Yi Wang, Ph.D.

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EDUCATION

Ph.D., Mechanical Engineering, Carnegie Mellon University, U.S.A, Dec. 2005

Dissertation Title: Modeling and Simulation of Lab-on-a-Chip Systems

Advisors: Professor Qiao Lin and Professor Tamal Mukherjee

M.Sc.Eng., Power Machinery and Energy Engineering, Shanghai Jiao Tong University, China, Dec. 2000
 Dissertation Title: Research on Dynamic Characteristics and Control Strategies of the Air-conditioner with

<u>Inverter</u>

Advisors: Professor Xingxi Zhou and Professor Jing Xia

B.Eng., Power Machinery and Energy Engineering, Shanghai Jiao Tong University, China, Jul. 1998

PROFESSIONAL EXPERIENCE

University of South Carolina Department of Mechanical Engineering	Columbia, South Carolina
Associate Professor	August 2017 –
CFD Research Corporation Biomedical and Energy Technologies (BET) Division	Huntsville, Alabama
Director	Aug. 2014 – Aug. 2017
Manager	Dec. 2011 – Aug. 2014
Group Leader	Dec. 2009 – Dec. 2011
Senior Engineer	Dec. 2007 – Dec. 2009
Engineer	Oct. 2005 – Dec. 2007

RESEARCH INTEREST

Computational and data-enabled science and engineering (CDS&E) and its applications in multiphysics and multiscale systems engineering, including fluid structural interaction, microfluidics/nanofluidics, thermal and energy management, additive manufacturing, among others.

- ➤ Physics-based adaptive modeling, from high-fidelity multiphysics CFD/FEM analysis to reduced order modeling and closed-form modeling for real-time simulation, design exploration, and process control
- > Data-driven multi-fidelity surrogate modeling for multidisciplinary analysis and optimization, large-scale system-level simulation, adaptive model integration, etc.
- Massive and real-time data analytics, discovery, and management, including engineering data mining, parameter estimation, uncertainty quantification, machine learning, and green computing & visualization
- > Systems engineering of microfluidics/nanofluidics, including model development, system design, control synthesis, hardware development, and experimentation, with the long-term goal towards engineering intelligence

PATENTS

- 1. "Miniaturized Electrothermal Flow Induced Infusion Pump", U.S. Patent No. 9,283,597, **Non-provisional Patent** Filed on Sept. 6, 2006
- 2. "Electrostatic Aerosol Concentrator", U.S. Patent No. 8,246,720 B2, **Non-provisional Patent** Filed on Jul. 31, 2007
- 3. "Microfluidic Biological Extraction Chip", U.S. Patent No. 8,435,465 B2, Non-provisional Patent Filed on Nov.3, 2008
- 4. "Method and Apparatus for Separating Particles by Dielectrophoresis", U.S. Patent No. 8,778,160 B2, **Non-provisional Patent** Filed on Jul.26, 2011
- 5. "Bipolar Electrode Sample Preparation Devices", U.S. Patent No. 9,784,710, **Non-provisional Patent** Filed on Mar. 10, 2014

PUBLICATIONS

- 1. Team members under my supervision
- * Corresponding author(s)

Book Chapters

- 1. H. Song¹, Y. Wang*, K. Pant, "Model Order Reduction," *Encyclopedia of Micro-and Nano-fluidics*, 2014, pp. 1-16, DOI: 10.1007/978-3-642-27758-0_1047-3, D. Li, Eds. Springer.
- 2. <u>Y. Wang</u>, Q. Lin and T. Mukherjee, "Composable Behavioral Models and Schematic-Based Simulation of Electrokinetic Lab-on-a-Chip Systems," *Design Automation Methods and Tools for Microfluidics-Based Biochips*, 2006, pp. 109-142, K. Chakrabarty and J. Zeng, Eds. Norwell, MA: Springer.
- 3. A.S. Bedekar, <u>Y. Wang</u>, S. Krishanamoorthy*, S. S. Siddhaye, and S. Sundaram, "System-Level Simulation of Flow-Induced Dispersion in Lab-on-a-Chip Systems," *Design Automation Methods and Tools for Microfluidics-Based Biochips*, 2006, pp. 189-214, K. Chakrabarty and J. Zeng, Eds. Norwell, MA: Springer.
- 4. <u>Y. Wang*</u>, A.S. Bedekar, S. Krishanamoorthy, S. Sundaram, A. K. Singhal, "Model Order Reduction," *Encyclopedia of Micro-and Nano-fluidics*, 2008, pp. 1382-1391, D. Li, Eds. Springer.

Selected Peer-Reviewed Journal Publications

- L. M. Lee, J. M. Rosanoa, Y. Wang*, C. J. Garsona, B. Prabhakarpandiana, K. Pant* G. J. Klarmannc, L. M. Alvarez, and E. Lai, Label-Free Mesenchymal Stem Cells Enrichment from Bone Marrow by Spiral Inertial Microfluidics, *Analytical Methods*, 10, 713-721, 2018
- 2. H. Song¹, J.M.Rosano, <u>Y.Wang</u>*, C.J. Garson, B. Prabhakarpandian, K. Pant, G.J. Klarmann, L.M.Alvarez, E. Lai, "Spiral-shaped inertial stem cell device for high-throughput enrichment of iPSC-derived neural stem cells", *Microfluid Nanofluid*, Vol. 21: 64. DOI:10.1007/s10404-017-1896-5, 2017
- 3. H. Song¹, J. Rosano, <u>Y. Wang</u>*, C.J. Garson, B. Prabhakarpandian, K. Pant, G.J. Klarmann, A. Perantoni, L.M. Alvarez, and E. Lai, "Identification of Mesenchymal Stem Cell Differentiation State Using Dual-micropore Microfluidic Impedance Flow Cytometry", *Analytical Methods*, Vol. 8, pp. 7437-7444, 2016. (Cover Story)
- 4. H. Song¹, J. Rosano, <u>Yi Wang</u>*, C.J. Garson, B. Prabhakarpandian, K. Pant, G.J. Klarmann, A. Perantoni, L.M.Alvarez, E. Lai, Continuous-Flow Sorting of Stem Cells and Differentiation Products based on Dielectrophoresis", *Lab on Chip*, 15, Vol. 5, pp. 1320-1328, 2015.
- 5. H. Song¹, <u>Y. Wang</u>*, C. Garson, K. Pant, "Concurrent DNA Preconcentration and Separation in Bipolar Electrode-Based Microfluidic Device", *Analytical Methods*, Vol. 7, 1273-1279, 2015. (Cover Story)

- 6. X. Tian, H. Guo, K. H. Bhatt, S. Q. Zhao, <u>Y. Wang</u>, J. Guo*, "Super-Period Gold Nanodisc Grating-Enabled Surface Plasmon Resonance Spectrometer Sensor", *Applied Spectroscopy*, Vol. 69, pp. 1182-1189, 2015.
- 7. H. Song¹, <u>Y. Wang</u>*, C. Garson, K. Pant, "Nafion-film-based Micro–nanofluidic Device for Concurrent DNA Preconcentration and Separation in Free Solution", *Microfluidics and Nanofluidics*, Vol. 17, pp. 693-699, 2014
- 8. <u>Y. Wang</u>*, H. Song, K. Pant, "A reduced-order model for whole-chip thermal analysis of microfluidic labon-a-chip systems", *Microfluidics and Nanofluidics*, Vol. 16, pp. 369-380, 2014.
- 9. H. Song¹, <u>Y. Wang</u>*, J. M. Rosano, B Prabhakarpandian, C. Garson, K. Pant, and E. Lai, "A microfluidic impedance flow cytometer for identification of differentiation state of stem cells", *Lab on Chip*, Vol. 13, pp. 2300-2310, 2013.
- 10. H. Song^{1*}, <u>Y. Wang</u>, K. Pant, "Scaling law for cross-stream diffusion in microchannels under combined electroosmotic and pressure driven flow", *Microfluidics and Nanofluidics*, Vol. 14, pp. 371-382, 2013.
- 11. G. Lamberti*, Y. Tang, B. Prabhakarpandian, <u>Y. Wang</u>, K. Pant, M. F. Kiani, B. Wang, "Adhesive interaction of functionalized particles and endothelium in idealized microvascular networks", *Microvascular Research*, Vol. 89, pp. 107–114, 2013.
- 12. H. Song^{1*}, <u>Y. Wang</u>, K. Pant, "Cross-stream diffusion under pressure-driven flow in microchannels with arbitrary aspect ratios: a phase diagram study using a three-dimensional analytical model", *Microfluidics and Nanofluidics*, Vol. 12, pp. 265-277, 2012.
- 13. H. Song¹, <u>Y. Wang</u>*, K. Pant, "System-level simulation of liquid filling in microfluidic chips", *Biomicrofluidics*, Vol. 5, 024107, 2011.
- 14. Prabhakarpandian B.*, <u>Y. Wang</u>, A. Rea-Ramsey, S. Sundaram, MF Kiani, K. Pant, "Bifurcations: focal points of particle adhesion in microvascular networks", *Microcirculation*, Vol. 18, No. 5, pp. 380-389, 2011.
- 15. Y. Zhou, <u>Y. Wang</u>, Q. Lin*, A Microfluidic Device for Continuous-Flow Magnetically Controlled Capture and Isolation of Microparticles, *Journal of Microelectromechanical Systems*, Vol. 19, No. 4, pp. 743-751, 2010.
- 16. <u>Y. Wang</u>*, K. Pant, et al., "Numerical Analysis of Electrokinetic Transport in Micro-nanofluidic Interconnect Preconcentrator in Hydrodynamic Flow", *Microfluidics and Nanofluidics*, Vol. 7, pp. 683-696, 2009.
- 17. Z. Zhou, <u>Y. Wang</u>*, T. Mukherjee, Q. Lin^{*}, "Generation of Complex Concentration Profiles by Partial Diffusive Mixing in Multi-stream Laminar Flow", *Lab on Chip*, Vol. 9, pp. 1439-1448, 2009.
- 18. <u>Y. Wang</u>*, Aditya S. Bedekar, S. Krishnamoorthy, Sachin S. Siddhaye, and Shivshankar, "System-Level Modeling and Simulation of Biochemical Assays in Lab-on-a-Chip Devices", *Microfluidics and Nanofluidics*, Vol. 3, pp. 307-322, 2007.
- 19. A. S. Bedekar*, <u>Y. Wang</u>, S. S. Siddhaye, S. Krishnamoorthy, and S. F. Malin, "Design Software for Application-Specific Microfluidic Devices," *Clinical Chemistry*, Vol. 53, pp. 2023-2026, 2007.
- 20. <u>Y. Wang</u>, Q. Lin* and T. Mukherjee, "Systematic Modeling and Design of Microfluidic Concentration Gradient Generators", *Journal of Micromechanics and Microengineering*, Vol. 16, pp. 2128-2137, 2006.
- 21. <u>Y. Wang</u>, Q. Lin and T. Mukherjee, "Composable Behavioral Models and Schematic-Based Simulation of Electrokinetic Lab-on-a-Chip Systems", *IEEE Trans. CAD.*, 2006, Vol. 2, pp.258-273.
- 22. A.S. Bedekar, <u>Y. Wang</u>, S. Krishnamoorthy*, S.S. Siddhaye and S. Sundaram, "System-Level Simulation of Flow-Induced Dispersion in Lab-on-a-Chip Systems", *IEEE Trans. CAD.*, 2006, Vol. 2, pp. 294-304.
- 23. <u>Y. Wang</u>, Q. Lin* and T. Mukherjee, "A model for laminar diffusion-based complex electrokinetic passive micromixers", *Lab on chip*, 2005, Vol. 5, pp. 877-887.

- 24. <u>Y. Wang</u>, Q. Lin* and T. Mukherjee, "A Model for Joule Heating-Induced Dispersion in Microchip Electrophoresis", *Lab on chip*, 2004, Vol.4 pp. 625-631.
- 25. <u>Y. Wang</u>, Q. Lin* and T. Mukherjee, "System-Oriented Dispersion Models of General-Shaped Electrophoresis Microchannels", *Lab on chip*, 2004, Vol. 4, pp. 453-463. (Hot Article)
- 26. W. Chen, X. Zhou, J. Xia, X. Jin, and <u>Y. Wang</u>, "Simulation Research on Control Strategies and Modeling of the Double-Evaporator Air-Conditioner with Inverter", *Journal of System Simulation (Chinese)*, 2002, Vol. 14, pp. 643-646.
- 27. X. Zhou, W. Chen, J. Xia, and Y. Wang, "Research on the Transient Performance of the Double-Evaporator VRV Air Conditioner", *Fluid Machinery (Chinese)*, 2001, Vol. 29, pp. 53-56.
- 28. <u>Y. Wang</u>, X. Zhou, J. Xia, and W. Chen, "Numerical Research on Simulation Model in Double-Evaporator Air Conditioning System with Inverter", *Energy Conservation (Chinese)*, 2000, Vol. 9, pp. 7-10.
- 29. X. Zhou, <u>Y. Wang</u>, Z. Zhou, and F. Xiao, "Simulation Research on Fuzzy Control of Inverter-aid Air Conditioner Based on Systems of Variable Conditions", *Fluid Machinery (Chinese)*, 2000, Vol. 7, pp. 42-46.
- 30. Z. Zhou, X. Zhou, <u>Y. Wang</u>, and F. Wang, "Simulation Research on the System Characters of Air-Conditioner with Inverter", *Fluid Machinery (Chinese)*, 2000, Vol. 28, pp. 43-47.
- 31. Y. Wang, X. Zhou, "Dynamic Simulation Study on the characteristics of the Evaporators in Air-Conditioner with Inverter", *Journal of Anhui Institute of Architecture (Chinese)*, 2000, Vol. 8, pp. 61-64

Selected Peer-Reviewed Conference Proceedings, Paper and/or Abstract

- 1. L.M. Lee, Y. Wang*, C.J. Garson, G.J. Klarmann, B. Prabhakarpandian, K. Pant, L.M. Alvarez, and Eva Lai, "Enrichment of Human Adipose-Derived Stem Cells by a Spiral-shaped Inertial Microfluidic Sorter", The 21st International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2017), Paper No. M188h.
- H. Song¹, J.M. Rosano¹, G.J. Klarmann, C.J. Garson¹, B. Prabhakarpandian, L.M. Alvarez, E. Lai, Y. Wang*, Kapil Pant, "High Throughput Enrichment of iPSC-Derived Neural Stem Cells using Spiral-shaped Inertial Microfluidic Devices", *International Conference of Microfluidics, Nanofluidics and Lab-on-a-Chip*, Paper ID. 11-437, 2016.
- 3. H. Song¹, J.M. Rosano¹, <u>Y. Wang</u>*, et al., "A Continuous-Flow Microfluidic Device For The Separation Of Stem Cells And Their Differentiation Progency Based On Dielectrophoresis", *19th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS)*, pp. 361-363, 2015.
- 4. H. Song¹, <u>Y. Wang</u>*, C. Garson, K. Pant, "Nafion film based nanofluidic device for concurrent DNA preconcentration and separation", *IEEE NANO*, 549-552, 2013.
- 5. H. Song¹, <u>Y. Wang</u>*, K. Pant, "Three-Dimensional Analytical Model for Pressure-Driven Cross-Stream Diffusion in Microchannels With Arbitrary Aspect Ratios", *ASME 3rd International Conference on Micro/Nanoscale Heat and Mass Transfer (MNHMT)*, pp. 27-37, 2012
- 6. J.J. Wei*, M. Rexius, M. Kofke, <u>Y. Wang</u>, S. Singhal, D.H. Waldeck, "Nano-plasmonics Sensing and Integration with Microfluidics for a Lab-on-chip", *Nanotech 2011*, Vol. 3, pp. 79-82, 2011
- 7. Y. Wang*, K. Pant, "System-Level Modeling of Surface-Immobilized Biomolecular Concentration Gradient Generation", ASME 1st International Conference on Micro/Nanoscale Heat and Mass Transfer (MNHMT), 179-186, 2009.
- 8. <u>Y. Wang</u>*, K. Pant, ZJ Chen, W. Diffey, P. Ashley, S. Sundaram, "Numerical Analysis of Nanofluidic Sample Preconcentration in Hydrodynamic Flow", *11th International Conference on Modeling and Simulation of Microsystems*, pp. 442-445, 2008.

- 9. Z. Zhou, <u>Y. Wang</u>, T. Mukherjee, Q. Lin*. "Design Synthesis and Experimental Validation of Microfluidic Concentration Gradient Generators". *IEEE MEMS* '2008, pp. 579-582, 2008.
- Y. Wang*, K. Pant, J. Grover, S. Sundaram, "Multi-physics Simulational Analysis of a Novel PCR Micro-Device", 10th International Conference on Modeling and Simulation of Microsystems, Vol. 3, pp. 456-459, 2007.
- 11. Y. Wang, Q. Lin* and T. Mukherjee, "System-Level Modeling and Design of Microfluidic Concentration Gradient Generators". *1st IEEE International Conference on Nano/Micro Engineered and Molecular Systems*, pp. 1368-1373, 2006.
- 12. Y. Wang*, A.S. Bedekar, S. Krishnamoorthy *et. al.* "Mixed methodology-based system level simulation of biochemical assays in integrated microfluidic systems", *9th International Conference on Modeling and Simulation of Microsystems*, pp. 546-549, 2006.
- 13. G.R. Wang*, J. Guo, Y. Lin, J. Feng, J. Wei, <u>Y. Wang</u>, S.Krishnamoorthy, S. Sundaram, "Laser-Induced Fluorescence Photobleaching Anemometer for Flow Velocity Measurement in Sub-Microscale Fluidic Channels", 2006 IEEE/LEOS Summer Topical Meeting on Optofluidics: Emerging Technologies and Applications, pp. 34-35, 2006.
- 14. Y. Wang*, R. Magargle, Q. Lin, J.F. Hoburg and T. Mukherjee, "System-Oriented Modeling and Simulation of Biofluidic Lab-on-a-chip", *The 13th International Conference on Solid-State Sensors, Actuators and Microsystems (Transducers* '05), pp. 1280-1283, 2005.
- 15. <u>Y. Wang</u>*, Q. Lin and T. Mukherjee, "System Simulations of Complex Electrokinetic Passive Micromixers", 8th International Conference on Modeling and Simulation of Microsystems, pp. 579-582, 2005.
- 16. <u>Y. Wang</u>*, Q. Lin and T. Mukherjee, "Applications of Behavioral Modeling and Simulation on Lab-on-achip: Micro-Mixer and Separation System", *2004 IEEE International Behavioral Modeling and Simulation Conference*, pp. 1-6, 2004.
- 17. <u>Y. Wang</u>*, Q. Lin and T. Mukherjee, "Models for Joule Heating Dispersion in Complex Electrophoretic Separation Microchannels", *2004 ASME International Mechanical Engineering Congress and Exposition*, No. 60970, 2004.
- 18. <u>Y. Wang</u>*, Q. Lin and T. Mukherjee, "Analytical Models for Complex Electrokinetic Passive Micromixers", *The 8th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS)*, pp. 596-598, 2004.
- 19. <u>Y. Wang</u>*, Q. Lin and T. Mukherjee, "Composable System Simulation of Dispersion in Complex Electrophoretic Separation Microchips", 7th International Conference on Modeling and Simulation of Microsystems, pp. 59-62, 2004.
- 20. Y. Wang*, Q. Lin and T. Mukherjee, "Analytical Dispersion Models for Efficient Simulation of Complex Microchip Electrophoresis Systems", *The 7th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS)*, pp. 135-138, 2003.
- 21. Y. Wang*, Q. Lin and T. Mukherjee, "Universal Joule Heating Model in Electrophoretic Separation Microchips", *The 6th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS)*, pp. 82-84, 2002.
- 22. Y. Wang*, Q. Lin, J. Hoburg and T. Mukherjee, "Modeling of Joule Heating in Electrophoretic Separation Microchips", 5th International Conference on Modeling and Simulation of Microsystems, pp. 80-83, 2002.
- 23. X. Zhou*, <u>Y. Wang</u>, J. Xia, B. Shen, "*Research* on Dynamic Characteristics of Double Evaporators in VRV Air Conditioner", 2000 International Conference of Air Conditioning in High Rise Buildings (ACHRB), pp. 279-283, 2000.

- 24. J. Xia*, F. Xiao, X. Jin, <u>Y. Wang</u>, G. Huang, "Optimal Sizing Analysis of Water Chillers in Large Air Conditioning System", 2000 International Conference of Air Conditioning in High Rise Buildings (ACHRB), pp. 145-149, 2000.
- 25. B. Shen*, Z. Su, <u>Y. Wang</u>, "Control of Air-Conditioner with Inverter Using Evaporating Pressure as Middle-Target via Fuzzy Method", *2000 International Refrigeration Conference at Purdue*, pp. 457-464, 2000.
- 26. B. Shen*, Z. Su, <u>Y. Wang</u>, "Research On Characteristics Of Double-Evaporators In VRV Air Conditioner", *2000 International Refrigeration Conference at Purdue*, pp. 135-142, 2000.
- 27. H. Song¹, <u>Y. Wang</u>*, J. Rosano, et al., "A Micropore-based Impedance Flow Cytometer for Identifying Differentiation State of Stem Cells", *BMES Annual Fall Meeting*, 2013.
- 28. H. Song¹, <u>Y. Wang</u>*, K. Pant, "System-level Simulation of Liquid Filling in Microfluidic Chips", *Lab on a Chip World Congress*, 2010.
- 29. <u>Y. Wang</u>*, K. Pant ZJ Chen, W. Diffey, P. Ashley, and S. Sundaram. "Numerical Analysis of Electrokinetic Transport at Micro-Nanofluidic Interfaces in Hydrodynamic Flow and Applications in Sample Preconcentration", *Eighth International Electrokinetic Conference*, 2008.
- 30. B. Prabhakarpandian, K. Pant, <u>Y. Wang</u>, and S. Sundaram*, "An Integrated Microfluidic Device for Fully Automated Isolation of RNA From Small Cell Cultures", *BMES Annual Fall Meeting*, 2007.
- 31. A. J. Pfeiffer, <u>Y. Wang</u>, Q. Lin, R. Magargle, J. Hoburg, T. Mukherjee and S. Hauan, "Design and Optimization of Microchip Based Electrophoretic Channel Topologies", *2003 AIChE Annual Meeting*, pp. 24b, 2003.
- 32. <u>Y. Wang</u>, X. Zhou, J. Xia, and W. Chen, "Study of Fuzzy Self-Adaptive PID Control Method of Electronic Expansion Valve in Air Conditioning Systems with Inverter-aid Compressor", *Annual Conference of Chinese Society of Engineering Thermodynamics*, pp. 54-59, 2000, Beijing, P.R.China (Chinese).
- 33. <u>Y. Wang</u>, X. Zhou, J. Xia, and W. Chen, "Transient Simulation Study of Superheat Degree in Air Conditioning Systems with Inverter-aid Compressor", *Annual Conference of Chinese Society of Engineering Thermodynamics*, pp. 60-65, 2000, Beijing, P.R.China. (Chinese)

INVITED TALKS AND SEMINARS

- 1. "A Review of Reduced Order Modeling (ROM) and Real-Time Simulation Techniques for Engineering Applications", Invited Seminar at the Hunan University of Science and Technology (HNUST), July 1st, 2016, Hunan, PR China.
- 2. "Multiphysics Variable-Fidelity Modeling and Simulation (MVF-M&S) for Biomedical Devices", Invited Seminar at Novartis Co., Sept. 16th, 2015, East Hanover, New Jersey.

RESEARCH GROUP

Current Group

Research Assistant Professor Dr. Shengwei Zhu November 2018

➤ Ph.D. Students: Feng Bai Fall 2018–

HONORS AND AWARDS

- Cover Story of Analytical Methods (Royal Society of Chemistry), "Identification Of Mesenchymal Stem Cell Differentiation State Using Dual-Micropore Microfluidic Impedance Flow Cytometry", Nov. 2016.
- ➤ Cover Story of Analytical Methods (Royal Society of Chemistry), "Concurrent DNA Preconcentration and Separation in Bipolar Electrode-Based Microfluidic Device", Feb. 2015.

- ➤ Hot Article of Lab on a chip (Royal Society of Chemistry), "System-Oriented Dispersion Models of General Shaped Electrophoresis Channels". The paper has been recognized as "very significant" to the field of integrated biological and chemical microsystems. July 2004
- **Best Poster Award**, Microfluidic/Biosensor Workshop at University of Pennsylvania, June 2003
- National Excellence Scholarship, Shanghai Jiao Tong University, P.R. China, Oct. 2000
- National Excellence Scholarship, Shanghai Jiao Tong University, P.R. China, Oct. 1999
- **Excellent Graduate**, Shanghai Jiao Tong University, P.R. China, June 1998
- > First Prize of Wanbang & Cao Wenjin Scholarship, Shanghai Jiao Tong University, Mar. 1998
- **Excellent Student**, Shanghai Jiao Tong University, P.R. China, Oct. 1997
- > Second Prize of The Excellence Scholarship of Shanghai Jiao Tong University, Sep. 1997
- ➤ Third Prize of The Excellence Scholarship of Shanghai Jiao Tong University, Sep. 1996
- **Excellent Student**, Shanghai Jiao Tong University, P.R. China, Oct. 1995
- > Second Prize of The Excellence Scholarship of Shanghai Jiao Tong University, Sep. 1995

PROFESSIONAL SERVICES

Service to Discipline

- > Session Co-chair: 2009 Micro/Nanoscale Heat and Mass Transfer International Conference
- Session Co-chair: 2013 13th International Conference On Nanotechnology

JOURNAL AND CONFERENCE PROCEEDINGS REVIEW COMMITMENTS

Journal

- ➤ Lab on Chip
- > Journal of Micromechanics and Microengineering
- Microfluidics and Nanofluidics
- > Talanta
- > Journal of Microelectromechanical Systems
- ➢ Biomedical Microdevices

Conference Proceedings

- ➤ 2006 IEEE Sensors Conference
- 2006 ASME International Mechanical Engineering Congress and Exposition (IMECE)
- ➤ 2008 ASME 2nd International Conference & Exhibition of Integration & Commercialization of Micro & Nanosystems
- > 2009 Micro/Nanoscale Heat and Mass Transfer International Conference
- ➤ 2012 Micro/Nanoscale Heat and Mass Transfer International Conference
- ➤ 2013 IEEE NANO Conference