## Panel 6-2. Neuroscience & Health

Date & Time: Oct. 24 (Thu), 14:00-16:00

Venue: Room 104

Host: - ( AFLEIS 및 STATE OF ASSOCIATION OF Medical Law (Neurolaw Research Team)

- (한) 연세대학교 의료법윤리학연구원 Asian Institute for Bioethics and Health Law (AIBHL), Yonsei University

- 🦚 미래의료인문사회과학회 Academic Network for Future Medicine and Humanities

## "Clinical Applications of Brain-Machine Interface Technology"

Chair In Young Lee (Professor, Hongik University, Korea)

Panel 6-2. a Jeong-Woo Sohn (Professor, Catholic Kwandong University, Korea)

From Non-Human Primate Research to Clinical Applications: Advances in Brain-Machine Interface Technology

Panel 6-2. b Tamami Fukushi (Professor, Tokyo Online University, Japan)

Human Brain Research and Human Subjects Protection in Neuroethical Context

**Discussion** Discussants:

Sung-Jin Jeong (Principal Researcher, Korea Brain Research Institute, Korea)
Ji Hyun Yang (Research Fellow, Yonsei University College of Medicine, Korea)

## **Abstract**

The brain-machine interface (BMI) translates neuronal information into commands that can control virtual or physical machines. BMI allows for a direct connection between the brain and external devices through implanted or non-invasive electrodes, without manual input. This innovative technology has immense potential in treating neurological disorders, restoring or rehabilitating motor, sensory, or speech functions, and enhancing cognitive abilities. This session will explore the ethical, legal, and societal issues that may arise as BMI moves from research to clinical practice.