

Dr. Changsheng Wu's lab (<https://changsheng-wu.github.io>) at the National University of Singapore (NUS) is now looking for passionate and highly motivated PhD students for 2024 August intake. The students can be enrolled in either **Electrical and Computer Engineering** or **Materials Science and Engineering** depending on his/her preference. Potential thesis topics include:

- ❖ Bioelectronics
 - Wireless soft devices for health monitoring or therapy
 - Edge computing or AI for health
- ❖ Smart Materials
 - Novel 3D metastructures for soft biosensors and energy harvesters
 - Programmable metamaterials for actuation and sensing
 - Wireless soft- or micro- robots

The research at Wu 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 solutions for **sustainable living and environment**.

Applicants are expected to have BS/MS degrees in Electrical and Computer Engineering, Mechanical Engineering, Materials Science, Biomedical Engineering, Physics, or other related fields. Interested candidates are welcome to send application to Dr. Wu at cwu@nus.edu.sg. Details for the position is listed below:

- Highly motivated in interdisciplinary research
- For bioelectronics, candidates with prior experience and proficiency in **microwave & RF, NIRS, ultrasound/mechano-acoustic, thermoelectric or thermal physics, edge computing** are preferred
- For smart materials, prior experience and proficiency in **microfabrication, soft materials, or liquid metal** are required
- Application materials: Cover letter, CV, research statement 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.

About PI: Dr. Changsheng Wu joined the Department of Materials Science and Engineering at NUS as Presidential Young Professor in April 2022. He holds courtesy appointment in Electrical and Computer Engineering and 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 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.

课题组简介

新加坡国立大学吴昌盛课题组 (<https://changsheng-wu.github.io>) 致力于开发用于能量收集、生物传感和治疗的无线可穿戴设备和智能机器人，利用生物电子学、材料科学和先进制造为可持续医疗和环境创造新型解决方案。现诚招 2024 年 8 月入学的博士生，申请者可选电子系 (ECE) 或材料系 (MSE) 入学。

招聘方向

- 1) 无线生物电子：无线柔性传感/治疗器件；面向医疗健康的边缘计算/人工智能
- 2) 智能材料：3D 超结构；可编程超材料；无线软体/微纳机器人

岗位要求

- 1) 品学兼优，热爱科研，具有责任心、主观能动性和团队意识，富有创造力和执行力
- 2) 有任意一项可证明的特长，包括但不限于高质量科研经历、高绩点、创业有成等
- 3) 具备良好的英文沟通、阅读和写作能力，GRE 高于 320+3.5，托福高于 90 或者雅思高于 6.5
- 4) 无线生物电子方向，优先考虑具有如下背景的申请：微波和射频、电磁学、近红外光谱成像、热电、热学、声学、非接触式传感、边缘计算
- 5) 智能材料方向，只考虑具有如下背景的申请：微纳加工、软材料、液态金属

申请须知

1. 申请材料: 简历，研究意向书，成绩单，3 个推荐人联系方式（全英文）。研究意向书需说明自身科研背景与招聘方向的相关性。
2. 申请方式: 请将申请材料发送至 cwu@nus.edu.sg
3. 奖学金: NUS Research Scholarship、NUSRI Guangzhou Research Scholarship、NUSRI Chongqing Research Scholarship。广州奖学金 4 年均在新加坡开展研究，毕业后需在广州工作两年；重庆奖学金原则上 2 年在新国立重庆研究院开展研究，所获文凭与普通奖学金一致。特别优秀的申请者将推荐申请校长奖学金 (Presidential Graduate Fellowship)。
4. 邮件回复: 会尽量回复每一封申请邮件，申请材料不全或者非英文的将不回复。

导师简介

吴昌盛博士于 2022 年 4 月身份加入新加坡国立大学担任校长青年教授 (Presidential Young Professor)，材料科学与工程系 (MSE)、电气与计算机工程系 (ECE) 助理教授，新国大健康创新与技术研究院、N.1 健康研究院独立研究员。2013 年本科毕业于新加坡国立大学工程科学系，2019 年博士毕业于佐治亚理工学院材料科学与工程系，2019-2022 于西北大学生物电子研究所从事柔性生物电子研究。

导师风格

We do what matters and we do to make a difference. 讨论科研工作的时候会比较严肃直接，但就事论事，其余时候比较随性。对于有外方合作者的课题，会依据计划按时催进度。对

于有临床合作的课题，由于临床测试机会宝贵及高成本，会比较 push，原则上 deadline 即死线。对于偏基础研究和探索类的课题，会给予充分的自由和耐心。会尽全力提供指导，当遇到由于交叉学科特性带来的自己不熟悉的问题，一定会一起想办法解决或找到专业人士帮忙指导，不做甩手掌柜。但导师属于科研劝退党（想做好科研不容易，读博属于高风险投资），如果不是对科研或者创业非常有热情的同学，不建议申请本组。

课题组氛围

We can do it together. 本课题组的研究方向属于偏实验性质的交叉学科，有趣同时富有挑战。每个同学都会有自己的课题同时鼓励大家进行探索，不存在及禁止多人恶性竞争同一课题或抢占成果，鼓励组内成员多交流合作。目前组内成员都很优秀，专业背景各异（材料，电子，机械，计算机等），热爱科研，自我驱动能力强（因为导师不擅长画饼/打鸡血，反而经常毒鸡汤）。已形成良好的互助向上的环境。

学生出路

You do your best to excel and I do mine to support. 课题组成立时间尚短，样本量不大。有限样本中已有博后/硕士学生拿到名校（如清华，ETH）教职/博士的 offer。