

Keynote speech

Lecture Hall

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11:15 - 12:05

How do information processing systems deal with conflicting information?

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In this presentation, I will discuss how different information processing architectures deal with incongruent or conflicting information. For instance, a robust empirical finding is that RTs are slower when dealing with incongruent sources of information (e.g., determining whether a whale is a fish or a mammal? A whale has biological properties which make it a mammal but lives in an environment typically populated by fish) than when dealing with congruent sources of information (e.g., determining whether a trout is a mammal or a fish). I will argue that the effect of conflicting information depends on the processing architectures and derive a new measure of information processing called the conflict contrast function by drawing an analogy to the capacity of an information processing system. By varying the salience of the conflicting information source, I will show that serial, parallel and coactive information processing architectures predict qualitatively different conflict contrast functions. I will show results from several experiments and show that this novel measure provides convergent evidence to other measures based on the Systems Factorial Technology (Townsend & Nozawa, 1995; e.g., the Mean Interaction Contrast and the Survivor Interaction Contrast) about the underlying processing architecture.