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The emergent properties of the connected brain

Tuesday 10 September 2024 09:15 (1 hour)

Significant strides have been made in delineating the white matter architecture in the living human brain in the last two decades. These pathways have been identified as pivotal in supporting cognitive functions, with their variability closely associated with differences in cognitive performance, psychiatric conditions, and neurological manifestations. This underscores a hypothesis that brain functionality is not isolated within regions but emerges from the interaction facilitated by white matter connections. In our presentation, we will unveil cutting-edge methodologies developed recently in our lab –namely, the functionnectome and emuse –to explore these emergent properties. We will discuss their implications for understanding complex neuroscientific phenomena, such as consciousness and neuropsychological recovery post-stroke.

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