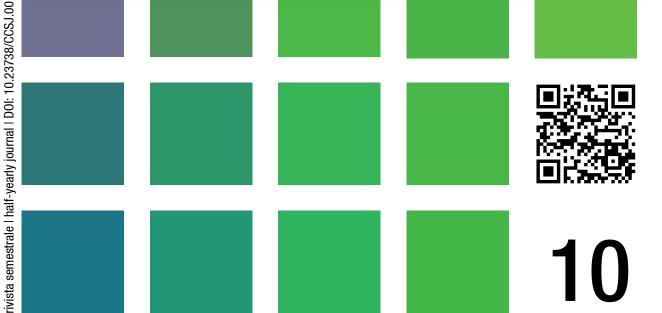


Rivista dell'Associazione Italiana Colore

DOI: 10.23738/ccsj.i102018.00



CULTURA E SCIENZA DEL COLORE COLOR CULTURE AND SCIENCE

Rivista semestrale dell'Associazione Italiana Colore http://jcolore.gruppodelcolore.it/ ISSN 2384-9568 DOI: 10.23738/CCSJ.00 ANCF F227716

DIRETTORE RESPONSABILE | EDITOR-IN-CHIEF

Maurizio Rossi (Politecnico di Milano, IT)

REDAZIONE | ASSOCIATE EDITORS

Aldo Bottoli (B&B Colordesian, IT) Daria Casciani (Politecnico di Milano, IT) Marco Gaiani (Università di Bologna, IT) Silvia Piardi (Politecnico di Milano, IT)

Alessandro Rizzi I Deputy Editor (Università degli Studi di Milano, IT)

Francesca Valan (Studio Valan, IT) Vien Cheung (University of Leeds, UK)

EDITORIAL BOARD MEMBERS

John Barbur (City University London, UK) Giovanni Bartolozzi (IFAC- CNR. IT) Berit Berastrom (NCS Colour AB. SE) Giulio Bertagna (B&B Colordesign, IT) Janet Best (Natific, UK) Aldo Bottoli (B&B Colordesian, IT) Patrick Callet (École Centrale Paris, FR)

Jean-Luc Capron (Université Catholique de Louvain, BE)

Daria Casciani (Politecnico di Milano, IT) Vien Cheung (University of Leeds, UK) Paula Csillag (ESPM University, BR)

Osvaldo Da Pos (Università degli Studi di Padova, IT) Hélène DeClermont-Gallernade (Chanel Parfum beauté, FR)

Reiner Eschbach (Xerox, USA) Alessandro Farini (INO-CNR, IT)

Christine Fernandez-Maloigne (University of Poitiers, FR)

Renato Figini (Konica-Minolta Sensing Europe, EU)

Raffaella Fontana (INO-CNR, IT)

Davide Gadia (Università degli Studi di Milano, IT)

Marco Gaiani (Alma Mater Studiorum Università di Bologna, IT) Robert Hirschler (Serviço Nacional de Aprendizagem Industrial, BR)

Takahiko Horiuchi (Chiba University, JP)

Sandra Krasovec (Fashion Institute of Technology, USA)

Francisco Imai (Canon, USA) Lia Luzzatto (Color and colors, IT) Kevin Mansfield (UCL, UK)

Veronica Marchiafava (GdC-Associazione Italiana Colore, IT)

PEER REVIEW PROCESS

Tutti gli articoli inviati alla rivista "Cultura e Scienza del Colore - Color Culture and Science" sono sottoposti ad un processo di revisione secondo la seguente procedura:

PRIMA REVISIONE

Gli associate editor valutano ogni articolo per determinare se il tema e il contenuto sono di interesse per la rivista. Una volta valutati gli articoli, gli associate editor selezionano dei revisori scegliendoli nell'editorial board in base all'esperienza degli stessi in un particolare settore disciplinare o tematica.

SECONDA REVISIONE

Ogni articolo è revisionato da due o tre revisori in un processo in cui essi stessi e gli autori sono mantenuti anonimi. Ai revisori è chiesto di valutare l'articolo considerando la sua originalità, la metodologia applicata e l'impatto sulla ricerca o sulla pratica professionale. Dopo aver raccolto i commenti dei revisori, gli associate editor elaborano e inviano al direttore responsabile un giudizio riassuntivo sull'accettazione o meno dell'articolo

COLLABORATORI I CONTRIBUTORS

Laura Bellia, Meriem Benkhedda, Giulio Bertagna, Ute Besenecker, Barbara Blin-Barrois, Aldo Bottoli, John Bullough, Giorgio Buratti, Guihua Cui, Osvaldo Da Pos, Hélène de Clermont-Gallerande, Julie Devdier, Chiara Donzella, Patrick Doucet, Eszter Dudás, Francesca Fragliasso, Robert Gerlach, Min Huang, Ted Krueger, Michela Lecca, Changjun Li, Ming Ronnier Luo, Maria Martone, Annamaria Mauro, Anna Mazzanti, Manuel Melgosa, Maria Kirk Mikkelsen, Claudio Oleari, Massimo Osanna, Pietro Paglierani, Floriana Papa, Pedro J. Pardo, Zachary Pearson, Renata Pompas Nicolas Rolland Michela Rossi Gennaro Spada Emanuela Stefanizzi Kheira Tabet Aoul, Justyna Tarajko-Kowalska, Francesca Valan, Anne Varichon, Ágnes Urbin

EDITORE | PUBLISHER

Gruppo del Colore – Associazione Italiana Colore www.gruppodelcolore.it Sede legale: Piazza Carlo Caneva, 4 - 20154 Milano (Italia)

NUMERO 10 - DICEMBRE 2018 **NUMBER 10 - DECEMBER 2018**

DOI: 10.23738/ccsj.i102018.00



Gabriel Marcu (Apple, USA) Anna Marotta (Politecnico di Torino, IT) Manuel Melgosa (Universidad de Granada, ES) Anna Grazia Mignani (IFAC-CNR, IT) Annie Mollard-Desfour (CNRS, FR)

Maria Luisa Musso (Universidad de Buenos Aires, RA) Galina Paramei (Liverpool Hope University, UK)

Laurence Pauliac (Historienne de l'Art et de l'Architecture, Paris, FR)

Silvia Piardi (Politecnico di Milano, IT) Marcello Picollo (IFAC-CNR, IT) Renata Pompas (AFOL Milano-Moda, IT) Boris Pretzel (Victoria & Albert Museum, UK) Noel Richard (University of Poitiers, FR) Katia Ripamonti (Cambridge Research System, UK) Alessandro Rizzi (Università degli Studi di Milano, IT) Maurizio Rossi (Politecnico di Milano, IT) Jodi L. Sandford (Università di Perugia, IT)

Raimondo Schettini (Università degli Studi di Milano Bicocca, IT) Verena M. Schindler (Chair AIC S.G. Environmental Colour Design) Gabriele Simone (Renesas Electronics Europe GmbH, DE) Andrea Siniscalco (Politecnico di Milano, IT)

Ferenc Szabó (University of Pannonia, HU) Mari UUsküla (Tallinn University, EE) Francesca Valan (Studio Valan, IT) Ralf Weber (Technische Universität Dresden, DE) Stephen Westland (University of Leeds, UK) Alexander Wilkie (Charles University in Prague, CZ)

All articles submitted to "Cultura e Scienza del Colore - Color Culture and Science" journal are peer-reviewed according to the following procedure:

The Associate Editors evaluate each article in order to define if the topic and content is suitable for consideration by the journal. Once the article passes the initial review the Associate Editors select several referees in the Editorial Board based on their expertise in the particular field or topic.

SECOND REVIEW

Each article is reviewed by two or three referees under a double-blind peer review process where the authors and the reviewers are kept anonymous. Referees are asked to evaluate the manuscript based on its originality, methodology and impact to research and relevance to the professional practice. After collecting the referees' reports, the Associate Editors make a recommendation on the acceptability of the article to the Editor in Chief.



CULTURA E SCIENZA DEL COLORE COLOR CULTURE AND SCIENCE

Rivista dell'Associazione Italiana Colore Registrazione presso il Tribunale di Milano al n. 233 del 24.06.2014

O SOMMARIO I SUMMARY

by Maurizio Rossi	5
Color on Ceramics in the Medieval Architecture of Tlemcen, Algeria: Light, Ambiance and Symbolism by Meriem Benkhedda and Kheira Tabet Aoul	7
The experience of equivalent luminous colors at architectural scale by Ute Besenecker, Ted Krueger, John Bullough, Zachary Pearson, Robert Gerlach	13
The changing colour of CHANEL's lipstick ranges from 1960 to 2015 by Hélène de Clermont-Gallerande, Nicolas Rolland, Patrick Doucet, Julie Deydier, Anne Varichon, Barbara Blin-Barrois	21
Light and colors in the "Villa dei Misteri" by Laura Bellia, Massimo Osanna, Gennaro Spada, Annamaria Mauro, Chiara Donzella, Francesca Fragliasso, Emanuela Stefanizzi	31
A Colour Palette Methodology by Maria Kirk Mikkelsen	43
Blue color traditions in Polish wooden architecture – valuable cultural heritage and a source of inspiration by Justyna Tarajko-Kowalska	49
Is it possible to improve the weighting function for lightness in the CIEDE2000 color-difference formula? by Manuel Melgosa, Guihua Cui, Claudio Oleari, Pedro J. Pardo, Min Huang, Changjun Li, Ming Ronnier Luo	59
From decoration to industrial design: Gio Ponti and color in architectural innovation by Michela Rossi and Giorgio Buratti	67
The contribution of colour in the artistic representation of the sacred. Italian innovations from the end of XIX century to the first part of the XX century by Anna Mazzanti	77
Improvement of a lamp construction with a highly reflective material by Eszter Dudás and Ágnes Urbin	87
A digital framework for color design and education by Pietro Paglierani and Francesca Valan	93

10 SOMMARIO I SUMMARY

Colors, lights and shapes in the Naples underground. The 103 "art stations" of Line 1 Colori, luci e forme nell'underground napoletano. Le "stazioni dell'arte" della Linea 1 by Maria Martone and Floriana Papa Colours for SLAncio. Project of the scene for a service and care facility in Monza 119 Colori per SLAncio. Progetto della scena per una struttura di assistenza e cura a Monza by Giulio Bertagna and Aldo Bottoli 129 **COLUMNS Review** by Renata Pompas 132 **Communications and Comments** by Michela Lecca and Osvaldo da Pos

Editorial

By publishing the n. 10 the "Color Culture and Science Journal" has reached its fifth year of life. After a process that lasted almost two years, the magazine was recognized as "Scientific" by the ANVUR for the area 08 "Civil Engineering and Architecture" and the area 10 "Sciences of antiquity, philological-literary and historical-artistic". For three years the magazine has been publishing only articles in English or bilingual. The ethical code, the peer review process and the detailed instructions for authors are available on the website. Each article is indexed by a DOI code and the dates of reception, review and acceptance of each published article are declared, in addition to any sources of funding and any conflicts of interest. All of these criteria were applied for the journal to be included in the Emerging Sources Citation Index (ESCI) of Web of Science (WoS) for which we applied at the beginning of 2018 and we are awaiting a response.

The journal is published by a multidisciplinary association that has its points of reference in the themes of color, light and the linked technical-scientific, cultural and professional sectors. Also in this issue there is a clear example of multidisciplinary integration.

In the paper "Color on Ceramics in the Medieval Architecture of Tlemcen, Algeria: Light, Ambiance and Symbolism", the authors Meriem Benkhedda and Kheira Tabet Aoul explore through a cultural and historical analysis the ancestral know-how and demonstrate that this architectural heritage has a colorful atmosphere, whose evolution is linked to the relationship between shapes, lights, materials and colors as well as its sociocultural context. In the article "The experience of equivalent luminous colors at architectural scale", Ute Besenecker, Ted Krueger, John Bullough, Zachary Pearson and Robert Gerlach present a research in the context of lighting and perception, through several experiments at architectural scale to explore whether visual stimuli closely matched for chromaticity and light level would produce recognizable differences in perceived and intuitive qualities. The topic of color in cosmetics, in the NCS color space defining hue, blackness and chromaticness of lipsticks, is the core of the scientific research "The changing colour of CHANEL's lipstick ranges from 1960 to 2015" presented by Hélène de Clermont-Gallerande, Nicolas Rolland, Patrick Doucet, Julie Devdier, Anne Varichon and Barbara Blin-Barrois. Laura Bellia, Massimo Osanna, Gennaro Spada,

Annamaria Mauro, Chiara Donzella, Francesca Fragliasso and Emanuela Stefanizzi, in their research "Light and colors in the Villa dei Misteri", analyze the lighting conditions and performed a metrological survey of the fresco's colors in the triclinium of this ancient Roman villa in Pompeii. In the paper "A Colour Palette Methodology", Maria Kirk Mikkelsen presents a method in design teaching for the creation of color palette called Color Combination Cards which is divided into four categories: plan, create, adjust and review. Justyna Tarajko-Kowalska presents a study "Blue color traditions in Polish wooden architecture valuable cultural heritage and a source of inspiration" about the use of the blue color in the traditional Polish wooden architecture, considering its symbolic, functional and decorative aspects. Manuel Melgosa, Guihua Cui, Claudio Oleari, Pedro J. Pardo, Min Huang, Changjun Li, and Ming Ronnier Luo, in the metrological research "Is it possible to improve the weighting function for lightness in the CIEDE2000 color-difference formula?", compare the performance of the ΔE_{00} colordifference formula with three modified formulas, applying the recommendations of the CIE 217:2016. Using the methods of investigation of the representation, Michela Rossi and Giorgio Buratti in their article "From Decoration to Industrial Design: Gio Ponti and Colour in Architectural Innovation", focus on the role of color in Ponti's design works: ceramics, furnishing accessories, domestic interior and building elements in the period 1940-59. In the essay "The contribution of colour in the artistic representation of the sacred. Italian innovations from the end of XIX century to the first part of the XX century", through a historical analysis, Anna Mazzanti delves into the theme of color, that assumes a symbolic value, in the context of the sacred painting between the nineteenth and twentieth centuries in Italy. Eszter Dudás and Ágnes Urbin in the paper "Improvement of a lamp construction with a highly reflective material" present a case study of lighting product design of a car indoor lamp focusing on the efficiency and the homogeneous light distribution of the product. In the paper "A digital framework for color design and education" Pietro Paglierani and Francesca Valan present an interesting set of digital functions, named "ColorTools", collected in a single framework written in Python, implementing the most popular color-theory libraries to match the needs of color designers. Maria Martone and Floriana Papa, in their paper "Colors, lights and shapes in the Naples underground. The art stations of Line 1", analyze and document the chromatic aspects of some of the main art stations, through the tools of investigation of the *representation*, defining an underground color sampling guide of spaces without natural light. Finally, Giulio Bertagna and Aldo Bottoli in their article "Colours for SLAncio project of the scene for a service and care facility in Monza" present the interesting results of a color *design* research on the perceptual configuration of the new facility for vegetative states, minimal consciousness, coma and ALS of the San Pietro di Monza Centre.

In the columns, Renata Pompas presents the review of the book of Andrea Dall'Asta "La luce splendore del vero. Percorsi tra arte, architettura e teologia. Percorsi dall'età paleocristiana al barocco - The light splendour of truth. Paths among art, architecture and theology from early Christian to baroque". Michela Lecca with Osvaldo da Pos in their Communications and Comments report some considerations from the talk that Prof. da Pos gave during the Munsell 2018 International Congress, about various topics on the subject of "Food and Color".

The Editor in Chief Maurizio Rossi