





Minerva Stiftung Gesellschaft
- für die Forschung m.b.H

**Technion** 

## The Max-Wertheimer Minerva Center for Cognitive Processes and Human Performance

אנו שמחים לארח את

ד"ר דומיניק לאמי מהחוג לפסיכולוגיה באוניברסיטת תל אביב

:ההרצאה תהיה בנושא

## The role of bottom-up in attentional capture

Recent research suggests that stimulus-driven salience determines attentional priority only when subjects adopt the strategy of searching for a discontinuity (singleton-detection mode) and may play no role when subjects look for a known-to-be-relevant target feature (feature-search mode). This conclusion is based on the finding that in feature-search mode, a singleton distractor elicits a shift to its location only if it possesses the target feature. While such findings suggest that salience *outside the attentional set* adopted by the observer for a specific feature has no effect on performance, it remains possible that salience may enhance the attentional priority within this set. This question was explored in four experiments. The results showed that a distractor sharing a defining feature with the target elicited faster shifts of attention to its location when it was a singleton (high bottom-up activation) than when presented in a heterogeneous display (low bottom-up activation). Moreover, a singleton distractor outside the attentional set (i.e., not possessing the target's defining feature) not only failed to capture attention but yielded *slower* responses at its location. The implications of these results for the roles of bottom-up and top-down processes on attentional priority allocation are discussed.

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