

# 제 59회

# ORGAN ON A CHIP

# 기술교류회

2020.09.17 **목** 오후 4시 30분

한림대학교 SmartLEAD 온라인 강연



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## 1. Education

박사: Stanford Univ., Dept. of Electrical Engineering (2015)

석사: 한국과학기술원, 전기 및 전자공학부 (2005)

학사: 고려대학교, 전기전자공학부 (2003)

## 2. Experience

2005 ~ 현재 한국과학기술연구원 뇌과학연구소, 선임연구원

2019 ~ 2019 Stanford Univ., 방문연구원

2016 ~ 2018 한국기술연합대학원대학교, 조교수

제목

## 차세대 초음파 트랜스듀서: 발명에서 상용화까지

### Next-gen ultrasonic transducer: From invention to commercialization

초록

As shown in CES 2020, the technology trends for the future have been rapidly switched from analog to digital; even a 'dog bowl' was digitalized to improve the health of companion cats and dogs. Following these tech trends, recently ultrasonic transducers fabricated by MEMS technology are starting to draw attention to the world since the existing ultrasonic transducer suffers from several restrictions such as manufacturing cost, design flexibility, and integration to electronics. In this seminar, I will introduce capacitive micromachined ultrasonic transducers (CMUT), which fully utilize the benefits of miniaturization from MEMS fabrication techniques. I will address the pros and cons of the CMUT and show some novel conceptual products, including applications on organ on a chip. I will conclude my talk by demonstrating how these ideas have been commercialized in recent emerging ultrasonic technologies.

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