


Curriculum Vitae

Personal Information	Name	Miao Yang	Gender	Male	
	Academic Title	Assistant Professor			
	College	Faculty of Materials and Manufacturing			
	Discipline	Artificial Intelligent, Optical detection, liquid surface wave, servo-control			
	Email	miaoyang@vip.126.com			
	Mail Add.	100 Ping Le Yuan, Chaoyang District, Beijing 100124, China			
Educational Background	Beihang University, Beijing, China		Ph.D 2009-2014		
	School of Automation Science and Electrical Engineering				
	Dissertation: <i>Detection Techniques of Mixed Gas and Fuel Surface in Airplane Fuel Tank</i>				
	Advisor: Dr. Shaoping Wang				
	Northwestern Polytechnical University, Xi'an, China		B.E. 2004-2008		
	School of Astronautics				
Working Experience	Counsellor, College of Electronic Engineering, Xi'an Aeronautical University, Xi'an, China, 2008-2009				
	Lecturer, College of Mechanical Engineering and Applied Electronics Technology, Beijing University of Technology, Beijing, China, 2014-present				
Research Interests	Prognostics and health management				
	Servo control and hardware-in-loop simulation				
	Bio-medical engineering and precision medicine				
	Liquid surface wave				
	Nondestructive testing technology based on laser				
Major Publications*	[1]	[2]Miao Y, Wang S. Failure diagnosis of hydraulic lifting system based on multistage telescopic cylinder[C]/Fluid Power and Mechatronics (FPM), 2011 International Conference on. IEEE, 2011: 828-834.			
	[2]	[3]Miao Y, Wang S, Zhao Y. Study on change of aircraft center of gravity during fuel consumption[C]//IEEE 10th International Conference on Industrial Informatics. IEEE, 2012: 86-90.			
	[3]	[4]Yang M, Shao-Ping W. Nonlinear Acoustic-Optical Effect and Extraordinary Diffraction Distribution in Liquid Surface[J]. Chinese Physics Letters, 2013, 30(12): 124304.			
	[4]	Miao Y, Wang S. Health Management System Based on Airworthiness of the Aircraft Fuel System[J]. Procedia Engineering, 2014, 80: 34-43.			
	[5]	Miao Y, Wang S. Modeling of center of gravity of aircraft on multifaults for fuel transfer[C]//2014 9th IEEE Conference on Industrial Electronics and Applications. IEEE, 2014: 1691-1695.			
	[6]	Miao Y, Wang S. Small amplitude liquid surface sloshing process detected by optical method[J]. Optics Communications, 2014, 315: 91-96.			
	[7]	Yang M, Song-Lin N. Localized Effect of Light Diffraction by Capillary Wave[J]. Chinese Physics Letters, 2015, 32(11): 114201.			
	[8]	Gou C, Cai B, Miao Y. Multi-resolution model consistency maintenance method based on ontology mapping[C]//Intelligent Computing and Internet of Things (ICIT), 2014 International Conference on. IEEE, 2015: 103-106.			
	[9]	Miao Y, Nie S. Research on vulnerability of seawater hydraulic system based on complex networks modeling[C]//Fluid Power and Mechatronics (FPM), 2015 International Conference on. IEEE, 2015: 654-659.			
	[10]	Miao Y, Wu C, Wang N, et al. Angle Compensation and Asymmetry Effect of Light Diffracted by Millimeter Liquid Surface Slosh Wave[J]. Chinese Physics Letters, 2016, 33(7): 074206.			
	[11]	Miao Y, Huo D. The technology of mixed gas detection in fuel tank based on tunable diode laser absorption spectroscopy[C]//Aircraft Utility Systems (AUS), IEEE International Conference on. IEEE, 2016: 1209-1213.			
	[12]	Yuan, Yongtao, Xiaojun Zhang, and Yang Miao. 2019. "A Novel Prognosis Method for Cavitations of Seawater Hydraulic Pump." In 2019 IEEE 8th International Conference on Fluid Power and Mechatronics (FPM).			

	<p>[13] Miao, Yang, Yuncheng Jiang, Jinfeng Huang, Xiaojun Zhang, and Lei Han. 2020. "Application of Fault Diagnosis of Seawater Hydraulic Pump Based on Transfer Learning." Shock and Vibration 2020: 1–8.</p> <p>[14] Wang, Kai, Xiaojun Zhang, Yang Miao, Baofeng He, and Cheng Wang. 2020. "Dispersion and Behavior of Hydrogen for the Safety Design of Hydrogen Production Plant Attached with Nuclear Power Plant." International Journal of Hydrogen Energy 45 (39): 20250–55.</p> <p>[15] Miao, Yang, Yuncheng Jiang, Zaihui Qiu, Lei Han, Xiaojun Zhang, and Di Wu. 2020. "Study on the Characteristics of Amplitude and Depth for Sloshing Wave by an Optical Method." Optik 212: 164634.</p> <p>[16] Miao, Yang, Yuncheng Jiang, Zaihui Qiu, and Di Wu. 2020. "The Measurement of Underwater Sound with Optical Diffraction by Liquid Surface Wave." European Physical Journal Plus 135 (9): 1–9.</p> <p>[17] Miao, Yang, Yuncheng Jiang, Zaihui Qiu, Jun Pan, Lu Wang, Zhenrong Han, Kun Li, Li Zhang, and Xiaolu Zhang. 2020. "Vibration Transients of Reservoir-Pipe-Valve System Caused by Water Hammer." Journal of Theoretical and Applied Mechanics 58 (4): 1037–48.</p> <p>[18] Miao, Yang, Zaihui Qiu, Yuncheng Jiang, and Liping Hou. 2020. "Visualization of Dynamic Wetting by Means of Critical Light Reflection from Curved Liquid Surface." Optik 219: 165262.</p> <p>[19] Miao, Yang, Xiang Guo, and Xiao-Jun Zhang. 2020. "Visualization of Fiber Moving in Air Tunnel with Velocity Gradient." Chinese Physics Letters 37 (3): 34201.</p>
Research Projects*	<p>1. Theory and Health Management Method of Integrated Fault Prediction for Electromechanical System of Large Aircraft (2021)</p> <p>Diagnosis of Intermittent Faults and fault-tolerant based on transfer learning theory and methodology for aircraft fuel system (Chinese National Natural Science Foundation 2019)</p> <p>Research on hydrogen leakage safety monitoring technology and development of intelligent test system:(The National Key Research and Development Program of China 2019)</p> <p>1. Research on Diagnosis of Composite Faults and performance degradation of Seawater Hydraulic Pump for Deepsea Applications(Chinese National Natural Science Foundation 2017)</p> <p>2. Research on fault prognosis and maintainability of seawater or brackish water reverse osmosis desalination piston pump(Beijing Municipal Natural Science Foundation 2017)</p> <p>1. Research on Damage Mechanism and Fault Diagnosis of Seawater Hydraulic Pump for deepsea applications (China Postdoctoral Science Foundation funded project, 2015)</p> <p>2. Research on fault prognosis of seawater or brackish water reverse osmosis desalination piston pump (Government of Chaoyang District Postdoctoral Research Foundation, 2015)</p> <p>3. Mechanism and Detection Method of Oxygen transmission in Fuel Tank Ullage (Open Research Fund of State Key Laboratory of Transient Optics and Photonics, 2015)</p> <p>4. Simulation of Thermo-mechanical Coupling of HPD diesel engine (Beijing Municipal Science and Technology Commission)</p> <p>5. Online Life Prediction Technology of complex electromechanical system devices (Beijing Municipal Science and Technology Commission)</p> <p>6. Mechanism and design method of Packaging picking robot harmonic drive (Beijing Municipal Science and Technology Commission)</p>
Professional Membership	<p>Member, Chinese Society of Aeronautics and Astronautics</p> <p>Member, Beijing Institute of Artificial Intelligence</p> <p>Member, Reliability Branch of Operations Research Society of China</p> <p>Member, Analytical Instrument Branch of China Instrument and Control Society</p>
Potential Research Projects**	<p>Vibration of Reservoir-Pipe-Valve System;</p> <p>Artificial intelligent</p> <p>Prognostics and health management</p>

* Please list achievements of recent 5 years

** This CV is intended to match Chinese and Polish Scientists within SPUC member universities, and Potential Research Projects is intended to apply for Sino-Polish or EU scientific cooperation projects.