

Dr. Changsheng Wu's lab (<https://changsheng-wu.github.io>) in the Department of Materials Science and Engineering at the National University of Singapore (NUS) is now looking for passionate and highly motivated PhD students for 2023 intake. Self-financed Master of Engineering students and visiting students/scholars are also welcome. Research areas include:

- ❖ Bioelectronics
  - Wireless soft devices for health monitoring or therapy
  - Advanced signal processing and analysis of bio-signals
  - Low-power/self-powered biosensing systems
  - Closed-loop sensing & therapeutic systems
- ❖ Multiscale and Multifunctional Structures for Soft Tissue-Electronics Interface
  - Novel 3D metastructures for soft biosensors and energy harvesters
  - Programmable metamaterials for actuation and sensing
  - Wirelessly controllable and reconfigurable robots

The research at Wu group is multidisciplinary and concentrates on the theme of “iMESH – intelligent Materials for Energy and Sensors towards Healthcare”, or more specifically, an intelligent Materials-based mesh synergizing Energy harvesting and bio-Sensors towards digital Health. Our group focus on developing **wireless wearables and intelligent robots** for energy harvesting, biosensing and therapeutic applications, leveraging bioelectronics, materials science, and advanced manufacturing to create continuous, pervasive, and personalized digital health solutions.

Applicants are expected to have BS/MS degrees in Materials Science, Electrical Engineering, Biomedical Engineering, Mechanical Engineering, Physics, or other related fields. Interested candidates are welcome to send application to Dr. Wu at [cwu@nus.edu.sg](mailto:cwu@nus.edu.sg). Details for different positions are listed below:

- ❖ PhD students
  - Strong interest in bioelectronics, energy, robotics, or materials design
  - Highly motivated in multidisciplinary and translational research
  - Proficiency with any of the following is a plus: embedded coding, circuit design, microfabrication, robotics
  - Application materials: Cover letter, CV, and contact information of 2-3 references
  - Besides the regular PhD scholarship, students are also encouraged to apply to other scholarships listed on <https://nusgs.nus.edu.sg/scholarships-list/>, e.g. President's Graduate Fellowship, ISEP Scholarship, etc.
- ❖ Master's students
  - Strong interest in bioelectronics, energy, robotics or materials design
  - Highly motivated in multidisciplinary research
  - Proficiency with any of the following is a plus: embedded coding, circuit design, microfabrication, robotics
  - Application materials: cover letter, CV, and contact information of 1-2 references

- Students are encouraged to apply to scholarships listed on <https://nusgs.nus.edu.sg/scholarships-list/>
- ❖ Visiting students and scholars
  - Relevant research background
  - Strong commitment to quality research
  - Application materials: cover letter, CV

About PI: Dr. Changsheng Wu joined the Department of Materials Science and Engineering at NUS as Presidential Young Professor in April 2022. He is also a PI in the Institute for Health Innovation & Technology and the N.1 Institute for Health. Dr. Wu received Ph.D. degree in Materials Science and Engineering from Georgia Tech and B.E. degree (First Class Honours) in Engineering Science Programme from NUS. From 2019 to 2022, he worked as a postdoctoral research fellow in the Querrey Simpson Institute for Bioelectronics at Northwestern University. His research interests include bioelectronics, electromechanical systems, metamaterials, and advanced manufacturing. He is the author or co-author of more than 50 peer-reviewed publications including *Nature Communications*, *Proceedings of the National Academy of Sciences*, *Materials Today*, *Science Robotics*, *Advanced Materials*, etc. He holds 5 patents, and his work received the TechConnect 2018 Innovation Award and the 2018 R&D 100 Award.

About NUS: The National University of Singapore (NUS) is a national research university based in Singapore. Founded in 1905 as the Straits Settlements and Federated Malay States Government Medical School, NUS is the oldest autonomous university in Singapore. According to most rankings, it is considered to be one of the best universities in the Asia-Pacific and in the world. In 2022, the QS World University Rankings ranked NUS 11th in the world and 1st in Asia. The Times Higher Education World University Rankings 2023 placed NUS at 19th in the world and 3rd in Asia Pacific.