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Monday, September 25, 2023, 15:00 hrs  
Wilhelm Wundt Room

## Guest Lecture

# Professor Jörn Diedrichsen

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Ontario, London, ON, Canada

## What is the function of the human cerebellum across cognitive domains?

The cerebellum has initially evolved to support basic sensory-motor functions. In the human brain, the cerebellar circuitry has dramatically expanded and contributes to virtually every cognitive function, including working memory, language, and social cognition. Given its uniform cytoarchitecture, it has long been hypothesized that the cerebellar circuit performs a common computation across all these functional domains. But what is this elusive transform? To ultimately answer this question we require a better understanding of the functional diversity of the cerebellum, its connectivity to the neocortex, and the relationship between cortical and cerebellar processes in each functional domain. Based on human fMRI work of the lab, I will present a novel functional atlas of the cerebellum, a large-scale cortico-cerebellar connectivity model, and a new approach to identify the specific role of cerebellar computation within a single cortical-cerebellar loop.