

PHYS342 Final Exam Topics

Chap8. Binocular vision and the perception of Depth

Binocular disparity

Depth perception: Convergence (angle of convergence), Accommodation, parallax

Advantages of 2 eyes over single eye:(depth perception and field of view)

Comparison of field of view (predator vs. prey)

Examples of Binocular disparity: Stereoscopes, Anaglyph, Pulfrich phenomenon

Depth Cues in 2D paintings (perspective, size, shading, details, obscuration)

Chap9. Color

What determines colors?

Intensity distribution curve

3 factors to determine colors (hue, saturation, intensity)

Color tree, Color Triangle, Chromaticity Diagram

Mixing color (Additive mixing, Partitive mixing, Spin(time))

Additive mixing (Intensity Distribution curve), Subtractive mixing, Paints mixing

Primary colors, Complementary color , metamers

Effect of light sources and surface reflection

Chap10. Color Perception Mechanisms

Cones and Rods

Trichromacy theory, Neutral point

Hue Discrimination (At what wavelength range are we more sensitive to the changes in colors?)

Psychological colors (RGBY)

Chromatic Channels and opposing colors

Color deficiency (monochromacy, dichromacy, Trichromacy), Rayleigh test

Spatial processing (simultaneous color contrast, chromatic edge enhancement, color constancy, chromatic lateral inhibition, Color Assimilation)