Journal of Vision Special Issue

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Psychophysical magic

The application of psychophysical strategies to investigate stages of visual and cognitive processing: Honoring the contributions of Randolph Blake

Visual psychophysics is commonly used to characterize and measure the detection and discrimination abilities of human and non-human observers, often with the aim of characterizing the sensitivity of the visual system. However, psychophysics can also be deployed strategically as a tool for revealing vision's beguiling abilities to construct impressions of objects and events, as well as to suppress suprathreshold stimuli from visual awareness. Psychophysics, in other words, can be used to perform what a layperson might otherwise construe as *magic*.

Over his career, Randolph Blake capitalized on diverse psychophysical tactics to reveal novel aspects of binocular vision, adaptation, motion, biological motion perception, and multisensory integration, with the aim of delineating the sequencing of events that comprise human visual processing (a strategy famously dubbed 'psychoanatomy' by Bela Julesz). For this special issue, we invite research papers that connect with Blake's work by showcasing the application of psychophysical techniques for examining current issues in the study of vision, perception, consciousness and cognition.

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Submissions accepted through April 30, 2025 (deadline extended). Accepted papers will be published as ready in the current monthly issue as well as presented together as a special issue on the JOV website.