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## 강연제목: 생체신호 기반 디지털 멘탈 헬스케어 (Biosignal-based Digital Mental Healthcare)

### Abstract:

With the rapid development of machine learning and digital healthcare technologies, increasing interest has been drawn toward digital mental healthcare based on biomedical signals including electroencephalography, functional near infrared spectroscopy, and photoplethysmography. These technologies are expected to provide psychiatrists and patients with more objective diagnostic indices and allow for the general users to effectively manage their mental health in daily life. In this talk, I will introduce recent trends in the biosignal-based digital mental healthcare, focusing on the biosignal-based neuromarkers to diagnose various psychiatric disorders, necessity of developing wearable biosignal measurement systems, biosignal-aided digital therapeutics technologies, and closed-loop digital mental healthcare systems incorporating biomedical signals with digital therapeutics and electroceuticals.

### Brief Biosketc

Chang-Hwan Im received his B.S., M.S., and Ph.D. degrees from the School of Electrical Engineering, Seoul National University in 1999, 2001, and 2005, respectively. He was a post-doctoral Associate in the Dept. Biomedical Engineering, University of Minnesota, Minneapolis, USA, from 2005 to 2006. From 2006 to 2011, he was with the Department of Biomedical Engineering, Yonsei University, South Korea, as an assistant/associate professor. Since 2011, he has been with the Dept. of Biomedical Engineering, Hanyang University, South Korea, as a tenured full professor. He has authored over 180 articles in peer-reviewed international journals. He is currently serving as an Associate Editor in a number of SCI-indexed journals including Sensors, Frontiers in Human Neuroscience, and Experimental Neurobiology. His research interests cover various areas of neuroelectromagnetics and computational neuroengineering, especially brain-computer interfaces, diagnosis of neuropsychiatric diseases, noninvasive brain stimulation, and biosignal-based human-computer interfaces.