

Curriculum Vitae

Name: Song FU

Date of Birth: March 3, 1959

Birthplace: Jiangxi, China

Career: Professor of Fluid Dynamics at Tsinghua University



Education

- 1978.9—1979.3: Department of Mechanical Engineering, Tsinghua University
- 1979.7—1980.8: Chichester College of Technology, UK
- 1980.9—1983.7: Department of Mechanical Engineering, Imperial College London (B.Sc. Honors)
- 1983.8—1988.7: Department of Mechanical Engineering, University of Manchester Institute of Science & Technology (Ph.D.)

Work Experience

After returning from the study in UK in the summer of 1988, Song FU joined Tsinghua University and has been working there ever since. The following list provides the positions that he held in chronicle order:

- 1988.7: Lecturer, Dept. Engineering Mechanics, Tsinghua University
- 1990.12: Assoc. Professor, Dept. Engineering Mechanics, Tsinghua University
- 1993.12: Professor, Dept. Engineering Mechanics, Tsinghua University
- 1993.4—1995.10: Head of Fluid Mechanics Division, Dept. Engineering Mechanics, Tsinghua University
- 1995.1—1999.7: Deputy Director of the Institute of Engineering Mechanics, Tsinghua University
- 1995.9-2003.6: Member of the Academic Board of Tsinghua University
- 2000.3—2002.6: Director of Science & Technology Office, Tsinghua University
- 2000.9—: Changjiang Professor of the Ministry of Education
- 2000.6—2005.9: Director of the Institute of Fluid Mechanics
- 2002.6—2004.6: Vice Dean of the School of Mechanical Engineering
- 2004.5—Present: Deputy Dean of the School of Aerospace Engineering

Academic-Related Activities

- Vice Chairman of the Chinese Aerodynamic Society (since 2001)
- Chairman of the Fluid Mechanics Committee of the Chinese Society of Mechanics (2007-2011)
- Advisory Editor for *Flow Turbulence & Combustion*
- Associate Editor of *AIAA Journal*
- Associate Editor-in-Chief for: *Science in China Aeries G*, *Progress in Mechanics* (in Chinese)
- Executive member of the editorial board of *Acta Mechanica Sinica*
- Member of the editorial board of the following Chinese Journals: *Journal of Computational Mechanics*, *Journal of Engineering Mechanics*, *Journal of Aerodynamics*
- Member of the Advisory Committees: *International Symposium of Turbulence & Shear Flow Phenomena (TSFP, since 2001)*, *International Symposium of Turbulent Heat & Mass Transfer (THMT, since 2002)*, *International Conference on Computational Fluid Dynamics (ICCFD, since 2005)*

Current Research Interests

- Turbulence Modeling
 - Modeling of hypersonic transition flows;
 - Modeling of turbulent flows with rapid distortion;
 - Modeling of compressible turbulent flows;
- Aerodynamics
 - Numerical study of casing treatment for axial compressor rotor;
 - Numerical study of aircraft aerodynamics;
 - Cooling tower;
 - Petroleum engineering.

Some Selected Publications

1. Xiaolong Yang, Song Fu, the effect of filtering on truncated Navier-Stokes equations, *J. Turbulence*, Vol.8, No.8:1, 1-18, 2007
2. XIAO Zhixiang, CHEN Haixin, ZHANG Yufei, HUANG Jingbo, FU Song, Study of delayed- detached eddy simulation with weakly nonlinear turbulence model, *AIAA Journal of Aircraft*, 43(5):1377-1385, 2006
3. FU Song, LI Qibing, Numerical simulation of compressible mixing layers, *International Journal of Heat and Fluid Flow*, 2006, **27**:895-901
4. LI Qibing, FU Song, On the multidimensional gas-kinetic BGK scheme, *Journal of Computational Physics*, 220:532-548, 2006
5. LI Qibing, FU Song, Applications of implicit BGK scheme in near-continuum flow. *International Journal of Computational Fluid Dynamics* 20(6):453-461, 2006
6. Qibing Li, Song Fu & Kun Xu, A compressible Navier–Stokes flow solver with scalar transport, *Journal of Computational Physics* 204 (2005) 692–714

7. Liu XM & Fu S, Numerical simulation of compressible separated turbulent flows over inclined slender body, JOURNAL OF SPACECRAFT AND ROCKETS 42 (3), 572-575 MAY-JUN 2005
8. Li QB & Fu S, Application of gas-kinetic scheme with kinetic boundary conditions in hypersonic flow, AIAA JOURNAL, 43 (10): 2170-2176 OCT 2005
9. Zhixiang Xiao, Haixin Chen, Song Fu and Fengwei Li, "Computations with k-g Model for Complex Configurations at High-Incidence", Journal of Aircraft, Vol.42, No.2, 2005 March-April, pp: 462-468; (SCI: 915FS, EI: 05209100991)
10. Fu Song, Li Qibing & Wang Minghao, Depicting vortex stretching and vortex relaxing mechanisms, CHIN. PHYS. LETT. Vol.20, No.12 (2003) 2195-2198
11. Qibing Li, Haixin Chen & Song Fu, Large-scale vortices in high-speed mixing layers, Physics of Fluids, Vol.15 No.10:3240-3243, October 2003
12. H. Chen, S. Fu & F. Li, Navier-Stokes Simulations for transport aircraft wing/body high-lift configurations, Journal of Aircraft, Vol.40, No.5: 883-890, Sept.-Oct.2003
13. FU Song, GUO Yang, QIAN Weiqi & WANG Chen, Recent progress in nonlinear eddy-viscosity turbulence modeling, Acta Mechanica Sinica, Vol.19, No.5:1-11, October 2003
14. Qibing Li & Song Fu, Numerical simulation of high-speed planar mixing layer, Computers & Fluids 32 (2003) 1357-1377
15. Song Liu & Song Fu, Regimes of vortex shedding from an in-line oscillating circular cylinder in the uniform flow, Acta Mechanica Sinica, Vol.19, No.2:118-126, April 2003
16. Wang M.H. Fu S. & Zhang G. H., Large-Scale Spiral Structures in Turbulent Thermal Convection Between Two Vertical Plates, Physical Review E 66, 066306 (2002)
17. Fu S, Qian WQ Development of curvature sensitive nonlinear eddy-viscosity model, AIAA J 40 (11): 2225-2233 NOV 2002
18. Guo Y. and Fu S., On the elimination of wall-topography parameters from the nonlinear eddy-viscosity closure, CFD J vol.10 no.4:512-519, Jan 2002
19. Fu S. & Zhai Z.Q. *Numerical investigation of the adverse effect of wind on the heat transfer performance of two natural draft cooling towers in tandem arrangement*, Acta Mechanica Sinica, Vol.17, No.1, Feb. 2001
20. C. B. Lee, S. Fu. On the formation of the chain of ring-like vortices in a transitional boundary layer, Experiments in Fluids 30 (2001) 354-357