



刘汉兵

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研究方向 Research Interests

分布参数系统的控制理论，特别是最优控制和能稳性。
Control theory of parameter distributed systems, especially about the optimal control theory and stabilizability.

教育经历 Education

- 2009. 10—2012. 07, 罗马尼亚 “Al.I.Cuza” University, 最优控制, 博士;
Ph.D. of Mathematics, "Alexandru Ioan Cuza" University in Iasi
- 2007. 09—2009. 07, 武汉大学, 数学与统计学院应用数学专业, 硕士;
M. S., School of Mathematics and Statistics, Wuhan University
- 2003. 09—2007. 07, 华中师范大学, 数学与统计学学院应用数学专业, 本科。
B. S., School of Mathematics and Statistics, Huazhong Normal University

工作经历 Academic Experience

- 2016. 01- , 中国地质大学(武汉), 副教授;
Associate professor, China University of Geosciences (Wuhan)
- 2013. 01 -2015. 12, 中国地质大学(武汉), 讲师;
Lecture, China University of Geosciences (Wuhan)
- 2012. 07 月-2012. 12, 中国地质大学(武汉), 助教;
Assistant professor, China University of Geosciences (Wuhan)

学术兼职 Academic Service

- [1] 美国数学会《Mathematical Reviews (数学评论)》评论员
Reviewer of Mathematical Reviews (American Mathematical Society)
- [2] SCI 期刊《SIAM Journal on Control and Optimization》、《ESAIM: COCV》、
《Mathematical Control and Related Fields》、《Journal of the Franklin Institute》
等期刊审稿人。
Reviewer of journals above.

科研课题 Funded Research Projects

- [1] 国家自然科学基金青年基金项目(National Natural Science Foundation of China): “具有状态约束的 Navier-Stokes 方程的最优控制问题”(Optimal control problems of Navier-Stokes equations with state constraints) (主持, 2015-2017)
- [2] 中央高校杰出人才培育基金(‘the Fundamental Research Funds for the Central Universities): “带有约束的流体方程的最优控制问题” (Optimal control of fluid flows with constraints) (主持, 2014-2015)

科研论文 Publications

- [1] **Hanbing Liu**, Wenqiang Luo, Shaohua Li, Time-periodic Fitzhugh-Nagumo equation and the optimal control problems, *Chinese Annals of Mathematics, Series B*, to appear.
- [2] Han, Shuo; **Liu, Hanbing**; Lin, Ping, Null controllability and global blowup controllability of ordinary differential equations with feedback controls. *J. Math. Anal. Appl.* 493 (2021), no. 1, 124510, 33 pp.
- [3] **Liu, Hanbing***; Hu, Peng, Boundary sampled-data feedback stabilization for parabolic equations. *Systems Control Lett.* 136 (2020), 104618, 8 pp.
- [4] Lin, Ping; **Liu, Hanbing***; Wang, Gengsheng, Output feedback stabilization for heat equations with sampled-data controls. *J. Differential Equations* 268 (2020), no. 10, 5823–5854.
- [5] **Liu, Hanbing***, Xiao, Haijun, Boundary feedback stabilization of Boussinesq equations. *Acta Math. Sci. Ser. B (Engl. Ed.)* 38 (2018), no. 6, 1881–1902.
- [6] **Liu Hanbing**, Impulse output feedback stabilization of Fisher’s equation. *Systems & Control Letters*, 2017, 107:17–21.
- [7] **Liu, Hanbing***; Zhang, Can, Observability from measurable sets for a parabolic equation involving the Grushin operator and applications. *Math. Methods Appl. Sci.* 40 (2017), no. 10, 3821–3832.

[8] **Liu, Hanbing***; Hu, Peng; Munteanu, Ionuț, Boundary feedback stabilization of Fisher's equation. *Systems Control Lett.* 97 (2016), 55–60.

[9] **Liu, Hanbing**, Boundary optimal feedback controller for time-periodic Stokes-Oseen flows. *NoDEA Nonlinear Differential Equations Appl.* 21 (2014), no. 5, 709–735.

[10] **Liu, Hanbing***; Yang, Juan, Optimal control of semilinear parabolic systems with state constraint. *J. Math. Anal. Appl.* 417 (2014), no. 2, 787–803.

[11] **Yang, Juan**; Liu, Hanbing*, An approximation scheme of stochastic Stokes equations. *Electron. Commun. Probab.* 18 (2013), no. 21, 10 pp.

[12] **Liu, Hanbing**, Optimal control of fluid dynamic systems with state constraint of pointwise type. *Nonlinear Anal.* 93 (2013), 97–108.

[13] **Liu, Hanbing**, Boundary optimal control of time-periodic Stokes-Oseen flows. *J. Optim. Theory Appl.* 154 (2012), no. 3, 1015–1035.

[14] **Liu, Hanbing**, Optimal control problems with state constraint governed by magnetohydrodynamic equations. *Numer. Funct. Anal. Optim.* 32 (2011), no. 4, 409–435.

[15] **Liu, Hanbing**, Optimal control problems with state constraint governed by Navier-Stokes equations. *Nonlinear Anal.* 73 (2010), no. 12, 3924–3939.

教授课程 Teaching

《控制论 (Control Theory)》 《高等数学 (Advanced Mathematics)》

《线性代数 (Linear Algebra)》

奖励与荣誉 Honors and Awards

2016 年, 论文“Liu, Hanbing*; Yang, Juan, Optimal control of semilinear parabolic systems with state constraint, *J. Math. Anal. Appl.* 417 (2014), no. 2, 787–803.”获第十六届湖北省自然科学优秀学术论文奖

2015 年, 指导学生田文浩, 王杨, 姚悦, 获得美国大学生数学建模竞赛一等奖;

2019 年, 获中国地质大学 (武汉) 第十一届青年教师教学竞赛一等奖;

两次入选地大学者。