Hu Jinrong

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Education Experience

Sep 2015 - Jun 2019
Chongqing Jiaotong University, China **Mathematics (Bachelor)**

Sep 2019 - Present
Hunan University, China **Mathematics**

Research Interests

My research is in the field of convex geometric analysis, partial differential equations and geometric flow.

Status

I am currently a PhD in the fourth year in the School of Mathematics at Hunan University. My supervisor is prof. Huang Yong, my research contents mainly involve the asymptotic behavior analysis of geometric flow (mainly Gaussian curvature flow, nonlinear curvature flow, logarithmic curvature flow), the use of geometric flow to solve some problems in convex geometry (such as the regularity of smooth solutions of Minkowski problem), the use of variational theory to solve geometric problems (such as the existence of weak solutions of Minkowski problem) and the discovery of some geometric inequalities .

Past Activities

- Academic Conference on Nonlinear Partial Differential Equations and Geometric Analysis, in China, Hunan University, 2019
- Symposium on the Frontiers of Geometric Analysis and Partial Differential Equations, in China, Shaanxi Normal University, 2021
- The 20th Academic Conference on Nonlinear Partial Differential Equations, in China, Hunan University, 2022

Publications and preprints

[1] Hu Jinrong; Liu Jiaqian. On the Lp torsional Minkowski problem for $0<p<1$.. *Adv. in Appl. Math.* 128 (2021), Paper No. 102188, 22 pp.
[2] Hu Jinrong; Liu Jiaqian; Ma Di. A Gauss curvature flow to the Orlicz-Minkowski problem for torsional rigidity. *J. Geom. Anal.* 32 (2022), no. 2, Paper No. 63, 28 pp.
[3] Hu Jinrong; Liu Jiaqian; Ma Di. A flow method to the Orlicz-Aleksandrov problem. *J. Funct. Anal.* 284 (2023), no. 6, Paper No. 109825, 24 pp.
[4] Hu Jinrong; Zhang Ping. The functional Orlicz-Brunn-Minkowski inequality for q-torsional rigidity, *Mathematika* (2023), no. 4, 934-956.
[5]Hu Jinrong; Liu Jiaqian; Ma Di; Wang, Jing. A class of generalized fully nonlinear curvature flows and its application, arXiv:2206.01963.
[6] Hu Jinrong; Mao Qiongfang. Some remarks on a class of logarithmic curvature flow, arXiv:2302.10537.
[7] Hu Jinrong; Mao Qiongfang; Wang Sinan. On the continuity of the solutions to the Lp torsional Minkowski problem, arXiv:2303.11038.
[8] Hu Jinrong; Huang Yong; Lu Jian. On the regularity of the chord log-Minkowski problem, arXiv:2304.14220.

[9] **Hu Jirong;** Huang Yong; Lu Jian; Wang Sinan. The chord Gauss curvature flow and its Lp chord Minkowski problem, arXiv:2305.00453.
[10] Fang Niufang; **Hu Jinrong**; Zhao Leina. From the Brunn-Minkowski inequality to a class of generalized Poincaré-type inequality for torsional rigidity, arXiv:2307.12738.

Teaching

- TA for Mathematical Analysis, HNU, Fall 2020
- TA for Higher Mathematics, HNU, Spring 2021, Spring 2022, Spring 2023
- TA for Linear Algebra, HNU, Fall 2021, Fall 2022, Fall 2023

Awards

- The 17th 'Summer School on Nonlinear Partial Differential Equations' , in China, Jilin University, August, 2019, Third prize
- The 18th 'Summer School on Nonlinear Partial Differential Equations' , in China, Harbin Engineering University, August, 2020, First prize