Huazhu Fu | Curriculum Vitae

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Experiences

1: Principal Scientist, 2021.08 – present,

Institute of High Performance Computing, Agency for Science, Technology and Research (A*STAR), Singapore.

2: **Senior Scientist**, 2018.11 – 2021.07,

Inception Institute of Artificial Intelligence (IIAI), Abu Dhabi, United Arab Emirates.

3: **Scientist**, 2015.10 – 2018.11,

Institute for Infocomm Research, Agency for Science, Technology and Research (A*STAR), Singapore.

4: **Research Fellow**, 2013.08 – 2015.09,

School of Computer Engineering, Nanyang Technological University (NTU), Singapore.

5: **Research Intern**, 2012.07 – 2013.01,

Systems Research Group, Microsoft Research Asia, China.

Education

Tianjin University, China Ph.D.

in School of Computer Science 2010.09–2013.06

Tianjin University of Technology, China M.E.

in School of Mechatronics Engineering 2007.09–2010.03

Nankai University, China B.S.

in School of Information and Numerical Science 2002.09–2006.06

Professional Activities

IEEE Senior Member

Member of of the IEEE Bio Imaging and Signal Processing Technical Committee (BISP TC).

Associate Editor:

IEEE Transactions on Medical Imaging (IF=10.6, 2020 - present)

IEEE Transactions on Neural Networks and Learning Systems (IF=10.4, 2022 - present)

IEEE Journal of Biomedical and Health Informatics (7.7, 2020 - present)

IEEE Transactions on Artificial Intelligence (2023 - present)

Scientific Reports (*IF*=4.996, 2021 - present).

IEEE Access (IF=3.9, 2018 - present).

Guest Editor:

- 1. IEEE JBHI, Special Issue on "Foundation Models in Medical Imaging", 2023.
- 2. IEEE TMI, Special Issue on "Geometric Deep Learning in Medical Imaging", 2022.
- 3. IEEE JBHI, Special Issue on "Generative Adversarial Networks in Biomedical Image Computing", 2021.
- 4. IEEE JBHI, Special Issue on "Ophthalmic Image Analysis and Informatics", 2020.

Area Chair/Senior Program Committee:

- 1. International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 2021-2023.
- 2. International Joint Conference on Artificial Intelligence (IJCAI), 2021.
- 3. ACM International Conference on Multimedia in Asia (MM Asia), 2021.
- 4. AAAI Conference on Artificial Intelligence (AAAI), 2022.
- 5. Medical Imaging with Deep Learning (MIDL), 2022-2023.
- 6. IEEE International Conference on Image Processing (ICIP), 2022-2023.
- 7. IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI), 2022-2023.

- 8. International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2023.
- 9. IEEE International Symposium on Biomedical Imaging (ISBI), 2023.

Challenge Organizer:

- 1. "ATLAS: A Tumor and Liver Automatic Segmentation", in MICCAI 2023.
- 2. "STAGE: Structural-Functional Transition in Glaucoma Assessment", in MICCAI 2023.
- 3. "GOALS: Glaucoma Oct Analysis and Layer Segmentation Challenge", in MICCAI 2022.
- 4. "GAMMA: Glaucoma Grading from Multi-Modality Images Challenge", in MICCAI 2021.
- 5. "REFUGE2: 2nd Retinal Fundus Glaucoma Challenge", in MICCAI 2020.
- 6. "ADAM: Automatic Detection challenge on Age-related Macular degeneration", in ISBI 2019.
- 7. "AGE: Angle closure Glaucoma Evaluation Challenge", with MICCAI 2019.
- 8. "PALM: PathologicAL Myopia detection from retinal images", in ISBI 2019.
- 9. "REFUGE: Retinal Fundus Glaucoma Challenge", in MICCAI 2018.

Workshop Chair:...

- 1. Workshop on Ophthalmic Medical Image Analysis (OMIA) with MICCAI, 2019 present.
- 2. Workshop on Resource-Efficient Medical Image Analysis (REMIA) with MICCAI, 2022 present.

Academic Awards

- 1. 2023, Best Paper Award of Distributed, Collaborative and Federated Learning (DeCAF) Workshop in MICCAI.
- 2. 2022, Best Paper Award of Ophthalmic Medical Image Analysis (OMIA) Workshop in MICCAI.
- 2022, Best Paper Runner-up Award of Resource-Efficient Medical Image Analysis (REMIA) Workshop in MICCAI.
- 4. 2021, Best Paper Award in IEEE International Conference on Multimedia & Expo (ICME).
- 5. 2021-2023, Top 2% Scientists Worldwide, by Stanford University.
- 6. 2021, Finalist of the Young Scientist Publication Impact Award in MICCAI.
- 7. 2021, Most Influential Paper (Application) Award in Jittor Developer Conference.
- 8. 2020-2022, IEEE TMI Distinguished Reviewer Gold Level.
- 9. 2021, Outstanding Reviewer in CVPR.
- 10. 2014, China Computer Federation (CCF) Outstanding Dissertation Nomination.

Grants

- 1. **Principal Investigator** (2022-2025): "Robust and Trustworthy Al system for Multi-modality Healthcare", A*STAR SERC Central Research Fund, S\$900,000.
- 2. **Principal Investigator** (2022-2024): "Efficient and Robust Federated (Un)Learning for Utilizing Large Model on Resource-limited Clients", A*STAR Career Development Fund, S\$110,000.
- 3. **Principal Investigator** (2022-2023): "Trustworthy and Data-efficient Multi-modality Learning for Healthcare", A*STAR Al3 HTPO Seed Fund, S\$250,000.
- 4. **Co-PI** (2023-2025): "Development of Stable, Robust and Secure Intelligent Systems for Autonomous Vehicles", Al Singapore Grand Challenge in Robust Al Funding, \$\$2,554,800.
- Co-PI (2022-2025): "SmartRx: Safe Medication Management Platform Augmented by ARTificial Intelligence for Prescribers [Rx]", AI Singapore Tech Challenge Funding, \$\$2,500,000.
- Co-PI (2022-2025): "RAPIER Radiology Pathology Information Exchange Resource", AI Singapore Tech Challenge Funding, \$\$2,866,000.

Selected Publications

Journals:..

- 1. Meng Wang, Tian Lin, Lianyu Wang, ..., and <u>Huazhu Fu</u>, "Uncertainty-inspired Open Set Learning for Retinal Anomaly Identification", *Nature Communications*, in press.
- Alexandros Karargyris, Renato Umeton, ..., <u>Huazhu Fu</u>, ..., Spyridon Bakas, and Peter Mattson, "Federated Benchmarking of Medical Artificial Intelligence with MedPerf", *Nature Machine Intelligence*, Vol. 14, No. 1, pp. 115, 2023. DOI: 10.1038/s42256-023-00652-2

- Yahui Long, Kok Siong Ang, ..., <u>Huazhu Fu</u>, ..., Longqi Liu, and Jinmiao Chen, "Spatially informed clustering, integration, and deconvolution of spatial transcriptomics with GraphST", *Nature Communications*, Vol. 14, No. 1, pp. 115, 2023. DOI: 10.1038/s41467-023-36796-3
- Zongbo Han, Changqing Zhang, <u>Huazhu Fu</u>, and Joey Tianyi Zhou, "Trusted Multi-View Classification with Dynamic Evidential Fusion", *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol. 45, No. 2, pp. 2551-2566, 2023. DOI: 10.1109/TPAMI.2022.3171983 "ESI Highly Cited Paper".
- Tao Zhou, <u>Huazhu Fu</u>, Chen Gong, Ling Shao, Fatih Porikli, Haibin Ling, and Jianbing Shen, "Consistency and Diversity induced Human Motion Segmentation", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (*TPAMI*), Vol. 45, No. 1, pp. 197-210, 2023. DOI: 10.1109/TPAMI.2022.3147841 "ESI Highly Cited Paper".
- Peng Zheng, <u>Huazhu Fu</u>, Deng-Ping Fan, Qi Fan, Jie Qin, Yu-Wing Tai, Chi-Keung Tang, and Luc Van Gool, "GCoNet+: A Stronger Group Collaborative Co-Salient Object Detector", *IEEE Transactions on Pattern Analysis* and Machine Intelligence (*TPAMI*), Vol. 45, No. 9, pp. 10929-10946, 2023. DOI: 10.1109/TPAMI.2023.3264571
- 7. Chun-Mei Feng, Yunlu Yan, Shanshan Wang, Yong Xu, Ling Shao, and <u>Huazhu Fu</u>, "Specificity-Preserving Federated Learning for MR Image Reconstruction", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 42, No. 7, pp. 2010-2021, 2023. DOI: 10.1109/TMI.2022.3202106
- 8. Along He, Kai Wang, Tao Li, Chengkun Du, Shuang Xia, and <u>Huazhu Fu</u>, "H2Former: An Efficient Hierarchical Hybrid Transformer for Medical Image Segmentation", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 42, No. 9, pp. 2763-2775, 2023. DOI: 10.1109/TMI.2023.3264513
- Erjian Guo, <u>Huazhu Fu</u>, Luping Zhou, and Dong Xu, "Bridging Synthetic and Real Images: a Transferable and Multiple Consistency aided Fundus Image Enhancement Framework", *IEEE Transactions on Medical Imaging* (*TMI*), Vol. 42, No. 8, pp. 2189-2199, 2023. DOI: 10.1109/TMI.2023.3247783
- Chun-Mei Feng, Yunlu Yan, Geng Chen, Yong Xu, Ying Hu, Ling Shao, and <u>Huazhu Fu</u>, "Multimodal Transformer for Accelerated MR Imaging", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 42, No. 10, pp. 2804-2816, 2023. DOI: 10.1109/TMI.2022.3180228
- 11. Jiangbo Shi, Lufei Tang, Zeyu Gao, Yang Li, Chunbao Wang, Tieliang Gong, Chen Li, and <u>Huazhu Fu</u>, "MG-Trans: Multi-scale Graph Transformer with Information Bottleneck for Whole Slide Image Classification", *IEEE Transactions on Medical Imaging (TMI)*, 2023, in press.
- 12. Jicheng Liu, Hui Liu, <u>Huazhu Fu</u>, Yu Ye, Kun Chen, Yu Lu, Jianbo Mao, Ronald X. Xu, and Mingzhai Sun, "Edge-guided Contrastive Adaptation Network for Arteriovenous Nicking Classification Using Synthetic Data", *IEEE Transactions on Medical Imaging (TMI)*, 2023, in press.
- 13. Heng Li, Ziqin Lin, Zhongxi Qiu, Zinan Li, Ke Niu, Na Guo, textbf<u>Huazhu Fu</u>, Yan Hu, and Jiang Liu, "Enhancing and Adapting in the Clinic: Source-free Unsupervised Domain Adaptation for Medical Image Enhancement", *IEEE Transactions on Medical Imaging* (**TMI**), 2023, in press.
- 14. Fahad Shamshad, Salman Khan, Syed Waqas Zamir, Muhammad Haris Khan, Munawar Hayat, Fahad Shahbaz Khan, and <u>Huazhu Fu</u>, "Transformers in medical imaging: A survey", *Medical Image Analysis* (*MedIA*), Vol. 88, 102802, 2023. DOI: 10.1016/j.media.2023.102802 "ESI Highly Cited Paper".
- Heng Li, Haofeng Liu, <u>Huazhu Fu</u>, Yanwu Xu, Hai Shu, Ke Niu, Yan Huf, and Jiang Liu, "A Generic Fundus Image Enhancement Network Boosted by Frequency Selfsupervised Representation Learning", *Medical Image Analysis* (*MedIA*), Vol. 90, 102945, 2023. DOI: 10.1016/j.media.2023.102945
- 16. Yangqin Feng, Zizhou Wang, Xinxing Xu, Yan Wang, <u>Huazhu Fu</u>, Shaohua Li, Liangli Zhen, Xiaofeng Lei, Yingnan Cui, Jordan Sim Zheng Ting, Yonghan Ting, Joey Tianyi Zhou, Yong Liu, Rick Siow Mong Goh, and Cher Heng Tan, "Contrastive Domain Adaptation with Consistency Match for Automated Pneumonia Diagnosis", *Medical Image Analysis* (*MedIA*), Vol. 83, 102664, 2023. DOI: 10.1016/j.media.2022.102664
- Zhiqiang Tao, Jun Li, <u>Huazhu Fu</u>, Yu Kong, and Yun Fu, "From Ensemble Clustering to Subspace Clustering: Cluster Structure Encoding", *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, Vol. 34, No. 5, pp. 2670-2681, 2023. DOI: 10.1109/TNNLS.2021.3107354
- 18. Kahou Tam, Li Li, Bo Han, Chengzhong Xu, and <u>Huazhu Fu</u>, "Federated Noisy Client Learning", *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2023, in press.
- Runmin Cong, Ning Yang, Chongyi Li, <u>Huazhu Fu</u>, Yao Zhao, Qingming Huang, and Sam Kwong, "Global-and-Local Collaborative Learning for Co-Salient Object Detection", *IEEE Transactions on Cybernetics (TCyb)*, Vol. 53, No. 3, pp. 1920-1931, 2023. DOI: 10.1109/TCYB.2022.3169431 "ESI Highly Cited Paper".
- Liansheng Wang, Jiacheng Wang, Lei Zhu, <u>Huazhu Fu</u>, Ping Li, Gary Cheng, Zhipeng Feng, Shuo Li, and Pheng-Ann Heng, "Dual Multiscale Mean Teacher Network for Semi-supervised Infection Segmentation in Chest CT Volume for COVID-19", *IEEE Transactions on Cybernetics (TCyb)*, Vol. 53, No. 10, pp. 6363-6375, 2023. DOI: 10.1109/TCYB.2022.3223528

- 21. Chun-Mei Feng, Yunlu Yan, Kai Yu, Yong Xu, <u>Huazhu Fu</u>, Jian Yang, and Ling Shao, "Exploring Separable Attention for Multi-Contrast MR Image Super-Resolution", *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2023, in press.
- 22. Tao Zhou, Yi Zhou, Kelei He, Chen Gong, Jian Yang, <u>Huazhu Fu</u>, and Dinggang Shen, "Cross-level Feature Aggregation Network for Polyp Segmentation", *Pattern Recognition (PR)*, Vol. 140, 109555, 2023. DOI: 10.1016/j.patcog.2023.109555
- Jingjing Chen, Linhai Zhuo, Zhipeng Wei, Hao Zhang, <u>Huazhu Fu</u>, and Yu-Gang Jiang, "Knowledge Driven Weights Estimation for Large-scale Few-shot Image Recognition", *Pattern Recognition (PR)*, Vol. 142, 109668, 2023. DOI: 10.1016/j.patcog.2023.109668
- Bo Peng, Mingliang Zhang, Jianjun Lei, <u>Huazhu Fu</u>, Haifeng Shen, and Qingmin Huang, "RGB-D Human Matting: A Real-World Benchmark Dataset and A Baseline Method", *IEEE Transactions on Circuits and Systems* for Video Technology (TCSVT), Vol. 33, No. 8, pp. 4041-4053, 2023. DOI: 10.1109/TCSVT.2023.3238580
- Qing Li, Changqing Zhang, Qinghua Hu, Pengfei Zhu, <u>Huazhu Fu</u>, and Lei Chen, "Stabilizing Multispectral Pedestrian Detection with Evidential Hybrid Fusion", *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, in press, 2023.
- 26. Qing Li, Changqing Zhang, Qinghua Hu, <u>Huazhu Fu</u>, and Pengfei Zhu, "Confidence-aware Fusion using Dempster-Shafer Theory for Multispectral Pedestrian Detection", *IEEE Transactions on Multimedia (TMM)*, Vol. 25, pp. 3420-3431, 2023. DOI: 10.1109/TMM.2022.3160589
- 27. Tao Lei, Rui Sun, Xiaogang Du, <u>Huazhu Fu</u>, Changqing Zhang, and Asoke K. Nandi, "SGU-Net: Shape-Guided Ultralight Network for Abdominal Image Segmentation", *IEEE Journal of Biomedical and Health Informatics* (*JBHI*), Vol. 27, No. 3, pp. 1431-1442, 2023. DOI: 10.1109/JBHI.2023.3238183
- 28. Hengyi Yang, Tao Zhou, Yi Zhou, Yizhe Zhang, and <u>Huazhu Fu</u>, "Flexible Fusion Network for Multi-Modal Brain Tumor Segmentation", *IEEE Journal of Biomedical and Health Informatics (JBHI)*, Vol. 27, No. 7, pp. 3349-3359, 2023. DOI: 10.1109/JBHI.2023.3271808
- Junting Zhao, Zhaohu Xing, Zhihao Chen, Liang Wan, Tong Han, <u>Huazhu Fu</u>, and Lei Zhu, "Uncertainty-aware Multi-dimensional Mutual Learning for Brain and Brain Tumor Segmentation", *IEEE Journal of Biomedical and Health Informatics (JBHI)*, 2Vol. 27, No. 9, pp. 4362-4372, 2023. DOI: 10.1109/JBHI.2023.3274255
- 30. Mengjie Guo, Risa Higashita, Chen Lin, Lingxi Hu, Wan Chen, Fei Li, Gilda Wing Ki Lai, Anwell Nguyen, Rei Sakata, Keiichiro Okamoto, Bo Tang, Yanwu Xu, <u>Huazhu Fu</u>, Fei Gao, Makoto Aihara, Xiulan Zhang, Jin Yuan, Shan Lin, Christopher Kai-shun Leung, and Jiang Liu, "Crystalline lens nuclear age prediction as a new biomarker of nucleus degeneration", *British Journal of Ophthalmology* (*BJO*), 2023, in press. DOI: 10.1136/bjo-2023-323176
- 31. Jianyang Xie, Quanyong Yi, Yufei Wu, Yalin Zheng, Yonghuai Liu, Antonella Macerollo, <u>Huazhu Fu</u>, Yanwu Xu, Jiong Zhang, Ardhendu Behera, Chenlei Fan, Alejandro F Frangi, Jiang Liu, Qinkang Lu, Hong Qi, and Yitian Zhao, "Deep segmentation of OCTA for evaluation and association of changes of retinal microvasculature with Alzheimer's disease and mild cognitive impairment", *British Journal of Ophthalmology* (*BJO*), 2023, in press. DOI: 10.1136/bjo-2022-321399
- 32. Wenguan Wang, Qiuxia Lai, <u>Huazhu Fu</u>, Jianbing Shen, Haibin Ling, and Ruigang Yang, "Salient Object Detection in the Deep Learning Era: An In-Depth Survey", *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol. 44, No. 6, pp. 3239-3259, 2022. DOI: 10.1109/TPAMI.2021.3051099 "ESI Highly Cited Paper".
- 33. Changqing Zhang, Yajie Cui, Zongbo Han, Joey Tianyi Zhou, <u>Huazhu Fu</u>, and Qinghua Hu, "Deep Partial Multi-View Learning", *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol. 44, No. 5, pp. 2402-2415, 2022. DOI: 10.1109/TPAMI.2020.3037734 "ESI Highly Cited Paper".
- 34. Deng-Ping Fan, Tengpeng Li, Zheng Lin, Ge-Peng Ji, Dingwen Zhang, Ming-Ming Cheng, <u>Huazhu Fu</u>, and Jianbing Shen, "Re-thinking Co-Salient Object Detection", *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol. 44, No. 8, pp. 4339-4354, 2022. DOI: 10.1109/TPAMI.2021.3060412 "ESI Highly Cited Paper".
- 35. Kang Zhou, Jing Li, Weixin Luo, Zhengxin Li, Jianlong Yang, <u>Huazhu Fu</u>, Jun Cheng, Jiang Liu, and Shenghua Gao, "Proxy-bridged Image Reconstruction Network for Anomaly Detection in Medical Images", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 41, No. 3, pp. 582-594, 2022. DOI: 10.1109/TMI.2021.3118223
- 36. Jinkui Hao, Fei Li, Huaying Hao, <u>Huazhu Fu</u>, Yanwu Xu, Risa Higashita, Xiulan Zhang, Jiang Liu, and Yitian Zhao, "Hybrid Variation-aware Network for Angle-closure Assessment in AS-OCT", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 41, No. 2, pp. 254-265, 2022. DOI: 10.1109/TMI.2021.3110602
- 37. Heng Li, Haofeng Liu, Yan Hu, <u>Huazhu Fu</u>, Yitian Zhao, Hanpei Miao, and Jiang Liu, "An Annotation-free Restoration Network for Cataractous Fundus Images", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 41, No. 7, pp. 1699-1710, 2022. DOI: 10.1109/TMI.2022.3147854

- 38. Along He, Kai Wang, Tao Li, Wang Bo, Hong Kang and <u>Huazhu Fu</u>, "Progressive Multi-scale Consistent Network for Multi-class Fundus Lesion Segmentation", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 41, No. 11, pp. 3146-3157, 2022. DOI: 10.1109/TMI.2022.3177803
- 39. Huihui Fang, Fei Li, <u>Huazhu Fu</u>, Xu Sun, and *et.al.*, "ADAM Challenge: Detecting Age-related Macular Degeneration from Fundus Images", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 41, No. 10, pp. 2828-2847, 2022. DOI: 10.1109/TMI.2022.3172773
- Xiaoqing Zhang, Zunjie Xiao, <u>Huazhu Fu</u>, Yan Hu, Jin Yuan, Yanwu Xu, Risa Higashita, and Jiang Liu, "Attention to region: Region-based integration-and-recalibration networks for nuclear cataract classification using AS-OCT images", *Medical Image Analysis* (*MedIA*), Vol. 80, 102499, 2022. DOI: 10.1016/j.media.2022.102499
- 41. Changqing Zhang, Yu Geng, Zongbo Han, Yeqing Liu, <u>Huazhu Fu</u>, and Qinghua Hu, "Autoencoder in Autoencoder Networks", *IEEE Transactions on Neural Networks and Learning Systems* (*TNNLS*), 2022, in press.
- 42. Xiaoqiang Wang, Lei Zhu, Siliang Tang, <u>Huazhu Fu</u>, Ping Li, Fei Wu, Yi Yang, and Yueting Zhuang, "Boosting RGB-D Saliency Detection by Leveraging Unlabeled RGB Images", *IEEE Transactions on Image Processing (TIP)*, Vol. 31, pp. 1107-1119, 2022. DOI: 10.1109/TIP.2021.3139232
- 43. Junbing Li, Changqing Zhang, Joey Tianyi Zhou, <u>Huazhu Fu</u>, Shuyin Xia and Qinghua Hu, "Deep-LIFT: Deep Label Specific Feature Learning for Image Annotation", *IEEE Transactions on Cybernetics* (*TCyb*), Vol. 52, No. 8, pp. 7732-7741, 2022. DOI: 10.1109/TCYB.2021.3049630 "ESI Highly Cited Paper".
- 44. Jixiang Gao, Jingjing Chen, <u>Huazhu Fu</u>, and Yu-gang Jiang, "Dynamic Mixup for Multi-Label Long-Tailed Food Ingredient Recognition", *IEEE Transactions on Multimedia* (*TMM*), 2022, in press. DOI: 10.1109/TMM.2022.3181789
- 45. Ziyi Shen, <u>Huazhu Fu</u>, Jianbing Shen, and Ling Shao, "Modeling and Enhancing Low-quality Retinal Fundus Images", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 40, No. 3, pp. 996-1006, 2021. DOI: 10.1109/TMI.2020.3043495
- 46. Yuhui Ma, Huaying Hao, Jianyang Xie, <u>Huazhu Fu</u>, Jiong Zhang, Jianlong Yang, Zhen Wang, Jiang Liu, Yalin Zheng, and Yitian Zhao, "ROSE: A Retinal OCT-Angiography Vessel Segmentation Dataset and New Model", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 40, No. 3, pp. 928-939, 2021. DOI: 10.1109/TMI.2020.3042802 "ESI Highly Cited Paper".
- 47. Along He, Tao Li, Ning Li, Kai Wang, and <u>Huazhu Fu</u>, "CABNet: Category Attention Block for Imbalanced Diabetic Retinopathy Grading", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 40, No. 1, pp. 143-153, 2021. DOI: 10.1109/TMI.2020.3023463 "ESI Highly Cited Paper".
- 48. Yi Zhou, Tianfei Zhou, Tao Zhou, <u>Huazhu Fu</u>, and Ling Shao, "Contrast-Attentive Thoracic Disease Recognition with Dual-Weighting Graph Reasoning", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 40, No. 4, pp. 1196-1206, 2021. DOI: 10.1109/TMI.2021.3049498
- 49. Yuhui Ma, Jiang Liu, Yonghuai Liu, <u>Huazhu Fu</u>, Yan Hu, Jun Cheng, Hong Qi, Yufei Wu, Jiong Zhang, and Yitian Zhao, "Structure and Illumination Constrained GAN for Medical Image Enhancement", *IEEE Transactions on Medical Imaging* (*TMI*), Vol. 40, No. 12, pp. 3955-3967, 2021. DOI: 10.1109/TMI.2021.3101937
- 50. Tao Li, Wang Bo, Chunyu Hu, Hong Kang, Hanruo Liu, Kai Wang, and <u>Huazhu Fu</u>, "Applications of Deep Learning in Fundus Images: A Review", *Medical Image Analysis* (*MedIA*), Vol. 69, pp. 101971, 2021. DOI: 10.1016/j.media.2021.101971

 "ESI Highly Cited Paper".
- 51. Cheng Xue, Lei Zhu, <u>Huazhu Fu</u>, Xiaowei Hu, Xiaomeng Li, Hai Zhang, and Pheng-Ann Heng, "Global Guidance Network for Breast Lesion Segmentation in Ultrasound Images", *Medical Image Analysis* (*MedIA*), Vol. 70, pp. 101989, 2021. DOI: 10.1016/j.media.2021.101989
- 52. Jiansheng Fang, <u>Huazhu Fu</u>, Jiang Liu, "Deep Triplet Hashing Network for Case-based Medical Image Retrieval", Medical Image Analysis (MedIA), Vol. 69, pp. 101981, 2021. DOI: 10.1016/j.media.2021.101981
- 53. Chun-Mei Feng, Zhanyuan Yang, <u>Huazhu Fu</u>, Yong Xu, Jian Yang, and Ling Shao, "DONet: Dual-Octave Network for Fast MR Image Reconstruction", *IEEE Transactions on Neural Networks and Learning Systems* (*TNNLS*), 2021, in press. DOI: 10.1109/TNNLS.2021.3090303
- 54. Chongyi Li, Runmin Cong, Sam Kwong, Junhui Hou, <u>Huazhu Fu</u>, Guopu Zhu, Dingwen Zhang, and Qingming Huang, "ASIF-Net: Attention Steered Interweave Fusion Network for RGB-D Salient Object Detection", *IEEE Transactions on Cybernetics* (*TCyb*), Vol. 51, No. 1, pp. 88-100, 2021. DOI: 10.1109/TCYB.2020.2969255 "ESI Highly Cited Paper".
- 55. Jiansheng Fang, <u>Huazhu Fu</u>, Dan Zeng, Xiao Yan, Yuguang Yan, and Jiang Liu, "Combating Ambiguity for Hash-code Learning in Medical Instance Retrieval", *IEEE Journal of Biomedical and Health Informatics (JBHI)*, Vol. 25, No. 10, pp. 3943-3954, 2021. DOI: 10.1109/JBHI.2021.3082531

- 56. Natalia Porporato, Tin A. Tun, Mani Baskaran, Damon WK. Wong, Rahat Husain, <u>Huazhu Fu</u>, Rehena Sultana, Shamira A Perera, Leopold Schmetterer, and Tin Aung, "Towards 'Automated Gonioscopy': A Deep Learning Algorithm for 360° Angle Assessment by Swept-Source Optical Coherence Tomography", *British Journal of Ophthalmology* (*BJO*), 12 April 2021. DOI:10.1136/bjophthalmol-2020-318275
- 57. Changqing Zhang*, <u>Huazhu Fu</u>*, Qinghua Hu, Xiaochun Cao, Yuan Xie, Dacheng Tao, and Dong Xu, "Generalized Latent Multi-view Subspace Clustering", *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol. 42, No. 1, pp. 86-99, 2020. DOI: 10.1109/TPAMI.2018.2877660 (*co-first author) "ESI Highly Cited Paper".
- 58. Changqing Zhang, <u>Huazhu Fu</u>, Jing Wang, Qinghua Hu, Xiaochun Cao, Wen Li, "Tensorized Multi-View Subspace Representation Learning", *International Journal of Computer Vision (IJCV)*, Vol. 128, No. 8-9, pp. 2344-2361, 2020. DOI: 10.1007/s11263-020-01307-0
- Tao Zhou, <u>Huazhu Fu</u>, Jianbing Shen, Geng Chen, Ling Shao, "Hi-Net: Hybrid-fusion Network for Multi-modal MR Image Synthesis", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 39, No. 9, pp. 2772-2781, 2020. DOI: 10.1109/TMI.2020.2975344
- Tianyang Zhang, Jun Cheng, <u>Huazhu Fu</u>, Zaiwang Gu, Yuting Xiao, Kang Zhou, Shenghua Gao, Rui Zheng, and Jiang Liu, "Noise Adaptation Generative Adversarial Network for Medical Image Analysis", *IEEE Transactions on Medical Imaging (TMI)*, Vol. 39, No. 4, pp. 1149-1159, 2020. DOI: 10.1109/TMI.2019.2944488
- 61. Deng-Ping Fan, Tao Zhou, Ge-Peng Ji, Yi Zhou, Geng Chen, <u>Huazhu Fu</u>, Jianbing Shen, and Ling Shao, "Inf-Net: Automatic COVID-19 Lung Infection Segmentation from CT Images", *IEEE Transactions on Medical Imaging* (*TMI*), Vol. 39, No. 8, pp. 2626-2637, 2020. DOI: 10.1109/TMI.2020.2996645 "ESI Highly Cited Paper",
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