Yiqing Li

"Aerodynamic optimization for greener transport vehicles and energy systems with machine learning and first principles."

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Address: Changzhou, Jiangsu
Birth: 1994.06.23
Nationality: China

Degree: Master
Skills:

- Programming (Python, C)
- CFD (RANS, LES)
- Optimization
- Machine learning

Education and Experience

Visiting PhD student 2022.12-2023.3

Chair of Fluid Dynamics, Technical University of Berlin

PhD student..... 2020.9-now

Power Engineering,

School of Mechanical Engineering and Automation, Harbin Institute of Technology (Shenzhen).

Master 2017.9-2020.4

Power Engineering,

School of Mechanical Engineering, Tongji University.

(GPA: 4.27/5.0; IELTS: 7.0/9.0)

Bachelor..... 2012.9-2016.7

Building Environment and Equipment Engineering,

School of Environmental Science and Technology, Suzhou University of Science and Technology.

(GPA: 4.14/5.0)

Awards and Honors

- National Scholarship, 2022;
- CTC Outstanding Research Award Finalist, 2021;
- Experimental operator and interpreter of Shanghai Automotive Wind Tunnel Center, 2017-2020;
- Supervisor of the academic sector in the student union, 2017-2020;
- Member of the design sector in PACE concept car union, 2017-2018;
- Secretary of the Youth League branch, 2015-2016;

- Merit Student of Suzhou University of Science and Technology, 2013, 2014, 2015;
- The first-class scholarships of Suzhou University of Science and Technology, 2013, 2014, 2015;
- Outstanding Graduate of Suzhou University of Science and Technology, 2016.

Publications

[1] **Li, Y.**, Cui, W., Jia, Q., Li, Q., Yang, Z., Morzynski, M., & Noack, B.R. (2022). Explorative gradient method for active drag reduction of the fluidic pinball and slanted Ahmed body. J. Fluid Mech, 932, A7. DOI: https://doi.org/10.1017/jfm.2021.974.

[2] Blanchard A.B., Cornejo Maceda G.Y., Fan D., **Li Y.**, Zhou Y., Noack B. R., & Sapsis T.P. (2022). Bayesian Optimization for Active Flow Control. Acta Mechanica Sinica, 37, 1786–1798. DOI: https://doi.org/10.1007/s10409-021-01149-0.

[3] Cornejo Maceda G.Y., **Li, Y.**, Lusseyran, F., Morzynski, M., & Noack, B.R. (2021). Stabilization of the fluidic pinball with gradient-enriched machine learning control. J. Fluid Mech, 917, A42. DOI: https://doi.org/10.1017/jfm.2021.301.

[4] Reumschüssel, J.M., von Saldern, J.G., **Li, Y.**, Paschereit, C.O., & Orchini, A. (2021). Gradient-Free Optimization in Thermoacoustics: Application to a Low-Order Model. J. Eng. Gas Turbines Power, 144(5): 051004. DOI: https://doi.org/10.1115/1.4052087.

Talks

[1] **Li Y.**, Yang Z., Blanchard A., Pickering E., Tyliszczak A., & Noack, B.R. (2023). Optimization for flow control. 2rd Chinese Conference of Aerodynamics (CCA2), Tianjin, China.

[2] **Li Y.**, Yang Z., Morzynski, M., & Noack, B.R. (2022). Explorative gradient method for high-dimensional actuation parameter spaces. 12th International Symposium on Turbulence and Shear Flow Phenomena (TSFP12), Osaka, Japan.

[3] **Li Y.**, Yang Z., Morzynski, M., & Noack, B.R. (2022). Explorative gradient method for active wake control with multiple inputs. XXV Fluid Mechanics Conference (XXVFMC), Rzeszow, Poland.

[4] **Li Y.**, Yang Z., Morzynski, M., & Noack, B.R. (2021). Explorative gradient method for active drag reduction of a slanted Ahmed body in a 10-dimensional search space. 4th International Conference in Numerical and Experimental Aerodynamics of Road Vehicles and Trains (AeroVehicles4), Berlin, Germany.

[5] Noack, B.R., **Li Y.**, et. al. (2020). Machine learning control and modeling—How taming turbulence can be made easy, efficient, fast and fun. Annual Meeting of the GDR 2502 “Separated Flow Control”, PPRIME, France.

[6] **Li Y.**, Cui W., Jia Q., Li Q., Yang Z., Morzynski M., & Noack B.R. (2020). Explorative gradient method for active drag reduction of the fluidic pinball and slanted Ahmed body. 73rd Annual Meeting of the APS Division of Fluid Dynamics (DFD2020), Chicago, America.

[7] **Li Y.**, Yang Z., Morzynski, M., Qiao Z., Krajnović S., & Noack, B.R. (2020). Explorative gradient method for multi-actuator flow control. Machine Learning Methods for Prediction and Control of Separation Turbulent Flows, Paris, France.