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College of Engineering  
Eastern Institute of Technology, Ningbo

## Professional Appointments

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- 2025-on **Director of AI Software Department**, Tenfong Technology Co., Ltd., ShenZhen
- 2024-on **Research Assistant Professor**, College of Engineering, Eastern Institute of Technology, Ningbo
- 2021-2023 **Visiting Scholar**, FPCRL (PI: Xiang I.A. Yang), the Pennsylvania State Univerisity

## Education

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- 2019-2024 **Doctor of Philosophy degree** in *Mechanics*, Peking University(Advisor: Yipeng Shi)
- 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

## Notable Awards and Scholarships

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- 2024 **Winner (1/323)** of *Rapid Aerodynamic Drag Prediction for Arbitrary 3D Vehicle Competition*, IJCAI 2024
- 2023 **CFD Best Paper Award**, IMECE 2023
- 2023 Peking University President's Scholarship
- 2021 Peking University President's Scholarship
- 2021 Outstanding Graduate of University of Science and Technology of China

## Publications

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- 2026 GeoFormer: Mesh-Free Geometry-to-Flow Alignment Framework for Real-Time Aerodynamics on Non-Watertight CAD.  
*Physics of Fluid*.  
Gu, J., Chen, Y.\*, **Bin, Y.**, & Chen, S.
- 2025 Spatially-aware transformer operator for real-time aerodynamic evaluations of arbitrary three-dimensional vehicles.  
*Journal of Computational Physics*.  
Yang, H., Gu, J., Chen, Y., **Bin, Y.\***, Wang, J.\*, & Chen, S.
- 2025 Large language model driven development of turbulence models.  
*FLOW*.  
Yang, Z., **Bin, Y.**, Shi, Y., & Yang, X. I A\*
- 2025 Data-enabled reduction of the time complexity of iterative solvers.  
*Journal of Computational Physics*.  
**Bin, Y.**, Yang, X. I A\*, Grauer, S. J.& Kunz, R.

- 2024 Direct numerical simulation of the 7-7-7 film cooling at a range of compound angles.  
*International Journal of Heat and Mass Transfer*.  
**Bin, Y.**, & Yang, X. I A\*
- 2024 Constrained re-calibration of two-equation Reynolds-averaged Navier–Stokes models.  
*Theoretical and Applied Mechanics Letters*  
**Bin, Y.**, Li, J., Hu, X., Grauer, S. J., & Yang, X. I A\*
- 2023 Large-eddy simulation of separated flows on unconventionally coarse grids.  
*Journal of Fluid Engineering*.  
**Bin, Y.**, Park, G. I., Lv, Y., & Yang, X. I A\*
- 2023 *A priori* screening of data-enabled turbulence models.  
*Physical Review Fluids*.  
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 priori* 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 Richtmyer–Meshkov mixing: Constrained large-eddy simulation.  
*Journal of Fluid Mechanics*.  
**Bin, Y.**, Xiao, M., Shi, Y.\*, Zhang, Y.\*, & Chen, S.

## Technical and Personal skills

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