

Keynote speech

Lecture Hall

Sunday, 28th September 2014

11:10 - 12:00

Response Time General Recognition Theory (RTGRT): The Parallel Theory

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General Recognition Theory (Ashby & Townsend, 1986) was originally developed as a robust and general way to theorize and test notions of perceptual independence. It represented an extension and generalization of tradition signal detection (Green & Swets, 1987) theory to a multi-dimensional setting. As such, and like its predecessors, it was non-dynamic (i.e., static). Over the years, Ashby and colleagues (e.g., 1990) have offered extensions that rendered it dynamic. In 2012 Townsend, Houpt & Silbert introduced a completely general stochastic descent based on parallel architectures. This presentation will show how the original static concepts find a new but natural interpretation in parallel architectures and also lead to extended stochastic analogues. The new definitions, axioms and theorems will be described (sans proofs) along with real computational dynamic systems which are examples systems obeying our axioms. If time, early applications will be presented.