

# A General Framework for Quantifying Representational Interactions Using Information Theory

**Submission ID** 3000065

**Submission Type** Poster

**Topic** Cognitive Science

**Status** Submitted

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## SUBMISSION DETAILS

**Presentation Type** Either Poster or Oral Presentation

**Presentation Abstract Summary** To begin understanding the mechanisms of information processing in brain networks we need to develop more powerful methodologies that can address the following foundational challenges: (1) to relate stimulus information with its representation in the brain and simultaneously with behavioural outcomes, (2) to relate stimulus representations from different times, in different brain regions and across different measurement modalities to reconstruct information processing networks and (3) to understand how different aspects of complex naturalistic stimuli are coded and processed in network nodes. Here, we present a novel methodology based on information theoretic quantification of redundant and synergistic representational interactions that addresses all these challenges in a common, general framework.

**Paper Upload (PDF)** [Ince et al. CCN 2017 v5.pdf](#)

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## Keywords

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information processing
representational interactions
mutual information
redundancy
synergy
partial information decomposition