Jun CHENG

PERSONAL PARTICULARS

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RESEARCH INTEREST

AI for Healthcare, 3D Vision, Robotic Vision and Perception.

SUMMARY

Jun Cheng received the B. E. degree from the University of Science and Technology of China, and the Ph. D. degree from Nanyang Technological University, Singapore. He is currently a Principal Investigator and senior research scientist and at Institute for Infocomm Research (I^2R), Agency of Science, Technology and Research (A*STAR), Singapore. He has authored/co-authored 200+ prestigious journals/conferences, such as T-IP, T-CSVT, T-MI, T-BME, CVPR, ECCV, ICCV, MICCAI and invented more than 20 patents. He is currently Associate Editor for IEEE Transaction on Image Processing and IEEE Transactions on Medical Imaging. He served/serves for area chairs and senior PC for MICCAI (2017, 2019, 2022, 2023), AAAI (2022), ICLR (2022, 2023) and NeurIPS (2023, 2024).

He has been working extensively in the area of 3D vision and medical imaging. He was previously a Professor at Cixi Institute of Biometical Engineering, Ningbo Institute of Materials Technology & Engineering, Chinese Academy of Sciences and deputy director of UBtech Research. He has received the IES Prestigious Engineering Achievement Award 2013. His work in glaucoma screening has been an important contribution to the President's Science and Technology Award Singapore in 2014. He has worked as principal investigator, co-investigator, collaborator or team member on 13 research projects of more than 10M SGD funded by A*STAR, National Medical Research Council (NMRC), Explore Technology Pte Ltd and industry in Singapore.

EDUCATION

Nanyang Technological University, Singapore
Doctor of Philosophy, Electrical and Electronic Engineering, June 2008

University of Science and Technology of China, Anhui, China,
Bachelor, Electronic Engineering and Information Science, June 2002

EMPLOYMENT HISTORY

Institute for Infocomm Research, A*Star

Principal Scientist & Principal Investigator, July 2021 - Present

UBTech Research Institute

Deputy Director, December 2018-July 2021

Chinese Academic of Sciences

Professor, December 2017-December 2018

Institute for Infocomm Research, A*Star

Research Lead, October 2009 - December 2017

Panasonic Singapore Laboratories, Singapore

Research & Development Engineer, April 2007 - October 2009

Public and Professional Service

Associate Editor, **IEEE Transaction on Medical Imaging**, 2015 - present

Associate Editor, **IEEE Transaction on Image Processing**, 2022 - present;

Guest Editor, **IEEE Journal of Biomedical and Healthy Informatics**, 2020.

Area Chair, **MICCAI**, 2017, 2019, 2022, 2023;

Area Chair, **ICLR**, 2022, 2023;

Area Chair, **NeurIPS**, 2023, 2024;

Senior PC, **AAAI**, 2022;

Awards

1. Best poster award, MICS, 2019.
2. Best oral presentation award, Int. Conf. on Contr. and Comp. Vis., 2018.
3. IES prestigious achievement award, 2013.

Kenotes and Invited Talks

1. U-talk: Artificial Intelligence: Computer Vision and Its Application in Robotics, 2020.
2. Keynote Speaker: Glaucoma Screening from Fundus Images And Its Challenges, BOOM workshop in conjuction with IJCAI 2019.
3. Invited Speaker: Structure-preserving guided retinal image filtering and its application for optic disc analysis, Medical Image Computing Seminar (MICS) 2019.

Selected Publications

1. S. Chen, C. Ding, M. Liu, **Jun Cheng**, D. Tao, CPP-Net: Context-aware Polygon Proposal Network for Nucleus Segmentation, IEEE Trans. on Image Processing (**TIP**), vol. 32, pp. 980-994, 2023. (**IF 10.856**)
2. K. Zhou, J. Li, Y. Xiao, J. Yang, **Jun Cheng**, W. Liu, We. Luo, J. Liu, S. Gao, Memorizing Structure-Texture Correspondence for Image Anomaly Detection, IEEE Trans. on Neural Networks and Learning Systems, (**TNNLS**), vo. 33, no. 6, pp. 2335-2340, 2022. (**IF 10.451**)
3. Y. Ma, J. Liu, Y. Liu, H. Fu, Y. Hu, **Jun Cheng**, H. Qi, Y. Wu, J. Zhang, Y. Zhao, Structure and Illumination Constrained GAN for Medical Image Enhancement, IEEE Transactions on Medical Imaging (**TMI**), vol. 40, pp. 3955-3967, 2021. (**IF 10.048**)
4. L. Mou, L. Chen, **Jun Cheng***, Z. Gu, Y. Zhao and J. Liu, Dense Dilated Network with Probability Regularized Walk for Vessel Detection, IEEE Trans. On Medical Imaging (**TMI**), vol. 39, no.5, pp. 1392-1403, 2020. (**IF 10.048**)

5. T. Zhang, **Jun Cheng***, H. Fu, Z. Gu, Y. Xiao, K. Zhou, S. Gao, R. Zheng, J. Liu, Noise Adaptation Generative Adversarial Network for Medical Image Analysis, IEEE Trans. On Medical Imaging (**TMI**), vol. 39, no. 4, pp. 1149-1159, 2020. (**IF 10.048**)
6. Y. Jiang, L. Duan, **Jun Cheng***, Z. Gu, H. Xia, H. Fu, C. Li and J. Liu, JointRCNN: A Region-based Convolutional Neural Network for Optic Disc and Cup Segmentation, IEEE Trans. On Biomedical Engineering (**TBME**), vol. 67, no. 2, pp. 335-343, 2020. (**IF 4.491**)
7. Z. Gu, **Jun Cheng***, H. Fu, K. Zhou, H. Hao, Y. Zhao, T. Zhang, S. Gao and J. Liu, CE-Net: Context Encoder Network for 2D Medical Image Segmentation, IEEE Trans. On Medical Imaging (**TMI**), vol. 38, no. 10, pp. 2281-2292, 2019. (**IF 10.048**) **ESI Highly cited, 2019 Best Poster Award.**
8. **Jun Cheng***, Sparse Range-constrained Learning and Its Application for Medical Image Grading, IEEE Transactions on Medical Imaging (**TMI**),, vol. 37, no. 12, pp. 2729-2738, 2018. (**IF 10.048**)
9. **Jun Cheng***, Z. Li, Z. Gu, H. Fu, D. W. K. Wong, J. Liu, Structure-preserving Guided Retinal Image Filtering and Its Application for Optic Disc Analysis, IEEE Transactions on Medical Imaging (**TMI**), vol. 37, no. 11, pp. 2536-2546, 2018. (**IF 10.048**)
10. H. Fu, **Jun Cheng***, Y. Xu, C. Zhang, D. W. K.Wong, J. Liu, X. Cao, Disc-aware Ensemble Network for Glaucoma Screening from Fundus Image, IEEE Transactions on Medical Imaging (**TMI**), vol. 37, no. 11, pp. 2493-2501, 2018.(**IF 10.048**)
11. H. Fu, **Jun Cheng**, Y. Xu, D. W. K. Wong, J. Liu and X. Cao, Joint Optic Disc and Cup Segmentation Based on Multi-label Deep Network and Polar Transformation, IEEE Transactions on Medical Imaging (**TMI**), vol. 37, no 7, pp. 1597-1605, 2018. (**IF 10.048, ESI Highly cited**)
12. **Jun Cheng***, D. Tao, Y. Quan, D. W. K. Wong, G. Cheung, M. Akiba and J. Liu, Speckle Reduction in 3D Optical Coherence Tomography of Retina by A-scan Reconstruction, IEEE Tran. on Medical Imaging (**TMI**), vol. 35, no. 10, pp. 2270-2279, 2016. (**IF 10.048**)
13. **Jun Cheng***, F. Yin, D. W. K. Wong, D. Tao and J. Liu, Sparse Dissimilarity-constrained Coding for Glaucoma Screening, IEEE Tran. on Biomedical Engineering (**TBME**), vol. 62, Issue 5, pp. 1395-1403, 2015. (**IF 4.491**)