

Curriculum Vitae

Name in Full

Tang Gui-Hua

Position

Full Professor since 2011, Department of Thermo-Fluid Science and Engineering, School of Energy and Power Engineering, Jiaotong University, Xi'an, China

Deputy Head of Department of Thermo-Fluid Science and Engineering since 2012

Head of Department of Thermo-Fluid Science and Engineering since 2016

Qualifications

2004 Ph. D. Engineering Thermophysics, Jiaotong University, Xi'an

1999 M. Sc. Thermal Engineering, Jiaotong University, Xi'an

1996 B. E. Thermal Engineering, Jiaotong University, Xi'an

Overseas Experiences

April 2007-August 2009 Higher Scientific Officer in Daresbury Laboratory, Science and Technology Facilities Council, UK

March 2008-August 2008 Visiting Scholar in University of Strathclyde, UK

Research Fields

Heat transfer enhancement; droplets and condensation heat transfer; electrokinetics; liquid or gas flow and heat transfer in microchannels; thermal transport in thermoelectrics and nanoporous thermal insulation; lattice Boltzmann method; non-Newtonian fluid flow and heat transfer; microscale and mesoscale fluid flow and heat transfer; Erosion and corrosion

Professional Activities

1. **Associate Editor** for "ASME Journal of Heat Transfer", 2015-
2. **Editorial Member** for "Journal of Energy and Power Engineering", 2012-
3. **Editorial Member** for "Journal of Fluids and Thermal Sciences", 2011-
4. **Editorial Member** for "Engineering", 2011-
5. **Editorial Member** for "Applied Physics" (in Chinese), 2011-
6. **Project Specialist** for the National Basic Research Program of China (2011CB710700), Fundamental Research on Deep Utilization of Low Temperature Flue Gas Waste Heat of Boilers, 2011-2015

7. **International Scientific Committee Member** for the Sixth Micro and Nano Flows Conference, Atlanta, Sep 10-12, 2018
8. **International Scientific Committee Member** for the Asian Symposium on Computational Heat Transfer and Fluid Flow (ASCHT17), Chennai, Dec 10-13, 2017
9. **学术委员会委员(Scientific Committee Member)**, 第十四届全国渗流力学大会(The 14th National Conference on Seepage Mechanics), 杭州(Hangzhou), Aug 23-25, 2017
10. **Session Organizer** for the Session of Computational Method, 1st Asian Conference on Thermal Sciences 2017, Jeju, March 26-30, 2017
11. **International Scientific Committee Member** for the Fifth Micro and Nano Flows Conference, Milan, Sep 11-14, 2016
12. **Track Organizer** for the Track of Heat and Mass Transfer in Small Scale, ASME 2016 Micro/Nanoscale Heat and Mass Transfer International Conference, Singapore, Jan 3-6, 2016
13. **International Scientific Committee Member** for the International Conference on Thermal Science and Technology (2015), Dalian, Oct 19-22, 2015
14. **International Scientific Committee Member** for the Asian Symposium on Computational Heat Transfer and Fluid Flow (ASCHT15), Pusan, Jun 21-24, 2015
15. **International Scientific Committee Member** for the Fourth Micro and Nano Flows Conference, London, Sep 7-10, 2014
16. **International Scientific Committee Member** for the First International Heat Transfer Symposium, Beijing, May 6-9, 2014
17. **Session Organizer** for the Session of Mesoscopic Approaches of Computational Methods in Micro/Nanoscale Transport, ASME 2013 Micro/Nanoscale Heat and Mass Transfer International Conference, Hongkong, Dec 11-14, 2013
18. **Section Organizer** for the Section of Nanotech in Heat Transfer and Nano Fluid Engineering, The BIT'S 3rd Annual World Congress of Nanoscience and Nanotechnology 2013, Xi'an, Sep 26-28, 2013
19. **Section Organizer** for the Section of Nanotech in Heat Transfer and Nano Fluid Engineering, The BIT'S 2nd Annual World Congress of Nanoscience and Nanotechnology 2012, Qingdao, Oct 26-28, 2012
20. **Session Organizer** for the Session of Numerical Simulation of Heat and Mass Transfer, ASME 2012 Micro/Nanoscale Heat and Mass Transfer International Conference, Atlanta, March 3-6, 2012
21. **Local Organizing Committee Member** for 2011 National Conference on Heat and Mass Transfer of Chinese Society of Engineering Thermophysics, Xi'an, China, Oct 14-16, 2011
22. **International Scientific Committee Member** for the Third Micro and Nano Flows Conference, Thessaloniki, Greece, Aug 22-24, 2011

23. **Organizer** for the mini-symposium of Lattice Boltzmann method for flow and heat transfer, Second International Conference on Computational Methods for Thermal Problems, Sep 5-7, 2011, Dalian, China
24. **Local Organizing Committee Member** for 2010 China-UK Workshop on Electricity & Energy, Suzhou, April 12-14, 2010
25. **Session Organizer** for ASME 2009 Micro/Nanoscale Heat and Mass Transfer International Conference, Shanghai, Dec 18-21, 2009
26. **Local Organizing Committee Member** for Asian Symposium on Computational Heat Transfer and Fluid Flow (ASCHT07), Xi'an, Oct 18-21, 2007
27. **Reviewer** for the following international journals:
 Progress in Energy and Combustion Science; Scientific Report; Nanoscale; Microfluidics and Nanofluidics; Biomicrofluidics; Applied Mathematics and Computation; Water Resources Research; International Journal of Heat and Mass Transfer; International Communications in Heat and Mass Transfer; Chinese Physics Letters; ASME Journal of Fluids Engineering; Applied Thermal Engineering; Chinese Science Bulletin; Central European Journal of Physics; Brazilian Journal of Chemical Engineering; International Journal of Modern Physics C; Science in China Series E-Technological Sciences; Advances in Applied Mathematics and Mechanics; Engineering Applications of Computational Fluid Mechanics; Journal of Enhanced Heat Transfer; Heat Transfer Engineering; Applied Mathematics and Mechanics; International Journal of Thermal Sciences; International Journal for Numerical Methods in Fluids; Progress in Chemistry; Zeitschrift fur Naturforschung Section A-A Journal of Physical Sciences; Engineering; International Journal of Microscale and Nanoscale Thermal and Fluid Transport Phenomena; Modelling and Simulation in Engineering; Frontiers in Heat and Mass Transfer; Heat Transfer Research; ASME Journal of Heat Transfer; Journal of Thermophysics and Heat Transfer; Scientia Iranica; Indian Journal of Physics; Arabian Journal for Science and Engineering; International Journal of Numerical Methods for Heat and Fluid Flow; Chinese Physics B; Open Journal of Fluid Dynamics; International Journal of Engineering, Science and Technology; Colloids and Surfaces A: Physicochemical and Engineering Aspects; Physica E; Engineering Computations; Journal of Energy and Power Engineering; International Journal of Energy Research; Applied Energy; Advances in Information Sciences and Service Sciences; Journal of Porous Media; Advances in Mechanical Engineering; AIP Advance; Computers and Mathematics with Applications; Energy; European Journal of Mechanics - B/Fluids; Computers and Fluids; Mathematical Problems in Engineering; International Journal of Electrical Power and Energy Systems; Journal of Computational Multiphase Flows; Fuel; International Journal of Computational Fluid Dynamics; Petroleum Science; Communications in Computational Physics; Reviews in Chemical Engineering; Solar Energy; Experimental Thermal and Fluid Science; Annals of Nuclear Energy; International Journal for Numerical Methods in Biomedical Engineering; Journal of Zhejiang University-Science A; Chemical Engineering and Processing: Process Intensification; Advances in Mechanical Engineering; Journal of Natural Gas Science & Engineering; Journal of Rheology; Infrared Physics and Technology; Journal of Non-Crystalline Solids; Applied Optics; Journal of Applied Physics; Physica B; Alexandria Engineering Journal; Journal of Aerosol Science; Physics of Fluid

International Journal Publications

1. Lu Y B, **Tang G H**, Sheng Q, Gu X J, Emerson D R, Zhang Y H, Knudsen's permeability correction for gas flow in tight porous media using the R26 moment method, **Journal of Porous Media**, in press.
2. Fu B, **Tang G H**, Li Y F, Electron-phonon scattering effect on lattice thermal conductivity of silicon nanostructures, **Physical Chemistry and Chemical Physics**, 2017, 19: 28517-28526.
3. Niu D, Guo L, Hu H W, **Tang G H**, Dropwise condensation heat transfer model considering the liquid-solid interfacial thermal resistance, **International Journal of Heat and Mass Transfer**, 2017, 112: 333-342.
4. Pu J H, Li G X, **Tang G H**, Sun H Y, Niu D, The effect of chemical functionalisation on nanoporous energy absorption system, **Molecular Simulation**, 2017, 17: 1442-1447.
5. Jin Y, **Tang G H**, He Y L, Tao W Q, Numerical study of the solid particle erosion on H-type finned circular/elliptic tube surface, **Communications in Computational Physics**, 2017, 21(2): 466-489.
6. Sun H Y, Pu J H, **Tang G H**, High-performance thermogalvanic cell based on organic nanofluids (基于纳米有机液体的高性能温差电池), **Acta Physico-Chimica Sinica (物理化学学报)**, 2016, 32(10): 2555-2562.
7. Du M, **Tang G H**, Plasmonic nanofluids based on gold nanorods/nanoellipsoids/nanosheets for solar energy harvesting, **Solar Energy**, 2016, 137: 393-400.
8. Hu H W, **Tang G H**, Niu D, Wettability modified nanoporous ceramic membrane for simultaneous residual heat and condensate recovery, **Scientific Reports**, 2016, 6: 27274.
9. **Tang G H**, Zhao Y, Guo J F, Multi-layer graded doping in silica aerogel insulation with temperature gradient, **International Journal of Heat and Mass Transfer**, 2016, 99: 192-200.
10. Shi Y, **Tang G H**, Y Wang, Simulation of three-component fluid flows using the multiphase lattice Boltzmann flux solver, **Journal of Computational Physics**, 2016, 314: 228-243.
11. Hu H W, **Tang G H**, Niu D, Experimental investigation of convective condensation heat transfer on tube bundles with different surface wettability at large amount of noncondensable gas, **Applied Thermal Engineering**, 2016, 100: 699-707.
12. Wang Y C, **Tang G H**, Prediction of sulfuric acid dew point temperature on heat transfer fin surface, **Applied Thermal Engineering**, 2016, 98: 492-501.
13. Lu Y B, **Tang G H**, Tao WQ. Experimental study of microchannel flow for non-Newtonian fluid in the presence of salt, **Experimental Thermal and Fluid Science**, 2016, 74: 91-99.

14. Shi Y, **Tang G H**, Non-Newtonian rheology property for two-phase flow on fingering phenomenon in porous media using the lattice Boltzmann method, **Journal of Non-Newtonian Fluid Mechanics**, 2016, 229: 86-95.
15. Niu D, **Tang G H**, The effect of surface wettability on water vapor condensation in nanoscale, **Scientific Reports**, 2016, 6: 19192.
16. Jin Y, Yu Z Q, **Tang G H**, He Y L, Tao W Q, Parametric study and multiple correlations of an H-type finned tube bank in a fully developed region, **Numerical Heat Transfer Part A-Applications**, 2016, 70(1): 64-78.
17. Zhao Y, **Tang G H**, Monte Carlo study on extinction coefficient of silicon carbide porous media used for solar receiver, **International Journal of Heat and Mass Transfer**, 2016, 92: 1061-1065.
18. Gu W, **Tang G H**, Tao W Q, High efficiency thermophotovoltaic emitter by metamaterial-based nano-pyramid array, **Optics Express**, 2015, 23: 30681
19. Du M, **Tang G H**, Optical property of nanofluids with particle agglomeration, **Solar Energy**, 2015, 122: 864-872.
20. **Tang G H**, Bi C, Zhao Y, Tao W Q, Thermal transport in nano-porous insulation of aerogel: Factors, models and outlook, **Energy**, 2015, 90: 701-721.
21. Lu Y B, **Tang G H**, Experimental Investigation of Fluid Through Porous Media Packed with Single-Diameter and Multi-diameter Spheres, **Transport in Porous Media**, 2015, 110: 449-459.
22. Lu Y B, **Tang G H**, Radial voidage variation in packed beds of uniformly sized spheres: theory and experiment, **Journal of Porous Media**, 2015, 18(7): 689-698.
23. Shi Y, **Tang G H**, Xia H H, Investigation of coalescence-induced droplet jumping on superhydrophobic surfaces and liquid condensate adhesion on slit and plain fins, **International Journal of Heat and Mass Transfer**, 2015, 88: 445-455.
24. **Tang G H**, Xia H H, Shi Y, Study of wetting and spontaneous motion of droplets on microstructured surfaces with the lattice Boltzmann method, **Journal of Applied Physics**, 2015, 117: 244902.
25. Hu H W, **Tang G H**, Niu D, Experimental investigation of condensation heat transfer on hybrid wettability finned tube with large amount of noncondensable gas, **International Journal of Heat and Mass Transfer**, 2015, 85: 513-523.
26. Guo L, **Tang G H**, Experimental study on directional motion of a single droplet on cactus spines, **International Journal of Heat and Mass Transfer**, 2015, 84: 198-202.
27. Shi Y, **Tang G H**, Lattice Boltzmann simulation of droplet formation in non-Newtonian fluids, **Communications in Computational Physics**, 2015, 17(4): 1056-1072.

28. Zhao Y, **Tang G H**, Du M, Numerical study of radiative properties of nanoporous silica aerogel, **International Journal of Thermal Sciences**, 2015, 89: 110-120.
29. Zhao Y, **Tang G H**, Monte Carlo study on carbon-gradient-doped silica aerogel insulation, **Journal of Nanoscience and Nanotechnology**, 2015, 15: 3259-3264.
30. Gu W, **Tang G H**, Tao W Q, Thermal switch and thermal rectification enabled by near-field radiative heat transfer between three slabs, **International Journal of Heat and Mass Transfer**, 2015, 82: 429-434
31. Niu D, **Tang G H**, Static and dynamic behavior of water droplet on solid surfaces with pillar-type nanostructures from molecular dynamics simulation, **International Journal of Heat and Mass Transfer**, 2014, 79: 647-654.
32. Wang Y C, **Tang G H**, Acid condensation and heat transfer characteristics on H-type fin surface with bleeding dimples and longitudinal vortex generators, **Chinese Science Bulletin**, 2014, 59(33): 4405-4417.
33. Shi Y, **Tang G H**, Simulation of Newtonian and non-Newtonian rheology behavior of viscous fingering in channels by the lattice Boltzmann method, **Computers & Mathematics with Applications**, 2014, 68: 1279-1291.
34. Sheng Q, **Tang G H**, Gu X J, Emerson D R, Zhang Y H, Simulation of thermal transpiration flow using a high-order moment method, **International Journal of Modern Physics C**, 2014, 25: 1450061.
35. **Tang G H**, Lu Y B, A resistance model for Newtonian and power-law non-Newtonian fluid transport in porous media, **Transport in Porous Media**, 2014, 104: 435-449.
36. Fu B, **Tang G H**, Bi C, Thermal conductivity in nanostructured materials and analysis of local angle between heat fluxes, **Journal of Applied Physics**, 2014, 116: 124310.
37. Xia H H, **Tang G H**, Shi Y, Tao W Q, Simulation of heat transfer enhancement by longitudinal vortex generators in dimple heat exchangers, **Energy**, 2014, 74: 27-36.
38. Zhao X B, **Tang G H**, Ma X W, Jin Y, Tao W Q, Numerical investigation of H-type finned oval tube with longitudinal vortex generators and dimples heat exchanger, **Applied Energy**, 2014, 127: 93-104.
39. Bi C, **Tang G H**, Hu Z J, Yang H L, Li J N, Coupling model for heat transfer between solid and gas phases in aerogel and experimental investigation, **International Journal of Heat and Mass Transfer**, 2014, 79: 126-136.
40. Bi C, **Tang G H**, Hu Z J, Heat conduction modeling in 3-D ordered structures for prediction of aerogel thermal conductivity, **International Journal of Heat and Mass Transfer**, 2014, 73: 103-109.

41. Shi Y, **Tang G H**, Tao W Q, Lattice Boltzmann study of non-Newtonian blood flow in mother and daughter aneurysm and a novel stent treatment, **Advances in Applied Mathematics and Mechanics**, 2014, 6: 165-178.
42. Shi Y, **Tang G H**, Xia H H, Lattice Boltzmann simulation of droplet formation in T-junction and flow focusing devices, **Computers & Fluids**, 2014, 90: 155-163.
43. Hu H W, **Tang G H**, Theoretical investigation of stable dropwise condensation heat transfer on a horizontal tube, **Applied Thermal Engineering**, 2014, 62 (2): 671-679.
44. **Tang G H**, Bi C, Fu B, Thermal conduction in nano-porous silicon thin film, **Journal of Applied Physics**, 2013, 114 (18): 184302.
45. Bi C, **Tang G H**, Tao W Q, Heat transfer enhancement in mini-channel heat sinks with dimples and cylindrical grooves, **Applied Thermal Engineering**, 2013, 55: 121-132.
46. Bi C, **Tang G H**, Effective thermal conductivity of the solid backbone of aerogel, **International Journal of Heat and Mass Transfer**, 2013, 64: 452-456
47. **Tang G H**, Zhai G X, Tao W Q, Gu X J, Emerson D R, Extended thermodynamic approach for non-equilibrium gas flow, **Communication in Computation Physics**, 2013, 13: 1330-1356.
48. Jin Y, **Tang G H**, He Y L, Tao W Q, Parametric study and field synergy principle analysis of H-type finned tube bank with 10 rows, **International Journal of Heat and Mass Transfer**, 2013, 60: 241-251.
49. Bi C, **Tang G H**, Tao W Q, Prediction of the gaseous thermal conductivity in aerogels with non-uniform pore-size distribution, **Journal of Non-Crystalline Solids**, 2012, 358: 3124-3128.
50. Zhao Y, **Tang G H**, Li Z Y, Parametric investigation for suppressing near-field thermal radiation between two spherical nanoparticles, **International Communications in Heat and Mass Transfer**, 2012, 39: 918-922.
51. **Tang G H**, Lu Y B, Zhang S X, Wang F F, Tao W Q, Experimental investigation of non-Newtonian liquid flow in microchannels, **Journal of Non-Newtonian Fluid Mechanics**, 2012, 173: 21-29.
52. Shi Y T, Gao M, **Tang G H**, Tao W Q, Experimental research of CFB ash deposition on helical finned tubes, **Applied Thermal Engineering**, 2012, 37: 420-429.
53. **Tang G H**, Hu H W, Zhuang Z N, Tao W Q, Film condensation heat transfer on a horizontal tube in presence of a noncondensable gas, **Applied Thermal Engineering**, 2012, 36: 414-425.
54. **Tang G H**, Zhao Y, Zhai GX, Bi C, Phonon boundary scattering effect on thermal conductivity of thin films, **Journal of Applied Physics**, 2011, 110(4): 046102.
55. **Tang G H**, Non-Newtonian flow in microporous structures under the electroviscous effect, **Journal of Non-Newtonian Fluid Mechanics**, 2011, 166(14/15): 875-881.

56. **Tang G H**, Wang S B, Ye P X, Tao W Q, Bingham fluid simulation with the incompressible lattice Boltzmann model, **Journal of Non-Newtonian Fluid Mechanics**, 2011, 166(1/2): 145-151.
57. Li Q, He Y L, **Tang G H**, Tao W Q, Lattice Boltzmann modeling of microchannel flows in the transition flow regime, **Microfluidics and Nanofluidics**, 2011, 10(3): 607-618.
58. Li X F, **Tang G H**, Gao T Y, Tao W Q, Simulation of Newtonian and non-Newtonian axisymmetric flow with an axisymmetric lattice Boltzmann model, **International Journal of Modern Physics C**, 2010, 21(10): 1237-1254.
59. **Tang G H**, Li X F, Tao W Q, Micro-annular electroosmotic flow with the axisymmetric lattice Boltzmann method, **Journal of Applied Physics**, 2010, 108(11): 114903.
60. **Tang G H**, Ye P X, Tao W Q, Pressure-driven and electroosmotic non-Newtonian flow through microporous media via lattice Boltzmann method, **Journal of Non-Newtonian Fluid Mechanics**, 2010, 165(21/22): 1536-1542.
61. Zhao C Y, Dai L N, **Tang G H**, Qu Z G, Li Z Y, Numerical study of natural convection in porous media (metals) using Lattice Boltzmann Method (LBM), **International Journal of Heat and Fluid Flow**, 2010, 31(5): 925-934.
62. **Tang G H**, He Y L, Tao W Q, Numerical analysis of mixing enhancement for micro-electroosmotic flow, **Journal of Applied Physics**, 2010, 107(10): 104906.
63. **Tang G H**, Ye P X, Tao W Q, Electroviscous effect on non-Newtonian fluid flow in microchannels, **Journal of Non-Newtonian Fluid Mechanics**, 2010, 165(7/8): 435-440.
64. **Tang G H**, Wang F F, Tao W Q, Lattice Boltzmann simulation of electroosmotic micromixing by heterogeneous surface charge, **International Journal of Modern Physics C**, 2010, 21(2): 261-274.
65. Wang Y, He Y L, Li Q, **Tang G H**, Tao W Q, Lattice Boltzmann model for simulating viscous compressible flows, **International Journal of Modern Physics C**, 2010, 21 (3): 383-407.
66. Li Q, He Y L, **Tang G H**, Tao W Q, Improved axisymmetric lattice Boltzmann scheme, **Physical Review E**, 2010, 81(5): 056707.
67. Gu X J, Emerson D R, **Tang G H**, Analysis of the slip coefficient and defect velocity in the Knudsen layer of a rarefied gas using the linearized moment equations, **Physical Review E**, 2010, 81(1): 016313.
68. Gu X J, Emerson D R, **Tang G H**, Kramers' problem and the Knudsen minimum: a theoretical analysis using a linearized 26-moment approach, **Continuum Mechanics and Thermodynamics**, 2009, 21(5): 345-360.
69. He Y L, Li Q, Wang Y, **Tang G H**, Lattice Boltzmann method and its applications in engineering thermophysics, **Chinese Science Bulletin**, 2009, 54(22): 4117-4134.
70. Li Q, He Y L, **Tang G H**, Tao W Q, Lattice Boltzmann model for axisymmetric thermal flows, **Physical Review E**, 2009, 80(3): 037702.

71. Li Q, He Y L, Wang Y, **Tang G H**, Three-dimensional non-free-parameter lattice-Boltzmann model and its application to inviscid compressible flows, **Physics Letters A**, 2009, 373(25): 2101-2108.
72. Xu H, Luan H B, **Tang G H**, Tao W Q, Entropic lattice Boltzmann method for high Reynolds number fluid flows, **Progress in Computational Fluid Dynamics**, 2009, 9 (3/4/5): 183-193.
73. **Tang G H**, Li X F, He Y L, Tao W Q, Electroosmotic flow of non-Newtonian fluid in microchannels, **Journal of Non-Newtonian Fluid Mechanics**, 2009, 157(1/2): 133-137.
74. **Tang G H**, Zhang Y H, Barber R W, Gu X J, Emerson D R, Modeling viscous fluid damping in oscillating microstructures, **Modern Physics Letters B**, 2009, 23(3): 241-244.
75. **Tang G H**, Zhang Y H, Gu X J, Barber R W, Emerson D R, Lattice Boltzmann modeling thermal transpiration, **Physical Review E**, 2009, 79(2): 027701.
76. **Tang G H**, Gu X J, Barber R W, Emerson D R, Zhang Y H, Lattice Boltzmann simulation of nonequilibrium effects in oscillatory gas flows, **Physical Review E**, 2008, 78(2): 026706-8.
77. **Tang G H**, Zhang Y H, Gu X J, Emerson D R, Lattice Boltzmann modelling Knudsen layer effect in non-equilibrium flows, **Europhysics Letters**, 2008, 83(4): 40008.
78. **Tang G H**, Zhang Y H, Emerson D R, Lattice Boltzmann models for nonequilibrium gas flows, **Physical Review E**, 2008, 77(4): 046701.
79. Wang Y, He Y L, Li Q, **Tang G H**, Numerical simulations of gas resonant oscillations in a closed tube using lattice Boltzmann method, **International Journal of Heat and Mass Transfer**, 2008, 51(11/12): 3082-3090.
80. Li Q, He Y L, Wang Y, **Tang G H**, An improved thermal lattice Boltzmann model for flows without viscous heat dissipation and compression work, **International Journal of Modern Physics C**, 2008, 19(1): 125-150.
81. Wang Y, He Y L, Zhao T S, **Tang G H**, Tao W Q, Implicit-explicit finite-difference lattice Boltzmann method for compressible flows, **International Journal of Modern Physics C**, 2007, 18(12): 1961-1983.
82. Tong C Q, He Y L, **Tang G H**, Wang Y, Liu Y W, Mass modified outlet boundary for a fully developed flow in the lattice Boltzmann equation, **International Journal of Modern Physics C**, 2007, 18(7): 1209-1221.
83. Li Z, He Y L, **Tang G H**, Tao W Q, Experimental and numerical studies of liquid flow and heat transfer in microtubes, **International Journal of Heat and Mass Transfer**, 2007, 50(17): 3447-3460.
84. **Tang G H**, Li Z, He Y L, Tao W Q, Experimental study of compressibility, roughness and rarefaction influences on microchannel flow, **International Journal of Heat and Mass Transfer**, 2007, 50(11-12): 2282-2295.
85. **Tang G H**, Li Z, He Y L, Zhao C Y, Tao W Q, Experimental observations and lattice Boltzmann method study of the electroviscous effect for liquid flow in microchannels,

Journal of Micromechanics and Microengineering, 2007, 17 (3): 539-550.

86. **Tang G H**, Tao W Q, He Y L, Simulating two- and three-dimensional microflows by the lattice Boltzmann method with kinetic boundary conditions, **International Journal of Modern Physics C**, 2007, 18(5): 805-817.
87. **Tang G H**, He Y L, Tao W Q, Comparison of gas slip models with the solutions of the linearized Boltzmann equation and direct simulation of Monte Carlo method, **International Journal of Modern Physics C**, 2007, 18(2): 203-216.
88. **Tang G H**, Li Z, Wang J K, He Y L, Tao W Q, Electroosmotic flow and mixing in microchannels with the lattice Boltzmann method, **Journal of Applied Physics**, 2006, 100(9): 094908-10.
89. Wang Y, He Y L, **Tang G H**, Tao W Q, Simulation of two dimensional oscillating flow using the lattice Boltzmann method, **International Journal of Modern Physics C**, 2006, 17(5): 615-630.
90. **Tang G H**, Tao W Q, He Y L, Gas slippage effect on microscale porous flow using the lattice Boltzmann method, **Physical Review E**, 2005, 72(5): 056301.
91. **Tang G H**, Tao W Q, He Y L, Thermal boundary condition for the thermal lattice Boltzmann equation, **Physical Review E**, 2005, 72(1): 016703.
92. **Tang G H**, Tao W Q, He Y L, Three-dimensional lattice Boltzmann model for gaseous flow in rectangular microducts and microscale porous media, **Journal of Applied Physics**, 2005, 97(10): 104918.
93. **Tang G H**, Tao W Q, He Y L, Lattice Boltzmann method for gaseous microflows using kinetic theory boundary conditions, **Physics of Fluids**, 2005, 17 (5): 058101.
94. Wu H R, He Y L, **Tang G H**, Tao W Q, Lattice Boltzmann simulation of flow in porous media on nonuniform mesh, **Progress in Computational Fluid Dynamics**, 2005, 5(1/2): 97-103.
95. **Tang G H**, Tao W Q, He Y L, Lattice Boltzmann method for simulating gas flow in microchannels, **International Journal of Modern Physics C**, 2004, 15 (2): 335-347.
96. **Tang G H**, Tao W Q, He Y L, Simulation of fluid flow and heat transfer in a plane channel using the lattice Boltzmann method, **International Journal of Modern Physics B**, 2003, 17 (1/2): 183-187.

Authorized Patents

1. **Tang G H**, Du M, Zhao Y, A Multi-layer graded doping in silica aerogel insulation, China Patent: CN201410546754.7, Authorized date: 4/27/2016
2. **Tang G H**, Zhao X B, A combined bionic anti-wear H-fin oval tube for flue gas heat exchange, China Patent: CN201410174345.9, Authorized date: 4/28/2014

3. **Tang G H**, Hu H W, Li Z Y, Gao T Y, A nano-porous structure of the flue gas condensing heat exchanger, China Patent: CN201010227848.X, Authorized date: 28/11/2012
4. Tao W Q, **Tang G H**, Liu X, Tang S C, A type of heat transfer tube, China Patent: CN02139463.6, Authorized date: 02/08/2006
5. Tao W Q, Liu X, **Tang G H**, Tang S C, A type of internal grooved heat transfer tube, China Patent, CN02139462.8, Authorized date: 04/05/2005

Courses Delivered

Advanced Heat Transfer; Recent Advances in Heat Transfer; Heat Transfer; Thermal Dynamics
Fundamentals

Selected Research Grants in Chief

1. Mechanism of droplet adsorption, nucleation and drainage on micro and nanoscale structures in the presence of large amount of noncondensable gas, National Natural Science Foundation of China, No. 51076125, 2016-2019, 600k RMB
2. Heat transfer mechanism of nanoporous aerogel, Specialized Research Fund for the Doctoral Program of Higher Education of China, No. 20130201110042, 2014- 2016, 120k RMB
3. Complex flow and heat/mass transfer in micro- and nano-structures, National Natural Science Foundation of China for Excellent Young Scholars, No. 51222604, 2013-2015, 1000k RMB
4. Understanding Unconventional Natural Gas Flows in Shale Rocks, JOINT PROJECT National Natural Science Foundation of China–Royal Society of Edinburgh, No. 51311130316, 2013-2015, 125k RMB
5. Complicated heat and mass transfer mechanism of fume and prevention with the dew point corrosion, National Key Basic Research Program of China (973 Program), No. 2011CB710702, 2011-2015, 4.72Million RMB
6. Molecule and phonon transport in nano-porous structures, National Natural Science Foundation of China, No. 51076125, 2011-2013, 400k RMB
7. The transport and control of microscale non-Newtonian fluid, Science and Technology Research and Development Program of Shaanxi Province, No. 2010KJXX-01, 2011-2013, 100k RMB
8. Microscale fluid flow and heat transfer, Program for New Century Excellent Talents in University of China, No. NCET-07-0676, 2008-2010, 500k RMB
9. Non-Newtonian fluid flow in microscale porous media, National Natural Science Foundation of China, No. 50776067, 2008-2010, 340k RMB
10. Microscale gaseous flow in porous media, National Natural Science Foundation of China, No. 50406020, 2005-2007, 230k RMB

11. Key project of Ministry of Education in China for inviting foreign experts, 2015 (Professor Alan J. H. McGaughey, Mechanical Engineering, Carnegie Mellon University, USA)
12. Key project of Ministry of Education in China for inviting foreign experts, 2014, 2015 (Professor Yonghao Zhang, Weir Professor of Thermodynamics and Fluid Mechanics and Director of James Weir Fluids Laboratory, University of Strathclyde, UK)
13. Key project of Ministry of Education in China for inviting foreign experts, 2013 (Professor Stefan Kanchev Stefanov, Institute of Mechanics, Bulgarian Academy of Sciences, Bulgaria)
14. Key project of Ministry of Education in China for inviting foreign experts, 2012 (Professor Jason Reese, University of Strathclyde, UK)
15. Key project of Ministry of Education in China for inviting foreign experts, 2012, 2016 (Dr. Ronggui Yang, University of Colorado Boulder, USA)
16. Key project of Ministry of Education in China for inviting foreign experts, 2010 (Professor David R Emerson, Science and Technology Facilities Council, UK)
17. Key project of Ministry of Education in China for inviting foreign experts, 2010 (Dr. Xiaojun Gu, Science and Technology Facilities Council, UK)
18. Key project of Ministry of Education in China for inviting foreign experts, 2010 (Dr. Tony Jun Huang, Penn State University, USA)

Prizes and Awards

1. Publons Peer Review Awards 2017, as one of the top 1 per cent of peer reviews in Engineering, 2017
2. My Favorite Teacher of Xi'an Jiaotong University, 2015
3. KC Wong Yucai Award of Xi'an Jiaotong University, 2014
4. Best Reviewer for ASME Journal of Heat Transfer, 2014
5. Best Presenter for The 8th International Conference on Fluid Thermal and Energy Conversion, 2013
6. Best Reviewer for Chinese Science Bulletin, 2012
7. Second Class Prize of National Natural Science Award of China (Rank 2), 2012
8. First Prize of Natural Science Award of the Ministry of Education in China (Rank 2), 2011
9. Chung-Hua Wu Award, Chinese Society of Engineering Thermophysics, 2011
10. Second Prize of National Technology Invention of China (Rank 6), 2009
11. Youth Science and Technology Star of Shaanxi Province in China, 2009
12. New Century Excellent Talents in University of China, 2007
13. Outstanding Doctoral Dissertation of Shaanxi Province in China, 2007
14. First Prize of Science and Technology of Shaanxi Province in China (Rank 5), 2005
15. Best paper for the 11th Annual Conference of China Engineering Thermophysics Association, 2005

Work Address

MOE Key Laboratory of Thermo-Fluid Science and Engineering

School of Energy and Power Engineering

Xi'an Jiaotong University

Xi'an 710049, P R China

Email: ghtang@mail.xjtu.edu.cn; g.h.tang@qq.com

Tel: 0086-29-82665319

Fax: 0086-29-82665445

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