题目：Modeling and Experimental Study of MEMS Capacitive Microphones

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地点：机械群楼F210

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报告摘要

Microphones are acoustic-mechanical-electrical sensors that convert acoustical signals into electrical signals. The sensor is applied to telephones, hearing aids, mobile phones, tablet PC. MEMS technology has been widely applied to microphones for the advantages of offering small size, low cost, and ease of integration with CMOS etc. There are three types of MEMS microphones: piezoelectric, piezoresistive, and capacitive. MEMS capacitive microphones show the high sensitivity and CMOS compatibility, while maintaining low power consumption.

The performance is related to the bias voltage, structure and residual stress. This talk discusses the theoretical study of MEMS capacitive microphones with the lumped-element method, and then talk about the experimental fabrication and test.

报告人简介：

Kui Song graduated with his bachelor’s degree from Xiangtan University in Engineering and Mechanics, and graduated with his doctor’s degree from Institute of Mechanics, Chinese Academy of Sciences (CAS) in Fluid Mechanics. He is a visiting scholar in Hong Kong University of Science and Technology (HKUST). He is now a lecture in Xiangtan University. His research work is about microfluidics and MEMS sensors. He did research work on the logic function of droplet microfluidics, and droplet-based microfluidics & microfluidic chip applications on cell studies.