

Weixiong Wang

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➤ EDUCATION

- 2008 Tsinghua University (Beijing, China), PhD, Engineering Mechanics
- 2004 Tsinghua University (Beijing, China), MS, Engineering Mechanics
- 2001 Zhejiang University (Hangzhou, China), BS, Engineering Mechanics
 - No. 1 out of 26,
 - Zhu Ke Zhen Prize (the highest honor of the university, only 10 students each year)

➤ RESEARCH INTERESTS

Non-Newtonian fluid flows; Micro/bio-fluidics; Design and optimization of rheological and micro-fluidic devices; Turbo-machineries design and development; CFD method development and mesh generation algorithms.

➤ RESEARCH EXPERIENCE

- 2009 Postdoctoral Researcher in Tulane University
(Numerical simulations of non-Newtonian fluid flows)
- 2008 Postdoctoral Researcher in the Ohio State University
(Numerical and experimental study of microfluidics)
- 2007 Developing numerical prediction method for turbulent noise of axial flow cooling fans
- 2005 Design a series of Contra-Rotating Axial Flow Fans for XISHAN fan company in Beijing.
Increase the total efficiency from 75% to 81%.
- 2004 Proposed a semi-empirical method to predict the Vortex Shedding Noise of a centrifugal impeller for DAIKIN company in Japan. Error for the total SPL has only 3 dB near design point.
- 2004 Numerically predict the aerodynamic performance of a multi-blades centrifugal fan used in house hold dry machine for SIEMENS company in Germany.
- 2003 Design a low pressure axial flow fan for REVCOR company in USA.
- 2001 Internship in Chinese Ship Science Research Center

➤ TEACHING EXPERIENCE

- 2009 Two lectures in the graduate class of Computational Modeling of Biomedical Systems, Tulane Univ.
- 2005 Teaching Assistant, Experimental Fluid Mechanics (to undergraduate student), Tsinghua Univ.
- 2004 Teaching Assistant, Computational Fluid Dynamics (to graduate student), Tsinghua Univ.

➤ SOCIAL ACTIVITY

- 2005 Captain of the volleyball team of the department
- 2001 President of the graduate students in the class of fluid mechanics
- 2000 Visit Hong Kong Polytechnic University
- 1999 Vice president of student union in college of MEE, Zhejiang Univ.

➤ HONORS AND AWARDS

- 2003~2005 GaoTian imperial prize, GuangHua first order scholarship (two times)
- 2006 First prize for the excellent presentation on 2005 doctoral forum of Tsinghua University.
- 2006 No. 3 in the volleyball competition of “Ma Yue Han” cup.
- 2002~2004 “Advanced class in Tsinghua Univ.” and “Excellent group of youth in Beijing” for 3 times
- 2001 Excellent graduate in high school of Zhejiang Province
- 2000 Won “Zhu Ke Zhen Prize” in 2000, which is the highest honor in Zhejiang University, only 10 students will win it each year.
- 1998~2001 First order scholarship in Zhejiang Univ. for 3 times.
- 1991~2001 Won “Shu Ping Scholarship” in Shanghai for 10 years.

➤ PUBLICATIONS

- 1 W. Wang, D. De Kee, and D. Khismatullin, “Numerical Comparison of Vane Rheometer and Double Concentric Cylinder Rheometer with Slotted Rotor (DCCR/SR)”, *J. Rheol.* (2010, submitted).
- 2 P.C. Stapor, W. Wang, W.L. Murfee, and Damir B. Khismatullin, “The distribution of fluid shear stresses in capillary sprouts: Effect of vascular permeability”, *Cardiovas. Eng. Tech.* (2010, submitted).
- 3 W. Wang, H. Zhu, D. De Kee, and D. Khismatullin, “Numerical investigation of the reduction of wall-slip effects for yield stress fluids in a double concentric cylinder rheometer with slotted rotor”, *J. Rheol.* (2010, in press).
- 4 Z-Q Cai, W. Wang, S. Movva, D. Guerra, Y. Hoie, L. J. Lee and J. M. Castro. “Heat transfer studies on epoxy based sandwich structural composites for wind blades”, *Annual Technical Conference-Society of Plastics Engineers (ANTEC) (2009) 67th*, 2259-2263.
- 5 H. He, Y. Yuan, W. Wang, N. Chiou, A. J. Epstein, and L.J. Lee, “Design and testing of a microfluidic biochip for cytokine enzyme-linked immunosorbent assay”, *Biomicrofluidics*. 2009, 3(2).
- 6 S. Wang, X. Zhang, W. Wang, and L.J. Lee, “Semicontinuous Flow Electroporation Chip for High-Throughput Transfection on Mammalian Cells”, *Anal. Chem.*, 2009, 81(11).
- 7 W. Wang, S. Li, Z. Zhu, D. Huang, and K. Zhu, “Numerical prediction of vortex shedding noise radiated by a centrifugal impeller”, *Engineering Mechanics*, 2008, 25(7).
- 8 P. Lei, X. Li, S. Li, and W. Wang, “Numerical Prediction of Aerodynamic Performance for a Contra-rotating Axial-flow Fan”, *Compressor Blower & Fan Technology*, 2008 (4).
- 9 W. Wang, S. Li, Z. Zhu, D. Huang, and K. Zhu, “Shaft Power Matching and Performance Prediction for Contra-Rotating Axial Flow Fans”, *International Journal of HVAC&R Research*, 2007, 13(1).
- 10 W. Wang, S. Li, Z. Zhu, D. Huang, and K. Zhu, “Effects of blade cutting to the aerodynamic performance of low pressure cooling fan”, *Journal of Tsinghua University*, 2007 (2).
- 11 W. Wang, S. Mo, X. Chen, and S. Li, “The Effect of Diversion Cover Position to The Performance of Axial Flow Cooling Fan”, *Compressor Blower & Fan Technology*, 2007(1).
- 12 Z. Yu, S. Li, W. He, W. Wang, D. Huang, and Z. Zhu, “Numerical simulation of flow field for a whole centrifugal fan and analysis of the effects of blade inlet angle and impeller gap”, *International Journal of HVAC&R Research*, 2005(2).
- 13 W. Wang, S. Li, Z. Zhu, “An extremum developing method for an undevelopable surface and its application to axial fan blades”, *Compressor Blower & Fan Technology*, 2004 (4).
- 14 J. Lin, Y. Wang, W. Wang, and Z. Yu. “Numerical simulation of the sedimentation of cylindrical pollutant particles in fluid”, *Journal of Environmental Sciences*, 2002(4).
- 15 J. Lin, W. Wang, “Numerical simulation of the sedimentation of cylindrical particles”, *Journal of engineering thermophysics*, 2002(5).

➤ CONFERENCES & PRESENTATIONS (* Presenter)

- 1 Y. Teng, W. Wang, and D.B. Khismatullin, “Development of multiple-particle-tracking microrheology for fluids experiencing deterministic motion”, 82nd Annual Meeting of the Society of Rheology, October 24-28, 2010 — Santa Fe, New Mexico.
- 2 W. Wang*, D.B. Khismatullin, H. Zhu, and D. De Kee, “Numerical analysis of double concentric cylinder rheometer with slotted rotor”, 82nd Annual Meeting of the Society of Rheology, October 24-28, 2010 — Santa Fe, New Mexico.
- 3 W. Wang*, B. Meng, and D. De Kee, “Numerical investigation of the slotted plate rheometer for yield stress fluids”, 82nd Annual Meeting of the Society of Rheology, October 24-28, 2010 — Santa Fe, New Mexico.
- 4 W. Wang*, F. Graziano, V. Russo, and D.B. Khismatullin, “Numerical study of blood flow after embolization of cerebral aneurysm with yield stress fluids”, 2010 BMES Annual Fall Meeting, October 6-9, 2010 — Austin, Texas.
- 5 W. Wang*, P. C. Stapor, W.L. Murfee, and D.B. Khismatullin, “Influence of permeability on shear stress distribution along capillary sprouts”, 2010 BMES Annual Fall Meeting, October 6-9, 2010 — Austin, Texas.
- 6 W. Wang*, D. Khismatullin, H. Zhu, and D. De Kee, “Numerical investigation of the reduction of wall slip effects in a double concentric cylinder rheometer with slotted rotor”, SCALA 2010 - Scientific Computing Around Louisiana, February 5-6, 2010 — Baton Rouge, Louisiana.
- 7 W. Wang*, H. He, and L.J. Lee, “CFD Simulation of Capillary Valves in a Microfluidic Biochip”, 10th US National Congress on Computational Mechanics, July 16-19, 2009, Columbus, Ohio.
- 8 X. Hu, W. Liao, W. Wang, Z. Yu, L.-S. Fan, and L.J. Lee, “Single DNA Dynamics in Microscaled Free

Surface Flows”, 10th US National Congress on Computational Mechanics, July 16-19, 2009, Columbus, Ohio.

- 9 W. Wang, L. Liu, S. Li, and X. Li, “Numerical prediction of turbulent noise for low pressure axial flow fans”, the 37th International Congress & Exhibition on Noise Control Engineering, October 26-29, 2008, Shanghai, China.
- 10 W. Wang*, D. Huang, “Numerical prediction of vortex shedding noise radiated by a centrifugal impeller”, 151st ASA Meeting, June 5-9, 2006, Providence, R.I.