

## Noninvasive or minimally invasive diagnosis and therapy

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Join Zoom Meeting

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Meeting ID: 946 8665 6528

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### Abstract

Noninvasive or minimally invasive diagnosis and therapy provide essential pathophysiological insights and boost the development of healthcare research. Accurate assessments of physiological parameters and timely medical intervention especially in deep tissues are still challenging due to the complex anatomy of organs and attenuation in biological tissues. In this talk, I will first present an ultrasound-based noninvasive approach to monitoring physiological changes deep inside the body. Then, I will talk about soft actuators made from liquid crystal elastomers that could potentially serve as biomedical robots. Lastly, I will demonstrate liquid crystalline microparticles with diverse micro-structured surface patterns as possible therapeutic delivery vehicles. These sensing and therapeutic systems will bring insights into translational medicine.

### Biography

Jiaqi Liu is currently a postdoctoral scholar in the Querrey Simpson Institute for Bioelectronics at Northwestern University, working with Prof. John A. Rogers. She received her Ph.D. in Materials Science and Engineering from University of Pennsylvania under the supervision of Prof. Shu Yang in 2021. She obtained her B.S. in Materials Chemistry from Fudan University in 2016. Her work has been recognized by the Sidney J. Stein Prize and Geoffrey Belton Graduate Fellowship Award from the University of Pennsylvania.