

심혈관 환자맞춤형 차세대 정밀의료기술 선도연구센터(RLRC) 2단계 1차년도 정기세미나

- 일정 : 2024년 10월 30일(수), 16:30~17:30
- 연사 : 포항공과대학교 기계공학과 김진태 교수
- 주제 : Fluid-integrated electronics for biomedical applications
- Abstract :

Fluid-integrated electronics, a new multidisciplinary field, merges the principles of fluid mechanics, cutting-edge soft electronic technologies, and computer vision methods, offering promising applications across various domains. This talk highlights examples in biomedical contexts, particularly in droplet-transmitted diseases and implantable devices. (i) The mechanisms behind aerosol- and droplet-based transmission of infectious diseases, particularly those influenced by speech, remain poorly understood. Our research investigates these processes by examining flow-particle physics during the production of plosive sounds and developing soft electronic platforms for continuous monitoring. (ii) Cardiovascular flows present one of the most intricate mechanical systems, involving interactions between viscoelastic arteries and non-Newtonian pulsing blood flows. Our work focuses on the coupled mechanics of blood vessels, fluid dynamics, and devices. These interdisciplinary studies aim to establish foundational knowledge and engineering solutions for disease control and implantable medical devices.

