intelligent Robots and Systems* ***(IROS 2014)***, Chicago, United States, 2014.
21. **Yixuan Yuan**, Max Q.-H. Meng. "Polyp Classification Based on Bag of Features and Saliency in Wireless Capsule Endoscopy." *IEEE International Conference on Robotics and Automation* ***(ICRA 2014)***, Hong Kong, 2014.
22. **Yixuan Yuan**, Max Q.-H. Meng. "Hierarchical key frames extraction for WCE video." *IEEE International Conference on Mechatronic and Automation* ***(ICMA 2013)***, Takamatsu, Japan, 2013. (**Toshio Fukuda Best Award in Mechatronics**)
23. **Yixuan Yuan**, Lei Guo, Peili Lv, Xintao Hu, Degang Zhang, Junwei Han, Li Xie, Tianming Liu. "Assessing Graph Models for Description of Brain Networks." *IEEE International Symposium on Biomedical Imaging* ***(ISBI 2011)***, Chicago, United States, 2011.

24. **Yixuan Yuan**, Lei Guo, Gang Li, Tuo Zhang, Xintao Hu, Tianming Liu. "Joint analysis of cortical folding pattern, thickness and fiber density using structural and DTI data." *IEEE International Symposium on Biomedical Imaging **(ISBI 2010)***, Rotterdam, Netherlands, 2010.
25. Zhaojin Gong, Jianfeng Lu, Jia Chen, Yaping Wang, **Yixuan Yuan**, Tuo Zhang, Lei Guo, L. Stephen Miller. "Ventricle shape analysis for centenarians, elderly subjects, MCI and AD patients." *First international conference on Multimodal brain image analysis **(MBIA 2011)***, Toronto, Canada, 2011.

EXTERNAL RESEARCH GRANTS

Sichuan Provincial Science and Technology Research Grants Feb. 2019

- *Research on Automatic Diagnosis System of Wireless Capsule Endoscope Image*
- RMB 100,000, PI

Contract Based Research Fund Jul. 2019

- *Provision of Services for the Development of Capsule Endoscopy Video Analaysis Algorithm*
- HKD 200,000, PI

Shenzhen-Hong Kong Innovation Circle Category D Project Oct. 2019

- *DeepProstate: An Intelligent Platform for Prostate Segmentation, Cancer Staging and Assessment with MRI images*
- HKD 3,080,000, PI

Collaborative Research Fund Feb. 2020

- *A Robotic Wireless Capsule Endoscopic System for Automated Gastrointestinal Disease Diagnosis*
- HKD 825,000, Co-I

ECS - Early Career Scheme Jul. 2020

- *Domain Knowledge Driven Deep Models for Automatic Gastrointestinal Disease Diagnosis*
- HKD 534,288, PI

National Natural Science Foundation of China Research Grants Sep. 2020

- *Automatic Colorectal Cancer Detection and Segmentation with Endoscopy Images*
- RMB 240,000, PI
- Young scholar scheme

PROFESSIONAL ACTIVITIES

Academic Organizer and Chair

- Area Chair in MICCAI 2019 Aug. 2018
- Program Committee of The 2nd Intelligence in Medicine Symposium Aug. 2018
- Program Co-Chairs of IEEE International Conference on Information and Automation Aug. 2018
- Session chair of IEEE International Conference on Information and Automation Aug. 2017
- Session chair of IEEE International Conference on Information and Automation Aug. 2016

- Session chair of IEEE International Conference on Information and Automation Aug. 2015

Conference Presentations

- **MICCAI**, Quebec, Canada Sep. 2017
- **IROS**, Daejeon, Korea Oct. 2016
- **EMBS**, Milano, Italy Aug. 2015
- **ICRA**, Seattle, United States May 2015
- **IROS**, Chicago, United States Sep. 2014
- **ICRA**, Hong Kong May 2014
- **ICMA**, Takamatsu, Japan Aug. 2013

Technical Reviewers

- IEEE Transaction on Medical Imaging
- IEEE Transaction on Industrial Informatics
- IEEE Journal of Biomedical and Health Informatics
- Biomedical Optics Express
- Computers in Biology and Medicine
- Journal of Imaging
- Signal, Image and Video Processing
- IEEE International Conference on Robotics and Automation
- IEEE International Conference on Information and Automation

TEACHING EXPERIENCES

Computer Vision (EE4211), CityU of HK Jan. 2020 - Apr. 2020
- *Course Leader*

Medical Imaging and Signal Processing (EE3919), CityU of HK Sep. 2019 - Dec. 2019
- *Course Leader*

Digital Image Processing (EE4206), CityU of HK Jan. 2019 - Apr. 2019
- *Course Leader*

Research Methods in Biomedical Engineering (BMEG5610), CUHK Jan. 2016 - Apr. 2016
- *Teaching Assistant* with Prof. Arthur Fuk-Tat Mak

Biomedical Ethics, Safety and Practice (BMEG 3110), CUHK Jan. 2014 - Apr. 2014
- *Teaching Assistant* with Prof. Arthur Fuk-Tat Mak

Medical Instrumentation and Sensors (ELEG 3240), CUHK Sep. 2013 - Dec. 2013
- *Teaching Assistant* with Prof. Zhang Yuanting

Biomedical Ethics, Safety and Practice (BMEG 3110), CUHK Jan. 2013 - Apr. 2013
- *Teaching Assistant* with Prof. Arthur Fuk-Tat Mak

Tele-medicine and Mobile healthcare (BMEG 3130), CUHK Sep. 2012 - Dec. 2012
- *Teaching Assistant* with Prof. Emma MacPherson