INTER-SOCIETY COLOR COUNCIL

Inter - Society Color Council

Quarterly Newsletter

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Director's Corner

Nancy Lockhart

Hi, my name is Nancy Lockhart, and I am a new board member with the ISCC. It is an honor to be asked to serve on one of the leading organizations that addresses color topics and color education in both the scientific and art industries.

Throughout my professional career and personal life, my interests have focused on the fusion of science and art and their effects on technology, marketing abilities and human interests. Color can be precise, ambiguous, thought-provoking and emotional. It also can bring on a personal meaning based on our own personal use and exposure to color over time. With all this in mind, I find joy in understanding, examining and exploring the world of color.

My color career began with working in the coatings laboratory at DuPont Performance Coatings during the summers between my university years. I was studying Environmental Science and Earth Studies and working in a chemical company. I was fascinated with how technology could push the use of more sustainability while still achieving dynamic and dazzling color effects in automotive coatings.

After receiving my Bachelor of Science degree from Western Michigan University, I joined DuPont as a full-time employee. I began working in color formulation and development. I received hands-on experience designing and applying and measuring colors at the Mt. Clemens Paint Plant in Michigan. In addition to my color activities, I was also working as a regulatory specialist in reviewing paint formulas for use in OEM automotive plants. I was able to oversee the color development processes, testing requirements and customer approvals to bring these colors to market. This color development role exposed me to global OEM specifications, color matching, color viewing and an understanding of industry needs. From here, I moved into global color forecasting and global color product management.

My love for color was also something that I liked to visualize in artwork. I fell in love with black and white

photography and built a dark room in my basement at home. The idea of taking a colorful image and bringing it back to life by manipulating the image in value shades was an exciting hobby. I was able to reimage the scene in different color palettes and shades. My love for nature was often found in my images as I was thrilled to carry my camera through the mountains of Yosemite and beyond.
In my product management role, I was able to work more extensively in color design of coatings—I worked with research teams at Axalta (formally DuPont) to develop color technologies that would bring colors to life. Here I had the privilege of leading a global team of color specialists and designers to develop a color forecast for the automotive market. I researched years of historical automotive color data to learn how mega trends can affect the popularity of products. Putting that aside, it was time to predict and promote new colors for the changing market. The industry changes brought to market sustainable material alternatives, electric vehicles and differing application processes.

I was fascinated with the changes in color trends over the last 75+ years and became a bit of an automotive color historian. Research and annual reports were released to the public as the global color team at Axalta was tracking these statistics.

In 2022, I made a move to VIAVI Solutions, an optical solutions company, to further learn about color pigments and optics. I worked with automotive, sports and equipment, and industrial and electronic product designers to style with light interference pigments and light diffractive pigments. I was driven to continue to bring new color palettes and technologies to the coatings market that could make a dynamic and emotional effect on the end product.

Over my time in the industry, I was able to create excitement around coatings color and the impact on global automotive consumer preferences and product innovation. My passion for nature and sustainability are always a drive.

I am looking forward to serving on the ISCC board over the

next years. This is a wonderful opportunity to support color education and work with experts in the colorful world of science and art. The Inter-Society Color Council is a 100% volunteer-run organization, and I will be helping to boost our membership and participation over the next few years. Members are able to socialize with experts in the field, learn from peers and share information about what is happening in color. Our membership is the foundation of our knowledge, growth and strategic direction of the council that will bring opportunities for success for all who belong.

Nancy Lockhart

Table of Contents

A Blast from the Past: ISCC Newsletters 50 Years Ago

This Blast from the Past is based on ISCC News Issue 237 (July-August 1975). From the previous column, I remind readers that I skipped Issue 235. In fact, Issue 235 does not appear in our archive.

> *If you have a copy of Issue 235, we would greatly appreciate if you would consent to loaning it so it could be scanned into our permanent record. Please email me to discuss this. (drwyble@gmail.com)*

Issue 237 is fairly typical of the time. Therefore, this column does not focus on the details and contents of Issue 237, but rather highlights some of the practices that might be interesting to restart. At least in the humble opinion of yours truly. So, while there are various reports from the active committees, including nominations and awards, and contributions such as book reviews and reports from member bodies, I will dig into some topics and subjects that fell by the wayside sometime in the intervening 50 years.

List of Members

There is a list of the members who have joined since the previous issue. In addition to their names, a business address was also published. In our modern times of distrust (and sometimes outright fear) of releasing personal information online, my hope would be that new members would consent to list at least their name and a few professional details. Of course, those that choose to do so would be free to publish any additional contact information.

The goal of ISCC, and therefore presumably the goal of joining ISCC, is to communicate and interact with fellow color enthusiasts. We have ways to do that, such as Colorful Connections, annual meetings and such, but wouldn't it be great if you could just reach out to a new member because you wanted to learn more about them, or the company they work for? Right now, that is virtually impossible unless you have some pre-existing connection with

that member. And even then, unless you are on the Board or the Membership Team, you do not even know who might have recently joined.

Member News

The second item I wanted to mention from this issue is "News of Members." These look to be self-submitted and can be as detailed as the submitter desires. Do you have a new job? Maybe you got a book published? Maybe you are about to retire? Or perhaps there is something else that is important for you to let the ISCC community know about. Yes, the quarterly team runs the risk of being inundated with these news items, but wouldn't it be great to have to solve the problem of too much information-sharing between members?

Historic Information

Before I close, here are a few actual bits from Issue #237 for the history buffs out there:

- Franc Grum was nominated to be President elect. Dr. Grum was at Eastman Kodak in 1975, but in a few short years would go on to found the Munsell Color Science laboratory at RIT.
- Calvin S. McCamy was nominated to serve as a Director. In 1976, Mr. McCamy (with Harold Marcus and James Davidson) would publish the article that first described the color checker color rendition chart.
- The AIC Judd Award was established by funds from Mrs. Deane B. Judd.
- The Library of Congress put their copy of the Gutenberg Bible on display. (Not color, but still pretty cool!).

To review this issue in its entirety, see:
http://www.iscc-archive.org/Newsletters/ISCCNews237.pdf

AIC 16th Congress in Taipei, Taiwan

Paula J. Alessi

The International Color Association, AIC, is holding their 16th Congress in Taipei, Taiwan from October 20-23, 2025. The general theme of the Congress is Color for Future. The Color Association of Taiwan is hosting this Congress. The Congress venue is Songshan Cultural and Creative Park, which is located in the heart of Taipei.

Program

The program is outlined below:

Tentative Program (updated June 12th, 2025)

Date	Oct. 19 (Sun)	Oct. 20 Day 1 (Mon)	Oct.21 Day 2 (Tue)	Oct. 22 Day 3 (Wed)	Oct. 23 Day 4 (Thu)	Oct. 24 Day 5 (Fri)
9:00 - 10:00		Opening Ceremony + Invited 1	Invited 2 2p	General Assembly (8:30-10:30)	Invited 3 2p	Excursion
10:00 - 10:30		Break				
10:30 - 12:00		Oral 1 6p x2	Oral 3 6p x2	Oral 4 6p x2	Oral 6 6p x2	
12:00 - 13:00		Lunch				
13:00 - 14:30	Workshop/ EC Meeting	Poster 1	Poster 2	Poster 3	Oral 7 6p x2	
14:30 – 15:00		Break				
15:00 – 16:15		Oral 2 5p x2	Judd/CADE/ Service Award Ceremonies & Lectures	Oral 5 5p x2	Oral 8 4p x2 (15:00-16:00)	
16:15 – 17:30		Study Group 1	Study Group 2	Study Group 3	Closing Ceremony (16:00-16:30)	
					Break	
18:00 – 20:00	Welcome Reception			Banquet (18:00-21:00)	ART-Taipei (Exhibition)	

1 track
2 tracks
Poster session
Events

Registration

Here are the registration details:

Fees in TWD	Early Bird Before 1st September	Standard After 1st September
Regular	12,500	14,500
Student	9,000	9,000
Accompanying	9,000	9,000
Banquet	3,000	
Excursion	1,500	

(US $1 = TWD $30, Fixed Exchange Rate)

There are three registration categories: regular attendee, student, or accompanying person. Here are the benefits for each category:

Benefit	Regular	Student	Accompanying
Workshops (upon registration)	•	•	
E-proceedings	•	•	
Book of Program	•	•	
Conference Materials and Eco Bag	•	•	
Welcome Receiption	•	•	•
Lunches	•	•	•
Coffee Breaks	•	•	•

More information on this 16th Congress can be found at: www.aic2025.org

Attendance

ISCC members are strongly encouraged to attend! This Congress promises to be a memorable one!

ISCC Webinar report

Ann Laidlaw

On July 8, Mary Caswell Stoddard wowed the attendees with a dynamic and fascinating introduction to her research. Her presentation was entitled, "Inside the Colorful World of Birds."

Birds evolved about 150 million years ago, and today they are the most diverse and colorful land vertebrates. In my group, we are fascinated by the ecological and evolutionary processes that drive this variation. Much of our work investigates coloration and color vision of birds. A fundamental challenge is that birds see differently from humans: They have tetrachromatic vision (four color cone-types) and ultraviolet sensitivity. To estimate a "bird's-eye view," we combine advanced imaging techniques with new computational methods. This has allowed us to test ideas about how birds use color to attract mates, avoid predators and deceive rivals. We also study the mechanisms of color production—involving pigments and structural color (like iridescence)—a pursuit that has led to some surprising discoveries. In the field, we are establishing a system for studying color perception in wild hummingbirds in the Rocky Mountains. These tiny iridescent birds lead colorful lives, performing spectacular courtship dives and pollinating diverse wildflowers. Overall, we apply an interdisciplinary approach, combining tools from mathematics, computer vision and optics, to explore the avian world.

Mary Caswell Stoddard (Cassie) is a professor in the Department of Ecology and Evolutionary Biology at Princeton University. Stoddard received her undergraduate degree from Yale University. On a Marshall Scholarship, she completed her Ph.D. at the University of Cambridge before joining the Harvard Society of Fellows as a Junior Fellow. Stoddard is a research affiliate at the American Museum of Natural History in New York City. She is a 2018 Packard Science and Engineering Fellow and a 2023 Schmidt Sciences Polymath Fellow.

Color Research & Application

Michael J. Murdoch

Color Research & Application's two recent issues, May/June and July/August, contained a rich breadth of topics. Here, I'm happy to highlight three articles that caught my attention, vastly different but all addressing core color science questions. The first is about brightness perception at extremely high luminance levels, the second about how color name categories affect color discrimination, and the third about quantifying image differences.

Characterization of Color Appearance of Self-Luminous Highlights Under HDR Scenes, Part I: Brightness for Neutral Stimuli

Hongbing Wang, Minchen Wei

https://doi.org/10.1002/col.22965

What happens when you turn the lights up to eleven? Wang and Wei continue the quest for a comprehensive model of perceived brightness by probing extremely high light levels, examining the behavior of lightness/brightness perception well beyond diffuse white. In their introduction, the authors point out the huge disparity between two classes of lightness models. Several that were designed with diffuse white as a maximum, including CIELAB, CIECAM02, and IPT, are concave-up power-law functions that continue getting steeper with higher luminance; others, including CAM02-UCS, hdr-CIELAB, and hdr-IPT, are sigmoid functions that are concave-up below diffuse white but concave-down above, leveling off to a maximum lightness value. Yet another class, including ICtCp and Jzazbz, utilize the perceptual quantizer (PQ) curve, which is based on local small differences rather than an appearance scale.

With these divergent models as a starting point, Wang and Wei built a light-booth based apparatus capable of very high illumination of its interior as well as extremely high emission of three LED sources visible through holes in the back of the booth itself. With this setup, they used an intuitive bisection task with the three LED sources. Observers simply adjusted the middle LED to the perceptual

midpoint in brightness between a darker and a brighter LED source. This task was repeated with many combinations of luminance levels in order to sample brightness perception throughout the wide range of luminance available: from 10 to 49,000 cd/m2.

They compared observer data to many existing lightness models. Because the middle LED was adjusted by observers to the midpoint between the high and low luminance LEDs, it should be the perceptual "average" of the brightness of those endpoints. Computing average lightness with different models, they found that the best predictions were made by power-law models CIECAM02, IPT, Y'CB'CR', and CIELAB, while the Michaelis-Menten-based models performed much worse. Authors acknowledge that parameter choice for some of these models can make large differences in their performance, and they point out unexpected lightness and chroma predictions that warrant further study. In short, the lightness relationships of the simpler power-law models seem to predict perceived brightness of high-luminance samples pretty well, but this is a topic that needs more research to understand fully.

Categorical color perception shown in a cross-lingual comparison of visual search

Elley Wakui, Dimitris Mylonas, Serge Caparos, Jules Davidoff
https://doi.org/10.1002/col.22964

Color is both a sensory and cognitive phenomenon, and questions about how language affects color perception, and vice-versa, are fascinating and tricky to answer. In this paper, Wakui, Mylonas, Caparos and Davidoff study categorical perception in speakers of languages with different color representations. Given today's connected, global culture, it is difficult to find local languages that have not been significantly influenced by other languages and cultures, but the authors identified a group of Himba speakers in remote Namibia who have participated in several cognitive linguistics studies. Interestingly, they note that the Himba language has adapted in the past 20 years of contact with urbanized researchers and languages. They have developed a blue/green color category boundary that previously did not exist.
This paper looked at the difference between within-category and across-category color discrimination, where the color categories were determined by color name boundaries in both English and Himba. Both languages have a blue/green category boundary, but they differ in their descriptions of blue-to-red hues. The Himba language has words roughly corresponding to red (serandu) and blue

(burou), but no intermediate words, meaning they have a serandu/burou category boundary. In English, there is no red/blue boundary, because pink, purple and lilac color names are used in between.

The authors utilized an odd-one-out visual search task, in which one of twelve presented color patches was different from the rest, either with the same color name (within-category) or with a different color name (across-category). The basic hypothesis was that colors across categories would be identified more quickly due to their cognitive categorical distinction. Within- and across-category color pairs were chosen with a difference of 5 Munsell hue units in the blue/green task and 7.5 Munsell hue units in the serandu/burou (red/blue) task. If you're curious, the blue/green boundary is at Munsell hue 6.25BG, while the serandu/burou boundary is at 7.5P.

As expected, category had a significant effect on the blue/green search task; speakers of both English and Himba identified cross-category color differences faster than within-category. The serandu/burou analysis is a little more complicated, showing overall faster performance for the English speakers (for whom all the pairs were across-category), and for the Himba speakers, significantly faster cross-category than within-category color difference identification. These results support the concept of categorical perception in color discrimination tasks, with some interesting nuances discussed in the paper. Well worth a read if you're interested in color naming and perception!

Towards a Model of Color Reproduction Difference

Gregory High, Peter Nussbaum, Phil Green

https://doi.org/10.1002/col.22969

How do you reliably predict the overall visual difference between color reproductions on different media? This is a critical question in color imaging, the answer to which can be used in color management and gamut-mapping algorithms. In this article, authors High, Nussbaum and Green show that both the visibility of differences in the substrate/paper color and the color gamut of the reproduction are affected by the image itself. They provide a multi-component computational model that predicts visual results.

It is quite common for an image to be reproduced on various displays with different primaries and color gamuts as well as in prints created with different ink sets and substrates (paper or other media). One may desire a consistent appearance among these reproductions, even if each medium has its own strengths and limitations. Color management algorithms and perceptual rendering

techniques provide intentional adjustment of color reproduction for a “best” result; the authors of this paper aim to put an accurate number on the magnitude of the visual difference between image reproductions.

Building on their previous work, the authors show that there is a strong correlation between typical printing gamuts and visual differences, but that the source image content affects the visibility magnitude. Key contributors to the prediction of visual differences were found to be the ratio of CIELAB gamut volumes, the ratio of contrast ratios (white:black luminance values), and the media white point difference in ΔE00. Their model is essentially a weighted sum of these three predictors, plus an offset; however, all of these weights and the offset are image dependent.

Based on the prevalence of pixel ΔE-based measures, the authors also modeled visual differences as a function of average ΔE00 between images. They show that average ΔE00 unsurprisingly predicts visual differences better than average ΔEab, but that their gamut-based prediction still performs better. Authors conclude that the success shown with gamut-based visual difference prediction is valuable, but that further work is warranted with more images and a broader sampling of starting color gamuts. All in all, comprehensive and promising work!

ISCC Color Impact 2025: Color as Communication Citation 2024

Dave Wyble & Maggie Maggio, Co-chairs CI25

Rochester Institute of Technology
June 14-18, 2025

This year's ISCC Color Impact 2025 conference turned out to be a dynamic and enriching event, bringing together a diverse community of color professionals from around the country and the world. Held at Rochester Institute of Technology (RIT) in June for the second time, this year's conference again offered an exceptional platform for interdisciplinary networking and intellectual exchange among scientists, designers, educators, and industry experts—all united by a shared passion for color.

Many attendees stayed in RIT's Global Village dorms, and presentations took place in the new, state-of-the-art Glass Box Theater.

One of the most valuable aspects of this year's conference was the consistently high caliber of the morning presentations. All speakers demonstrated their subject matter expertise and clearly communicated complex ideas to a broad audience. Highlighting the theme of "Color as Communication," the range of topics presented in each session inspired lively conversation throughout the three-day conference.

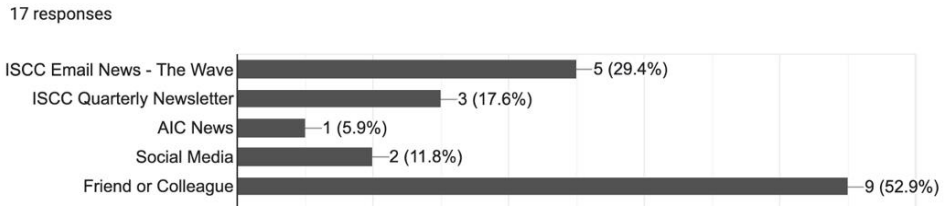
Equally important to the success of the conference were the many opportunities for professional networking. Attendees consistently remarked on the ease with which they could engage with colleagues from other fields during the morning buffets, the session breaks and the evening gatherings. We heard from many attendees that the added time for socializing fostered meaningful dialogue and opened the door to future conversations across the color disciplines.

In summary, Color Impact 2025 not only showcased the vibrant state of color research today but also strengthened the sense of community and shared purpose among its participants.
Once again, the ISCC reinforced its role as a hub for inspiration and connection in the interdisciplinary world of color professionals.

Summary of the Feedback Survey

Close to 20% of participants filled out the post-conference survey. It is worth noting that half of the 17 respondents found out about the conference from a friend or colleague. Even with all the online newsletters and social media posting, word of mouth is still the best way to publicize the conference!

Question 1 — How did you find out about the conference?



Question 2 — What Worked Well?

General Comments

- *"I thought the venue was great, having nearby and affordable rooms was essential, the organization was quite good, and the content was top-notch."*
- *"Everything was super amazing the courses, teachers, workshops, presentations, receptions, lab tours and so on."*

Program

- *"Keynotes, talks, and the program in general was great."*
- *"Excellent presentations. Made my head explode! In a good way."*

Networking

- *"The various disciplines working with color are all coming together. This is special!"*
- *"Social opportunities for side conversations: breakfast, breaks, receptions"*

- *"It was a diverse, full, and deeply engaging conference! I also really enjoyed meaningful opportunities to connect, collaborate, and have fun with each other."*

Question 3 — What Could Work Better?

Poster Session

- *"The poster session that included fantastic work should have a dedicated time and space."*
- *"Poster session was too short, not enough time to talk to all the authors."*

Site

- *"Travel to RIT campus from anywhere in Rochester was a bit annoying and costly, as there was a lack of public transport. I felt stuck on campus."*
- For those staying in the dorms - suggest bringing a thin blanket and a pillow to supplement the linen package provided.

Question 4 – What Was Your Favorite Part?

- *"I couldn't choose if I tried! I found all the sessions, talks, and posters so engaging and illuminating (no pun intended), and truly enjoyed all the conversations I had."*
- *"The opportunity to meet the amazing people interested in colour related topics, amazing lectures and expanding the horizons concerning new projects and collaborations."*
- *"Presentations, posters, meeting new and old friends and colleagues, visiting Munsell Laboratory and learning about new research and works in the industry."*

For The Record

Number of Attendees:	*93*
Number of Students:	*29*
Attendees in Dormitory:	*35*

Attendance Report

The number of regular registrations was lower than expected, and the number of students was higher than for CI23, which contributed to a loss in income. The following table is informational and does not account for some members and non-members paying the early-bird registration fee. Therefore, if you simply multiply the number of attendees in each type by the fee listed, it does not equal the total income in the budget report shown here.
Note that only the green cells contribute to the total attendance.

Registration Type	Fee	Attendees		
		2025	2023	difference
Members	$600.00	17	31	-14
non-Members	$675.00	11	20	-9
Speakers and Short Course Presenters	$250.00	27	33	-6
Students	$125.00	29	25	4
Workshop Instructors (combined with keynotes)	$0.00	0	6	-6
Exhibition Jurors	$0.00	0	3	-3
Waived (Keynotes, Workshop Instructors)	$0.00	9	3	6
Short Course Attendees	$140.00	33	40	-7
Workshop attendees	$25.00	112	60	52
Accompanying persons	$200.00	4	5	-1
TOTAL Attendees		**93**	**121**	**-28**

Budget Report

Total Expenses: *$48,745*

Total Income: *$43,297*

Net: *-$5,448*

CI2025 Committees

Steering Committee

Co-Chairs: *Dave Wyble and Maggie Maggio*
Website: *Amy Woolf*
Publicity: *Jean Hoskin, Nader Sadoughi*
Graphics Design: *Nader Sadoughi*
Treasurer: Paul Centore

Program Committee	*Rachel Schwen (chair)* *Jennifer Kruschwitz* *Bill Fischer* *Sandra Sampson*
Poster Jurors	*Karen Braun* *Luke Hellwig* *Luanne Stovall*
CI2025 Color Shifts Visual Exhibit Committee	*Karen Triedman (chair)* *Robin Kingsburgh* *Judith Tinkl* *Laura Berman* *Jean Hoskin* *Amy Woolf* *Sarah Woolf*
Art Exhibit Jurors:	*Jayanne English* *Alteronce Gumby* *Anne Lindberg*

Program Presentations & Posters

Keynotes

- *Augmenting Color Communication Within & Across Languages*, Dimitris Mylonas
- *Communicating Map Patterns Using Perceptual Dimensions of Color*, Cynthia A. Brewer
- *Seeking Improvements in Color Specification*, Mark D. Fairchild

Oral Presentations

- *Color Naming In Communication Across The Lifespan*, Akvile Sinkeviciute
- *Color By The Word: Using Large Language Models To Standardize and Visualize ECommerce Color Communication*, Mohammad Fathi, Sanjoy Ghose

- *Testing Terminology For A Universal Foundation In Colour Education*, Robin Kingsburgh
- *Enhancing Colour Selection Skills In Design Education: Exploring The Role of Colour Preference In Colour Competency Development*, Wenxian QIAN, Judith Mottram, Chaoran Wang
- *Developing Color Science Curriculum For Non-Science Students*, Luke Hellwig
- *Expanding The Global Partners Network For 21st Century Colour Literacy*, Luanne Stovall, Ingrid Calvo Ivanovich, Maggie Maggio
- *Signal, Noise, and Color Communication For The Vision Deficient 50% … and Everyone Else*, William Fischer
- *Computational Trichromacy Reconstruction: Empowering The Color-Vision Deficient To Recognize Colors Using Augmented Reality*, Yuhao Zhu
- *Color Spaces For All*, Esther Hagenlocher
- *An Introductory Study On Color Palettes of Color Me Beautiful*, Carole Jackson, Yoshie ENOKI, Kiminobu SATO
- *Red and Green As Visual Signifiers In The Brazilian Pharmaceutical and Health Market*, Camila Assis Peres Silva
- *Decoding The Language of Lip Color: A Cross-Cultural Perspective*, Veronika Marek, Gusang Kwon, Haiting Gu, Kitty Yu, Saijuan Ni, Grace Wu, Layla Bao, Ying Hu, Charlotte Rolland, Aurélie Coubart, Douaa Bekadi, Anke Hadasch
- *Yes, They Were Purple, But It Was Still Hazy*, Olivia Kuzio
- *Ecologies of Invisible Colors: An Artistic Exploration of Bacterial Pigments*, Felipe Leonardo Santos Shibuya
- *Pigment Mapping In Historical Artifacts Using Multispectral Imaging and False Color Visualizations*, David Messinger, Juilee Decker

Poster Presentations

- *2hdrvd: The Handheld High Dynamic Range Video Dataset*, Trevor Canham, Michael Murdoch, Andrew Sevigny, David Long, Michael Brown
- *Universal Color Design For Thematic Maps*, William Fischer
- *Performance Analysis of Deep Learning Architectures In Reconstruction of Overexposed Images*, Alireza Rabbanifar, Mekides Assefa Abebe, , Elena Fedorovskaya

- *Color Reproduction On Metal Surfaces: Best Practices and Technical Insights*, Sandra Dedijer, Maša Matić, Marko Milanović, Nemanja Kašiković
- *Color Association Correspondences Between Emojis and Emotions*, Gwynneth Buckton, Tina Sutton, Christopher Thorstenson
- *The World Was Black and White and We Were In Screaming Color: Color Terminology and Association with Taylor Swift's Music*, Sofie Herbeck, Leah Humenuck
- *Compensating For Color Deficits: Perceptual and Neural Adjustments In Anomalous Trichromacy*, Fatemeh Charkhtab Basim, Arsiak Ishaq, Erin Goddard, Michael A. Webster
- *Misha.br, Bringing Misha – RIT Technology To São Paulo, Brazil*, Júlia Schenatto, Maria Fernanda Pilotto Brandi, Bianca Fonseca, Camila Consani, Camila da Silva
- *Color Perception In Deaf and Hard of Hearing Individuals and Implications For Design*, Miranda Garvey, Elena Fedorovskaya
- *Developing A Custom Color Calibration Target For Objective Skin Color Measurement Using Color-Corrected Dermoscopy*, Maysoon Harunani,, Orlee Sadinoff, Anmol Jarang, Leonid Shmuylovich
- *Chromatic Adaptation In Displays: The Influence of Ambient Environment*, Eddie Pei, Susan Farnand, Mark Fairchild
- *Perceptual Thresholds of Facial Lighting In Emissive and AR Displays*, Xinmiao Zhang, Sofie R. Herbeck, Christopher Thorstenson
- *Optimizing Material Segmentation Using Fcn-Resnet101: The Role of Color-Based Data Augmentations With The Coco Dataset*, Soroush Shahbaznejad, Mekides Assefa Abebe, Michael Murdoch, Elena Fedorovskaya
- *Multisensory Color-Haptic Interaction In Augmented Reality*, Alireza Rabbanifar, Pratheep Kumar Chelladurai, Mekides Assefa Abebe, Elena Fedorovskaya
- *Using Generative AI For Data Color Scheme Suggestion*, Theresa-Marie Rhyne
- *Fundamental Brightness and Lightness Scales*, Saeedeh Abasi, Mark D Fairchild
- *Evaluating The Influence of Eyewear On Perception of Small Color Difference In Reflective Samples*, Shuyi Zhao, Susan Farnand, Christopher Thorstenson

- *Visual Perception and Contrast Sensitivity: Evaluating The Effects of Tinted Lenses*, Likhitha Nagahanumaiah, Susan Farnand, Christopher Thorstenson
- *Color Constancy In Virtual Environments With Head-Mounted and Flat-Panel Displays*, Andrea Avendano Martinez, Christopher Thorstenson, Michael Murdoch
- *Systems For Improved Color Optics and Painting*, Allyson Glenn
- *Creating Colored "Bound Volumes" With Digital Object Identifiers*, Daniel Martin
- *Preserving Perceptual Brightness: A G0-Referenced Lightness Metric For Enhanced Color-To-Grayscale Conversion*, Sanaz Aghamohammadi Kalkhoran, Mark Fairchild, Susan Farnand

Sunday Workshop Program

- *The Eye Opener Series: An Intro to the Color Literacy Project*, Maggie Maggio, with Robin Kingsburgh
- *A Beginners Guide to Color Measurement*, David R. Wyble
- *Multidisciplinary Explorations of Colour Concepts: A Colour Literacy Project Workshop*, Robin Kingsburgh, with Maggie Maggio
- *"What did you say?": Exploring the Challenges of Communicating Color Science*, Kimberly R. Mercier
- *Interacting with Color: A Practical Guide to Josef Albers's Color Experiments*, Fritz Horstman

Afternoon Short Course Program

- *Forgotten Memories Between Colors and Light*, Andrea Alejandra Badillo Sariñana
- *The Color All Around Us*, Jason Bemis
- *False Colors As Building Blocks of Information: Learning An Easy-To-Use, Open-Source Multispectral Image Processing Software (misha)*, Juilee Decker, David Messinger, Roger L. Easton, Jr.
- *Optics Outreach - Performing Experiments With K-12 With The Color "Wow!" Factor*, Jennifer Kruschwitz,
- *How do We Communicate Color Quality In Lighting?* Michael Murdoch, Kimberly Mercier

- *Norm-Critical Color Design: Unpacking Aesthetics, Gender, and Power In Design Objects*, Kel Jackson, Youngmi Christina Choi, Marie O'Mahony
- *Introduction To The Fischer Universal Color Design System*, William Fischer
- *Design Stories: How Color Shapes Narrative*, Ellen Divers, Ellen Divers Design, Linda Kafka
- *Communicating Color Using ICC Profiles*, Max Derhak

Tuesday Evening Program:

The Danny C Rich Memorial Lecture, by Ann Laidlaw
"Color For Everyone, Including Consumers"

Afternoon Tours

- Art & Architecture Walking Tour
- MAGIC Spell Studios
- Cary Graphic Arts Collection
- Chester F. Carlson Center for Imaging Science
- Munsell Color Science Laboratory Open House

The complete program booklet can be downloaded here:
http://iscc-archive.org/meetings/CI2025%20program%20booklet.pdf

Art Exhibition at Color Impact 2025

Color Shifts: Color as Communication

Panel Discussion

As a key part of Color Impact 2025: Color as Communication, the ISCC hosted a panel discussion on Tuesday afternoon to introduce the virtual exhibition Color Shifts. The panel explored color as a tool for communication and transformation. Attendees enjoyed an insightful discussion, video presentations from jurors, and a video greeting by juror Alteronce Gumby, who introduced the screening of his annotated film, Color—an investigation into color and culture across global contexts.

Winners by Category

Best of Show – Professional

Jack Madden
A Mountain Stream
2024, Digital, 12 x 18

Honorable Mention – Professional

Retura Claar
Otago Radiance
2024, Experimental film photography, 12 x 8”

Honorable Mention – Professional

David Harmon
Discoid #7
2023, Acrylic on panel, 12 x 12”

Best of Show – Amateur

Anna Reed
LUV
2023, Pigment print on collaged papers, 26 x 20”

Honorable Mention – Amateur

Diane Lamboley
Without Measure
2024, Digital photo on aluminum, 16 x 20”

Honorable Mention – Student

Fatma Algaz
A Typical Day in Damascus
2024, Acrylic with mixed media, 16 x 20”

View Art and More Online

To make the virtual show accessible to everyone, several key elements are now available on the ISCC website, including:

- A digital Flipbook presenting the exhibition.
  https://issuu.com/colorshowiscc/docs/iscc25flipbook_f6e41344f51e3e
  The cover, Nancy Wolk’s “*Cassiopeia A*,” features a visualization created with filtered data from the Chandra X-ray Observatory, illustrating how scientific information can be transformed into colorful stories that capture both the eye and the mind.
- Video presentations of jurors discussing their process and selections.
  https://www.youtube.com/watch?v=zBCaF0HY1mc&list=PLXEw-4kK4dL2alVw8aI5LiKvX UZI9oQBx&index=
- Audio artist statements from selected participants.
  https://www.youtube.com/watch?v=wxxuKw8vFmU&list=PLXEw-4kK4dL2alVw8aI5LiKvX UZI9oQBx&index=4

Appreciation

Thanks to everyone who contributed to the success of the exhibition, starting with the committee members: Jean Hoskin, Robin Kingsburgh, Laura Berman, and Judith Tinkl. Additional gratitude goes to Sara Woolf and Amy Woolf for graphic and website design and support, and a special thank you to Dave Wyble for technical assistance. Finally, a very special thank you to the participants and the jurors.
Color Shifts: Color as Communication successfully fulfilled its goal to provoke thought, invite dialogue, and explore how color influences our perception and communication. The convergence of art, science, and culture showed that color can be more than just aesthetic—it can serve as a language, a challenge, a question, and a call to see a new world.

Details on the show: From Inception to Completion

The development of the exhibition was a lengthy process, which began with the committee drafting an engaging call for submissions that encouraged artists, designers, educators, scientists and researchers across all disciplines to respond to color as a form of communication.

The call highlighted both conceptual depth and visual innovation. The central question of the Color Shifts exhibition was: “Can creative processes across disciplines enhance understanding and shift perspectives through color?” This question aligned with the ISCC mission to integrate color research, application, and communication within science, technology, art and design. The exhibition called for innovative, experimental, and emotionally impactful uses of color in any media. From analytical to aesthetic, the work emphasized the ability of color to communicate complex messages, inspire reflection, and change perspectives.

The jury comprised a unique mix of experts:

- Jayanne English, Senior Scholar, Department of Physics and Astronomy, University of Manitoba, astronomer, artist, and scientific visualization specialist
- Anne Lindberg, visual artist from Ancramdale, New York, known for sculpture, drawing, and dimensional textile installations
- Alteronce Gumby, a visual artist based in New York City whose work includes painting, ceramics, installation, performance and film

The role of the jury was to evaluate the submissions and encourage cross-disciplinary dialogue, honoring both creative experimentation and conceptual strength. Out of more than 352 submissions, 58 works were invited, resulting in a diverse exhibition.

Participants were asked to submit three images of their work, an optional audio artist statement, and a written explanation of their creative approach. This structure enabled artists to express their use of color both visually and intellectually. The result was a deeply engaging archive of color exploration—interactive, contemplative, and sometimes very personal. Submissions were categorized as Professional, Amateur, and Student. They included a wide variety of styles, media, and formats, reflecting the diversity of voices and perspectives in color-based expression.

AATCC Dedicates ColorLab to Roland L. Connelly, Sr.

Bhavani Jayaraman, Reprinted from AATCC

[Reprinted from AATCC]

DURHAM, N.C., August 8, 2025 – On May 15, 2025, AATCC dedicated the newly refurbished ColorLab in honor of Roland Connelly. The dedication ceremony took place at the AATCC Technical Center, and his memory was honored by the presence of close friends and family. In attendance were his wife, Lynn Connelly, son, Lee Connelly, his brother, Wes Connelly, and his sister-in-law, Pat Connelly.

Roland L. Connelly, Sr.
November 30, 1945 –
July 4, 2025

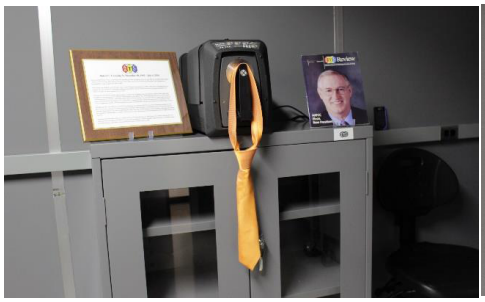
Roland founded RoLyn Group, a consulting service specializing in Roland color and lighting. He served as Director of Global Digital Supply Chain for X-Rite Inc. from 2005-2012. Before that, he was the Director of Enterprise Color Management at GretagMacbeth, which merged with X-Rite in 2005. Earlier in his career, Roland was the President and co-owner of SheLyn Incorporated from 1987 to 2003. Prior to founding SheLyn, he managed the Color Laboratory at Burlington Industries Corp. R&D for 18 years. With over 40 years of experience, Roland was an expert in all aspects of color management and control.

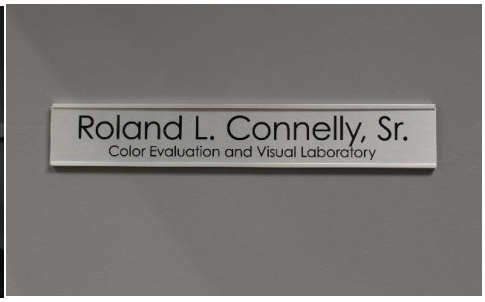
He frequently lectured and authored numerous papers on topics such as lighting, colorant formulation, quality control,

supply chain management, and instrumental UV calibration. Roland held several leadership roles, including President of AATCC, Chair of RA36 Color Measurement Committee, and member of the AATCC Board of Directors. He received the AATCC Chapin Service Award and served as President of the Inter Society Color Council (ISCC), among other duties. He was active in ASTM Committee E12 on Color and Appearance and the CIE (International Commission on Illumination). He also represented the US in ISO TC38 for Textiles.

Roland, along with a few others, was instrumental in developing and conducting AATCC's first Color Management workshop in 1977. He served as course instructor for many years until his retirement. Under his guidance, RA36 draft and maintained several AATCC standards. Roland played a key role in establishing the Textile Ultraviolet Control Standard (TUVCS) program, which helps labs improve the repeatability, reproducibility, and quality of their electronic color management and communication for white and light-colored textile materials.

Roland earned his Bachelor of Science in Textile Science and Mater of Science in Color Science from Clemson University. Roland was involved in the AATCC Foundation, and has a fellowship named after him to aid graduate students studying at Clemson University. He was a dedicated friend and advocate of AATCC. In honor of his contributions, AATCC gratefully accepted the donation of Roland's personal spectrophotometer, thanks to the generosity of his beloved spouse, Lynn Connelly.





AATCC connects the global textile community to empower an innovative, informed, and sustainable future. Headquartered in the Research Triangle Park of North Carolina, AATCC has provided standards development, testing materials, educational resources, and professional networking to the global textile industry for more than a century.

John Seymour

The Magic Cones

A recent cookout got me thinking. I had prepped oranges, lemons and limes as garnishes for umbrella drinks. Just to be fancy, I cut them all the same size and shape (see Figure 1 for actual photographic proof of my story). In my kitchen, under warm white illumination, I could readily tell which was which. I took the garnish platter outside and set it down alongside the table with the rest of the fixin's for the drinks. When I set the garnish plate down, I congratulated myself because I could still readily identify the three types of fruits. And thankfully, my guests were still able to correctly put the oranges in the Old Fashioneds, the limes in the Cuba Libres, and the lemons in the Arnold Palmers. What a fabulous and useful skill – that after only a few hundred thousand years of evolution, we have adapted the ability to identify fruits when we sit around a campfire!

Figure 1 – Garnishes for my fru-fru drinks

As human beings, we take this for granted, but it really is a feat. I checked the portable spectrometer that I always keep in my pocket. In my kitchen, the light level was around 100 lux. Outside, being a

bright effulgent day in South Carolina, my spectrometer registered 15,000 lux. Curious, I took the garnish plate back into the house into the dimly lit bedroom. At 15 lux, I could still determine which fruit was which.

I opened the calculator app on my phone, and (after a few attempts) I found that between the patio and bedroom, there was a difference in the amount of light by a factor of 1000! My spectrometer also revealed that the color temperature of the light went from 2900°K to 6500°K. When I compared the two spectra, I could see that daylight is relatively flat across the spectrum, but the warm white light from an LED fixture has about one-tenth the amount of light at the blue end compared with the red end.

Wow! Even though the strength and nature of the light had changed by huge amounts, and consequently the nature of the light reflected from the fruit had changed by huge amounts, oranges are still orange, limes are still lime green, and lemons are still lemon yellow. I thanked natural selection for giving me an evolutionary advantage over early pre-hominids who mistakenly put slices of orange in their Bloody Marys. (Yikes!) *Color constancy* sure saved my butt at this barbecue!

How does this happen?

There are some special kinds of magic in the *human visual system* (HVS) that makes this possible. One source of magic is that the pupil in the eye expands or contracts like the shutter in a camera to cover about three *stops* (which is a factor of about ten). This clearly is not the only mechanism – there is still a factor of at least 100, and the pupil can't provide a means for color balancing.

There are also some magic mechanisms in the lower parts of the brain. One is the mechanism where the brain finds a white point to compare to everything in our field of view. If a dingy white sheet of paper is the brightest thing in your field of view, it will look white.

But if you introduce a tiny amount of ultra-bright paper, the original sheet of paper will instantly look off color.

The brain also has this mechanism that corrects for shading. If I look at a blank wall, there may be ten times as much light reflected from one part versus another due to uneven illumination, but my brain corrects for this, and I see the wall as a uniform color. This is a useful evolutionary trait – it enables the *image segmentation* algorithm in the brain that helps me to distinguish the edges of a partially shaded orange from the color of my finger. Because of this fabulous algorithm, I have avoided a trip to the ER whenever I cut fruit for a cookout.

There are many optical illusions that illustrate this magic *shading correction algorithm*. In Figure 2, the RGB values of the squares labelled A and B are the same. Somewhere in the deep dark recesses of the brain, there is a correction for the apparent shadow cast by the green cylinder, which makes square B appear to be lighter than square A.

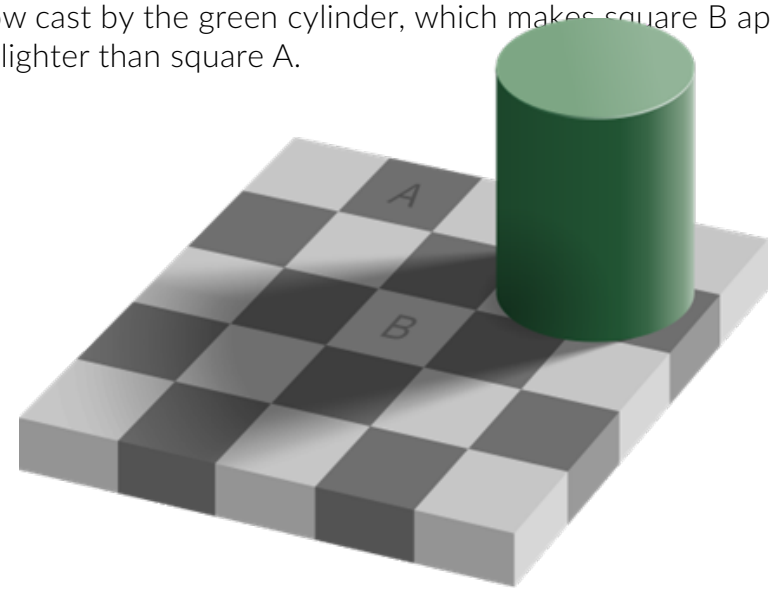


Figure 2 – Does Square A look brighter than Square B?

There is another likely location for a color constancy mechanism in the HVS. The retinex theory, developed initially by Edwin Land and later expanded upon by John McCann, purports that the nerves in the *retina* (the light-sensitive area at the back of the eye) are providing a signal that is a comparison between the light at one location versus the adjacent area.

But there is one more color constancy mechanism that (in my seldom humble opinion) doesn't get nearly enough airplay. I call it *chromophore depletion theory* in hopes that this fancy name will make it sound important.

Chromophore depletion

This theory starts with a few simple assumptions:

1. Light comes in individual tiny packets that we call photons.

2. There are a finite number of individual chromophore molecules in each rod or cone.

3. When a photon encounters a chromophore molecule, and the wavelengths are "compatible," the chromophore absorbs the energy, which sets off a chain reaction that results in sending a nerve pulse toward the brain.

4. The added energy will temporarily alter the chromophore molecule. It will become transparent (bleached) and hence will not be able to respond to subsequent photons. After each interaction, a *rhodopsin* molecule (such as those found in the rods) will be sidelined for perhaps minutes. A *cisopsin* molecule (in the cones) may be sidelined for tens of seconds.

By the way, the cis-opsin molecules in the long wavelength cones (the ones commonly called red) are called *erythrolabe*. In the medium wavelength cones (that we commonly call green), they are called *cholorlabe*. The short wavelength cones that we commonly call blue contain *cyanolabe* molecules. Warning – I am enough of a word geek that this might show up on your final exam!

While I am being pedantic, I should mention that the cones commonly referred to as *red cones* actually respond to a range of colors from the rainbow from green to red, and the cones commonly referred to as *green cones* respond to a range from cyan to yellow on the rainbow. The cones commonly called *blue cones* respond to rainbow colors from violet to cyan. Real color scientists call the cones L (long wavelength, that is "red" cones), M (medium wavelength, or "green" cones) and S (short wavelength, or "blue" cones).

Consequences of chromophore depletion

These assumptions lead to the tenets of the chromophore depletion theory. When an eye is in a relatively dark condition for a long period of time, most of the chromophores will be in the activated state, like outfielders waiting for the ball to come to them. Important point – there like several million outfielders in each cone. When they are all active, virtually all photons that make it to the outfield will be captured. This means that the fielding of photons

is very efficient; that is, the gain of the eye is quite high. But any captured photon will cause that outfielder to put down his glove for a while.

When the light level increases, photon captures are more frequent, so there is a higher percentage of chromophore molecules who are in this inactive state where their gloves are on the ground and they are grabbing a chaw, checking Instagram or waving at the crowd. As more and more chromophore molecules go into the inactive state, the probability decreases that an individual molecule, err, outfielder, will capture a photon. The incoming photon is more likely to bonk off the head of an inactive chromophore molecule.

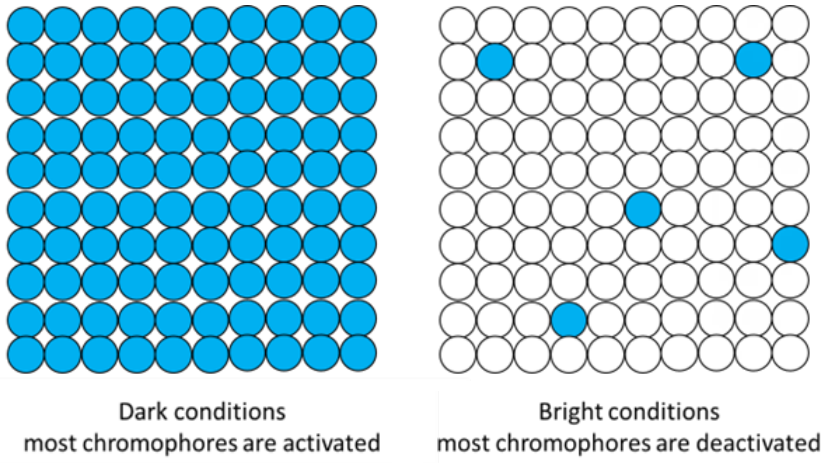


Figure 3 – Actual photo of activated and deactivated chromophore molecules created by AS (Actual Stupidity)

I should point out a weakness in my analogy. Any reader familiar with baseball beyond the Little Leagues will know that outfielders move around to align with incoming balls and sometimes will make dramatic leaps to catch balls. Chromophores are nowhere near that ambitious! They are more like a typical Little Leaguer who stands where they are put and patiently waits for a play where the ball comes directly to them.

So, chromophore depletion theory predicts that in low light conditions, there will be a lot of activated chromophore molecules just waiting to capture photons that come their way. The gain of the cone is high. When conditions are bright, there will be a much lower percentage of activated chromophores, and the gain will be lower.

Digital cameras, by the way, can be told to do this. They call it AGC, for automatic gain control.

Adaptation and Latency

The AGC mechanism which has been cleverly built into the rods and cones is a partial explanation for how the HVS can adapt to radically different light levels. The fact that each of the individual colors of cones are adapting independently in the L, M and S cones means that the AGC mechanism in the cones adapts the eye to differences in the white balance. Under warm white lighting, the S cones will capture less light, so the gain on these cones will go up relative to the M and L cones. In the biz, we call this *chromatic adaptation*.

Two examples illustrate the effect of time delay for a chromophore to reactivate. Suppose you are inside under moderately low lighting. If you step outside into bright sunlight, you will blink a few times, being momentarily blinded by the light. Adaptation is relatively quick since the outfielders immediately put their gloves down when they catch a ball. In a second or two, most of the outfielders will be posting selfies. With few gloves in action, the probability that any given photon is caught goes down, so the actual number of fielded balls goes down.

What happened in your cones is that there was a sudden rush of photons causing a lot of activated chromophore molecules. This overwhelmed the neural circuits, and everything was temporarily white. But the activated chromophores were very quickly depleted, and the gain of the cones was quickly turned down. The system reached a *steady state* rather quickly, that is, where there is a balance between the number of chromophores becoming deactivated and the number of chromophores becoming reactivated.

Now consider the opposite situation – on a sunny afternoon, you drive to a movie theater. (If you have never experienced this, I would suggest going into retirement. With those endless long and boring afternoons, you will have plenty of opportunities to try this experiment.) When you enter the darkened theater, it will be hard to see. But as you sit eating your buttered popcorn and sipping your fizzy drink, your vision will slowly return. Adaptation in this direction takes perhaps a few minutes.

When you first entered the theater, most of the chromophores in your cones were deactivated – you had been adapted to the bright sunlight. As stated in assumption 4), the process of re-activating a chromophore molecule takes tens of seconds (in the cones) or minutes (in the rods).

In Figure 4, the left-hand (metaphorical) flask contains a colored fluid, representing the chromophore molecules that are ready to capture light. When hit by a photon, these molecules jump to the inactive state in the metaphorical flask on the left. After a certain amount of time, individual inactivated chromophore molecules resume their colorful existence, waiting for another photon.

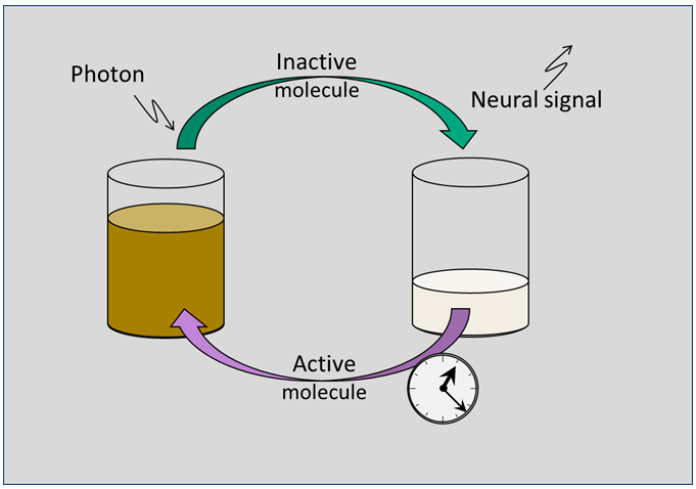


Figure 4 – The cycle of deactivation and reactivation of chromophore molecules

Thus, adaptation to light getting brighter is rather fast, but there is a latency for adaptation to dark conditions.

Afterimages

Now comes the audience participation part! Focus on the plus sign inside the red circle in Figure 5. Try to hold your eyes steady and slowly count to 20. (Innumerate readers may wish to take off their shoes for this.) When you reach 20, quickly shift your focus to the plus sign inside of the white circle.

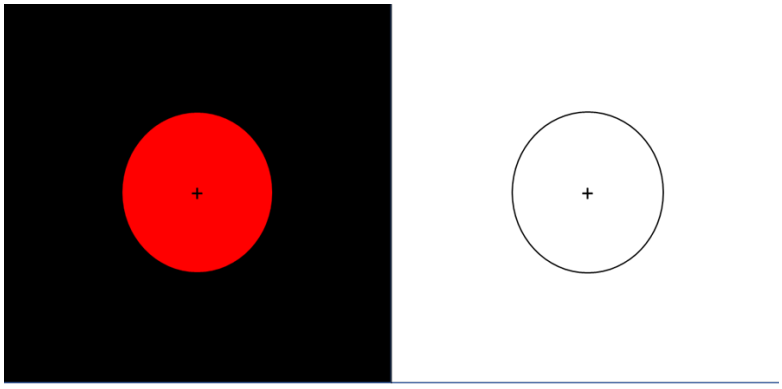


Figure 5 – What color do you see in the white circle?

When I have my students do this during a lecture, I usually hear some spontaneous laughter and gasps of surprise. I still hope to get an eruption of applause, but I am working on it. If you carefully follow the directions, you will see a cyan circle inside the white circle when you shift your gaze. At least I saw a color that I call cyan. If you call it light blue, we can still be friends. This will last for tens of seconds, gradually fading over that time.

When you fix your gaze on the red circle, the cones in the center of your field of view (in the fovea) adapt to the red. This means that the L cones have become depleted of activated chromophore molecules. The gain on these cones is low. The M and S cones have a relatively higher gain, since they are catching much less light.

When your gaze is shifted to the white circle, there is roughly an equal amount of light being sent to each of the three types of cones. But the L cones still have a relatively low gain, so despite there being roughly the same number of photons, the rate of photon capture is much less. If you take away red from white, you get a nerve signal that says "cyan." The chromophore molecules in the cones gradually are reactivated up to the "normal" level, causing the gain on the red cones to go up until equilibrium is reached.

The imaginary cyan dot is known as an *afterimage*. I would argue that chromophore depletion theory provides a satisfactory explanation for the effect. Any sort of neural or brain activity would be corrected much more quickly than the tens of seconds that we see. A chemical explanation makes the most sense.

In 1832, the German physicist Gustav Fechner said that afterimages are due to *retinal fatigue* [1]. Herman Helmoltz [2] made frequent use of the word fatigue in the third edition of his book. This word has stuck as an explanation for afterimages. But the word should not be taken to mean that Fechner and Helmholtz thought the cones were getting "tired." They meant that the cones were being partially and temporarily depleted of the magic substance that allows them to function.

Simultaneous contrast and Mach bands

Figure 6 demonstrates *simultaneous contrast*. The two squares in the left image are the same shade of gray, but the one on the right looks darker because the eye will naturally wiggle around a bit. The cones looking at that gray patch (surrounded by white) will have relatively lower gain than the cones looking at the gray patch surrounded by black.

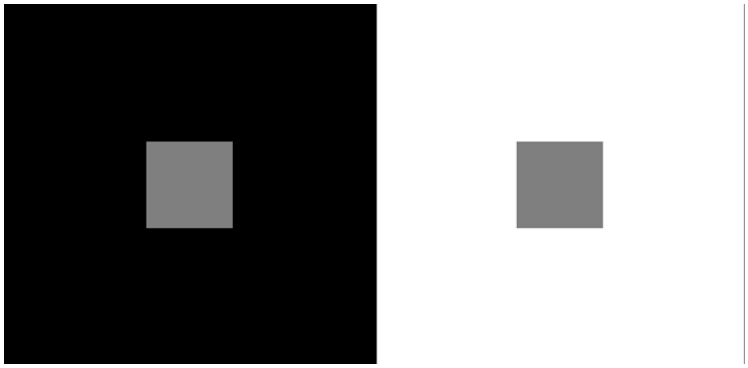


Figure 6 – Simultaneous contrast

In Figure 7, each square in the tone ramp has a uniform gray level. Chromophore depletion will change the gains of the cones near the edges, making the squares appear to be darker and lighter near the transitions. These imaginary changes in gray level are called *Mach bands*, after Ernst Mach. Next time you are flying in your fighter jet at Mach 2, you can thank this same physicist.

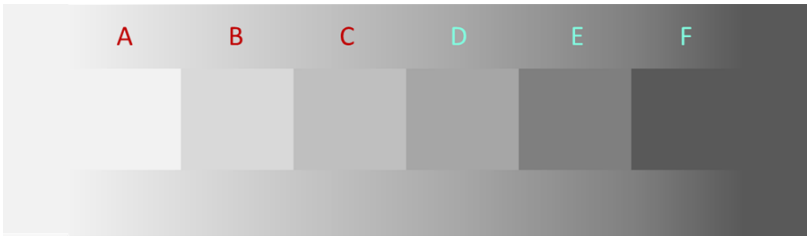


Figure 7 – Mach bands

Summary

This article summarized a magical effect in the cones that explains one mechanism for how the cones can adapt to vastly differing levels of light. This magic also helps objects retain their apparent color despite changes in lighting. The magic explains why night blindness lasts so much longer than sun blindness, why colors are changed by other colors in the field of view (simultaneous contrast) and a special case of simultaneous contrast called Mach bands.

Bibliography

[1] Heidelberger, Michael, Nature from Within - Gustav Theodor Fechner and His Psychophysical Worldview, University of Pittsburgh Press, 2004, pages 29 – 30

[2] von Helmholtz, H. (1924). Helmholtz's treatise on physiological optics (Trans. from the 3rd German ed. from 1911) (J. P. C. Southall, Ed.). Optical Society of America.

Calendar 2025

Sept. 4	2025 International Summit | Chromatic Connections Part One: Virtual Summit Reveal https://app.glueup.com/event/2025-international-summit-124762/
Sept. 7 - 10	GIA Converge AGS Conclave X GIA Symposium || Carlsbad, CA https://www.gia.edu/event/converge
Sept. 8 - 11	NAPIM's Annual Convention / Technical Conference || Omni Charlotte, Charlotte, NC https://www.napim.org/aws/NAPIM/pt/sp/events
Sept. 15 - 17	Society Plastics Engineers Color and Appearance Division RETEC || Cleveland, OH https://specad.org/2025_cadretec_homepage/
Sept. 21 - 24	Illuminating Engineering Society (IES) SALC Street & Area Lighting Conference New Orleans, LA https://www.ies.org/events/salc2025/
Sept. 30 - Oct 2	CMG Chromatic Connections Part Two: International Summit || Dallas, TX In person https://app.glueup.com/event/2025-international-summit-124762/
Oct. 1	Call for Abstracts Joint CIE-USNC & CORM Conference https://cormusa.org/corm-2023-scheduled-presentations/
Oct. 5 - 7	AATCC Fabricating the Future – AATCC & SEAMS Annual Conference || Savannah, GA https://www.aatcc.org/aatcc-events/summit/
Oct. 10 - 11	Society for Color and Appearance in Dentistry 16th Annual Conference Novotel Hotel, Miami, FL https://www.scadent.org/events/miami-2025
Oct. 14	Detroit Colour Council Seminar 11 a.m. – 3 p.m. || Schoolcraft College W210ABC https://detroitcc.org/upcoming-events/
Oct. 15	CMG ColorSpeak Webinar noon – 1 p.m. EST || Virtual https://www.colormarketing.org/events-all/colorspeakaugust-2025-ad68m
Oct. 19 - 23	IEALC Aviation Lighting Conference 2025 || Pittsburgh, PA https://www.iesalc.org/technology-meetings-2024-fall/
Oct. 20 - 23	AIC 2025 Taipei Color for the Future16th AIC Congress || Taipei, Taiwan https://www.aic2025.org/

Oct. 26 - 30	Frontiers in Optics and Laser Science Colorado Convention Center || Denver, Colorado https://www.frontiersinoptics.com/home/submissions/
Oct. 27 - 31	IS&T CIC 33 Color & Imaging Conference || Hong Kong https://www.imaging.org/IST/Conferences/CIC/CIC2025/CIC_Home.aspx?WebsiteKey=6d978a6f-475d-46cc-bcf2-7a9e3d5f8f82&hkey=16ed013b-0198-410f-b3d2-d928e32a03d-0&8a93a38c6b0c=1#8a93a38c6b0c
Oct. 27 - 30	American Society for Photogrammetry and Remote Sensing (ASPRS) 2025 International Technical Symposium || Virtual https://community.asprs.org/2025symposium/home
Oct. 28 - 31	ITMA 2025 Singapore Expo https://www.aatcc.org/aatcc-events/itma2025/
Nov. 3	ICC Color Symposium || Hopewell Hotel, Wan Chai, Hong Kong https://form.jotform.com/whattheythink/hong-kong-colour-symposium
Nov. 5 - 6	Inkspired: Innovations in Textile Printing Conference || StateView Hotel, Raleigh, NC https://www.aatcc.org/aatcc-events/printing25/
Nov. 7 - 8	IS&T Advances in Printing Technology 2025 Tokyo || Tokyo, Japan https://www.imaging.org/IST/Conferences/AdvPrintTech/AdvancesPrintTech_2025/PrintTech2025.aspx
Nov. 14	ColorChat Networking Event 10:30 – 11:30 a.m. || Virtual https://www.colormarketing.org/events-all/colorchatmay2025-z24fe-sacm9
Nov. 18 - 20	CIE – USNC & CORM Conference https://cormusa.org/news-events-3-2/

Sustaining Members

Sustaining members of the ISCC are organizations who support the mission and goals of the ISCC through financial or other support. With our member bodies, Sustaining Members also provide a critical connection to the color community. If you feel your company or organization should support the ISCC in this way, please contact the office for more information about member benefits.

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Quarterly Newsletter

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