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Centro Congressi Polo Le Benedettine (aula M)  
Piazza S. Paolo a Ripa D'Arno, 16 - 56125 Pisa PI

How space time and numerosity perceptual integration  
shapes brain response along the visual cortical  
hierarchy

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(see abstract on the second page)

## **How space time and numerosity perceptual integration shapes brain response along the visual cortical hierarchy**

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The perception of a flock of birds results from the integration of multiple visual features: shape, color, size, numerosity, spatial position as well as the sensation of the flow time associated with it. Low-level visual features are processed and integrated in the visual stream. For high level, more abstract features, like stimulus numerosity and duration, the mechanism of integration is much less clear. It is unclear to which extent stimulus's duration, numerosity and spatial position recruit same/different neural populations along the visual cortical hierarchy and how their perceptual integration leads to changes in populations' responses. In my talk I will present high-spatial resolution fMRI data with neural model-based analyses to show how concurrent changes of stimulus duration, spatial position and numerosity, shape and modulate brain responses (i.e., affecting model's response type as well as model's parameters) and influence the topographic organization of these features along the cortical visual hierarchy.