Yuanwei Bin

Curriculum Vitæ Summary

Website: www.ywbin.com
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College of Engineering
Peking University

Professional Appointments

2021-on **Visiting Scholar** in *Mechanical Engineering*, Pennsylvania State University

Education

2019-on **Ph.D. candidate** in *Mechanics*, Peking University

2015-2019 **Bachelor degree** in *Energy Engineering*, University of Science and Technology of China

2015-2019 **Double degree** in *Computer Science*, University of Science and Technology of China

2017-2017 **Exchange student**, National Tsing Hua University

Publications

2023 Large-eddy simulation of separated flows on unconventionally coarse grids.
Pre-print.
Bin, Y., Park, G. I., Lv, Y., & Yang, X. I A.

2023 A *priori* screening of data-enabled turbulence models.
Pre-print.
Chen, P. E S, **Bin, Y.**, Yang, X. I A, Shi, Y., Abkar, M., & Park, G. I..

2023 Constrained re-calibration of Reynolds-averaged Navier-Stokes models.
AIAA Journal
Bin, Y., Huang, G., Kunz, R., & Yang, X. I A.

2023 A *prior* investigation on heavy particles movement in compressible homogenous isotropic turbulence.
Chinese Journal of Theoretical and Applied Mechanics.
Bin, Y., Wu, Q., Xia, Z., & Shi, Y..

2023 Data-enabled re-calibration of the Spalart-Allmaras model.
AIAA Journal.
Bin, Y., Huang, G., & Yang, X. I A.

2022 Evolution of two counter-rotating vortices in a stratified turbulent environment.
Journal of Fluid Mechanics.
Bin, Y., Yang, X. I A, Yang, Y., Ni, R., & Shi, Y..

2022 Progressive, extrapolative machine learning for near-wall turbulence modeling.
Physical Review Fluids.
Bin, Y., Chen, L., Huang, G., & Yang, X. I A.

2021 A new idea to predict reshocked RichtmyerMeshkov mixing: Constrained large-eddy simulation.
Journal of Fluid Mechanics.
Bin, Y., Xiao, M., Shi, Y., Zhang, Y., & Chen, S..

Notable Awards and Scholarships

2023 Peking University President's Scholarship

2021 Peking University President's Scholarship

2021 Outstanding Graduate of University of Science and Technology of China

Interested Research Directions

- Stratified flow
- Reduce-order model
- Turbulence model
- ML in turbulence
- Vortex dynamics
- Numerical scheme
- etc.

Technical and Personal skills

- **Programming Languages:** C, C++, Python, Fortran, Matlab.
- **Industry Software Skills:** OpenFOAM, PointWise, SolidWorks, AutoCAD.