YuMing Zhang

Director of International Partnerships – College of Engineering
James Boyd Professor in Electrical Engineering
https://scholar.google.com/citations?user=kLq671IAAAAJ&hl=en

Professional Preparation:

- B.S., 1981, Control Major, Harbin Institute of Technology (HIT), Harbin, China
- M.S., 1984, Control Major, HIT, Harbin, China
- Ph.D., 1990, Welding Major, HIT, Harbin, China

Appointments:

College of Engineering, University of Kentucky (UK)
- 12/16-present, Director of International Partnerships

Department of Electrical and Computer Engineering & Institute for Sustainable Manufacturing, UK
- 7/05-present, Professor of Electrical Engineering
- 7/03-present, James R. Boyd Professor in Electrical Engineering
- 8/98-present, Director of Welding Research Laboratory and Director of Applied Sensing and Control Laboratory
- 8/98-6/05, Associate Professor of Electrical Engineering
- 2/91-7/98, Research Scientist, Welding Research Laboratory and Applied Machine Vision Laboratory

HIT State Key Laboratory of Advanced Welding and Joining – Junior Lecturer (9/84-8/86), Lecturer (9/86-11/90), and Associate Professor (12/90-2/9)

Ten Products:

- Y.K. Liu, Y.M. Zhang, 2017. "Supervised Learning of Human Welder Behaviors for Intelligent Robotic Welding," IEEE Transactions on Automation Science and Engineering, 14(3): 1532-1541, DOI (identifier) 10.1109/TASE.2015.2453351(Neural Network/Nonlinear Modeling)
- Y.K. Liu, Y.M. Zhang, 2015. "Iterative local ANFIS based human welder intelligence modeling and control in pipe GTAW process: A data-driven approach," IEEE/ASME Transactions on Mechatronics, 20(3): 1079-1088, DOI: 10.1109/TMECH.2014.2363050. (Neural Network/Nonlinear Modeling)
- Y.K. Liu, Y.M. Zhang, 2014. "Toward welding robot with human knowledge: A remotely-controlled approach," IEEE Transactions on Automation Science and Engineering, doi: 10.1109/TASE.2014.2359006. (Robot Control)
- Y.K. Liu, W.J. Zhang, Y.M. Zhang, 2014. "Dynamic neuro-fuzzy based human intelligence modeling and control in GTAW," IEEE Transactions on Automation Science and Engineering, 10.1109/TASE.2013.2279157.
- W.J. Zhang, J. Xiao, H.P. Chen, Y.M. Zhang, 2014. "Measurement of three-dimensional welding torch orientation for manual arc welding process," Measurement Science and Technology, 25, article number 035010 (17pp), doi:10.1088/0957-0233/25/3/035010 (Human Welder Operation Analysis)
- W.J. Zhang, X.W. Wang, Y.M. Zhang, 2013. "Analytical real-time measurement of three-dimensional weld pool surface," Measurement Science & Technology, 24(11), article number

115011 (18pp), doi:10.1088/0957-0233/24/11/115011. (Real-time Measurement of 3D Weld Pool Surface)
- Y.K. Liu, Y.M. Zhang, 2013. "Control of 3D weld pool surface," Control Engineering Practice, 21(11): 1469–1480.
- Y.K. Liu, Y.M. Zhang, 2013. "Model-based predictive control of weld penetration in gas tungsten arc welding," IEEE Transactions on Control Systems Technology, DOI: 10.1109/TCST.2013.2266662.
- Z.J. Wang, Y.M. Zhang, L. Wu, 2012. "Adaptive interval model control of weld pool surface in pulsed gas metal arc welding," Automatica, 48: 233–238.
- Y.M. Zhang and Y.C. Liu, 2007. "Control of dynamic keyhole process," Automatica, 43(5): 876-884.

Current Professional Services:
- American Welding Society (AWS): Lead Principal Reviewer - Welding Journal; Chair - Technical Papers Committee; Chair - AWS (Professional Programs) Annual Conference, Member - Fellow Selection Committee.
- Society of Manufacturing Engineers (SME): Associate Editor - Journal of Manufacturing Processes.
- Institute of Electrical and Electronics Engineers (IEEE): Publicity Chair - 2019 IEEE Conference on Automation Science and Engineering (CASE)

Honors and Recognitions:
- Fellow, Society of Manufacturing Engineers (SME), 2015
- Fellow, American Society of Mechanical Engineers (ASME), 2012
- Fellow, American Welding Society (AWS), 2009
- Recognized Associate Editor, Journal of Manufacturing Processes, SME, 2018
- A. F. Davis Silver Medal Award for Machine Design, AWS, 2018
- William Irrgang Memorial Award, AWS, 2017
- A. F. Davis Silver Medal Award for Machine Design, AWS, 2017
- Dean's Award for Excellence in Research, College of Engineering, UK, 2016
- A. F. Davis Silver Medal Award for Machine Design, AWS, 2015
- A. F. Davis Silver Medal Award for Machine Design, AWS, 2014
- Charles H. Jennings Memorial Award, AWS, 2013
- W.H. Hobart Memorial Award, AWS, 2013
- Charles H. Jennings Memorial Award, AWS, 2012
- Certificate of Appreciation for Ten Top Ranked Papers (out of 330 papers), The 21st IEEE International Symposium on Industrial Electronics (ISIE2012), 2012
- A. F. Davis Silver Medal Award for Machine Design, AWS, 2011
- A. F. Davis Silver Medal Award for Machine Design, AWS, 2009
- Adams Memorial Membership Award, AWS, 2005
- Poster Paper Prize, 15th Triennial World Congress, The International Federation of Automatic Control (IFAC), 2002
- Application Paper Prize Finalist, 15th Triennial World Congress, The International Federation of Automatic Control (IFAC), 2002
- A. F. Davis Silver Medal Award for Machine Design, AWS, 2001
- Donald Julius Groen Prize, The Institution of Mechanical Engineers, United Kingdom, 1995
- Five awards from Chinese Governments for achievements in developing first generation welding robots and weld joint penetration sensing and control technology