Group 3-3 Computational Models for Color Perception

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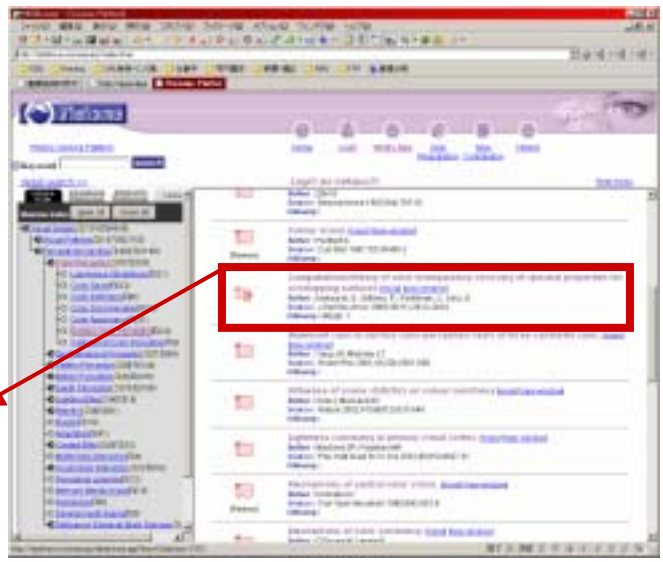
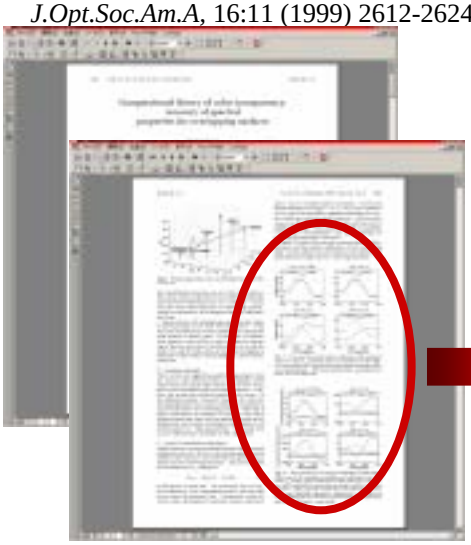
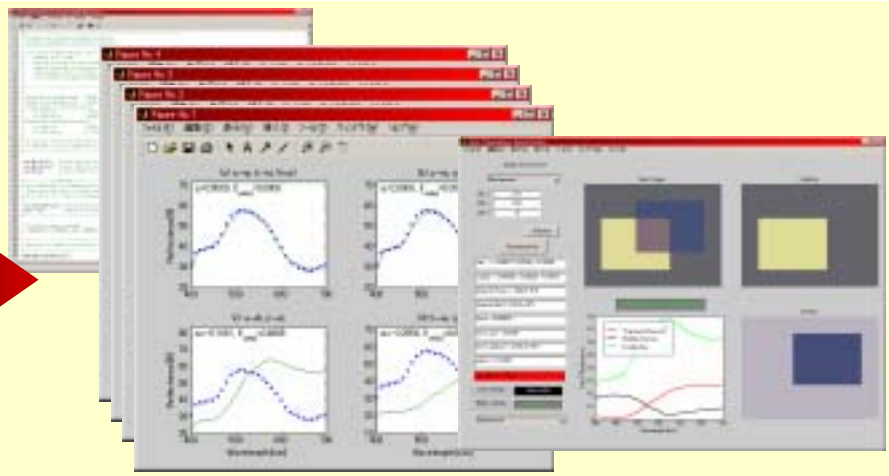
The goal of this study is to understand functional role of color vision: coding, representation and interpretation of color information by the visual pathway. To this end, a computational models are developed to explain various phenomena relating to color perception, including color transparency, constancy and visual attention to color.



Model Simulations

Computational theory of color transparency: recovery of spectral properties for overlapping surfaces
Nakauchi, S., Silfsten, P., Parkkinen, J., and Usui, S.
J.Opt.Soc.Am.A, 16:11 (1999) 2612-2624

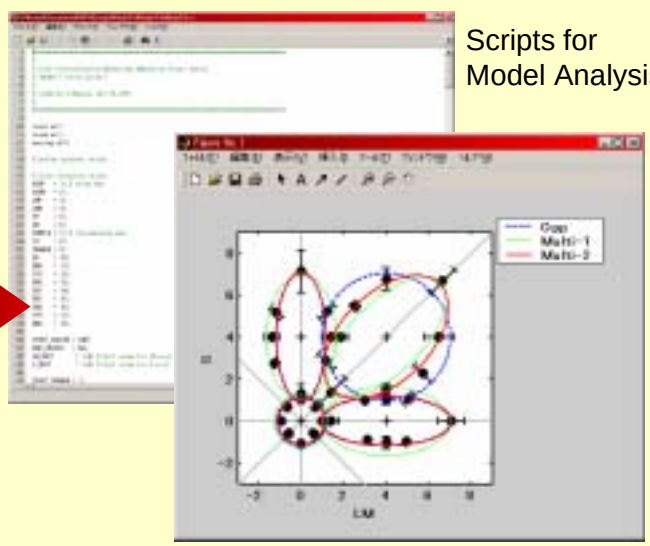




Model scripts for reproducing Figures and Interactive Demo

Experimental Data with Scripts for Model Analysis

Color Discrimination Mechanisms Mediating Visual Search
Nagata, K., Nakauchi, S. and Usui, S.
IEICE Trans., J87-D-II:4 (2002) 668-678



Scripts for Model Analysis

Experimental Data with Model Fit Results