

## Publications of Tong Li

1. Weifeng Jiang, Yuan Zhang, Tong Li and Tingting Chen, The cavitation and concentration of Riemann solutions for the isentropic Euler equations with isothermal dusty gas, *Nonlinear Analysis: Real World Applications*, published online October 1, 2022. <https://authors.elsevier.com/c/1frNX5Dp-h-aa>
2. Weifeng Jiang, Tingting Chen, Tong Li and Zhen Wang, The wave interactions of an improved Aw-Rascle-Zhang model with a non-genuinely nonlinear field, *Discrete and Continuous Dynamical Systems Series B*, published online, July, 2022. <https://www.aims.org/article/doi/10.3934/dcdsb.2022134>
3. Tong Li and Jeungeun Park, Traveling waves in a Keller-Segel model with logistic growth, *Communications in Mathematical Sciences*, **20**(2022), 829-853.
4. Tong Li and Nitesh Mathur, Riemann Problem For A Non-Strictly Hyperbolic System In Chemotaxis, *Discrete and Continuous Dynamical Systems Series B*, **27**(2022), 2173-2187.
5. Tong Li and Zhian Wang, Traveling wave solutions to the singular Keller-Segel system with logistic source, *Mathematical Biosciences and Engineering (MBE)*, **19**(2022), 8107-8131.
6. Lihui Guo, Tong Li and Gan Yin, The transition of Riemann solutions of the modified Chaplygin gas equations with friction to the solutions of the Chaplygin gas equations, *Zeitschrift für angewandte Mathematik und Mechanik*, **102**(2022), Issue 3, e201800064.
7. Weifeng Jiang, Tingting Chen, Tong Li and Zhen Wang, The Riemann problem with delta initial data for the non-isentropic improved Aw-Rascle-Zhang model, accepted for publication on *Acta Mathematica Scientia*, April 24, 2022.
8. Tingting Chen, Weifeng Jiang and Tong Li, On the stability of the improved Aw-Rascle-Zhang model with Chaplygin pressure, *Nonlinear Analysis: Real World Applications*, **62**(2021), p. 103351.
9. Tong Li, Dehua Wang, Fang Wang, Zhian Wang and Kun Zhao, Large time behavior and diffusion limit for a system of balance laws from chemotaxis in multi-dimensions, *Comm. Math. Sci.*, **19**(2021), 229-272.
10. Weifeng Jiang, Tong Li and Zhen Wang, The Limiting Behavior of the Riemann Solutions of Non-isentropic Modified Chaplygin Gas Dynamics, *Journal of Mathematical Physics*, **62**, 041501(2021).

11. Weifeng Jiang, Tong Li , Zhen Wang and Tingting Zhang, The Riemann solutions comparison for compressible Euler equations in different Chaplygin gas states, *Applicable Analysis*, **101**(2022), 4759-4773.
12. Yanbo Hu and Tong Li, Sonic-supersonic solutions for the two-dimensional self-similar full Euler equations, *Kinetic & Related Models*, **12**(2019), 1197-1228.
13. Tong Li and Jeungeun Park, Traveling waves in a chemotaxis model with logistic growth, *Discrete and Continuous Dynamical Systems-B*, **24**(2019), 6465-6480.
14. Lijun Pan, Xinli Han and Tong Li, New developments of generalized Riemann problem and its applications in chromatography equations, *Acta Mathematica Scientia*, **39(A)**(2019), 1300-1313.
15. Yanbo Hu and Tong Li, The regularity of a degenerate Goursat problem for the 2-D isothermal Euler equations, *Comm. Pure Appl. Anal.*, **18**(2019), 3317-3336.
16. Chao Deng and Tong Li, Global existence and large time behavior of a 2D Keller-Segel system in logarithmic Lebesgue spaces, *Discrete and Continuous Dynamical Systems-B*, **24**(2019), 183-195.
17. Xiaoyan Wang, Tong Li and Jinghua Yao, Dynamical behaviors of a system modeling wave bifurcations, *Comm. Math. Sci.*, **16**(2018), 1869-1894.
18. Lijun Pan, Xinli Han, Tong Li, and Lihui Guo, The generalized Riemann problem and instability of delta shock to the chromatography equations, *Comm. Math. Sci.*, **16**(2018), 705-734.
19. Yanbo Hu and Tong Li, An improved regularity result of semi-hyperbolic patch problems for the 2-D isentropic Euler equations, *J. Math. Anal. Appl.*, **467**(2018), 1174-1193.
20. Lihui Guo, Tong Li, Lijun Pan and Xinli Han, The Riemann Problem with Delta Initial Data for the One-Dimensional Chaplygin Gas Equations with a Source Term, *Nonlinear Analysis: Real World Applications*, **41**(2018), 588-606.
21. Tong Li and Jeungeun Park, Stability of traveling wave solutions of models for image processing with non-convex nonlinearity, *Communications on Pure and Applied Analysis*, **17**(2018), 959-985.
22. Tong Li and Jeungeun Park, Stability of traveling wave solutions of nonlinear conservation laws for image processing, *Comm. Math. Sci.*, **15**(2017), 1073-1106.
23. Lihui Guo, Tong Li and Gan Yin, The limit behavior of the Riemann solutions to the generalized Chaplygin gas equations with a source term, *J. Math. Anal. Appl.*, **455**(2017), 127-140.

24. Lihui Guo, Tong Li and Gan Yin, The Vanishing Pressure Limits of Riemann Solutions to the Chaplygin Gas Equations with a Source Term, *Communications on Pure and Applied Analysis*, **16**(2017), 295-309.
25. Tong Li, Hailiang Liu and Lihe Wang, Oscillatory traveling wave solutions to an attractive chemotaxis system, *J. Diff. Eqns.*, **261**(2016), 7080-7098.
26. Tong Li, Min Tang and Xu Yang, An augmented Keller-Segel model for E. coli chemotaxis in fast-varying environments, *Comm. Math. Sci.*, **14**(2016), 883-891.
27. Tong Li and Kun Zhao, Analysis of non-isentropic compressible Euler equations with relaxation, *J. Diff. Eqns.*, **259**(2015), 6338-6367.
28. Tong Li and Jinghua Yao, Equivariant Hopf bifurcation with arbitrary pressure laws in continuum mechanics, *Physica D*, **310**(2015), 79-94.
29. Tong Li and Anthony Suen, Existence of intermediate weak solutions to the equations of multi-dimensional chemotaxis systems, *Discrete and Continuous Dynamical Systems - Series A*, **36**(2015), 861-875.
30. Tong Li, Anthony Suen, Michael Winkler and Chuan Xue, Global small-data solutions of a two-dimensional chemotaxis system with rotational flux terms, *Mathematical models and methods in applied sciences*, **25**(2015), 721-746.
31. Chao Deng and Tong Li, Well-posedness of the 3D Parabolic-hyperbolic Keller-Segel System in the Sobolev Space Framework, *J. Diff. Eqns.*, **257**(2014), 1311-1332.
32. Jingyu Li, Tong Li and Zhi-An Wang, Stability of traveling waves of the Keller-Segel model with logarithmic sensitivity, *Mathematical models and methods in applied sciences*, **24**(2014), 2819-2849.
33. Lei Yu, Zhong-Ke Shi and Tong Li, A new car-following model with two delays, *Physics Letter A*, **378**(2014), 348-357.
34. Tong Li and Hui Yin, Convergence Rate To Strong Boundary Layer Solutions For Generalized BBM-Burgers Equations with Non-convex Flux, *Communications on Pure and Applied Analysis*, **13**(2014), 835-858.
35. Tong Li, Qualitative Analysis of some PDE Models of Traffic Flow, *Networks and Heterogeneous Media*, **8**(2013), 773-781.
36. Tong Li and Zhi-An Wang, Steadily propagating waves of a chemotaxis model, *Mathematical Biosciences*, **240**(2012), 161-168.
37. Tong Li, Ronghua Pan and Kun Zhao, Global dynamics of a hyperbolic-parabolic model arising from chemotaxis, *SIAM J. Appl. Math.*, **72**(2012), 417-443.

38. Tong Li and Zhi-An Wang, Nonlinear stability of large amplitude traveling waves to hyperbolic-parabolic system modeling chemotaxis. Hyperbolic problems-theory, numerics and applications. Volume 2, 519-526, Ser. Contemp. Appl. Math. CAM, 18, World Sci. Publishing, Singapore, 2012.
39. Dong Li and Tong Li, Shock formation in a traffic flow model with arrhenius look-ahead dynamics, *Networks and Heterogeneous Media*, **6**(2011), 681-694.
40. Tong Li and Kun Zhao, Global existence and long-time behavior of entropy weak solutions to a quasilinear hyperbolic blood flow model, *Networks and Heterogeneous Media*, **6**(2011), 625-646.
41. Lina Wang, Yaping Wu and Tong Li, Exponential Stability of Large-Amplitude Traveling Fronts for Quasi-linear Relaxation Systems with Diffusion, *Physica D*, **240**(2011), 971-983.
42. Dong Li, Tong Li and Kun Zhao, On a hyperbolic-parabolic system modeling chemotaxis, *Mathematical models and methods in applied sciences*, **21**(2011), 1631-1650.
43. Tong Li and Kun Zhao, On a quasilinear hyperbolic system in blood flow modeling, *Discrete and Continuous Dynamical Systems-B*, **16**(2011), 333-344.
44. Tong Li and Zhi-An Wang, Asymptotic nonlinear stability of traveling waves to conservation laws arising from chemotaxis, *J. Diff. Eqn.*, **250**(2011), 1310-1333.
45. Tong Li and Zhi-An Wang, Nonlinear Stability of Large Amplitude Viscous Shock Waves of a Generalized Hyperbolic-parabolic System Arising in Chemotaxis, *Mathematical models and methods in applied sciences*, **20**(2010), 1967-1998.
46. Lei Yu, Tong Li and Zhong-Ke Shi, The effect of diffusion in a new viscous continuum model, *Physics Letters, Section A: General, Atomic and Solid State Physics*, **374**(2010), issue 23, 2346-2355.
47. Lei Yu, Tong Li and Zhong-Ke Shi, Density Waves in a Traffic Flow Model with Reactive-time Delay, *Physica A, Statistical Mechanics and its Applications*, **389**(2010), issue 13, 2607-2616.
48. Tong Li and Zhi-An Wang, Nonlinear Stability of Traveling Waves to a Hyperbolic-parabolic System Modeling Chemotaxis, *SIAM J. Appl. Math.*, **70**(2009), 1522-1541.
49. Tong Li and Suncica Canic, Critical Thresholds in a Quasilinear Hyperbolic Model of Blood Flow, *Networks and Heterogeneous Media*, **4**(2009), 527-536.
50. Tong Li and Hailiang Liu, Critical Thresholds in Hyperbolic Relaxation Systems, *J. Diff. Eqns.*, **247**(2009), 33-48.

51. Tong Li and Yaping Wu, Linear and Nonlinear Exponential Stability of Traveling Waves for Hyperbolic Systems with Relaxation, *Comm. Math. Sci.*, **7**(2009), 571-593.
52. Tong Li, Y. Li and H. Hethcote, Periodic Traveling Waves in SIRS Endemic Models, *Mathematical and Compute Modelling*, **49**(2009), 393-401.
53. Tong Li and Hailiang Liu, Critical Thresholds in Relaxation Systems with Resonance of Characteristic Speeds, *Discrete and Continuous Dynamical Systems*, **24**(2009), 511-521.
54. Tong Li, Stability of Traveling Waves in Quasi-Linear Hyperbolic Systems with Relaxation and Diffusion, *SIAM J. Math. Anal.*, **40**(2008), 1058-1075.
55. Tong Li and Hailiang Liu, Critical Thresholds in a Relaxation Model for Traffic Flows, *Indiana Univ. Math. J.*, **57**(2008), 1409-1431.
56. Tong Li, Instability and formation of clustering solutions of traffic flow, *Bulletin of the Institute of Mathematics*, Academia Sinica (New Series), **2**(2007), 281-295.
57. Tong Li, Nonlinear Dynamics of Traffic Flow, *Proceedings of the Second International Multisymposium on Computer and Computational Sciences*, pp. 550-560, IEEE Computer Society, 2007.
58. Tong Li, Stability of CJ Detonations with a Two-Step Reaction Model, *HYP2004 Conference Proceedings II*, 157-164, Edited by F. Asakura, S. Kawashima, A. Matsumura, S. Nishibata, K. Nishihara, Yokohama Publishers, Inc., Japan, 2006.
59. Tong Li, Nonlinear dynamics of traffic jams, *Physica D*, **207**(2005), 41-51.
60. Tong Li and Hailiang Liu, Stability of a traffic flow model with nonconvex relaxation, *Comm. Math. Sci.*, **3**(2005), 101-118.
61. Tong Li, Modelling Traffic Flow with a Time-Dependent Fundamental Diagram, *Math. Methods Appl. Sci.*, **27**(2004), pp. 583-601.
62. Tong Li, Global Solutions of Nonconcave Hyperbolic Conservation Laws with Relaxation Arising from Traffic Flow, *J. Diff. Eqns.*, **190**(2003), 131-149.
63. Tong Li, Mathematical Modelling of Traffic Flows, in the Proceedings of Ninth International Conference on Hyperbolic Problems, Hyp2002, pp. 695-704, Edited by T. Y. Hou and E. Tadmor, Springer, 2003.
64. Tong Li, Well-posedness Theory of An Inhomogeneous Traffic Flow Model, *Discrete and Continuous Dynamical Systems*, Series B, **2**(2002), 401-414.

65. Tong Li and H. M. Zhang, The Mathematical Theory of an Enhanced Nonequilibrium Traffic Flow Model, *Network and Spatial Economics, A Journal of Infrastructure Modeling and Computation*, Special Double Issue on Traffic Flow Theory, **1**(2001), pp. 167-179.
66. Tong Li,  $L^1$  stability of conservation laws for a traffic flow model, *Electron. J. Diff. Eqns.*, **2001**(2001), No. 14, pp. 1-18.
67. Tong Li, Global Solutions And Zero Relaxation Limit For A Traffic Flow Model, *SIAM J. Appl. Math.*, **61**(2000), pp. 1042-1061.
68. Tong Li, Stability of a Transonic Profile Arising From Divergent Detonations, *Comm. in Partial Differential Equations*, **25**(2000), pp. 2087-2105.
69. Tong Li, Stability and Instability of Detonation Waves, in *Hyperbolic Problems: Theory, Numerics, Applications, Seventh International Conference in Zürich, February, 1998*, Volume II, pp. 641-650, Edited by M. Fey and R. Jeltsch, International Series of Numerical Mathematics, **Vol. 130**, Birkhäuser, 1999.
70. Tong Li, Time-Asymptotic Limit of Solutions of a Combustion Problem, *J. of Dynamics and Differential Equations*, **10**(1998), pp. 577-605.
71. Tong Li, Stability of Strong Detonation Waves and Rates of Convergence, *Electronic Journal of Differential Equations*, **1998**(1998), pp. 1-17.
72. Tong Li, Rigorous Asymptotic Stability of a CJ Detonation Wave in the Limit of Small Resolved Heat Release, *Combustion Theory and Modelling*, **1**(1997), pp. 259-270.
73. Tong Li, On the Initiation Problem for a Combustion Model, *J. Diff. Eqns.*, **112**(1994), pp. 351-373.
74. Tong Li, On the Riemann Problem for a Combustion Model, *SIAM J. Math. Anal.*, **24**(1993), pp. 59-75.