Waves of Lights, Magic Flowers and Unchained Dots illusions

Simone Gori (Department of General Psychology, University of Padua), D. Alan Stubbs (University of Maine)

We will present three new motion illusions. Wave of Lights and Magic Flowers present surprising size and brightness variations due to observer motion, while the Unchained Dots Illusion is characterized by the misperception of dot trajectory.

Free the Ring!: Striking Color Spreading Induced Transparency

Abigail Huang, Alice Hon and Eric Altschuler (New Jersey Medical School)

We read/saw that vertical yellow bars can appear to spread geometrically faithfully through a black horizontal bar. Here we show that in a stereopsis display this effect can give striking transparency—e.g., a white ring inside a black pyramid.

Coming face to face with 2-faced faces

Melinda S. Jensen and Kyle E. Mathewson (University of Illinois at Urbana-Champaign)

In this demo, we present pairs of identical ambiguous figures. Even with intentional effort, observers typically cannot hold opposing interpretations of the two figures. However, with a simple and powerful technique, observers can see the alternative interpretations side by side.

The Jaggy Diamonds Illusion

Qian Kun and Takahiro Kawabe (Kyushu University)

We report a new illusion where the edges of diamonds placed at the intersections of crossing grids are perceived to be jaggy (the jaggy diamonds illusion). Luminance contrast among diamonds, grids, and background is a strong determinant for this illusion.

Stretching out in the tub

Lydia Maniatis (American University)

A large image of a bathtub appears to change shape as the viewpoint changes.

Smoothness Aftereffect

Emmanuel Guzman Martinez, Marcia Grabowecky, Laura Ortega-Torres, and Satoru Suzuki (Northwestern University)

Adaptation to a grainy, randomly black and white flicker produces an apparently smoother region on a subsequent gray display. This percept can appear in rivalry with the afterimage of the adaptor when a proportion of white-black pixels differs.

Steerable Spirals

Peter B. Meilstrup and Michael N. Shadlen (University of Washington)

When local features are put in conflict with global trajectories, the result can depend on long range competition between features. In our demo viewers interactively adjust the spacing of an array of identical elements resulting in different perceived global directions.

The Wellcome Trust Illusion

Michael Morgan (Max-Planck Institute of Neurology, Koeln, Germany)

A page of the Wellcome Trust Grant Application form has a series of vertically aligned text boxes that are distorted in shape by surrounding text.

Variations on the hollow mask illusion

Thomas V. Papathomas and Manish Singh (Rutgers University)

In the hollow-mask illusion, a rotating hollow mask is perceived as a convex face rotating in the opposite direction. Variations of the hollow mask (featureless mask; random-textured; realistically painted; "smoking" a cigarette) illustrate how various manipulations affect the illusion.

Positive Afterimage

Maryam Vaziri Pashkam (Harvard University), Daw-An Wu (California Institute of Technology)

A powerful flash will burn a long-lasting positive afterimage on your retina that you can experiment on. Make the whole room tilt, make an object float in the air, or take a standstill picture of your friend's funny gesture with your eyes.

Exploring YOUR Phantom Limb: Paresthesias Elicited by Three Webcam Video Demonstrations

David Peterzell (University of California, San Diego and San Diego State University)

Three webcam-based procedures were designed in hopes of facilitating treatment of phantom limb pain in amputees (based on modifications to theories of VS Ramachandran), but cause unusual sensations (paresthesias and sense of limb movement) in many ''normal'' observers.

Star Trek (lightness from depth) illusion

Yury Petrov and Jiehui Qian (Northeastern University)

We will demonstrate how lightness and contrast of objects can be modulated up to 50%, when the objects appear to move in depth. Surprisingly, radial optic flow produces a much stronger illusion than binocular disparity.