Brain-Computer Interfaces: How Far Are We from The Matrix?

講　　者：吳承瀚醫師 Dr. Hemmings Wu
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時　　間： 2025/4/22 (Tue.) 10:00-11:00 (09:50入場、10:00開始)

地　　點：工程四館108+Webex 線上同步進行

主 持 人：王蒞君講座教授 陽明交通大學電機工程學系
Professor Li-Chun Wang,
Dept. of Electrical and Computer Engineering, NYCU

About the Speaker: Dr. Hemmings Wu is a neurosurgeon specializing in functional neurosurgery and neuromodulation for neurological disorders like Parkinson's, dystonia, epilepsy, and pain. His research interests include neuromodulation for neuropsychiatric disorders and brain-computer interfaces. He is also involved in biotech research and development and has co-founded startups. He received his medical bachelor at Peking University, master degree and residency training in neurosurgery at Shanghai Jiaotong University, and PhD in neuroscience at KU Leuven. He finished his postdoctoral training at Stanford University. He is currently an attending neurosurgeon and research professor at Zhejiang University School of Medicine Second Affiliated Hospital in Hangzhou, China.

Abstrat:
Brain-computer interfaces (BCIs) have rapidly transitioned from theoretical concepts to clinical realities, dramatically reshaping possibilities for neurological rehabilitation and human-computer interaction. Yet, how close are we to the futuristic visions once limited to science fiction? In 2019, our team performed Asia's first implantable BCI surgery, marking a milestone in this transformative technology. Since then, we have accumulated extensive experience across diverse dimensions—from pioneering neurosurgical techniques and optimizing clinical care to refining research design, data collection methodologies, and real-world applications. This talk will highlight key findings from our published research, showcasing the significant progress made and lessons learned. Additionally, I will explore emerging trends and share insights on the future trajectory of BCI, discussing potential breakthroughs and challenges that will shape the next decade of innovation in neuroscience and technology.

報名QR Code

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