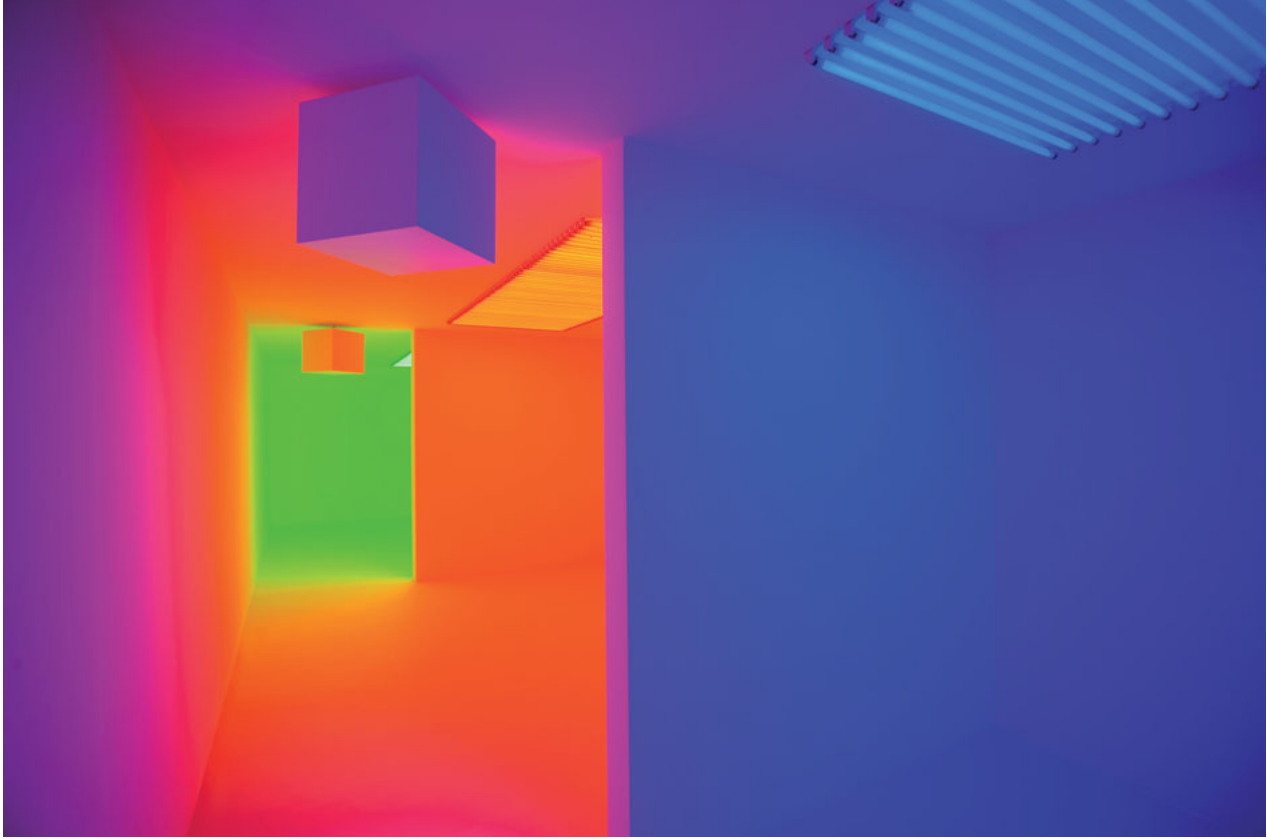


LIVE AND DIRECT: COLOR, PERCEPTION, EXPERIENCE

SEP 16 2026
FEB 7 2027

CARLOS CRUZ-DIEZ. *CHROMOSATURION*, PARIS 1965/2015. PHOTO: SHARJAH ART FOUNDATION / ALFREDO RUBIO © CARLOS CRUZ-DIEZ / BRIDGEMAN IMAGES 2026

At the center of this exhibit is a live and direct encounter with colors, made possible by a collection of works by modern and contemporary artists. Based on this experience, we invite you to reflect on long debated questions about the nature of color and its role in perception.

What does it mean to encounter colors “live and direct”? And why does it matter?

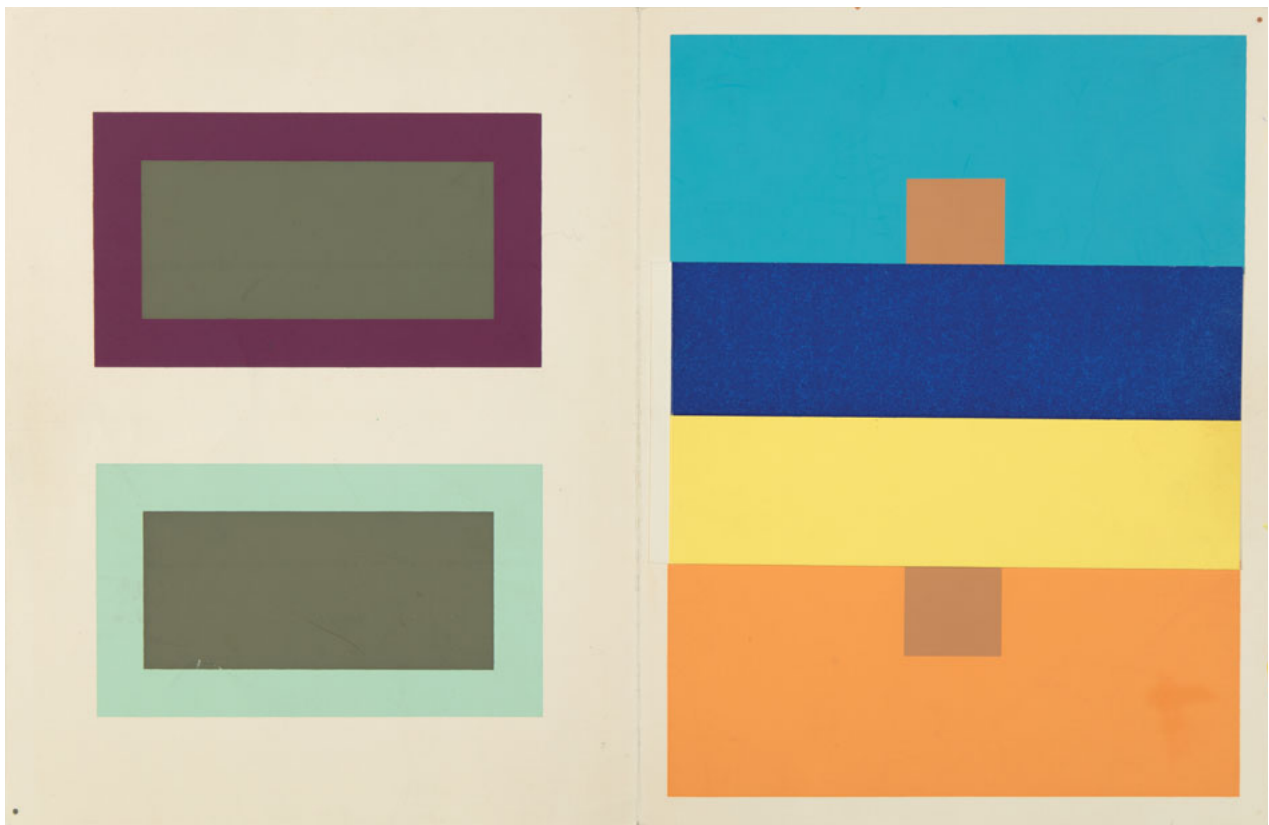
Normally, in our everyday experience of color, we do not pay much attention to colors themselves. We are interested in the things that colors signify. And when we do pay attention, usually we are interested only in basic categories: we are looking for a red scarf, a blue car, or a yellow door. We treat colors as simple, fixed properties; complexity and detail are ignored. When our interest in color is abstract, so is our experience. This habit of abstraction deeply influences our thinking about color, which in turn shapes our experience. As a result, we often fail to see the richness of color in our surroundings. To encounter color “live and direct” is to discover the richness that is lost by the abstraction of everyday experience.

The richness of color is more than complexity and detail. It also consists in the *behavior* of colors: their sub-

tle ways of changing in response to one another and to different kinds of light. When we notice this behavior, colors come alive.

The behavior of color depends on the interactive context in which it occurs. It depends on the ambient light that fills the space around us; it depends on the structure and material of things in our environment; it depends on our movement and individual sensitivity to light. Most of the time, however, the behavior of color is so subtle that it remains largely hidden.

Fortunately, modern artists have figured out how to create the conditions in which the behavior of color can be seen. Indeed, this is one of the great achievements of modern art. Impressionist experiments with color led, in the last century, to the treatment of color as an autonomous phenomenon and its investigation as a worthy subject in its own right. The first two artists of this exhibition – Josef Albers and Carlos Cruz-Diez – are leading figures of this movement, and in the works of contemporary artists Karina Peisajovich, Anoka Faruquee & David Driscoll, and the collective Los Dalton, we see how the investigation of color through art continues up to the present day.



JOSEF ALBERS. *INTERACTION OF COLOR. NO. IV-01*, 1963. MUSEO UNIVERSIDAD DE NAVARRA COLLECTION

Through carefully designed arrangements of light, material, and structure, the artwork of this exhibit provides us with an opportunity to encounter colors live and direct, as an event evolving in time and space. When experienced in this way, we see colors *happening*: arising and passing away, strengthening and fading, approaching and receding. We see colors making space, shape, and volume. We experience color as a live performance. Aside from whatever we can learn from this experience, it provides us with an occasion to renew and deepen our appreciation of color. The behavior of color is what makes it a source of endless enjoyment.

Such encounters are needed to counteract the modern tendency to depreciate color as purely subjective and superficial, even deceptive. Ever since early modern philosophers relegated color to the status of a “secondary quality,” there has been a tendency to segregate colors from other features of visual perception and to treat them as simple and inert. This modern concept of color is a prime example of what the philosopher Alfred North Whitehead called the “fallacy of misplaced concreteness”: our tendency to mistake abstractions for reality. The best way to correct this fallacy is to return to experiences that reveal the richness of colors and let them speak for themselves.

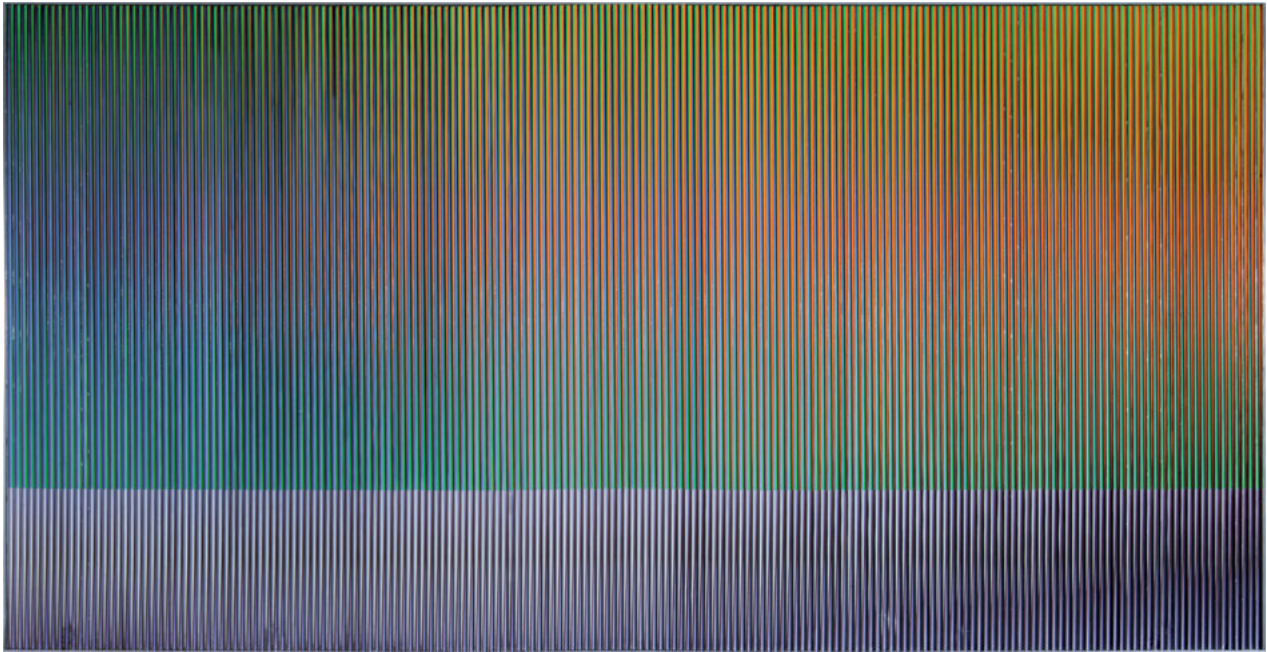
In addition, live and direct encounters with color can help us to rethink questions about the nature of color and its role in perception. In the atrium outside the galleries, a collection of displays and activities explores these questions from the standpoint of the interactive behavior revealed by the artwork.

Josef Albers, *Interaction of Color* (1963)

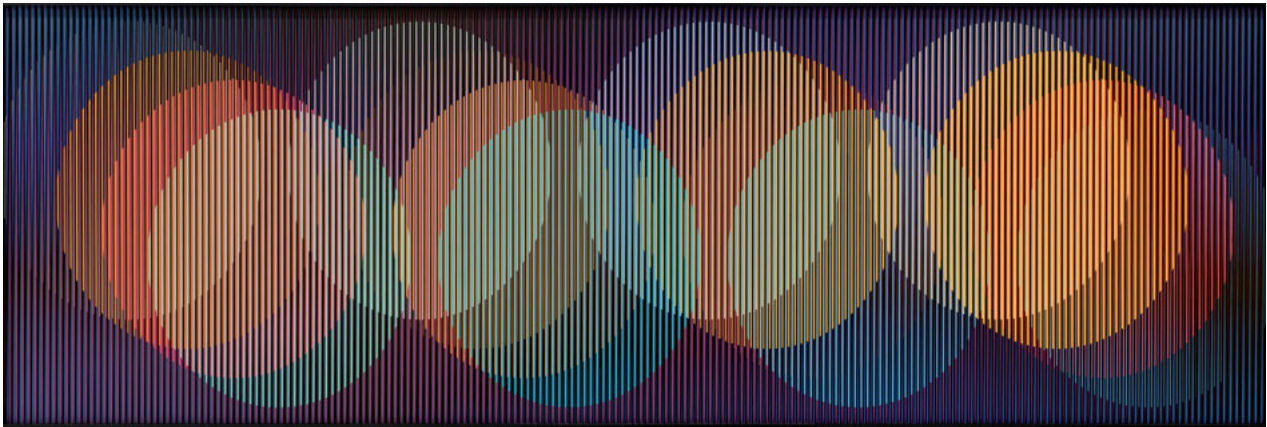
The exhibit begins with a landmark of color pedagogy, Josef Albers’s *Interaction of Color*. One of the most influential teachers and artists of the twentieth century, Albers (1888-1976) said that his goal was to “open eyes.” For this purpose, he prioritized practice over theory, and encouraged his students to learn through experimentation and direct observation. *Interaction of Color* is essentially a handbook for the study of color based on insights gathered by Albers over the course of his long teaching career, which began at the famous Bauhaus school in Germany and continued at Black Mountain College and Yale University in the United States. Its central and most innovative feature is a series of carefully designed exercises that teach us to see the behavior of colors.

The silkscreens presented here are from the original edition published by Yale University in 1963. Although these images are now used as an entryway into the study of color, they originally came into being as the end result of a collaborative process of experimentation. Through this process, Albers wanted his students “to develop—through experience—by trial and error—an *eye for color*,” by which he meant “seeing color action as well as feeling color relatedness.”¹

For those who have developed an eye for color, “colors present themselves in continuous flux, constantly related to changing neighbors and changing conditions.”² Each of the studies displayed in this exhibit was designed to reveal a specific aspect of color behavior. Some pose a specific “problem,” for example: How can we make one



CARLOS CRUZ-DIEZ. *PHYSICHROMIE NO. 1022*, 1975. PHOTOGRAPH COURTESY OF THE HORTENSIA HERRERO COLLECTION



CARLOS CRUZ-DIEZ. *CHROMOINTERFÉRENCE SPATIALE PARIS 18 PEGASO*, 2018. PHOTOGRAPH COURTESY OF THE HORTENSIA HERRERO COLLECTION

pigment appear as two colors? Others call for precise reproductions of the various mixtures of light and pigment that we see in our natural surroundings. The “solutions” to these problems were originally made by students from pieces of colored paper cut from magazines. After his retirement in 1958, Albers decided to publish these exercises together with a collection of what he considered to be the most successful and interesting solutions. The handbook is now regarded as a classic; it has gone through multiple editions, been translated into twelve languages, and is still widely used today.

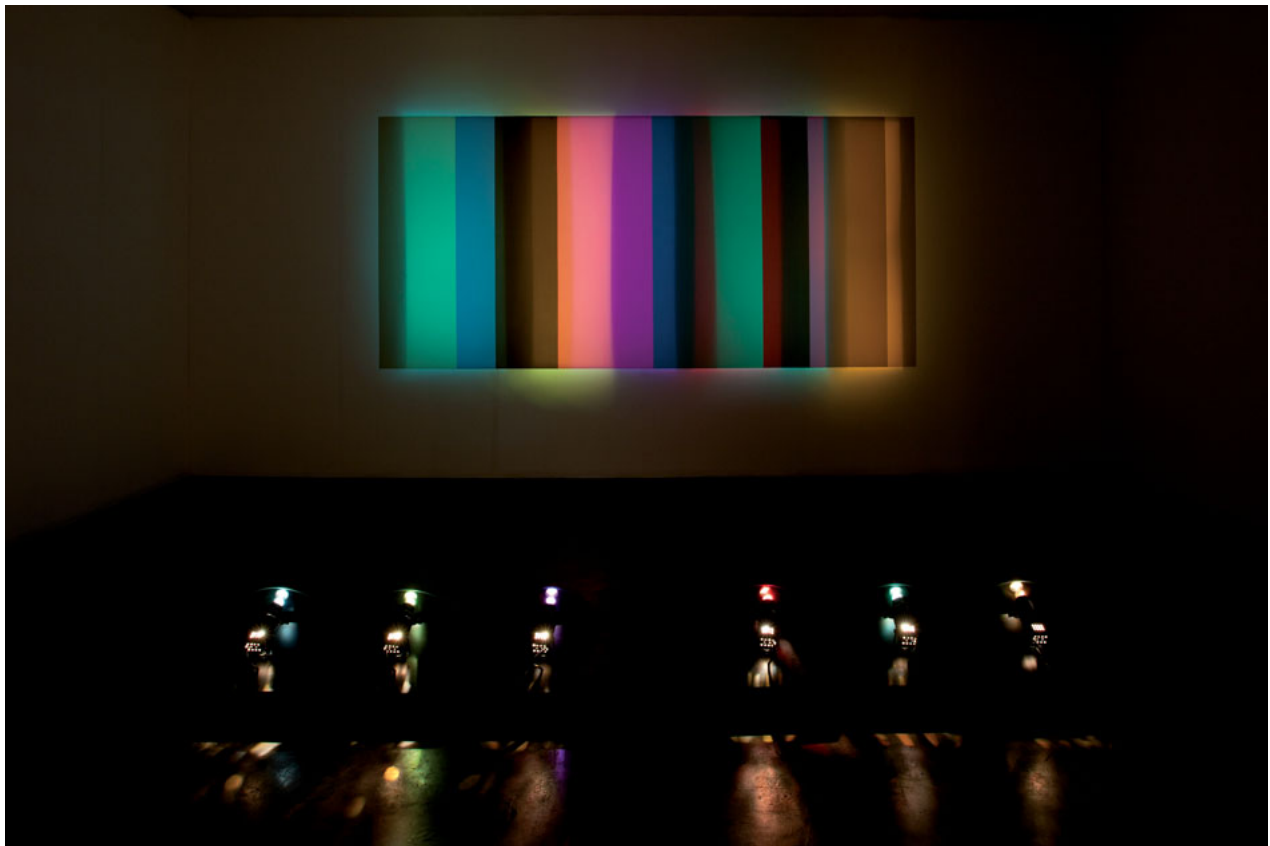
Carlos Cruz-Diez, *Chromosaturacion* (1965), *Physichromie no. 1022* (1975), *Chromointerférence spatiale Paris 18 Pegaso* (2018)

The exhibit continues with another landmark in the exploration of color, Carlos Cruz-Diez’s *Chromosaturacion* (1965). This work, and the art of Cruz-Diez (1923-2019) in general, arguably represents the culmination of the

turn in modern art toward the investigation of color as a worthy subject in its own right. In particular, we see two central themes of this movement brought to their fullest realization: the treatment of color as an autonomous phenomenon rather than a “secondary quality”; and the use of innovative techniques that facilitate our experience of color as an event rather than a fixed property.

According to Cruz-Diez, for centuries color was placed in an inferior position with respect to form: “first FORM, and then COLOR. For many, color was and continues to be that certain something that fills in form.”³ His mission as an artist was to liberate color from this subservient role through works that call our attention to the way in which colors evolve in time and space. For this purpose, prominent features of his works – and of the optical art and kinetic art with which he is associated – include the use of geometric patterns and the observer’s movement to create emergent and dynamic experiences of color.

In *Chromosaturacion*, we explore three separate but interconnected chambers illuminated by red, green, and



KARINA PEISAJOVICH. *RGB/CMY*, 2011/2026. MUSEO UNIVERSIDAD DE NAVARRA COLLECTION

blue monochromatic light. The experience of each spectator is a product of their movement and individual sensitivity to color, as they are “immersed in an atmosphere of colored air, a space where color acts with all its force on the spectator’s skin, objects and surrounding wall surfaces.”⁴ No two encounters with the work are exactly the same, as the light impacts us differently depending on how we move and where we look. Color is detached from particular objects so that it becomes a free-floating, immersive experience. In the words of Cruz-Diez, “Color becomes a situation happening in space, without the help of form, or even a support, and free of cultural conventions.”⁵

The exhibition also includes two works from his *Physichromie* series, in which colors are generated by the movement of the spectator. Again, color is experienced as a contingent and dynamic phenomenon that is created anew by each individual encounter.

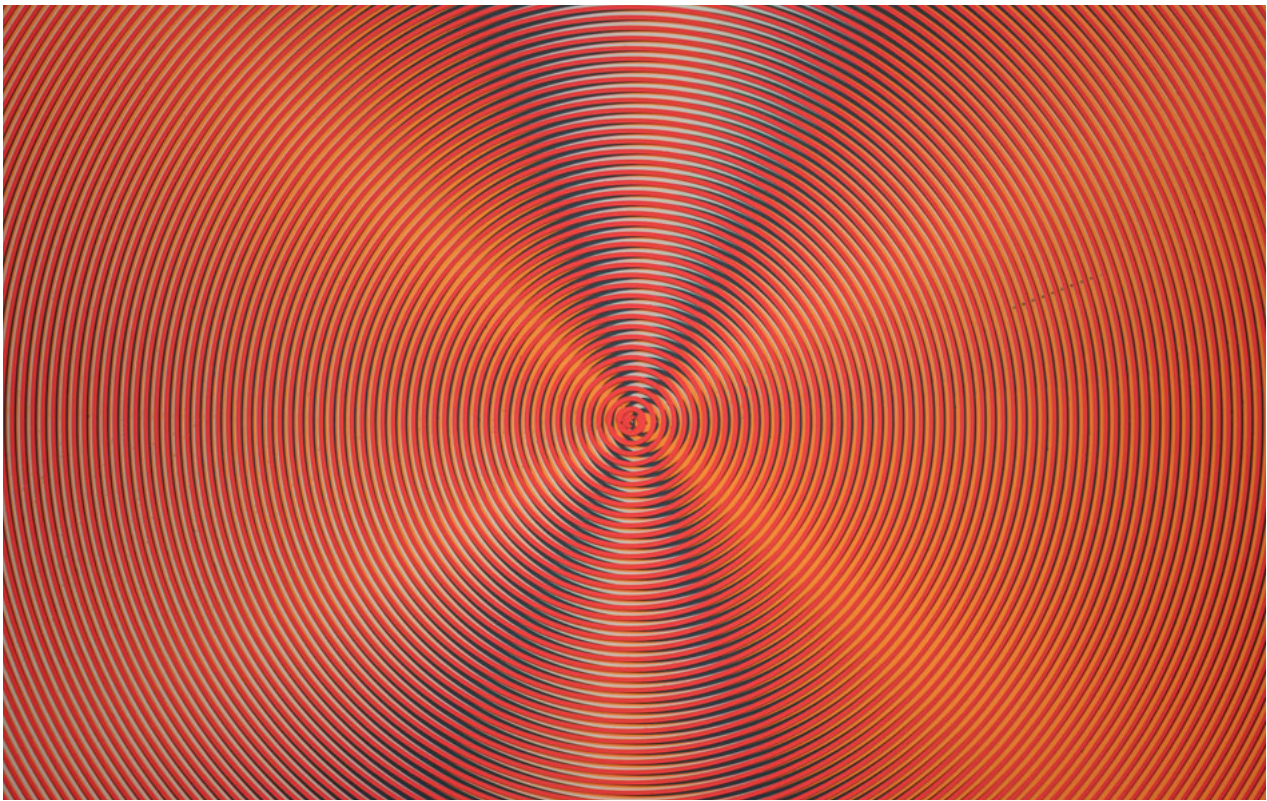
Karina Peisajovich, *RGB/CMY* [2011]

The work of Karina Peisajovich (Buenos Aires, 1966) is informed by her study of the history of color theories and their representation in scientific diagrams. She is keenly interested in the scientific properties of light and color as well as their emotional resonances. For this work, she focuses on the two main systems used to reproduce color on screens and in print: RGB, which uses primary colors of light (red, green, and blue); and CMY, which uses primary colors of ink (cyan, magenta, and yellow). By projecting continually changing bands of RGB light onto painted

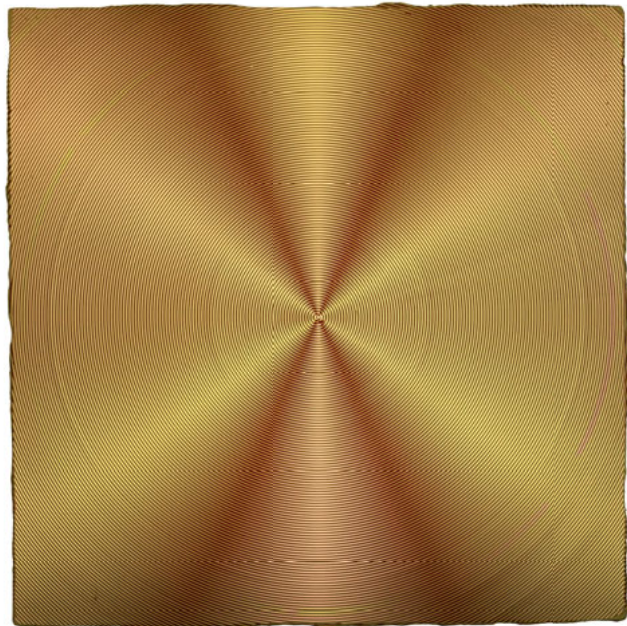
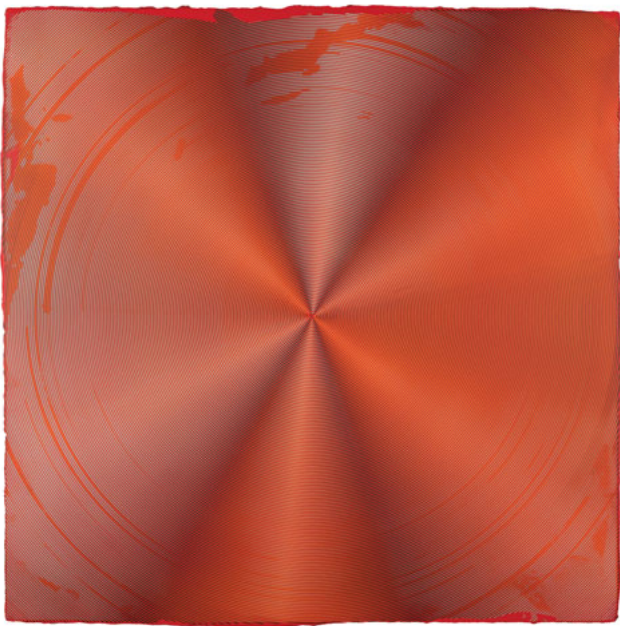
bands of CMY, Peisajovich creates a novel phenomenon in which the dynamism of color is realized in spectacular fashion. The mesmerizing transformations of color that we see happening before our eyes are products of the continual interaction of these two systems of light-based and pigment-based color.

Anoka Faruquee & David Driscoll, *interference paintings* (2017-2021)

Anoka Faruquee (Ann Arbor, MI, 1972) and her collaborator David Driscoll (Steubenville, OH, 1964) have developed a body of works that explore the *interference effects* caused by overlapping patterns of concentric circles. Interference effects include *moiré* patterns, where slightly offset patterns create shimmering movement and the appearance of volume, and, at smaller scales, a phenomenon known as “structural color,” where color is generated by the microscopic structure of a surface. The latter effect is widely used in nature; for example, it can be seen in the vibrant and iridescent colors of peacock tailfeathers and butterfly wings (samples of which are displayed in the foyer area of this exhibition). Because of the way interference patterns change as we move, they call into question the common view of color as a fixed property of objects. They also call our attention to the wave-like behavior of light. In Faruquee and Driscoll’s words, “The illusory effects in these paintings – of gloss, prismatic color, shading, and volume – are simulations of the wave behavior of light, i.e. reflection, refraction, diffraction and interference.”⁶



ANOKA FARUQEE & DAVID DRISCOLL. 2018P-25 [CIRCLE], 2018. DETAIL PHOTOGRAPH: MANUEL CASTELLS



ANOKA FARUQEE & DAVID DRISCOLL. 2018P-25 [CIRCLE] AND 2019P-25 [CIRCLE], 2018. PHOTOGRAPHS COURTESY OF GALERÍA CAYÓN, MADRID/MANILA/MENORCA

The patterns that we see in Faruqee and Driscoll's paintings are planned with scientific precision and made with custom-designed tools. Small "glitches" and other remnants of the production process are intentionally left visible, presenting a contrast between machine-like regularity and natural spontaneity.

Los Dalton, *Línea* (2023/2026)

Los Dalton is the name of an artistic collective formed by Miguel Fructuoso (Murcia, 1971), María Sánchez (Ávila,

1977) and Miguel Ángel Tornero (Baeza, 1978) in 2020. The project started when Sánchez and Tornero discovered that Fructuoso suffered from Daltonism, or color-blindness. This discovery was the starting point for a series of projects that highlight the differences between individual experiences of color. The painted line that continues around the walls of this gallery was produced by a team of volunteers with Daltonism. Each volunteer was presented with only the most recently painted section of the line and then asked to continue painting using the closest col-



LOS DALTON [MARÍA SÁNCHEZ, MIGUEL FRUCTUOSO AND MIGUEL ÁNGEL TORNERO]. *LÍNEA*, 2023. SITE-SPECIFIC INTERVENTION. CENTRO JOSÉ GUERRERO, GRANADA. PHOTOGRAPH COURTESY OF ANTONIO F. MORILLAS

or they could find from a collection of more than 100 samples of paint. This simple exercise draws attention to how differently we perceive colors, such that two colors that appear identical to one person may appear completely different to another. It also indicates the impossibility of transmitting our individual experience of color through words.

Color and perception

What can be learned from these experiences of the interactive and dynamic nature of color? In particular, what do they imply about the role of colors in perception?

Questions about perception and color have been debated by philosophers and scientists for centuries, and although significant progress has been made in recent decades, many questions remain unanswered. Ironically, our current perplexity about color is partly a consequence of scientific knowledge, or rather the way in which this knowledge is usually interpreted. In short, because science shows that the colors we see cannot be identified with any physical property of the objects around us, many have concluded that colors are merely subjective, even illusory. But then why do our eyes deceive us? Why do colors seem to belong to the presence of things in our environment? Why is color vision so widespread among other animals?

In the atrium outside the galleries, we invite you to reflect on the role of color in perception from the standpoint of the behavior revealed by the artwork. To facilitate this inquiry, we provide a collection of displays and activ-

ities that focus on three basic questions: How do colors change? How do colors happen? How do colors help us to see?

In light of the artwork, the fact that colors change should be plainly evident. But what is the significance of this fact for perception? Our thinking about this question depends on our concept of the job that colors do. It is widely assumed that colors just tell us about the “colors of things” (i.e., their pigmentation). From this perspective, colors change for one reason only: to maintain color constancy. Color constancy refers to the way in which objects appear to have the same color in different light conditions. The converse of color constancy is the Gelb effect, which we demonstrate in the exhibit. This is a change of lightness or color that occurs when objects are illuminated differently from their surroundings. In sum, color constancy and the Gelb effect suggest that colors change in order to maintain the same appearance relative to their surroundings.

On closer examination, however, it seems that this view is too simple. As indicated by the behavior revealed by the artwork, and also by the various models of “color space” displayed in the atrium, colors change in many ways. Moreover, the causes of change are many. This complexity is due to the fact that colors are interactive phenomena arising from the interplay of three “ingredients”: 1) the light produced by different sources and conveyed by surrounding media; 2) the materials, structures, and surface layout of our environment; 3) our sensitivity to different wavelengths of light. If any one of these three in-

gradients is missing, color doesn't happen. This last point is demonstrated in the exhibit by a specially painted black box that can be filled with light and yet, because none of this light is reflected by anything, its inside appears totally black. In short, to see color we need more than the presence of light: we need light that is *structured* by its interaction with different surfaces.

Once the complexity of color behavior is brought to our attention, we have reason to wonder why we almost never find colors to be confusing. Our lack of confusion, not to mention the dependability of color vision in nearly every situation of ordinary life, suggests that changes of color are informative rather than disorienting. And, in fact, the most recent scientific studies demonstrate that colors enhance our capacity to see shape, volume, and distance. In short, colors do much more than tell us about the "colors of things."

To appreciate these latest advances in the science of color vision, we have to think more like artists. That is, we have to stop thinking about colors as inert "secondary qualities" whose only role in perception is to fill in the contours of objects, and start thinking of them as interac-

tive phenomena, evolving in time and space. We have to see how colors participate in our perception of everything around us. We don't just see colors; we use colors to see.

When we think of colors this way, they become less perplexing and more communicative. We see that the relativity of colors – the richness of their behavior – does not make them deceptive. On the contrary, it makes them more useful for staying engaged with our surroundings. The behavior of color not only helps us to see things; it also helps us to feel the presence of things that *can* be seen. Because colors change, they help us to stay in touch with a world in which there is always more to see.

-
1. Joseph Albers, *Interaction of Color* (Yale University Press, 2013), 1.
 2. Albers, 5.
 3. Carlos Cruz-Diez, *Reflection on Color* (Fundación Juan March, 2009), 53.
 4. Cruz-Diez, 23.
 5. Cruz-Diez, 134.
 6. Anoka Faruquee & David Driscoll, "Artist's Statement" (November 2024), faruqueedriscollstudio.com, accessed August 18, 2026.



MUSEO
UNIVERSIDAD
DE NAVARRA

LIVE AND DIRECT:
COLOR, PERCEPTION,
EXPERIENCE

SEP 16 2026
FEB 7 2027

PLANT
-1



MUSEO UNIVERSIDAD DE NAVARRA

PRESIDENT OF THE UNIVERSIDAD DE NAVARRA
María Icaburu

PRESIDENT OF THE MUSEUM BOARD
Ángel Gómez Montoro

DIRECTOR
Jaime García del Barrio

ARTISTIC DIRECTORS
Gabriel Pérez-Barreiro
Teresa Lasheras

MANAGER

José Manuel Trillo

DIRECTOR OF COMMUNICATION AND MARKETING
Elisa Montserrat

HEAD OF COLLECTIONS AND EXHIBITIONS
Ignacio Migueliz

COORDINATOR OF COLLECTIONS AND
EXHIBITIONS
Natalia I. Sarratea

COLLECTIONS ADVISOR
Valentín Vallhonrat

EXHIBITION

ARTISTIC CURATOR

Gabriel Pérez-Barreiro

ACADEMIC CURATOR

Nathaniel F. Barrett

COORDINATION
Ignacio Migueliz

COORDINATION ASSISTANT
Natalia I. Sarratea

INSTALLATION

Mikel Juango

Joarte Estudios

Pigmento Otundal

Ostiz Audiovisuales

Pinturas Galán

RESTAURATION

Montaña González

GRAPHIC DESIGN

Ken

TRANSPORT

EDICT

Art i Clar

INSURANCE

Axa Art

Es Arte Deleitosa

PUBLISHED BY: MUSEO UNIVERSIDAD DE NAVARRA / DL NA 1794-2026 / +34948425700 / MUSEO.UNAV.EDU / MUSEO@UNAV.ES



NOTE: THIS TEXT HAS BEEN AUTOMATICALLY TRANSLATED