

Ph.D. Position Openings

Functional Materials for Hierarchical Manufacturing at Western University

We are looking for two highly motivated Ph.D. students to join the **Data-Driven Advanced Manufacturing (D2M) Group** in the Department of Mechanical and Materials Engineering (MME) at Western University. Our group aims to design the next generation of sustainable, functional materials for additive hierarchical manufacturing across multiple length scales. By combining materials science fundamentals and mechanical design principles, improved materials properties along with optimal hierarchical manufacturing parameters can be revealed for enhanced device performance in the following application areas:

- Energy Storage (Wearable Supercapacitors and Zn-ion Batteries)
- Biomedical Sensors (Tactile, Strain, Biomarkers, Microfluidics, etc.)

This proposed research project is situated between advanced manufacturing and material informatics. Hidden relations between device performance and manufacturing parameters can potentially be revealed, and further predictions on functional material quality and performance can be made. The ideal candidates should have completed their master's degrees in the following disciplines: Mechanical Engineering, Materials Science and Engineering, Chemical Engineering, Engineering Science, Chemistry, or Physics. They should also possess a strong combination of theoretical and experimental mechanical and materials engineering skillsets.

About Us

Dr. HaoTian Harvey Shi is an Assistant Professor of Advanced Manufacturing at Western University. Prior to joining Western, he was a research associate in the Department of Engineering at the University of Cambridge, U.K., working under the supervision of Dr. Shery Huang, on developing multi-lengths-scale hierarchical fiber-based printing technologies multiple applications. He has contributed to several publications in prominent journals, including *Nature Materials*, *Advanced Energy Materials*, *Chemical Engineering Journal*, *ACS Applied Materials & Interfaces*, *Advanced Materials Technologies*, *ACS Applied Energy Materials*, *Lab-on-a-Chip*, *Nanoscale Advances*, *Nanotechnology*, etc.

How to Apply

If interested, please send an email to Dr. Shi (Harvey.shi@uwo.ca) containing the following information. Applications will be considered for 2025 admission. Further application instructions can be found at <https://www.eng.uwo.ca/mechanical/>. Please apply before Dec. 15th, 2024.

- Academic CV
- A brief description of your expertise and research interests
- Transcripts (non-official)

About Western University

Situated along the banks of the Thames River in picturesque London, Ontario, a city with a population of approximately 350,000, Western University is a prominent academic institution routinely ranked as a top research-intensive university in Canada and is committed to excel as a leading research institution internationally (QS #120). Western University has a full-time enrollment of about 32,000 students in a range of academic and professional programs.

Western University

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