

אנו שמחים לארח את

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Attentional attraction of receptive fields can explain spatial and temporal effects of attention

A multitude of attentional effects were found at both the neural and behavioral levels of perception, however, the nature of the attentional mechanism is an unsettled issue. It is typically assumed that the fundamental impact of attention is enhancement of neuronal responses, but some attentional effects are difficult to explain by such gain modulations. Here we offer a different view: We suggest that the most fundamental impact of attention is the attraction (shift) of receptive fields towards the attended location. We further show, both conceptually and by model simulations, that this attraction of receptive fields can explain a diverse range of attentional effects, spatial as well as temporal, linking physiological measurements at the unit level with psychophysical observations (e.g., enhanced contrast sensitivity, enhanced spatial resolution, the Mexican-hat profile of attention, prolonged perceived duration, prior entry, degraded temporal resolution).

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נשמח לראותכם בין אורחינו

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