Dongxu Gao
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Qualifications

Ph.D., University of Portsmouth

Employment

Senior Lecturer
Senior Lecturer
School of Computing
University of Portsmouth
Portsmouth, United Kingdom
28 Feb 2024 → present

PDRA
University of Liverpool
Liverpool, United Kingdom
13 Aug 2018 → 1 Sept 2021

Research outputs

A floating-waste-detection method for unmanned surface vehicle based on feature fusion and enhancement
Li, Y., Wang, R., Gao, D. & Liu, Z., 26 Nov 2023, In: Journal of Marine Science and Engineering. 11, 12, 18 p., 2234.

Retinal vascular segmentation based on depth-separable convolution and attention mechanisms
Liu, X., Gao, D., Zhang, C., Gao, H. & Ju, Z., 11 Oct 2023, *Intelligent Robotics and Applications 16th International Conference, ICIRA 2023, Hangzhou, China, July 5–7, 2023, Proceedings, Part III.* Yang, H., Liu, H., Zou, J., Yin, Z., Liu, L., Yang, G., Ouyang, X. & Wang, Z. (eds.). Springer, p. 145-160 16 p. (Lecture Notes in Computer Science; vol. 14269).

SW-YOLO: improved YOLOv5s algorithm for blood cell detection
Wu, Y., Fang, Y., Gao, D., Gao, H. & Ju, Z., 11 Oct 2023, *Intelligent Robotics and Applications 16th International Conference, ICIRA 2023, Hangzhou, China, July 5–7, 2023, Proceedings, Part III.* Yang, H., Liu, H., Zou, J., Yin, Z., Liu, L., Yang, G., Ouyang, X. & Wang, Z. (eds.). Springer, p. 161-172 12 p. (Lecture Notes in Computer Science; vol. 14269)(Lecture Notes in Artificial Intelligence).

AS-TransUnet: combining ASPP and transformer for semantic segmentation
Wang, J., Gao, D., Wang, X., Gao, H. & Ju, Z., 10 Oct 2023, *Intelligent Robotics and Applications 16th International Conference, ICIRA 2023, Hangzhou, China, July 5–7, 2023, Proceedings, Part II.* Yang, H., Liu, H., Zou, J., Yin, Z., Liu, L., Yang, G. & Ouyang, X. (eds.). Springer, p. 147-158 13 p. (Lecture Notes in Computer Science; vol. 14268)(Lecture Notes in Artificial Intelligence).

SDE-YOLO: a novel method for blood cell detection
Wu, Y., Gao, D., Fang, Y., Xu, X., Gao, H. & Ju, Z., 1 Sept 2023, In: Biomimetics. 8, 5, 15 p., 404.

Shape-aware weakly/semi-supervised optic disc and cup segmentation with regional/marginal consistency
Meng, Y., Chen, X., Zhang, H., Zhao, Y., Gao, D., Hamill, B., Patri, G., Peto, T., Madhusudhan, S. & Zheng, Y., 16 Sept 2022, *Medical Image Computing and Computer Assisted Intervention – MICCAI 2022: 25th International Conference, Singapore, September 18–22, 2022, Proceedings, Part IV.* Wang, L., Dou, Q., Thomas Fletcher, P., Speidel, S. & Li, S. (eds.). Springer Nature, p. 524-534 11 p. (Lecture Notes in Computer Science; vol. 13434).

Dual consistency enabled weakly and semi-supervised optic disc and cup segmentation with dual adaptive graph convolutional networks
Meng, Y., Zhang, H., Zhao, Y., Gao, D., Hamill, B., Patri, G., Peto, T., Madhusudhan, S. & Zheng, Y., 31 Aug 2022, (Early online) In: IEEE Transactions on Medical Imaging.

Stripe noise removal and vessel segmentation of OCTA images
Wu, X., Gao, D., Borroni, D., Madhusudhan, S. & Zheng, Y., 1 Dec 2021, *Photo Acoustic and Optical Coherence Tomography Imaging: Angiography: An Application in Vessel Imaging.* El-Baz, A. & Suri, J. S. (eds.). IOP Publishing Ltd., Vol. 3. p. 3-1-3-25 25 p.

BI-GCN: Boundary-Aware Input-Dependent Graph Convolution Network for biomedical image segmentation
Meng, Y., Zhang, H., Gao, D., Zhao, Y., Yang, X., Qian, X., Huang, X. & Zheng, Y., 15 Oct 2021, (Accepted for publication) *Proceedings of BMVC 2021.* British Machine Vision Association

TransBridge: a lightweight transformer for left ventricle segmentation in echocardiography
Deng, K., Meng, Y., Gao, D., Bridge, J., Shen, Y., Lip, G. Y. H., Zhao, Y. & Zheng, Y., 21 Sept 2021, *Simplifying Medical Ultrasound. ASMUS 2021: Second International Workshop, ASMUS 2021, Held in Conjunction with MICCAI 2021, Strasbourg, France, September 27, 2021, Proceedings.* Noble, J. A., Aylward, S., Grimwood, A., Min, Z., Lee, S-L. & Hu, Y. (eds.). Springer, p. 63-72 10 p. (Lecture Notes in Computer Science (part of the Image Processing, Computer Vision, Pattern Recognition, and Graphics sub series); vol. 12967).

Cooperative low-rank models for removing stripe noise from OCTA images
Wu, X., Gao, D., Borroni, D., Madhusudhan, S., Jin, Z. & Zheng, Y., 1 Dec 2020, In: IEEE Journal of Biomedical and Health Informatics. 24, 12, p. 3480-3490 11 p., 12.

Regression of instance boundary by aggregated CNN and GCN
Meng, Y., Meng, W., Gao, D., Zhao, Y., Yang, X., Huang, X. & Zheng, Y., 7 Nov 2020, *Computer Vision – ECCV 2020 - 16th European Conference, 2020, Proceedings.* Vedaldi, A., Bischof, H., Brox, T. & Frahm, J-M. (eds.). Springer, p. 190-207 18 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 12353).

CNN-GCN aggregation enabled boundary regression for biomedical image segmentation
Meng, Y., Wei, M., Gao, D., Zhao, Y., Yang, X., Huang, X. & Zheng, Y., 29 Sept 2020, *Medical Image Computing and Computer Assisted Intervention – MICCAI 2020 - 23rd International Conference, Proceedings.* Martel, A. L., Abolmaesumi, P., Stoyanov, D., Mateus, D., Zuluaga, M. A., Zhou, S. K., Racoceanu, D. & Joskowicz, L. (eds.). Springer, p. 352-362 11 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 12264).

A novel deep learning based OCTA de-striping method
Gao, D., Celik, N., Wu, X., Williams, B. M., Stylianides, A. & Zheng, Y., 24 Jan 2020, *Medical Image Understanding and Analysis - 23rd Conference, MIUA 2019, Proceedings.* Zheng, Y., Williams, B. M. & Chen, K. (eds.). Springer, p. 189-197 9 p. (Communications in Computer and Information Science; vol. 1065).

Joint destriping and segmentation of OCTA images
Wu, X., Gao, D., Williams, B. M., Stylianides, A., Zheng, Y. & Jin, Z., 24 Jul 2019, *MIUA 2019: 23rd Conference on Medical Image Understanding and Analysis, Liverpool, UK, July 24–26, 2019, Proceedings.* Zheng, Y., Williams, B. M. & Chen, K. (eds.). Springer, p. 423-435 13 p. (Communications in Computer and Information Science; vol. 1065).

A novel object tracking method based on a mixture model
Gao, D., Ju, Z., Cao, J. & Liu, H., Sept 2018, In: International Journal of Intelligent Robotics and Applications. 2, 3, p. 361–371

Activity recognition for ASD children based on joints estimation
Gao, D., Ju, Z., Fang, Y., Cao, J., Yang, C. & Liu, H., 1 Dec 2017, *2017 IEEE International Conference on Systems, Man, and Cybernetics.* Institute of Electrical and Electronics Engineers Inc., 6 p.

Towards hand-object gesture extraction from depth image
Gao, D., Ju, Z., Cao, J. & Liu, H., 29 Dec 2016, *2016 Joint 8th International Conference on Soft Computing and Intelligent Systems and 2016 17th International Symposium on Advanced Intelligent Systems.* Institute of Electrical and Electronics Engineers Inc., p. 311-316

A novel approach to extract hand gesture feature in depth images
Ju, Z., Gao, D., Cao, J. & Liu, H., Oct 2016, In: Multimedia Tools and Applications. 75, 19, p. 11929-11943 15 p.

Real time object tracking via a mixture model
Gao, D., Ju, Z., Cao, J. & Liu, H., 23 Nov 2015, *Proceedings of the 2015 24th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN).* Institute of Electrical and Electronics Engineers Inc., p. 112-116

Real time object tracking with sparse prototypes
Gao, D., Cao, J., Ju, Z. & Ji, X., 2015, In: International Journal of Signal Processing, Image Processing and Pattern Recognition. 8, 4, p. 279-296

An algorithm for real-time object tracking in complex environment
Gao, D., Cao, J. & Ju, Z., 4 Sept 2014, *Proceedings of the 2014 International Joint Conference on Neural Networks (IJCNN).* Institute of Electrical and Electronics Engineers Inc., p. 1996-2002 7 p. (IEEE IJCNN Proceedings Series).