Zhenyue Chen, PhD
School of Physics Science and Engineering, Tongji University
No. 1239 Siping Road, Yangpu District
200092 Shanghai, China
Email: zhenyue_chen@tongji.edu.cn

Mission and research goals of the Bioimaging Lab

The Bioimaging Lab was formed in October 2024 after Prof. Zhenyue Chen joined the Institute of Precision Optical Engineering (IPOE), Tongji University. With passion in serving the 'Orientation to People's Life and Health', the Bioimaging Lab champions its scientific mission: to develop revolutionary new imaging methods and technologies for both preclinical and clinical settings! We are dedicated to driving advancements in disease diagnosis and treatment, ultimately bringing real benefits to patients!

Our research team is excited about exploring the following cutting-edge areas: (1) Novel optical, photoacoustic and multimodal biomedical imaging technologies, with a keen focus on their applications in neuroscience; (2) Innovative ultrasound metamaterials and neuromodulation technologies and their broad applications; (3) Clinical application research in photoacoustic imaging!

Leveraging the robust research foundation and technical support from IPOE, and capitalizing on Tongji University's abundant biomedical resources (including the School of Life Sciences, School of Medicine, and over ten large affiliated hospitals), we wholeheartedly believe that the Bioimaging Lab will forge a unique research path fostering innovation at the interface of medical science and engineering, empowering medical diagnosis and treatment with optical technologies!

Introduction of the PI of Bioimaging Lab

The PI of Bioimaging Lab, Prof. Dr. Zhenyue Chen, is a professor in School of Physics Science and Engineering, Tongji University, Shanghai China. He received his Ph.D. degree in Optical Engineering in 2016 from Beijing Institute of Technology. During 2013-2015, he studied as a visiting Ph.D. student in College of Optical Sciences at the University of Arizona, working on fluorescence imaging and polarimetry. During 2016-2022, he worked as a postdoc in Technical University of Munich, Helmholtz Center Munich and University of Zurich/ETH Zurich, focusing on optoacoustic imaging techniques. During 2022-2024, he worked as a senior scientist in Prof. Daniel Razansky's group in University of Zurich/ETH Zurich specializing in multimodal imaging techniques. He joined Tongji University in September 2024 and his current work focuses on biomedical imaging with novel and hybrid modalities including optics, optoacoustics and ultrasound. He has co-authored more than 50 papers in peer-reviewed journals and serves as a reviewer for a variety of journals such as Optics Letters, Optics Express, Journal of Biophotonics, ACS Photonics, IEEE TMI.

He has built long-term collaboration with world renowned research groups in ETH Zurich, Technical University of Munich (TUM) and other well-known universities. Undergraduate students with strong self-motivation, strong interests in scientific research are welcome to join the team to do semester projects or graduation project. Applications for Ph.D./postdoc positions are warmly welcome.

Zhenyue Chen, PhD
School of Physics Science and Engineering, Tongji University
No. 1239 Siping Road, Yangpu District
200092 Shanghai, China
Email: zhenyue_chen@tongji.edu.cn

If you are interested in joining the Bioimaging Lab, please contact Prof. Zhenyue Chen (zhenyue_chen @tongji.edu.cn).

For more information on previous and ongoing research work, please check Prof. Chen's webpage at

https://faculty.tongji.edu.cn/chenzhenyue/en/index.htm

https://www.researchgate.net/profile/Zhenyue-Chen-3?ev=hdr_xprf

https://scholar.google.com/citations?hl=en&user=l6JyuZMAAAAJ&view_op=list_works&sortby=pubdate

Introduction of the Institute of Precision Optical Engineering (IPOE)

The Bioimaging Lab belongs to the Institute of Precision Optical Engineering (IPOE), Tongji University, which is led by Prof. Xinbin Cheng and Prof. Zhanshan Wang. Since its establishment in May 2002, IPOE specializes in education, fundamental science, key technologies, and engineering application research in the field of precision optical engineering. Over the last 20 years, IPOE has contributed a lot to the development of the first-level discipline of Physics of Tongji University and led the establishment of the second-level discipline of Optics, as well as the undergraduate program in Optoelectronic Information Science and Engineering. In addition, the IPOE has provided crucial support for the establishment of the Minister of Education Key Laboratory of Advanced Micro-Structured Materials, Shanghai Frontiers Science Center of Digital Optics, and Shanghai Professional Technical Service Platform for Full-Spectrum and High-Performance Optical Thin Film Devices and Applications.

Adhering to the "Four Orientations" as our missions in scientific research, IPOE has established the following four characteristic research directions: X-ray devices and systems, high-power laser coating and applications, optical nanometrology and measurement, as well as micro-nano optics and intelligent sensing. A high-level research platform has been constructed, with a total expense of nearly 200 million Chinese Yuan on high-end instruments and more than 5,000 square meters of space for research activities and administration. Taking the ownership of the challenge to overcome cutting-edge scientific problems and targeting breakthroughs on core technologies, the IPOE has progressively forged a path that combines theoretical research and simulations, solutions to scientific problems and key technological breakthroughs, as well as scientific research and important applications. The institute has undertaken and accomplished several significant national scientific research projects. In addition, it has won the State Technological Invention Award twice, China Patent Award Gold Medal once, and the second and upper-level awards at the provincial and ministerial level five times. IPOE has become an important center for high-level talent cultivation and advanced scientific research. For more information on IPOE, please visit our website https://ipoe.tongji.edu.cn/en/Overview/Introduction.htm