

Date	Topic	Paper
04/01	Introduction	n/a
04/03	Interview with BMI Participant	n/a
04/08	Stimulation	Paper 1: Flesher et al. .Intracortical microstimulation of human somatosensory cortex.Sci. Transl. Med. 2016
		Paper 2: Flesher et al., A brain-computer interface that evokes tactile sensations improves robotic arm control. Science. 2021
04/10	Stimulation	Guest Speaker: David Bjanec
04/15	Navigation	Paper 1: Mishkin, M., Ungerleider, L., Macko, K. Object Vision and spatial vision: two cortical pathways. Trends in Neuroscience. 1983
		Paper 2: Olson, C. R. & Gettner, S. N. Object-centered direction selectivity in the macaque supplementary eye field. Science . 1995
04/17	Navigation	Guest Speaker: Jorge Gamez
04/22	Cortical Organization	Paper 1: Willett et al., Hand Knob Area of Premotor Cortex Represents the Whole Body in a Compositional Way. Cell. 2020
		Paper 2: Gordon et al. A somato-cognitive action network alternates with effector regions in motor cortex. Nature 2023
04/24	Cortical Organization	Presentation by Kelly Kadlec
04/29	Functional Ultrasound	Paper 1: Griggs et al. Decoding motor plans using a closed-loop ultrasonic brain-machine interface. Nat Neurosci. 2024
		Paper 2: Rabut, C., et al. A window to the brain: ultrasound imaging of human neural activity through a permanent acoustic window. Preprint. bioRxiv 2023
05/01	Functional Ultrasound	Guest Speaker: Thierry Callier and Lydia Lin
05/06	Internal Speech	Paper 1: Fernyhough C, Borghi AM. Inner speech as language process and cognitive tool. Trends Cogn Sci. 2023
		Paper 1 (second presenter)
05/08	Internal Speech	Guest Speaker: Sarah Wandelt
05/13	Attempted Speech	Paper 1: Anumanchipalli, G.K., Chartier, J. & Chang, E.F. Speech synthesis from neural decoding of spoken sentences. Nature. 2019
		Paper 2: Card, N., et al., An accurate and rapidly calibrating speech neuroprosthesis. Preprint. medRxiv 2023
05/15	BMI for Psychiatric Conditions	Paper 1: Scangos et al. Closed-loop neuromodulation in an individual with treatment-resistant depression. Nat Med 2021
		Paper 2: Gill et al. A pilot study of closed-loop neuromodulation for treatment-resistant post-traumatic stress disorder. Nat Commun 2023
05/20	Stability of neural signals	Paper 1: Tim P. Pons et al. .Massive Cortical Reorganization After Sensory Deafferentation in Adult Macaques. Science. 1991
		Paper 2: Makin, T., and Bensmaia, S., Stability of Sensory Topographies in Adult Cortex. Trends in Cognitive Sciences. 2017
05/22	Stability of neural signals	Guest Speaker: Charles Guan
05/27	no class	n/a
05/29	Real World BMI Applications	Guest Speaker: Xinyun Zou