

# Reshaping the future of biomedical engineering

A new university hub **INVITES ENGINEERING AND MEDICAL TALENT** to join its research and teaching programmes.

## Medical imaging, intelligent medicine, and smart biomedical instrumentation

are the three cornerstones at the School of Biomedical Engineering (the BME School) established in October 2020 at the ShanghaiTech University. Dinggang Shen, the founding dean of the School, who has been leading international projects in AI imaging, says this cross-disciplinary research hub is dedicated to making original scientific achievements and exploring innovative services to bridge academic research with industrial and clinical applications.

“Our three research directions will gradually expand in scope to cover biomaterials, neural engineering and other emerging fields,” says Shen. “Computer-aided medical imaging data analyses, deep learning for data modelling, as well as advanced data acquisition and processing methods, can significantly improve clinical workflow, clinical care, and patient outcome.”

Shen wants to ensure that every student, assigned to a full-time faculty advisor, is granted access to the newest biomedical knowledge and timely feedback on academic progress.

“Important breakthroughs in medical imaging for the next 10 to 20 years will be made in image-guided diagnosis and treatment integration, artificial intelligence-based image data acquisition and processing, as well as cellular and tissue-based functional imaging,” says Peng Hu, the school’s incoming executive dean who specializes in magnetic resonance imaging.

The emphasis of the BME School on accelerating technology transfer is made possible with a network of top-tier hospitals and partnering enterprises, as well as collaborations across engineering disciplines (such as information science), basic research (spanning from biomedical science to materials science), and clinical investigations for pioneering medical studies. These prove crucial to their many translational projects, according to associate professor Jeff L. Zhang, who specializes in functional imaging of kidneys and muscles.

Hu adds that the BME School hosts world-class infrastructure such as the magnetic resonance and molecular imaging laboratories for global talent. Its faculty members joined from prestigious universities and

institutes worldwide, such as the University of North Carolina at Chapel Hill, the University of California, Los Angeles, and Harvard Medical School.

New hires will also enjoy an internationally recognized tenure-track system, generous start-up funds, university-wide support programmes, an open and stimulating research environment, and attractive compensation packages.

“Established in 2013 with the support from the Shanghai Municipal Government and Chinese Academy of Sciences, ShanghaiTech stands out from other universities with its innovative and international spirit of the fast-growing Chinese metropolis,” says Shen. “The BME School is recruiting international scholars and educators who share our vision, as well as an innovative and entrepreneurial team spirit, to build our world-class biomedical engineering programmes.” ■



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Magnetic resonance laboratory