


Curriculum Vitae

HONGYI WANG

Personal Data

Name	Hongyi Wang	Gender	Femal	
Data of Birth	Jan. 6, 1984	Academic Background	Ph.D	
Department/ Institute	School of Artificial Intelligence, Tiangong University, China	Academic Title	Associate Professor	
Mobile	+86 15620925496	E-mail	wanghongyi@tiangong.edu.cn	
Mailing	Tiangong University, No. 399 Binshui Xi Road, Xiqing District, Tianjin 300387, P.R. of China			

Education

2006 - 2011 Ph.D. and M.Sc. in Detection Technology and Automation Device, School of Electrical Engineering and Automation, Tianjin University, China

2002 - 2006 B.Sc. in Automation, School of Electrical Engineering, Yanshan University, China

Work Experience

2019 – Now Tiangong University, China, Associate Professor

2011 – 2019 Tiangong University, China, Lecturer

Research Interests

- 1) Machine learning and intelligent system;
- 2) 3D-reconstruction of multi-phase flow;
- 3) Application of image processing and pattern recognition;
- 4) Condition monitoring and fault diagnosis using data-driving methods.

Teaching

Pattern recognition and image processing

Sensors and detection technology

Fundamentals of Computer Software Technology

Research Projects

- 1) Research on stereo-visualized measurement and dynamic mechanism of bubble flow in flotation. National Natural Science Foundation of China, Grant No. 51806150, 2019.01-2021.12, Principal.
- 2) Research on bubble temporal-spatial motion in the flotation process based on volume visualization technology. Natural Science Foundation of Tianjin, Grant No. 18JCQNJC04400, 2018.04-2021.03, Principal.
- 3) Mixed gas components detection by Raman spectrum analysis with deep learning method. Enterprise Science and Technology Commissioner Project of Tianjin, Grant No. 18JCTPJC60600, 2018.10-2019.09, Principal.
- 4) Compressor default prediction and diagnosis based on deep-learning method. Enterprise Cooperation

- Project, 2017.10-2018.05, Principal.
- 5) The influence of adsorption effect on hollow waveguide based spectroscopy for gas concentration measurement. National Natural Science Foundation of China, Grant No. 6150031095, 2015.01-2018.12, participant.

Recent Scientific Achievements & Selected Publications

- [1] **Hongyi Wang**, Yang Yang, Gongcheng Dou, Jipei Lou, Xinjun Zhu, Limei Song, Feng Dong, A 3D reconstruction method of bubble flow field based on multi-view images by bi-direction filtering maximum likelihood expectation maximization algorithm. *International Journal of Multi-phase Flow*, 2023, 165: 104480. (10.1016/j.ijmultiphaseflow.2023.104480)
- [2] **Hongyi Wang**, Yafang Shi, Xinjun Zhu, Limei Song, Feng Dong, 3-D reconstruction of bubble flow field based on the method of multivision by rough-precise location algebraic reconstruction technique, *IEEE Transactions on Instrumentation and Measurement*, 2022, 71: 1-11, Art no. 1002811. (DOI: 10.1109/TIM.2022.3158993)
- [3] **Hongyi Wang**, Jiwei Chen, Xinjun Zhu, Limei Song, Feng Dong. Early warning of reciprocating compressor valve fault based on deep learning network and multi-source information fusion, *Transactions of the Institute of Measurement and Control*, 2023, 45(4): 777-789 (DOI: 10.1177/01423312221110896)
- [4] **Hongyi Wang**, Gongcheng Dou, Hao Zhang, Xinjun Zhu, Limei Song, 3D velocity field reconstruction of gas-liquid two-phase flow based on space-time multi-scale binocular-PIV technology. *Optoelectronics Letters*, 15 Oct. 2022, 18(10): 0613-0617. (DOI: 10.1007/s11801-022-2007-8)
- [5] **Hongyi Wang**, Hongyu Wang, Xinjun Zhu, Qinghua Guo, Feng Dong. Three-dimensional reconstruction of dilute bubbly flow field with light-field images based on deep learning method, *IEEE Sensors Journal*, 2021.6, 21(12): 13417-13429. (DOI: 10.1109/JSEN.2021.3065374)
- [6] **Hongyi Wang**, Kun Zhang, Xinjun Zhu, Limei Song, Feng Dong. Multi-objective optimization design of cement grate cooler control system based on improved long short-term memory network, *Transactions of the Institute of Measurement and Control*, 2021, 43(5):3399-3412. (DOI : 10.1177/01423312211023017)
- [7] **Hongyi Wang**, Hongyu Wang, Limei Song, et al. Automatic Diagnosis of Rectal Cancer based on CT Images by Deep Learning Method, *The 12th International Congress on Image and Signal Processing, BioMedical Engineering and Information*, 2019, Huaqiao Kunshan
- [8] **Hongyi Wang**, Feng Dong, Xinxu Zhou, et al. Fault Diagnosis of Reciprocating Compressor Using Component Estimating Empirical Mode Decomposition and De-Dimension Template With Double-Loop Correction Algorithm, *IEEE Access*, 2019, 7: 90630-90639
- [9] Limei Song, **Hongyi Wang**, Jinyi Li, et al. *Digital Image processing and industrial application*, China Machine Press, 2018
- [10] Jiashuo Shi, Xinjun Zhu, **Hongyi Wang**, et al. Label enhanced and patch based deep learning for phase retrieval from single frame fringe pattern in fringe projection 3D measurement, *Optics Express*, 2019, 27(20): 28929-28943