Mingyang Bao

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🖳 **Blog:** www.bmy.asia

EDUCATION BACKGROUND

Huazhong University of Science and Technology(HUST)   2021 Sep. - 2025 Jun.

▸ **Bachelor of Engineering**   **GPA:**   4.3/5

College: School of Electric and Electrical Engineering(SEEE)
Major: Electrical Engineering
Courses: Electrical Machinery Theory, Electric Drive and Control Systems

SKILLS

English: CET-6

Python	Nodejs	Javascript	Golang	C/C++
Matlab	Femm	Ansys	Photoshop	Illustrator

RESEARCH EXPERIENCE

Hi-Motor Series   2022 Mar. - now

▸ **Leader/Fullstack Developer**

- Lead a 9-undergraduate team for software developement, related research and business collaboration.
- Develop *hi-motor designer* for design and optimization of high-efficiency motors, especially synchronous reluctance motors based on Python and Femm.
- Support intelligent selection of high-efficiency motors with motor database and knowledge sharing platform based on MongoDB, Nodejs and Golang.
- Archive 2 papers, 2 patents and register 2 software copyrights totally.

Design and Optimization of Flux-Barrier End shape in Synchronous Reluctance Motor Based on B-spines   2023 Aug. - 2023 Sep.

▸ **Primary Finisher**

- Propose a novel design method of flux-barrier end shape based on B-spline curves.
- Archive an effective electro-mechanical co-optimization workflow with sensitivity analysis, surrogate model, intelligient algorithms and multi-level optimization.

Summer Internship, Bosch (China) Investment Ltd.   2023 Jul. - 2023 Aug.

▸ **Fullstack Developer**   CR/RMD-AP, Shanghai, China

- Set up an optimization workflow for switched reluctance motors based on Ansys Maxwell and optiSLang.
- Develop tools for acquisition and analysis of automobile sales data in Python.
- Provide technical support for colleagues on project management, data analysis and artificial intelligence.
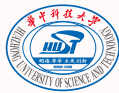
HONORS AND AWARDS

‣ **Sieyuan Schoolarship** (8/412)   ‣ **Self-improvement Student** (7/412)

IEEE Student Conference on Electric Machines and Systems   2023 Dec. 7 - 9

‣ **Best Presenter Award**   Huzhou, China

EXTRACURRICULAR ACTIVITIES

Wuhan Voltworks Science and Technology Ltd.   2024 Jan. - now

‣ **CEO/Chairman**   Leadership
- Promote the development and application of *Hi-Motor Series.*

Association for Mathematical Modeling, HUST   2022 Oct. - 2023 Sep.

‣ **Vice President**   Mathematical Modeling/Event Planing
- Organize school-wide and cross-school lectures for contests like MCM/ICM.
- Participate in textbook and video course developement in mathematical modeling.

Publicity Department, Student Union of SEEE, HUST   2022 Sep. - 2023 Aug.

‣ **Minister**   Writing/Graphic Design
- Generate positive publicity and media coverage of students and major events, such as the 70th anniversary celebration.

PUBLICATIONS

J Journal   **C** Conference   **P** Patent   **S** Software Copyright

C **M. Bao** *et. al.*, "Novel Design Method of Flux-Barrier End Shape of Synchronous Reluctance Motor Based on B-spline Curves", *2023 IEEE 6th Student Conference on Electric Machines and Systems (SCEMS)*, Huzhou, China, pp. 1--8, Dec. 2023, doi: https://doi.org/10.1109/SCEMS 60579.2023.10379317

C T. He, Y. Wang, **M. Bao**, J. Li, S. Feng and R. Qu, "Design and Validation of a High-Efficiency Synchronous Reluctance Motor", *2023 IEEE 26th International Conference on Electric Machines and Systems (ICEMS)*, Zhuhai, China, pp. 1--8, Nov. 2023, doi: https://doi.org/10.1109/ICEMS 59686.2023.10345091

P Y. Wang, J. Li, X. Li, **M. Bao** and R. Qu, "Rotor with Adjacent Electrode Mirror Image of Synchronous Reluctance Motor and Permanent Magnet Asisted Synchronous Reluctance Motor", China Patent, Publication, No. CN202310703464.8, Sep. 2023

P Y. Wang, X. Li, J. Li, **M. Bao** and R. Qu, "A Permanent Magnet Asisted Synchronous Reluctance Motor of Low Torque Ripple", China Patent, Publication, No. CN202310406410.5, Jul. 2023

S **M. Bao**, S. Lu and Y. Wang, "Hi-Motor Hub: Intelligient Selection Tool for High-efficiency Motors V1.0", China Software Copyright, Publication, No. 2023SR1417580, Nov. 2023

S **M. Bao**, J. Li, Y. Chen and Y. Wang, "Hi-Motor Designer: Intelligient Software for Design and Optimization of Synchronous Reluctance Motor V1.0", China Software Copyright, Publication, No. 2023SR0446741, Apr. 2023

REFEREES

‣ Yawei Wang (Tutor), Associate Professor of Huazhong University of Science and Technology, yaweiwang@hust.edu.cn

‣ Ronghai Qu (Tutor), Professor of Huazhong University of Science and Technology, ronghaiqu@hust.edu.cn