

# A Model of Human Task Switching as Optimal Time Allocation

**Submission ID** 3000262  
**Submission Type** Poster  
**Topic** Cognitive Science  
**Status** Submitted  
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## SUBMISSION DETAILS

**Presentation Type** Either Poster or Oral Presentation

**Presentation Abstract Summary** How do humans allocating time to different activities, e.g. when to eat, work or play? Time allocation is a challenging control problem - it requires integrating the importance and availability of goals with our ability to complete them. By drawing on and extending optimal time allocation results in foraging theory, we develop a rational theory for task switching as an optimal time allocation process. We combine tasks that provide instantaneous re-wards with those that provide rewards upon completion together in a unified framework. Our approach provides novel explanations for task quitting near completion, and for understanding the impact of deadlines. No prior work has directly applied foraging ideas to general task switching behavior, synthesizing usually disparate bodies of research.

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## Keywords

Keywords
task switching
time allocation
foraging
human decision-making

decision modeling