CV

PERSONAL INFORMATION

Phone:14122095054,8613651155586   Email:yuandf@amss.ac.cn   Research Field: Nonlinear Partial Differential Equations

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RESEARCH INTERESTS

Fluid Mechanics, Nonlinear Partial Differential Equations, hyperbolic conservation laws
My research interests include the well-posedness and large-time behaviors of solutions to initial/initial-boundary value problems arising in mathematical physics, such as Euler/Euler Poisson Equations; I am also interested in free boundary problems and characteristic discontinuities for hyperbolic conservation laws.

EDUCATION

09/2014-12/2019   Ph.D. Candidate in Mathematics, University of Chinese Academy of Sciences(expected)Advisor: Feimin Huang

12/2017-Present   Joint Ph.D. student, University of Pittsburgh   Advisor: Dehua Wang, Feimin Huang

Compressible vortex sheets in elastodynamics

03/2017-04/2017   Visiting Scholar in Department of Mathematics, University of Pittsburgh

Compensated compactness method

09/2010-07/2014   B.S. in Mathematics and Applied Mathematics, Hunan University, China

PUBLICATIONS

1.   F. M. Huang, T. H. Li, H. M. Yu, **D. F. Yuan**, Large time behavior of entropy solutions to one-dimensional unipolar hydrodynamic model for semiconductor devices. **Z. Angew. Math. Phys.** 69 (2018), no. 3, Art. 69, 12.

2.   F. M. Huang, D. H. Wang, **D. F. Yuan**, Nonlinear stability and existence of vortex sheets for inviscid liquid-gas two-phase flow. **Discrete Contin. Dyn. Syst. Ser. A**, (2019), 39(6): 3535-3575.

3.   F. M. Huang; T, H, Li; **D. F. Yuan**, Global Entropy Solutions to Multi-Dimensional Isentropic Gas Dynamics with Spherical Symmetry. **Nonlinearity,** (2019),32(11):4505-4523.

4.   W. T. Cao, F. M. Huang, **D. F. Yuan**, Global Entropy Solutions to the Gas Flow in General Nozzle. **SIAM J. Math. Anal.** 51-4. (2019) , 3276-3297

5.   G. Q. Chen, L. He, Y. Wang, **D. F. Yuan**, Global existence of weak solution to the compressible Euler-Poisson equations with spherical symmetry and large initial data, in preparation.

6.   R. M. Chen, F. M. Huang, D. H. Wang, **D. F. Yuan,** Stabilization effect of elasticity on compressible vortex sheets in three-dimensional elastodynamics, in preparation.

CONFERENCE EXPERIENCE

September 2017 **Contributed Talk**, Workshop on Nonlinear PDE seminar, UCAS, China
June 2018   **Contributed Talk**, XVII International Conference on Hyperbolic Problems:
                            Theory, Numerics, Applications, Pennsylvania State University, University Park, USA

TEACHING EXPERICENCE

September 2015   Hyperbolic Conservation Laws And Compensated compactness method, UCAS,China
June 2017   Teaching assistant for summer school in Nonlinear PDE, Northwest University, China
March 2019   Vortex sheet solutions, University of Pittisburgh,USA

HONORS AND AWARDS

2012-2013,2013-2014   National Scholarship(Award for top 1% students)
2017   Merit Student in UCAS
2017-2019   China government scholarship
2019   The President Scholarship of UCAS(Chinese Academy of Sciences) (Award for top 1% students)