

Curriculum vitae



Personal Data

Name: He Zeqiang

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Education

PhD: 2022-2025, Tokyo Institute of Technology, Mechanical Engineering, Japan

Msc: 2020-2022, Tokyo Institute of Technology, Mechanical Engineering, Japan

BEng: 2016-2020, Zhejiang University, Electrical Engineering, China

Research background

Bearingless motor, magnetic suspension, sensorless rotational control, sensorless suspension, motor modeling, parameter identification.

Honors

Japanese government full-funded international student.

Best Paper Award on ICMT2024, Title: A single-drive bearingless motor for percutaneous axial flow pump

Membership and experience

2023-2024: IEEE student member, Reviewer for IEEE TIE.

Publications

1. **Z. He** and T. Shinshi, "Torque Regulation Theory and Sensorless Control Technology for Unipolar Salient Synchronous Permanent Magnet Motor Based on Unified Models," *IEEE Trans. Power Electron.*, Early Access, doi: 10.1109/TPEL.2024.3495715.
2. **Z. He**, N. Sugita and T. Shinshi, "A Novel Heteropolar Bearingless Slice Motor With a PM-Free Rotor for Centrifugal Blood Pump Applications," *IEEE Access*, vol. 11, pp. 100114-100124, 2023.
3. R. Yang, **Z. He**, N. Sugita and T. Shinshi, "Low-Cost and Compact Disposable Extracorporeal Centrifugal Blood Pump Utilizing a Homopolar Bearingless Switched Reluctance Slice Motor," *IEEE Access*, vol. 11, pp. 24353-24366, 2023.
4. **Z. He** and T. Shinshi, "A Sensorless Control Method for Doubly Salient Motor Based on Variant Park Transform," *2023 IEEE Industrial Electronics and Applications Conference (IEACon2023)*, Penang, Malaysia, 2023, pp. 63-68, 2023.
5. **Z. He** and T. Shinshi, "Sensorless Control for PMSM with Adaptive Resistance Estimation Using Flux Norm Correction," *27th International Conference on Electrical Machines and Systems (ICEMS2024)*, Fukuoka, Japan, 2024.
6. T. Shinshi, **Z. He**, R. Yang, N. Sugita, "Bearingless Slice Motors with PM-free Rotor for Disposable Centrifugal Blood Pumps," *18th International Symposium on Magnetic Bearing (18th ISMB)*, Proceedings of 18th ISMB, pp. 57-60, July 2023.