

# **The relationship between neural variability, perceptual abilities and attention in humans**

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**Abstract:** The mammalian brain is a remarkably variable system in which neural responses to repeated presentation of an identical stimulus exhibit considerable trial-by-trial variability. Using EEG recordings, cognitive and psychophysical experiments, I demonstrate how measures of neural variability are useful for explaining perceptual and behavioral differences between individuals, and reveal somewhat of the functional meaning of having a brain that is more or less variable.