

Liuchao (Christopher) Jin



☎ (+852) 9570 5790 ✉ liuchao.jin@link.cuhk.edu.hk [in linkedin.com/in/liuchaojin](https://www.linkedin.com/in/liuchaojin)
📍 ERB201, The Chinese University of Hong Kong, Hong Kong SAR, 999077, China
🌐 <https://liuchao-jin.github.io/> 📅 20 Nov 1999, Shaoxing, Zhejiang, China

🎓 Education

08/2022-Present Hong Kong, China	Chinese University of Hong Kong (CUHK), Doctor of Philosophy - Ph.D. Major : Mechanical and Automation Engineering Supervisor : Prof. Wei-Hsin Liao Joint Training @ Southern University of Science and Technology (SUSTech) Co-Supervisor : Prof. Qi Ge Research Direction : 3D/4D Printing, Smart Materials & Adaptive Structures, Soft Robotics. Award : Hong Kong PhD Fellowship Scheme (HKPFS), SUSTech Fellowship Program
09/2018-06/2022 Chengdu, China	Sichuan University - Pittsburgh Institute (SCUPI), Bachelor of Engineering - BE GPA : 4.0/4.0 Weighted Average Mark : 96.29/100 Major : Mechanical Engineering Ranking : 1/79

📖 Publications & Patents

- **Liuchao Jin**, Shouyi Yu, Jianxiang Cheng, Haitao Ye, Xiaoya Zhai, Jingchao Jiang, Kang Zhang, Bingcong Jian, Mahdi Boda-ghi, Qi Ge, Wei-Hsin Liao. (2024). Machine learning-driven forward prediction and inverse design for 4D printed hierarchical architecture with arbitrary shapes. *Applied Materials Today*. 40. 102373.
- **Liuchao Jin**, Xiaoya Zhai, Kang Wang, Kang Zhang, Dazhong Wu, Aamer Nazir, Jingchao Jiang, Wei-Hsin Liao. (2024). Big data, machine learning, and digital twin assisted additive manufacturing : A review. *Materials & Design*. 24. 113086.
- **Liuchao Jin**, Xiaoya Zhai, Jingchao Jiang, Kang Zhang, Wei-Hsin Liao. (2024). Optimizing stimuli-based 4D printed structures : a paradigm shift in programmable material response. In *Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2024* (Vol. 12949, pp. 321-332). SPIE.
- **Liuchao Jin**, Xiaoya Zhai, Kang Zhang, Jingchao Jiang, Wei-Hsin Liao. (2024). Spider web-inspired additive manufacturing : unleashing the potential of lightweight support structures. In *21st International Conference on Manufacturing Research*.
- **Liuchao Jin**, Xiaoya Zhai, Kang Zhang, Jingchao Jiang. (2024). Unlocking the Potential of Low-Melting-Point Alloys Integrated Extrusion Additive Manufacturing : Insights into Mechanical Behavior, Energy Absorption, and Electrical Conductivity. *Progress in Additive Manufacturing*.
- **Liuchao Jin**, Xiaoya Zhai, Kang Zhang, Jingchao Jiang, Wei-Hsin Liao. (2024). 3D printing low-melting-point alloys integrated soft robots. *Materials Science in Additive Manufacturing*. 3(3). 4144.
- Changyue Liu, **Liuchao Jin**, Wei-Hsin Liao, Zhijian Wang, Qiguang He. (2024). Achieving rapid actuation in liquid crystal elastomers. *National Science Open*.
- Kang Zhang, Qiang Gao, Jingchao Jiang, Meishan Chan, Xiaoya Zhai, **Liuchao Jin**, Jiangfan Zhang, Jifan Li, Wei-Hsin Liao. (2024). High energy dissipation and self-healing auxetic foam by integrating shear thickening gel. *Composites Science and Technology*, 110475.
- **Liuchao Jin**, Weicheng Cui. (2023). On Technical Issues for Underwater Charging of Robotic Fish Schools Using Ocean Renewable Energy. *Ships and Offshore Structures*. 1-11.
- Jingchao Jiang, Xiaoya Zhai, Kang Zhang, **Liuchao Jin**, Qitao Lu, Zhichao Shen, Wei-Hsin Liao. (2023). Low-melting-point alloys integrated extrusion additive manufacturing. *Additive Manufacturing*. 72, 103633.
- Jingchao Jiang, Xiaoya Zhai, **Liuchao Jin**, Kang Zhang, Jun Chen, Qitao Lu, Wei-Hsin Liao. (2023). Design for Reversed Additive Manufacturing Low-Melting-Point Alloys. *Journal of Engineering Design*. 1-14.
- Jingchao Jiang, **Liuchao Jin**, Xiaoya Zhai, Kang Zhang, Jun Chen, Wei-Hsin Liao. (2023). A novel strategy to fabricate low-melting-point alloy and its composite parts using extrusion additive manufacturing. In *The 50th International Conference on Computers and Industrial Engineering*.
- Xiaoya Zhai, Yundong Gai, **Liuchao Jin**, Wei-Hsin Liao, Falai Chen, Ping Hu. (2023). Isogeometric topology optimization of auxetic materials based on moving morphable method. In *Materials Research Proceedings*. 31, 172-186.
- **Liuchao Jin**, Yuchen Lou, Lu-An Chen, Qi Lu. (2022). 6 Degree of Freedom Unified Tracking Controller for Tilt-Rotor Multi-Rotor Unmanned Aerial Vehicles Based on Unit Dual Quaternion. In *2022 5th IEEE International Conference on Unmanned Systems (ICUS)*. IEEE.
- Xiaoya Zhai, **Liuchao Jin**, Jingchao Jiang. (2022). A survey of additive manufacturing reviews. *Materials Science in Additive Manufacturing*. 1(4).
- China Invention Grant Patent : Tracking Control Method for Tilt-Rotor Multi-Rotor UAV Based on Dual Quaternion. Patent number : ZL 2022 1 0739442.2.
- China Utility Model Patent : Air Purification Device. Patent number : ZL 2021 2 2679101.4.

Experiences

- > 08/2023 - Present, Southern University of Science and Technology, Visiting Scholar, Supervisor : Prof. Qi Ge.
- > 08/2024 - Present, Shenzhen University, Visiting Scholar.
- > 08/2022 - Present, The Chinese University of Hong Kong, Teaching Assistant.
- > 09/2021 - 06/2022, Sichuan University - Pittsburgh Institute, Teaching Assistant.
- > 04/2021 - 09/2021, Westlake University, Research Assistant.
- > 03/2021 - 09/2021, McGill University, Research Assistant.

Honors & Awards

- 11/2022 Outstanding Senior Project Award in Sichuan University
- 10/2022 Best Paper Award in 2022 IEEE International Conference on Unmanned Systems (ICUS)
- 06/2022 Outstanding Senior Project Award in Sichuan University-Pittsburgh Institute
- 05/2022 First Prize in The 7th National Academic English Vocabulary Competition (NAEV)
- 05/2022 Outstanding Senior Project Poster Award in Sichuan University-Pittsburgh Institute
- 03/2022 Outstanding Graduate of Sichuan Province
- 03/2022 Outstanding Communist Party Member of Sichuan University-Pittsburgh Institute
- 01/2022 A-level Certificate in Comprehensive Quality of University Students in Sichuan Province
- 12/2021 2020-2021 Academic Year National Scholarship (China) (¥8,000)
- 10/2021 Outstanding Graduate of Sichuan University
- 10/2021 2020-2021 Academic Year Outstanding Student of Sichuan University
- 10/2021 2020-2021 Academic Year Sichuan University-Pittsburgh Institute Best Academic Achiever Award (¥60,000)
- 09/2021 First Prize in Chinese Tale - English Talk
- 06/2021 Second Prize in Videos and Voices Short Video Contest
- 05/2021 Second Prize in The 6th National Academic English Vocabulary Competition (NAEV)
- 04/2021 Honorable Mention in 2021 Mathematical Contest in Modeling (MCM)
- 12/2020 2019-2020 Academic Year National Scholarship (China) (¥8,000)
- 10/2020 2019-2020 Academic Year Outstanding Student of Sichuan University
- 09/2020 Excellent Teaching Assistant Award for Sichuan University-Pittsburgh Institute
- 09/2020 2019-2020 Academic Year Sichuan University-Pittsburgh Institute Academic Star (¥10,000)
- 12/2019 2018-2019 Academic Year National Scholarship (China) (¥8,000)
- 12/2019 Excellent Student in Party School of the Sichuan University Committee of the Communist Party of China
- 10/2019 2018-2019 Academic Year Outstanding Student of Sichuan University
- 09/2019 2018-2019 Academic Year Sichuan University-Pittsburgh Institute Best Academic Achiever Award (¥60,000)
- 07/2019 First Prize in the Special Category of the 9th "Video Friends Cup" China University TV Awards
- 07/2019 Excellent Student of Military Skills Training in Sichuan University
- 02/2019 Student Ambassador of Sichuan University-Pittsburgh Institute

Leadership & Extracurricular Activities

- > 06/2024 - Present, Sichuan University-Pittsburgh Institute Alumni Association, Alumni Mentor.
- > 09/2022 - 09/2023, The Postgraduate Halls Residents' Association, General Administrator.
- > 03/2022 - 03/2023, Mitacs Globalink, Ambassador.
- > 09/2019 - 09/2020, Sichuan University The 31st Student Congress, Representative.
- > 03/2019 - 06/2020, Sichuan University Student Television Station, Deputy Director.
- > 09/2018 - 06/2019, Sichuan University-Pittsburgh Institute Student Council, Member.

Community Contributions

- > 05/2021 & 11/2019, Chengdu Blood Center, Blood Donor.
- > 02/2021, UNESCO, Disaster Risk Management at UNESCO Designated Sites, Volunteer.
- > 07/2020-08/2020, GREENPEACE, Blue Planet Rescue Plan, Volunteer.
- > 02/2019, SCU - Return to Alma Mater, Social Practice of Winter Vacation, Participant.