

Dr. Yiqing Meng

Research fellow

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ACADEMIC DEGREES

- 04/2016** **Ph.D. in Engineering**
Title of dissertation: *Imaging of conductive continuous phase velocity distribution in water continuous multiphase flows using Inductive Flow Tomography (IFT)*.
University of Huddersfield , Computing & Engineering school
Huddersfield , United Kingdom
- 01/2011** **M.Sc. in Control Systems Engineering & Instrumentation**
Title of thesis: *Designed and implemented a high accuracy PT100 temperature measurement circuitry*
University of Huddersfield , Computing & Engineering school
Huddersfield , United Kingdom
- 06/2009** **BEng in Micro-electronics**
Subjects Included: *Electronics, Electrical Principles, Mathematics, Electronic Design, Manufacture, PCB Testing, Professional Development, Embedded Systems, Signal Analysis and Control, Communications, Control Systems, and Process*
Xi'an Science & Technology University, Xi'an, China

WORKPLACES

- 2018–** **Research Fellow**
Eötvös Loránd University, Faculty of Informatics, Department of Mechanical Engineering,
Savaria Institute of Technology
- 2016 – 2017** **Research Fellow**
University of Huddersfield, School of Computing and Engineering
- 2012 – 2014** **Teaching Assistant**
University of Huddersfield, School of Computing and Engineering
- 2011 – 2016** **Ph.D. student**
University of Huddersfield, School of Computing and Engineering

RESEARCH INTERESTS

- **Dynamic control system:** Design and implement controller for the dynamic system, such as the convoy vehicle system and the transmission line vibration.
- **Cable vibration:** This research is concerned with investigating of the progression of ice shedding phenomenon due to nature causes or following an initial trigger such as a controlled shock load applied locally with a cable de-icing device.
- **Multiphase flow measurement & Instrumentation:** Develop and construct a multi-electrodes electromagnetic flow meter for measuring the local water velocity distribution in water is continuous multiphase flow. Develop a flow metering technique is capable of reconstructing the local volume fraction distribution and local velocity distribution of the discontinuous phases (e.g. solids or gas) in multiphase flow (e.g. gas-in-water or solids-in-water two phase flow)

TEACHING ACTIVITY

Teaching Assistant

- Course (Msc): Signal analysis and Process control.

Supervisor

- Co-supervisor, 3 PhD students.

LANGUAGES

- English: writing, reading, speaking (fluent)
- Chinese: writing, reading, speaking (native)

SOFTWARES

- Programming language: MATLAB, LabView, C(Arduino), VM1 (Micro-controller), Roboteq (Roboteq motor controller)
- Simulations: Simulink, MATLAB, Protel99, Multisim11.0,
- Finite element software: Adina, COMSOL Multiphysics
- CAD software: Solid Works, PCB wizard

TECHNICAL SKILLS AND EXPERIENCES

Practical work

- Experienced in designing, building analogue electronic circuit and PCB.
- Manipulate signal processing algorithms, such as DFT, FFT, Wavelet analysis, cross correlation.
- Experienced in developing embedded system, such as Arduino, ARM, VM1, NI myRio, RoboteQ
- Experienced in various machining techniques

Review work

- IEEE Sensor Journal
- Journal of Flow Measurement and Instrumentation
- Journal of Measurement Science and Technology

RESEARCH PROJECTS

- 2018 – 2020** Project: EFOP-3.6.1-16-2016-00018 – Improving the role of research + development + innovation in the higher education through institutional developments assisting intelligent specialization in Sopron and Szombathely
Workgroup: Innovative processing technologies, applications in energy engineering, and wide-range microstructure investigation techniques
Source: EFOP-3.6.1-16 within Horizon 2020 program
- 2016 – 2017** Subject: Developing a self-adaptive control system for a robotic trailer
Source: *Low Impact City Logistics Innovate Project -102617*
- 2013 – 2014** Subject: Developing industrial standard multiphase flow metering system for iPhase ltd
Source: *Industrial project (iPhase ltd)*

- 2011 – 2013** Subject: Developing an imaging of conductive continuous phase velocity distribution in water continuous multiphase flows using Inductive Flow Tomography (IFT)
Source: *Next Generation Visualization & Metering Technology for Multi-phase Flows*” supported by EPSRC(EP/H023194/1)
Subject: Developed the LabView and MATLAB based software for online measuring the solids volume fraction distribution and solids velocity distribution in solids-in-water two phase flows using **Impedence Cross Correlation (ICC)** device.
2011 – 2013 Source: *Research project, University of Huddersfield*
- 2011 – 2013** Subject: Developed the LabView and MATLAB based software for online and offline data processing software for **Venturi** flow meter
Source: *Research project, University of Huddersfield*

PATENT

Subject: A control system for a self-propelled trailer (GB201719321D0)

Research Award

2nd prize of 12th Chunhui Bei(Chunhui Cup) Innovation & Entrepreneurship Competition in United Kingdom

Subject: Drone competition system

PUBLICATIONS

1. Meng, YQ. & Lucas, G.(2017). Imaging water velocity and volume fraction distributions in water continuous multiphase flows using Inductive Flow Tomography and Electrical Resistance Tomography, *Measurement Science and Technology*.
2. Kollár, L. E., Lucas, G. P., & Meng, Y. (2015). Reconstruction of velocity profiles in axisymmetric and asymmetric flows using an electromagnetic flow meter. *Measurement Science and Technology*, 26(5), 055301
3. Muhamedsalih, Y., Lucas, G. P., & Meng, Y. Q. (2015). A two-phase flow meter for determining water and solids volumetric flow rates in stratified, inclined solids-in-water flows. *Flow Measurement and Instrumentation*.
4. Meng, YQ., & Lucas, G. (2013). Two-phase flow meter for determining water and solids volumetric flow rate in stratified solids-in-water flows. *Annual Researchers’ Conference(CEARC13)*, University of Huddersfield.
5. Muhamedsalih, Y., Lucas, G., Meng, Y.Q, & Leeungcalsatien, T. (2013). Two-phase flow meter for determining water and solids volumetric flow rate in inclined solids-in-water flows. *World Congress on Industrial Process Tomography(WCIPT7)*

Scientific reports:

1. Yiqing Meng, Lucas, G. P., Description of Matlab codes for signal processing and data correction for the flow induced voltage from IFT system, SERG Internal Report, University of Huddersfield, UK, June 2014.
2. Yiqing Meng, Simon Iwnicki, Description of control system design for the robotic trailer, Project Internal Report, University of Huddersfield, UK, 2017.