MAE-CUHK CRM-Lab: openings for Postdoctoral, PhD students, and Research Assistant

Please refer to next page for the Chinese version.

Dr. Guoxin Fang will join the Chinese University of Hong Kong as an Assistant Professor in October 2023. He plans to establish the Computational Robotics and Manufacturing (CRM) Lab at the Department of Mechanical and Automation Engineering (MAE). He is currently seeking motivated students with a solid mathematical and technical background who are interested in research topics such as robotics, additive manufacturing, and computer-aided design to join his group.

Dr. Fang is currently a research associate in digital manufacturing at The University of Manchester. He obtained his Ph.D. degree in Advanced Manufacturing from Delft University of Technology and holds B.S. degrees in Mechanical Engineering from the Beijing Institute of Technology. Dr. Fang's research has been recognized with awards, including the Best Paper Award at the 2022 SIGGRAPH Asia Conference, the Best Paper Award at the ASME IDETC-CIE 2023 conference, and finalist for the best student paper at the 2021 IEEE CASE conference.

Postdoctoral and visiting researcher positions

Dr. Guoxin Fang's lab is currently seeking a motivated and creative Postdoctoral Research Fellow specializing in robot-assisted additive manufacturing. The appointment will begin from January 2024. Qualified candidates please send their CV, motivation letter (includes a publication list, a research statement detailing their past research experiences, future research interests and plans, career aspirations, and objectives), as well as representative research papers and the contact information for three references, to Dr. Guoxin Fang at fangguoxin96@gmail.com. Visiting research positions are also available if your research background aligns with the lab research interests.

Ph.D. positions

Two fully-funded Ph.D. student positions are available for enrollment in Spring/August 2024, with a focus on two research topics:

1) **Development of multi-axis additive manufacturing system;**
2) **Machine Learning-based design, fabrication, and control for soft robot system.**

Applicants should hold a B.S. or M.S. degree in Mechanical Engineering, Electronic Engineering, Automation, Computer Science, Robotics, or related fields. Prospective Ph.D. students are encouraged to send an email to Dr. Guoxin Fang at fangguoxin96@gmail.com, including their CV, undergraduate transcripts, and representative papers (if available).

Research Assistant position

A research assistant position is available starting from October 2023, focusing on establishing an additive manufacturing platform with a robotic arm (ABB / UR5). Interested candidates please contact Dr. Fang directly and provide details of their work experience.

Graduate and undergraduate students

Over the past years, Dr. Guoxin Fang has collaborated with over 20 graduate and undergraduate students from TU Delft, CUHK, and the University of Manchester. Many of these students have since pursued Ph.D. studies at various institutions. Motivated MPhil applicants are encouraged to contact Dr. Fang. Additionally, undergraduate students looking for final year projects are also welcome to join Dr. Fang's lab

香港中文大学 机械及自动化系 方国鑫课题组招收博士研究生

招生计划：博士研究生 2 名，研究助理 1 名

博士将由香港博士生奖学金计划（HKFPS，每年津贴 322,800 港元）或香港中文大学博士生奖学金（每年津贴 216,360 港元）支持，详情请参考港中文研究生院: https://www.gs.cuhk.edu.hk/admissions/programme/engineering

研究助理将根据申请者研究能力和经验提供具有竞争力的薪酬（每月 17,000-21,000 港元），享受年假及医疗福利。

导师简介：课题组 PI 方国鑫博士，将于 2023 年 10 月加入香港中文大学担任助理教授职位。方博士研究方向为机器人、计算设计及数字化制造。本科毕业于北京理工大学，博士毕业于荷兰代尔夫特理工大学（TU Delft），师从 Charlie C.L. Wang 教授 和 Prof. Jo M.P. Geraedts 教授。博士后期间，在英国曼彻斯特大学数字化制造研究所开展机器人辅助先进制造、软体机器人方向的研究。方博士在先进制造方向的研究工作获得了 ASME IDETC-CIE 2023 conference 最佳论文奖, 2022 SIGGRAPH Asia Conference 最佳论文奖，以及 2021 IEEE CASE conference 最佳学生论文提名。更多信息请访问个人主页: https://guoxinfang.github.io/。

博士研究生（2024 年 1 月春季入学，或者 2024 年 8 月秋季入学）

研究课题：

1) **机械臂辅助多轴增材制造** （robot-assisted multi-axis additive manufacturing with functional material）
   了解更多可以收看方博士在 GAMES：CAD/CAE/CAM 专题上的报告（中文）
   https://www.bilibili.com/video/BV1Qx4y1o7fB/
2) **软体机器人设计、制造、及控制** (Design, fabrication, and control for soft robot system)
   了解更多可以参考方博士论文：Kinematics of Soft Robots by Geometric Computing, T-RO 2020; Sensing and reconstruction of 3-D deformation on pneumatic soft robots, T-MECH 2021. Efficient jacobian-based inverse kinematics with sim-to-real transfer of soft robots by learning, T-MECH 2022;

申请要求:

1）对科研有热情，目标清晰，自我驱动力强，数理基础扎实。机械工程、自动化、机器人、电子、计算机等相关专业本科/硕士毕业，具有增材制造、机器学习、机器人操控等研究背景优先考虑，具有 RoboCon、RoboMaster 等比赛经历优先考虑。

2）具备良好的英文沟通，阅读和科学写作能力。

3）具有良好的编程能力 （C++/Python），有几何计算、机器学习项目经历优先考虑。

研究助理（最早 2023 年 10 月入职）

招收研究助理一名（具有机械设计/机械制造/机器人专业本科或硕士学位），主要负责搭建多轴增材制造系统，并操作 ABB/UR5 等机器人进行连续碳纤维等先进材料的制造。有相关研究或工作经验者优先，

申请方式：

请感兴趣的同学邮件联系方博士: fangguoxin96@163.com。请在邮件里阐述研究兴趣和研究经历、附上本科/硕士成绩单、简历和已发表论文。