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**Monday, 24 April 2023, 17:00 hrs**

Hybrid event: Lecture Hall (C101), 1<sup>st</sup> Floor and  
via Zoom: please contact [psy-office@cbs.mpg.de](mailto:psy-office@cbs.mpg.de)

# Distinguished Guest Lecture

Professor Jim Haxby

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## Modeling shared and individuating information encoded in fine-scale cortical topographies

Information is encoded in fine-scale functional topographies that vary from brain to brain. Hyperalignment models information that is shared across brain in a high-dimensional common information space. Hyperalignment transformations project idiosyncratic individual topographies into the common model information space. These transformations contain topographic basis functions, affording estimates of how shared information in the common model space is instantiated in the idiosyncratic functional topographies of individual brains. This new model of the functional organization of cortex – as multiplexed, overlapping basis functions – captures the idiosyncratic conformations of both coarse-scale topographies, such as retinotopy and category-selectivity, and fine-scale topographies. Hyperalignment also makes it possible to investigate how information that is encoded in fine-scale topographies differs across brains. These individual differences in fine-grained cortical function were not accessible with previous methods.