Yu Yang

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Education

Ph.D. **Texas A&M University** 08/2010 – 05/2017
Mechanical Engineering, Overall GPA 3.7/4.0

B.S. **Tongji University** 09/2006 – 06/2010
Mechanical Engineering, Overall GPA 4.32/5.0

Research and Work Experience

Graduate Research 08/2010 – 05/2017
Mechanical Engineering Department, Texas A&M University

- **Designed and Examined Laser Induced Droplet Ejection and Applications in Micro-Fabrication**
  - Fabricated inkjet nozzle with sub-micro meter (~500nm) aperture size and achieved 1 order higher printing resolution compared with traditional inkjet methods.
  - Generated sub-micro liquid droplet and liquid spray by applying high energy laser with different pulse duration.
- **Conducted Transient Temperature Measurement of Micro-Electronic Devices**
  - Measured transient 2D temperature profile of micro-electronic device with nano-second time resolution using pulsed laser illumination.
- **Developed High Accuracy Meshfree Method to Simulate Low Compressibility Without Simplification**
  - Proposed and verified new algorithm for derivatives calculation for meshfree fluid dynamics method.
  - Analyzed thermal induced liquid flow using proposed new meshfree algorithm.

Course Project
Electrical Engineering Department, Texas A&M University

- **IC MEMS and Sensor Fabrication** 08/2012 – 07/2013
  - Constructed simple IC structure in the lab.
  - Characterized device properties.
- **Experimental Optics** 08/2011 – 12/2011
  - Design and experimental implementation of laser intensity stabilizing electronic servo system with acousto-optic modulators.
  - Design and experimental implementation of electronic servo for frequency locking of laser with a high Q etalon cavity.

Student Research Assistant 06/2009 – 07/2009
Mechanical Engineering, Tongji University

- Tested Indoor Air Quality in Commercial Buildings at Different Time.
- Verified Experimental Data with Simulation Prediction to Improve Simulation models.

Internship 06/2007 – 09/2007
Yancheng Xuxing Chemical Co. Ltd

- Estimated production time-lines.
- Participated in organization of production schedule.

Lab Instructor/Teaching Assistant Experience

Industrial Automation 07/2014 – 05/2017
Industrial Distribution Program, Texas A&M University
- Instructed RSLogix automatic controlling systems and software.
- Introduced external variable frequency device and remote controlling.
- Advised individual project utilize PLC in daily life scenarios.

Fundamental Engineering 08/2013 – 05/2014
Engineering Academic and Student Affairs, Texas A&M University
- Introduced concepts in engineering fundamentals and design process.
- Instructed programming languages (C++, LabVIEW, and MATLAB).
- Advised group project problem design and coordinated group presentations with final project demo.

Honors

Graduate Student Fellowship 06/2012
NSF CMMI Engineering Research and Innovation Conference
Graduate Scholarship, Texas A&M University 08/2011 – 05/2012
G H Thompson Graduate Fellow 08/2010 – 05/2011
Scholarship Sponsored by Camfil Farr 09/2008 – 09/2009
Scholarship Sponsored by Agile Group 09/2007 – 09/2008

Publications

- **Yu Yang**, Vijay M Sundaram, Alok Soni, Sy-bor Wen, Laser induced nano-droplet ejection for the construction of nano-inkjets, 2012 IMECE ASME.
- Sy-Bor Wen, Vijay M. Sundaram, Daniel Mcbride, **Yu Yang**, Low Cost High Precision Micro-Lensed Optical Fiber Providing Deep Micron to Deep Nanometer Level Light Focusing, Opt Lett. 2016 Apr 15;41(8):1793-6.
- **Yu Yang**, Sy-Bor Wen, High Accuracy Method in Derivative Calculation in Meshfree Fluid Dynamics Computing (in preparation).

Skills

- Hardware Skills
  - Optical Microscopy
  - Photo-lithography
  - High Power Laser Operation
  - Confocal Microscopy
  - Electron-Beam Deposition
  - Near Field Scanning Optical Microscopy (NSOM/NOSM)
  - Atomic Force Microscopy (AFM)
  - Scanning Electron Microscopy (SEM)
  - Sputter
  - Phase Contrast Microscopy
  - Spin Coating
  - Optical Alignment
- Software Skills
  - FORTRAN
  - MATLAB
  - LabVIEW
  - COMSOL
  - Microsoft Office
  - C/C++
  - OpenMPI
  - AutoCAD
  - RSLogix 5000
- Language
  - Chinese (Native)
  - English