

# Chao Liu

## Curriculum Vitae

Associate Professor  
Department of Biomedical Engineering, Southern University of Science and Technology, China



### Educational Background & Professional Experience

2019–Present	Associate Professor, Department of Biomedical Engineering, Southern University of Science and Technology, China
2016–2019	Post-doctoral Fellow, Department of Biomedical Engineering, Langone Medical Center, New York University, China
2010–2016	PhD, Institute of Biomedical Engineering (BME), University of Toronto, Canada
2008–2010	MASc, Mechanical Engineering, University of Toronto, Canada
2003–2008	BASc, Engineering Science – Biomedical Engineering, University of Toronto, Canada

### Research Interests

Chao’s research interests include the mechanobiology of skeletal stem cells, tissue engineering of bone tissue for regenerative medicine applications, and biomechanical functional implants.

### Publications

- Hongzhi Liu, Hang Zhou, Yuanhao Fan, Jiawei Li, Ziyu Guo, Qiuchi Xu, Yang Liu, Kun Gao, Neima Ait Lahcine, Jianing Zhang, Jingjing Zhou, Fengjin Guo, Chao Liu “Macrophages regulate angiogenesis–osteogenesis coupling induced by mechanical loading through the Piezo1 pathway.” Journal of Bone and Mineral Research (2024): zjae198.
- Ziyan Wang, Minmin Lin, Yonghao Pan, Yang Liu, Chengyu Yang, Jianqun Wu, Yan Wang, Bingtong Yan, Jingjing Zhou, Chao Liu “Periostin+ macrophages improved long bone regeneration in a mechanosensitive manner” Bone Research 12.1 (2024): 59.
- Hang Zhou, Hongzhi Liu, Minmin Lin, Hantang Wang, Jingjing Zhou, Ming Li, Xue Yang\*, Guibing Fu\*, Chao Liu\* “Hyperbaric oxygen promotes bone regeneration by activating the mechanosensitive Piezo1 pathway in osteogenic progenitors” Journal of Orthopaedic Translation 48 (2024) 11–24
- Yang Liu<sup>#</sup>, Yue Wang<sup>#</sup>, Minmin Lin<sup>#</sup>, Hongzhi Liu, Yonghao Pan, Jianqun Wu, Ziyu Guo, Jiawei Li, Bingtong Yan, Hang Zhou, Yuanhao Fan, Ganqing Hu, Haowen Liang, Shibo Zhang, Ming–Fung Francis Siu, Yongbo Wu, Jiaming Bai\*, Chao Liu\* “Cellular scale curvature in bioceramic scaffolds enhanced bone regeneration by regulating skeletal stem cells and vascularization” Advanced Healthcare Materials (2024) 13.29 (2024): 2401667.
- Jianqun Wu, Yonghao Pan, Yangyi Yu, Qihao Yang, Qisong Liu, Yang Liu, Jinhao Zhong, Linhao Fu, Haotian Cai, Chao Liu\*, Guangheng Li\* “Axial Compressive Loading Attenuates Early Osteoarthritis by Reducing Subchondral Bone Remodeling.” The American Journal of Sports Medicine 51, no. 7 (2023): 1752–1764.