

JAIC Special Issue on Colour and Light

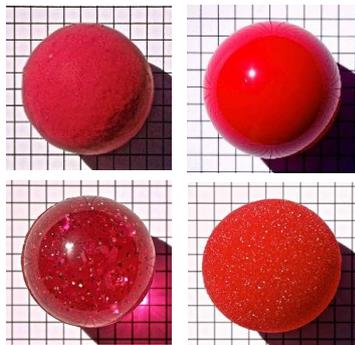
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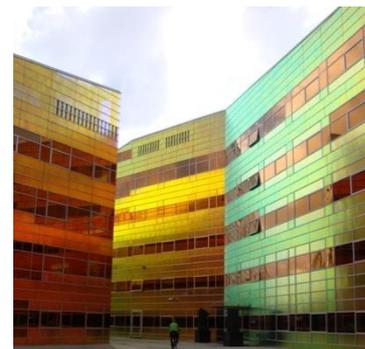
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The inspiration for a special issue of the *Journal of the Association Internationale de la Couleur* (JAIC) about 'colour and light' grew out of a conversation between Associate Editor Vien Cheung and myself, Verena M. Schindler, during the AIC 2015 Midterm Meeting in Tokyo, Japan. Potential authors related to the topic were determined and then invited to submit papers for review. The result is the present Volume 17 (2017), which includes eleven papers about the visual experience of colour and light as well as about 'opening the eyes' and 'making visible' and is aimed at persons interested in the creative fields of art, design, and architecture.



Discussing the works of a few artists and different modes of appearance established by David Katz, [Paul Green-Armytage](#) (Australia) extends Katz's ideas with his own analysis, while drawing attention to the difficulties of dealing with attributes of colour and appearance such as matte, glossy, metallic, translucent, transparent, or textured. Presenting various students' attempts at arranging objects with different colours and different surface qualities, the author points not only to how the vocabulary, but also how the colour system should be extended. Exploring dimensions of colour including light and appearance is a new approach in twentieth-century colour theory. The author quotes José Luis Caivano, who described a two-dimensional model for *cesía* (appearance) in 1993 based on César Janello's theory of design. The present paper coherently and newly enlarges this colour system.

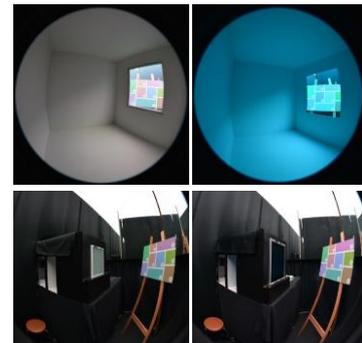
Exploring the visual experience of colour in contemporary architecture, [Fiona MacLachlan](#) (United Kingdom) develops some interesting insights from architects applying prismatic glass to colour-specific films and digitally programmed coloured lighting. Underscoring the arguments are examples taken from the work of American architect Steven Holl and the Dutch office UNStudio. As well, prominent works of artists such as Daniel Buren and Carlos Cruz-Diez point to the relevance of artistic research about colour and light within architectural space. And lastly, MacLachlan's article also deals with the increasing application of digital media to master exterior and interior architecture based on the work of designers such as Jason Bruges Studio and Carnovsky. Especially valuable are the author's critical comments concerning the use of colour as an inherent design element versus employing it as an independent added feature potentially distorting the expressive meaning of the architecture.





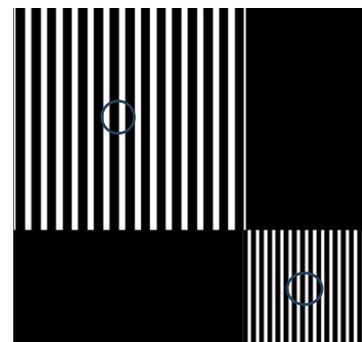
New ways of using large format digital display screens in contemporary urban space and as communication elements are discussed by [Katia Gasparini](#) (Italy). Her paper addresses how to make architecture visible, i.e., perceptible, by means of the colour and light from digital technologies such as media façades, interactive installations, and monumental projections. Used as temporary or permanent platforms—not only for commercial aims but also for public communication, cultural exchange, artistic work, synaesthetic performance, or political messages—these urban screens, which are constituted through light and colour, have a strong impact on architecture, spatial dynamics, diurnal and nocturnal ambience, and the functionality of urban space and the built environment. Further, the author explores the relationship between users, smart technologies, mobility, and new concepts of communication and approaches to design.

The desire of users to replace walls with high-tech glazing that allows for control of the incoming solar radiation and indoor lighting conditions, while also providing expansive views to the outside, has led to new sustainable and smart materials. Glass can work as a dynamic filter, especially if technologically advanced glazings such as electrochromic (smart glass), electrotropic, or photochromic products are used. The research carried out under an artificial sky by [Shabnam Arbab and Barbara Szybinska Matusiak](#) (Norway) explores whether these three different types of glazing have a high or low impact on the perception of colours. The transmittance state of a switchable glazing may be transparent, coloured, or a point in between these two states, thereby changing the spectral composition of light and affecting the appearance of objects as well as the ambience of the space.



Based on Shigenobu Kobayashi's 'Color Image Scale' method, [Markus Reisinger](#) (Switzerland) introduces the two contrasting pairs soft-hard and warm-cool as comparative dimensions in order to evaluate the impact of surface texture, colours, and lighting quality on visual perception. These design options may facilitate the choice of lighting, colours, and surfaces for indoor spaces. As well, they may help anticipate the total appearance of an interior or a scene and provide arguments for grounding particular creative preferences.

Inspired by observing the linear reliefs of the Oslo Opera House and the interior and exterior reliefs by Norwegian artist Edit Lundebrekke, [Barbara Matusiak](#) (Norway) explores the parameters that influence the perception of sunlit monochrome linear reliefs. Based on the sunlight's angle of incidence, the angle of observation, and depth of the relief, she calculates the average luminance of a sunlit relief, concluding that it is not the relief's depth or the interval width that is relevant for perceived lightness, i.e., the degree of stimulation, but rather the observer's viewing angle and the sunlight's angle of incidence.



Instigated by the debate about the colour reconstruction of the north-east façade of the Royal Castle of Warsaw, [Anna Sochocka and Karin Fridell Anter](#) (Sweden) raise the following question: Can the colour of a façade be reconstructed on the basis of an artist's panoramic view of the city? Previous research results had shown that a paint colour of a façade is perceived differently at a distance. In order to better describe this visual experience, the authors introduce the terms 'nominal colour' versus 'perceived colour'. They analyse selected façades of Warsaw's Old Town under various weather conditions, concluding that, in general, colours are perceived less blackish, i.e., lighter at a distance. Therefore, the surface colour of the Royal Castle should have been a darker colour than in the *veduta*.



How do we teach colour to architectural students? The authors [Ralf Weber and Thomas Kanthak](#) (Germany) take up this challenging question. The point of departure in their courses is not colour theory *per se*, but individual experience and the analysis of natural and manmade environments. Another important feature of their didactic approach is that colour is not meant to be an isolated design element, but rather an integrated one in a general approach that includes light and space, whereby the design idea crystallizes somewhere in between the three. The paper provides insights into the steps and content of these specific courses as well as some concluding remarks reflecting on the highlights and difficulties of their own experience.

The last three papers deal with artistic works including art installations that make the interaction between colour and light become almost tangible.

[Charlotte Beaufort](#) (France) develops a theory of the interval that enhances the emergence of colour. In her colour-light installations, slowly shifting coloured lights produce nearly imperceptible motion, which differs from the rapidly pulsing coloured light in the works of Ann Veronica Janssens or the static fields of coloured light in the works of Michel Verjux or James Turrell. Focusing mainly on the effects of coloured light in contrast to pigment colour, Beaufort delineates some particular lines of thought, which help the reader understand the author's own approach to colour. As well, she discusses a non-colour approach, e.g., as with the monochromes in *ganzfeld* [from the German for 'entire field'] experiences, which are achieved by filling the entire visual field with the same coloured light, in comparison to a colourist approach, in which arrangement, succession, and juxtaposition of colours are fundamental.



Dealing with coloured light performances, a most topical theme today, in her own colour-light installations or concerts, [Gisela Meyer-Hahn](#) (Germany) composes with colour, light, space, and music or sound to trigger sensual perceptions through hearing and seeing. In her contribution to this special issue, the author addresses her individual practice of dramaturgy that starts with observing and exploring the pre-existing context followed by an evaluative and creative process with the aim of stimulating the spectator's personal and associative experience. She does not use coloured light to illuminate an object or space, but rather as a means of expressing relational interactions between the different factors. Further, Meyer-Hahn describes concepts and results of *Colour Dialogues*, a temporary art project at wind power stations, as well as a *Colour-Light-Concert* performed live at the Cathedral of St. Peter, Schleswig, using a script and mixer console.

Coloured glass artworks allow natural light to filter into spatial environments with the aim of enlivening space by affecting sensory experience. A crucial aspect is the viewer's immersion in environments of colour and light that create an ambience of comfort and well-being. Such environments also help participants to identify natural rhythms and cycles. As well, the bright colours of the glass panels challenge the viewer to see surroundings in a new way. [Doreen Balabanoff](#) (Canada) describes several of her artworks to create a deeper understanding of the phenomenological and atmospheric nature of colour and light. Divided into four themes—image and emanation; resonance and chord; threshold and veil; and, projection, reflection, light and time—Balabanoff's ideas emerge in a continuous flow through testing and expanding notions of colour, daylight, and darkness.



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(Guest Editor)

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