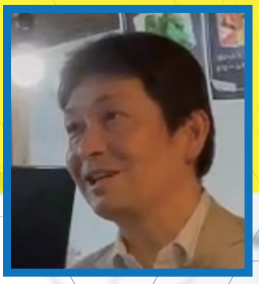
国立精神・神経医療研究センター　神経研究所

第 40 回システム神経科学セミナー

疾病研究第三部・モデル動物開発研究部・IBIC 先進脳画研究部合同

演者：**小村　豊 先生**

Yutaka Komura, Ph.D.



京都大学大学院

人間科学・環境学研究科　教授

Graduate School of Human and Environmental Studies,

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日時	**7月24日（金）** 16:00-17:30（質疑応答含む）
会場	研究所３号館　IF セミナールーム
発表言語	英語 (English)
参加費	無料
参加方法	事前申込不要です。直接会場へお越し下さい。

Traveling waves link information-theoretical and multiscale views on (un)consciousness

During wakefulness, we experience perception, which disappears under general anesthesia. Perception relies on the brain’ s ability to encode features of the external world and transmit information between cortical areas. Classical studies have established a fundamental principle of encoding: the property of “neuronal tuning” in sensory cortices. Recent theories of consciousness hypothesize that perceptual experience arises from widespread information processing acrossthe cortex. However, the neural basis mediating information transfer between cortical regions remained unclear. Using large-scale and gird-like ECoG arrays, we demonstrated that traveling waves serve as a fundamental mode of global information transfer.

In the seminar, we introduce a new metric “informational tuning” to quantify the fidelity of information routing. Based on the current and previous findings, we discuss the mechanisms of (un)consciousness across micro-, meso- and macro-scales.

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