

Inter-Society Color Council News

Issue 401 Contents

January/February 2003

Letter from ISCC President	1
BOD, Officers Contact Information	2
Nickerson Nominations Solicited	2
Industrial Color Solutions Details	2

February 2003	
DPP 2003 Conference	
Color Communications '03	8

Paul M. Tannenbaum...... 8

Color Research & Application,

Limits of Vision - UMIST Conference.	9
RIT Munsell Color Summer Courses	9
Calendar	10
FIT Position Available	11

Color Science Color Scholarships......11

Sustaining Members, Memberbodies, Editor,

Office Contact Information......Back Cover

Winter is here when Nature paints in black and white and casts of gray



Happy New Year

Letter from ISCC President

By the time that you read this issue of the ISCC *News* it will be almost too late to register for the Industrial Color Solutions symposium being held at Philadelphia University. But, there still may yet be time. Contact Cynthia Sturke in ISCC Office to get information on last minute arrangements. The program looks to be an outstanding array of very practical talks on how to make use of color measurements in your business.

The program for the annual meeting and SCAI symposium with our memberbody, FSCT in April is also nearly complete. This event only occurs about every five or six years, so be sure not to miss it.

On a less happy theme, you will see on the next page a cry for help. At the annual meeting last year and in the printed text of my speech, I indicated that the ISCC operates only because of the volunteers that help make it a great organization. One of our standing committees, the Publications Committee, is in desperate need of volunteers. The Publications Committee is responsible for editing and composing this newsletter and reviewing, editing and approving the other technical and historical publications from the Council. The membership of the committee has declined over the years, due to retirements and sadly, the passing of many of it former members. The job of getting the Newsletter to you had defaulted to the Office. In these lean economic times we are no longer able to fund that activity out of your dues.

You may have noticed that this issue of the Newsletter is much later and smaller than usual. This is because we had to scramble to find the resources needed to edit and compose the information. We really do need your help! Please consider how you might contribute to the Council's Publication committee needs especially the Newsletter.

Danny C. Rick ISCC President

ISCC Executive Officers

President

Dr. Danny Rich

Sun Chemical Research

631 Central Avenue, Carlstadt, NJ 07072 201-933-4500x1144 fax201-933-5658

richd@sunchem.com

President-Elect Dr. Joanne C. Zwinkels

National Research Council of Canada Inst. for National Measurement Standards

M-36, Montreal Road

Ottawa, ON K1A OR6 Canada

613-993-9363 fax 613-952-1394

joanne.zwinkels@nrc.ca
Secretary Mr. John McCann
McCann Imaging

161 Claffin Street, Belmont, MA 02478

617-484-7865 fax 617-484-2490 mccanns@tiac.net

Treasurer Mr. Hugh Fairman

503 Bradley Court, Princeton, NJ 08540 609-430-1630 fax 609-430-1618

resourceiii@erols.com

Past-President Mr. Jack Ladson

Integrated Color Solutions, Inc.

1000 Plowshare Road, Yardley, PA 19067 215-369-5005 fax 215-369-3191

jackladson@icscolor.com

ISCC Board of Directors

2000-2003

Dr. Robert Buckley Xerox Corporation

43 Scarborough Pk, Rochester, NY 14625 585-422-1282 fax 585-265-8871

rbuckley@crt.xerox.com

Mr. Alan Kravetz 13 Farm Stead Rd, New Windsor, NY 12553

845-561-0788 fax 845-568-5859

alan.kravetz@verizon.net

Dr. Mary McKnight NIST

Bidg. 226, Rm 1B350, 100 Bureau Dr., Stop 8621, Gaithersburg, MD 20899-8621 301-975-6714 fax 301-990-6891

mary.mcknight@nist.gov 2001-2004

Mr. James GKing DuPont Performance Coatings

945 Stephenson Hwy, Troy, MI 48007-2802

248-583-8276

fax 248-583-8316

james.g.king@usa.dupont.com

Dr. Eileen Korenic Univ. of Wisconsin-River Falls,

Physics Dept. CSH, River Falls, WI 54022 715-425-3560 fax 715-425-0652

eileen.korenic@uwrf.edu

Prof. Margaret Miele Fashion Institute of Technology/SUNY

Dept. of Social Sciences 7th Ave @ 27th St., NY, NY 10001-5992

212-217-8449 fax 212-217-7095 mielemar@fitsuny.edu

2002-2005

Dr. Karen M. Braum Xerox Corporation

800 Phillips Rd., MS 128-27E,

Rochester, NY 14580

585-422-6380 fax: 585-422-6117

kbraum@crt.xerox.com

Mr. Johnny Suthers Eastman Chemical Company

P.O. Box 511, Kingsport, TN 37662-5065 423-229-3263 fax: 423-229-4205

isuthers@eastman.com

Ms. Lisa Thieme Colwell Industries, Inc.

2605 Marion Drive, P.O. Box 308

Kendallville, IN 46755

260-347-3900x3372 fax: 260-347-2079

lisat@colwellind.com

Does this issue of the ISCC News seem late?

It is late - nearly a month late! The ISCC Publications Committee is in need of volunteers to help solicit information from the members and memberbodies, to help edit that information into readable text and to compose that text into those neat little boxes and to place pictures in the stories. The Newsletter editor cannot do it all by himself. We had been asking the Office Manager to wear two hats - one as Office Manager and Meeting Registration coordinator and the others as the Associate Editor. Due to our current financial situation - we have had to ask Cynthia to give up her second hat. It was a hard decision to make - the Newsletter had been looking good and was filled with interesting news. But now we need your help. Please contact D. Rich or G. Celikiz if you can afford a couple of hours a week helping us produce

Don't forget to send in your registration forms and make travel plans for:

Industrial Color Solutions

Registration Forms
Hotel Information
on the ISCC Web site
March 9-11, 2003
Philadelphia, PA

Request for Nominations Nickerson Service Award

The Inter-Society Color Council's Nickerson Service Award was established in 1980 to recognize outstanding long-term contributions toward the advancement of the Council and its aims and purposes. The contributions may be in the form of organizational, clerical, technical, or other services that benefit the Council and its members. Candidates for the award must be members of the Council and must have been active in the affairs of the Council. If you would like to nominate a person for this award please contact Robert Marcus at Datacolor International, 5 Princess Road, Lawrenceville, NJ 08648, 609-895-7426, 609-895-7438 (fax), rmarcus@datacolor.com. Nominations must be received before December 20, 2003.

ISCC Welcomes New Members

Fashion Institute of Technology Students

Ms. Bujare Ibroci F.I.T., 260 Arlene Street

Staten Island, NY 10314

718-698-3181 bujare@earthlink.net

Ms. Beth Ann Trammell F.I.T., 1103 55th St., #2F

Brooklyn, NY 11219

646-279-1085 bethann@underblob.com

Ms. (Kay) Sun Y. Kim F.I.T., 85-04 63rd Dr. #5E

Rego Park, NY 11374

917-930-6631 mypuppychoco@yahoo.com

Mr. Ryo Yoshihara F.I.T., 242 E. 75th St. #3D

New York, NY 10021

718-278-3387 ryoshihara@aol.com

Ms. Caroline Martin F.I.T., 19 Bhauveht Street

Nanuet, NY 10954

845-624-5679 carolnchrs@aol.com

Ms. Amanda Szenicer F.I.T., 11 Meadow Lane

Lawrence, NY 11559

516-840-5089 anabgins11@aol.com

M. Hubert Brakohiapa F.I.T., 13 A Kensington Arms

Hightstown, NJ 08520

609-443-3774 hbrakoh@prodigy.net

Ms. Woltoo Joen F.I.T., 47 State Street

Brooklyn, NY 11201

718-858-4877 wonjoo55@hotmail.com

Ms. Lisa A. Sumption F.I.T., 210 W. 27th Street, A 10B2

New York City, NY 10001

646-414-3644 sumption-1@hotmail.com

Ms. Shwaita Grover F.I.T., 150 Wetgate Drive,

Edison, New Jersey 08820

908-822-8787 shwaiteg@hotmail.com

Mr. Simcha Frishman E.I.T., 386 Beach 12th St.

Far Rockawy, NY 11691

646-643-0906 frishes@aol.com

Ms. Amy N. Banner F.I.T., 106 Brite Avenue

Scarsdale, NY 10583

718-397-8158 amy@bannerprop.net

W

e

1

C

O

m

e

to the ISCC!

2003

Inter Society Color Council Annual Meeting and

Symposium on Color & Appearance Instrumentation* April 13 – 16, 2003

Sheraton Four Points Hotel - Chicago O'Hare Airport - Chicago, IL

ISCC Annual meeting will be held on April 13–14, followed by SCAI event on April 15–16 that will focus on new instruments, optical models, and other aspects of color and appearance. General sessions, featuring an international line up of speakers, will be combined with "hands-on" workshops, at which the latest color measurement equipment and software will be demonstrated. Manufacturing, production, and R & D personnel should all benefit from participating in this program by way of new and updated instrumentation and networking with others for better understanding of color and appearance issues in the coatings industry.

<u>Contact for Registration</u>: The registration form may be downloaded at <u>www.coatingstech.org</u>. Send the completed form with payment to FSCT, 492 Norristown Rd., Blue Bell. PA 19422-2350; 610.940.0777; fax: 610.940.0292; or email <u>fsct@coatingstech.org</u>.

Romesh Kumar Clariant Corporation 500 Washington St. Coventry, RI 02816 Tel: 401.823.2161 Fax: 401.823.2750 E-mail: romesh.kumar@clariant.com

Contact for Exhibiting:

Cynthia Sturke Inter-Society Color Council 11491 Sunset Hills Rd. Reston, VA 20190

Tel: 703.318.0263 Fax: 703.318.0514 E-mail: iscc@compuserve.com

*Co-sponsored by ISCC and Federation of Societies for Coatings Technology

Registration Information

Before Feb 28th		After the 28th.
ISCC only	\$150	\$175
SCAI only	\$200	\$250
ISCC & SCAI	\$300	\$350
Students	\$100	\$100
	Exhibitors Rate	
ISCC & SCAI	(Sun, Mon, Tues evenings)	\$500
Reduced Regist	tration Fee for exhibitors (per person) is	\$150 .

Four Points Hotel Chicago O'Hare

Complimentary Hotel Shuttlebus

For Reservations: 1-800-323-1239

to and from airport every 20 minutes.

For special room rate please mention "ISCC".

Registration forms are available on www.iscc.org, from the ISCC Office, and have been included in this issue.

ISCC Annual Meeting—April 13-14, 2003 Final Programs

INTEREST GROUP I

FUNDAMENTAL AND APPLIED RESEARCH

Dr. Joel Pokorny

"Rod-Cone Interactions Studied with 4-Primary Colorimetry"

Yingqing Huang

"Determination of Particle Absorption Spectrum of Pigments using Frequency Domain Photon Migration"

Dr. Steven Shevell

"Color Perception with Patterned Backgrounds"

Dr. Ethan Montag

"The Same Stimuli Lead to Different Results: A Comparison of Constant Stimuli and Gray Scale Methods of Color Difference Scaling"

Come and experience the presentations concerning what research approaches are being conducted by the outstanding list of speakers. What influences the perception of color, and what affects what and how we see will be discussed. Additionally, research concerning the use of photon migration in the determination of pigment concentrations will be presented.

INTEREST GROUP II

INDUSTRIAL APPLICATION OF COLOR

Richard Aspland and Pramod Shanbag
"Dependence of CMC Color Differences on the
Choice of the Standard"

Jack A. Ladson

"3D Interactive Modeling of Products in a Real Time Environment, with True Color Appearance on Screen"

Alberto Argoitia

"Special Effects Pigments by Thin Film and Diffractive Interference"

Hugh Fairman and Michael H. Brill "The Principle Components of Reflectances"

David L. Spooner

"Exploring the Applicability of a Measuring System that Corrects for Lateral Diffusion Error"

Dr. Danny C. Rich

"Choosing the Best Aperture of Illumination and View for Characterizing the Color of Inks and Print"

Experience a full session covering both visual and instrumental applications of color in industry.

INTEREST GROUP III

Art, Design And Psychology

"Color Science is Creating a Modern-Day Renaissance in Art & Design"

During the Renaissance scientific advancements contributed to a creative revolution in the world of art. Art and science were blended as the roles of artist and scientist became intertwined. Today's advancements in color science have had a similar impact on the work of artists and designers. A panel discussion will be held to explore how this renaissance is impacting design in the modern world.

Prof. Margaret Miele

Fashion Institute of Technology/SUNY
"How Technology is Altering Human Color
Response"

Dr. Eileen Korenic

University of Wisconsin - River Falls

"The Relationship Between Technology and the Visual Arts"

Two ISCC Members received IS&T Honors and Awards 2002

IS&T is pleased to honor individuals who have made substantial contributions to imaging and to this Society. The 2002 Honors and Awards program gives recognition to imaging scientists, engineers and students for exemplary technical achievements. It also recognizes members whose personal efforts have contributed substantially to the programs and activities of IS&T. Two of the award recipients are also members of the ISCC. The announcements about them are included below. For a complete listing of awards go to the IS&T website.

John McCann has capably served as chair of the Honors and Awards committee, consisting of Jan Allebach, Eric Hanson, Takashi Kitamura, and Derek Wilson. Thanks to this team for a superb effort in selecting an outstanding slate of recipients.

Fellowship

Fellowship is awarded to a Regular Member for outstanding achievement in imaging science or engineering. This year Roy Berns was one of three to whom Fellowship is are awarded.

Roy Berns

For his numerous significant contributions to the field color imaging

Dr. Roy S. Berns is the Richard S. Hunter Professor in Color Science, Appearance, and Technology at the Munsell Color Science Laboratory and Graduate Coordinator of the Color Science master's degree program within the Center for Imaging Science at Rochester Institute of Technology. He received B.S. and M.S. degrees in textile science from the University of California at Davis and a Ph.D. degree in chemistry with an emphasis in color science from Rensselaer Polytechnic Institute. He has served on the board of directors of the Council for Optical Radiation Measurements and the Inter-Society Color Council (ISCC). In 1990, he received the ISCC Macbeth award for significant contributions to the field of color. In 1999 he, along with Koichi Iino, received the Society for Imaging Science and Technology journal award (science), which recognizes an outstanding contribution in the area of basic science, published in its technical journal during the preceding year. Also in 1999, Berns received the best paper award from the Society of Plastics Engineers Color and Appearance Division. He has authored over 100 publications and lectured widely throughout the world. During 2000, he wrote the third edition of Billmeyer and Saltzman's Principles of Color Technology. He is currently involved in a joint research program in museum imaging with the National Gallery of Art, Washington, DC and the Museum of Modern Art, New York.

Raymond Davis Scholarship

The Raymond Davis Scholarship is granted to a student (or students) of imaging science or engi-neering for use in continuing their studies as a graduate or undergraduate. The grant is made for academic study or research in the theory or practice of imaging science. This year Anthony Calabria is one of two recipients.

Anthony J. Calabria has now completed the second year of a two-year M.S. program in Color Science with the Munsell Color Science Laboratory at Rochester Institute of Technology. He received a B.S. in Imaging Science from RIT in 2000, studying colorant scattering on transparent media. He completed internships at the Estee Lauder Companies in 1999, working on a spectral imaging system; and the Xerox Corporation in 2000, studying sharpness of printed images. In 2001 he co-authored a study on chromatic-adaptation transforms. Anthony is currently completing thesis requirements for the M.S. degree. Under the supervision of Mark D. Fairchild, he is researching perceived contrast of color images. His professional interests are color imaging on the internet, image rendering, and color appearance in images. After graduation he accepted a position as a Color Engineer with the Color Research Laboratory of the Sun Chemical Corporation in the Daniel J. Carlick Technical Center of the General Printing Ink (GPI) Division.

Color and Research Application In This Issue February 2003

Usually commercial software for matching and batch adjustment uses a phenomenological model such as the Kubelka-Munk model, the mathematical basis of which was first published in 1931. However, generally the software does not deal with fluorescence. This is unacceptable in the modern industries such as the paper industry and the textile industry, where optical brighteners are used. In our first article, A Fluorescent Extension to Kubelka-Munk Model, Tarja and John Shakespeare provide an extension to the model to incorporate the fluorescence. Their work is applied to the paper industry, but requires characterization of the materials using a specialized

spectrophotometers that both illuminates and views the material monochromatically.

Our next article, Inter-observer Variability and Color Representation Systems, presents a systematic method to analyzed the colorimetric behavior of a set of observers. Using 11 observers, J. M. Ezquerro, F. CarreOo, and J. M. Zoido compare the outputs of various observer-to-standard metrics (including the F-norm, the correlation variance accounted for and difference metrics) using particularly colors. The rank-ordering of the observers in these various metrics is a quick way to scan for the possibility that two

metrics are functions of each other. The authors thus conclude that in the study of inter-observer variability in colorimetry, the procedure to be preferred is the one for which the color representation systems of the individual sets of color matching functions are optimized to minimize the distances (F-norms).

In tasks where the detection, recognition or analysis of color is necessary, knowledge of the illumination is an important factor. The most commonly used illumination is natural daylight. In our next article, Color Coordinates of Objects with Daylight Changes Javier Romero, Javier Hernandez-Andrès, Juan L. Nieves, and Josè A. Garcia discuss the colorimetric changes in natural and man-made objects that occur between midday and twilight. Also in this article the color appearance was evaluated using the CIECAM97s color appearance model.

Often there is more than one experimental approach to the analysis of a problem. Whenever this occurs, the question arises as to which approach is best. Ethan D. Montag and David C. Wilber compare the two most widely used psychophysical methods for scaling color differences.

In A Comparison of Constant Stimuli and Gray Scale Methods of Color Difference Scaling, the authors found similar trends, but differences between the two methods. They conclude that the method of constant stimuli is the preferable technique

It has been well known that the surface of a material affects the color that is perceived and the color that is measured. Therefore, general wisdom has advocated having similar surface characteristics before a color difference is evaluated between two specimens. While it is fairly common knowledge that color becomes lighter and less saturated as the surface becomes rougher, the extent of this phenomenon has not been studied in detail. In our next article, Color Change Due to Surface State Modification Lionel Simonot and Mady Elias quantify this phenomenon and determine a minimum roughness modification that will induce a visible color change.

In textiles, dying and printing are major factors that affect the color. However, other factors can not be overlooked. One of these is the transformation in structure, which results from the spinning or weaving. Usually when color of textiles is studied, it is in the context of the dying and/or printing parameters. However, this is not the end of the story. In our next article L. Thevenet, D. Dupont, and A. M. Jolly-Desodt describe Modeling Color Change after Spinning Process Using Feedforward Neural Networks.

Our next article, Determining Color Gamuts of Digital Cameras and Scanners, addresses the input issues. In this article Jan Morovic and Peter Morovic propose a method to simulate the response of an input device to a given spectral power distribution. The gamut of the input medium is then determined on the basis of having a set of spectra that covers the majority of all possible spectra.

For the final article in this issue, we move to the field of color reproduction. Much study has occurred comparing the output of a color reproduction process. What has been less studied is the input.

(In this Issue February 2003 - continued)

We end this issue with a letter to the editor in the Communications and Comments section. Michael Brill discusses two approaches to the analysis of principal components in A Non-PC Look at Principal Components. Also, the books, Visual Color and Color Mixture by Jozef Cohen and Color Vision and Colorimetry: Theory and Applications by Daniel Malacara are reviewed. Finally there is a report on CGIV 2002 First European Conference on Color in Graphics, Imaging, and Vision.

Ellen C. Carter, Editor Color Research and Application

DPP 2003 (IS&T)

Europe is following up the smash success of DPP 2001 with a second Digital Production Printing Conference to be held May 18-21, 2003 at the Hilton Barcelona Hotel in Barcelona, Spain, This bi-annual conference is oriented toward end-toend solutions for digital industrial and production printing end-users. Participants will see presentations by industry leaders from around the globe providing a comprehensive assessment of technology and applications covering the areas of production printing and industrial printing. Manufacturers and converters to publishers and retailers up-to-date information on new technical and commercial developments. DPP 2003 will provide attendees the opportunity to expand their insight into a rapidly developing industry sector and the necessary knowledge to exploit the tremendous gains which digital and on-demand printing provides.

http://www.imaging.org/conferences/dpp2003

Passing of Dr. Paul M. Tannenbaum

Just before this edition was sent to the printers it was learned that long time ISCC member Dr. Paul M. Tannenbaum had passed away suddenly. A full obituary will be in the next issue of *ISCC News*.

Call for Papers

Colour Society of Australia
COLOUR COMMUNICATION '03
October 10-11, 2003
Melbourne, Australia

At the beginning of this first decade of a new millennium it is opportune to celebrate the part colour plays in the fast moving world of communication. In doing so, we will look at two facets. The contribution that is made by the Artist and that of the process of Imaging.

The artist as the creator of something new and fresh, has many ways of expressing this and giving it life, form, and meaning. Our aim is for the conference to generate debate on the use of colour with the scene set by the keynote addresses from leading artists or authors. Our plan is to stimulate discussion on how colour complements art, how colours of old can be replicated, the joint issues of renovation and conservation, new colour and colouring methods and new materials.

Imaging is a well established but still rapidly expanding modern technology. Spanning as it does virtually all disciplines we find it used in medicine, physics, entertainment, military to name just a few. The part colour plays can be for pleasure, information, identification, display and to enhance text clarity. Accurate reproduction of original colour in hard and soft copies is a major challenge in modern communication. Papers that define the problems and overview solutions would be welcomed.

We also invite papers of interest on any subject involving colour that is likely to add to the enjoyment and scope of the Conference.

Authors are invited to submit an expression of interest to Conference Committee Chair Derek Grantham by email

derek@cathaypigments.com.au or by fax to +61 3 8795 8099. The web site:

http://www.colour-society.org is under construction.

CONFERENCE ANNOUNCEMENT AND FIRST CALL FOR PAPERS

LIMITS OF VISION - Space, Time and Colour

Manchester, United Kingdom 8th - 9th SEPTEMBER 2003.

A meeting is being organized by the Visual Sciences Lab, UMIST, Manchester, to celebrate the scientific career of Professor Janus Kulikowski.

Invited Speakers:

Bogdan Dreher, University of Sydney
Ewen King-Smith, Ohio State University, USA
Kathy Mullen, McGill University, Canada.
David Tolhurst, University of Cambridge, UK
Trichur Vidyasagar, Australian National University,
Canberra
Vince Walsh, UCL, London

To reflect Janus's contribution to vision science the theme of the meeting is spatial, temporal and chromatic aspects of vision. Papers are invited either as platform or poster presentations. The abstract deadline will be in February 2003. Early pre-registration is encouraged due to the limited number of spaces. If you wish to attend the meeting please tell us now by visiting the conference website, www.limits.org.uk.

The all-inclusive price will be 195 pounds. This will cover registration, Monday night accommodation and all meals including the conference dinner (Monday night). Additional nights before and after the meeting are available by arrangement (from 35 pounds B&B). Conference proceedings will be published as a special issue of Perception

The conference will be held at Chancellor's Hotel and Conference Centre, Owen's Park, Manchester. All accommodation is en-suite, situated in the east wing of the residence.

Electronic Inquiries: info@limits.org.uk

RIT's Munsell Color Science Laboratory

Summer School of Industrial Short Courses June 3-6, 2003

Summer in Rochester is fantastic. This summer plan to take advantage of one or more of the MCSL two-day short courses. We begin with the introductory/ refresher course on principles of color technology that has been presented to satisfied participants for over 20 straight years. Follow this up with one of our courses on advanced or specialized topics. If you're already comfortable with the fundamentals of color measurement, feel free to jump right into one of these courses. Each course features hands-on experiences that take advantage of the Munsell Color Science Laboratory's unique and outstanding facilities.

Begin With Either of These Courses (Tuesday and Wednesday)

Principles of Color Technology, Roy S. Berns and Mark D. Fairchild June 3-4

Device Profiles for Color Management, Mitchell R. Rosen June 3-4

Add on an Advanced or Specialized Course (Thursday and Friday)

Vision and Psychophysics, Ethan D. Montag June 5-6

Instrumental-Based Color Matching, Roy S. Berns June 5-6

Color Appearance: CIECAM02 and Beyond, Mark D. Fairchild June 5-6

Optimization Techniques for Color Reproduction, Noboru Ohta and Mitchell R. Rosen June 5-6

Halftone Theory and Practice, Jonathan S. Arney June 5-6

For More Information: www.cis.rit.edu/mcsl

CALENDAR

Please send any information on Member-Body and other organization meetings involving color and appearance functions to:

Ms. Cynthia Sturke, ISCC Office 11491 Sunset Hills Road,

Reston, VA 20190 703-318-0263 tel 703-318-0514 fax

iscc@compuserve.com website: http://www.iscc.or

1	take take take take take take take take
Feb 17-19	26th Biennial Western Coatings Societies Symposium and Show, "Making a
	Difference", Reno, NV Technical Papers: Tim Specht 510-451-2326
	Table-top exhibits: Leon Persson 702-492-1577.
March 5-6	CMG's Western Regional Meeting Los Angeles, California, USA www.colormarketing.org
March 9-11	ISCC Williamsburg Conference, Solutions for Industrial Color Problems,
	Chairs: Ralph Stanziola, 908-369-8736 rascolor@juno.com Philadelphia University
	John S. Locke, 302-695-1865 john.s.locke@usa.dupont.com
April 6-9	TAGA 2003 Montreal, Hotel Omni Mont-Royal, Quebec, Canada
.	Contact: TAGA at 585-475-7470 http://www.taga.org
April 12-15	CMG's Spring International Conference, Hollywood, FL Contact: Elizabeth Preston
- :	703-329-8500 epreston@colormarketing.org or visit: www.colormarketing.org
April 13-16	ISCC Annual Meeting and Symposium on Color & Appearance Instrumentation
• • • · · · · · · · · · · · · · · · · ·	Co-sponsored by ISCC and FSCT, Chicago, IL
1	Chair: Romesh Kumar, Clariant Corporation, 401-823-2161 romesh.kumar@clariant.com
May 3-9	ASPRS Annual Conference, Anchorage, AK
May 13-16	The Digital Photography Conference, PICS 2003, Hyatt Regency, Rochester, NY. For
• ;	registration and hotel information, contact The Society for Imaging Science & Technology,
,	7003 Kilworth Lane, Springfield, VA, USA 22151. Pamela Forness, Program Mgr:
	703-642-9090; Fax: 703-642-9094; pics@imaging.org; http://www.imaging.org.
May 20	CMG Northeastern Regional Meeting, New York, New York, USA
	www.colormarketing.org
June 12-13	CMG's European Meeting Copenhagen, Denmark www.colormarketing.org
June 16-18	CMG's Central Regional Meeting Chicago, Illinois, USA www.colormarketing.org
June 23-25	ASTM E-12 Color and Appearance Meeting/Housing: San Diego Town and Country Hotel
ſ	and Convention Center, San Diego, CA In Conj. with: CIE Meeting (Intl Commission on
	Illumination)
June 25-July 2	2 CIE's 25th Session entitled "Light, Dark Skies and Space" San Diego, CA
·	International Dark-Sky Association, ida@darksky.org or www.cie-usnc.org,
	520-293-3198; FAX 520-293-3192
Aug 4-6	Midterm Mtg: AIC Color 2003 "Color Communication & Management"
	Bangkok, Thailand Contact: aran@sc.chula.ac.th
Sept 8-9	UMIST Visual Sciences Lab Conference, "LIMITS OF VISION - Space, Time and
_	Colour", Manchester, United Kingdom. info@limits.org.uk
Sept 18-19	CMG's Canadian Regional Meeting Toronto, Canada www.colormarketing.org
Oct 9-11	Colour Society of Australia, "Colour Communication 03", Melbourne
ı	Australia, contact: Derek Grantham derek@cathaypigments.com.au.
Nov 1-4	CMG's Fall International Conference San Francisco, Calif. www.colormarketing.org

ASTM E12 Color and Appearance Meeting/Housing: Embassy Suites Hotel, Ft. Lauderdale, Jan 19-22

FL In Conj. With: D01/G03

TAGA/IS&T 2004 San Antonio, Hyatt Regency Riverwalk Hotel, San Anotnio, TX **April 18-21**

Contact: TAGA at 585-475-7470 http://www.taga.org

Position Announcement: Full-time Tenure Track Classroom Faculty Spring 2003 Science and Mathematics Department

FIT's Department of Science and Mathematics seeks qualified applicants to fill a tenure-track faculty position in the physical sciences. Background in color science preferred. Suucessful candidate must be prepared to teach course in color science and the physical science survey. Expected to coordinate a re-organization of the physical science curriculum. Must be highly motivated and have good technology skills. Demonstrated teaching effectiveness required. Minimum 60 appropriate graduate credits required, Ph.D. preferred.

To apply, please submit a letter of interest, curriculum vitae, and three current letters of reference to:

> **Personnel Administration** Fashion Institute of Technology 227 27 Street, New York, NY 10001.

The screening process will begin immediately and continue until the position is filled.

Advertising Policy

The ISCC advertising policy for the ISCC News is as follows: Pre-paid color-related advertising will be accepted 30 days in advance of the publishing date. The rates are:

\$ 100 business card-size ad

\$ 250 1/4 page ad

\$ 500 1/2 page ad

\$ 1,000 full page ad

The editor reserves the right to determine the acceptability of the advertising. A 20% discount available for a yearly contract.

Color Science Offers Graduate Scholarships

The Masters of Science Degree Program in Color Science is currently seeking highly qualified applicants for Fall 2003. Scholarships and assistantships are available for those who qualify. Funding can consist of up to full tuition assistance and a 12-month stipend (total of about \$30,000/per year). Request your graduate application today! The deadline to be considered for funding is February 15, 2003.

The Rochester Institute of Technology Chester F. Carlson Center for Imaging Science offers students a unique opportunity to earn a MS Degree in Color Science with the Munsell Color Science Laboratory, a preeminent academic laboratory dedicated to color science and imaging in the United States.

For more information see us at:

http://www.cis.rit.edu/mcsl

or contact:

Colleen M. Desimone RIT Munsell Color Science Laboratory 54 Lomb Memorial Dr., Rochester, NY 14623.

Issue #401

January/February 2003

Editor: Prof. Gultekin Celikiz

tel: 215-836-5729

fax: 215-836-0448

celikizg@aol.com

All submissions must be in English. Please submit March/April 2003 articles no later than February 1st.

ISCC Sustaining Members

	•	
Barr Associates, Inc.	www.barrassociates.com	978-692-7513
BYK-Gardner USA	www.bykgardner.com	301-483-6500
Ciba Specialty Chemicals	www.cibasc.com	302-633-2042
Color Communications, Inc.	www.ccicolor.com	773-638-1400
DuPont Performance Coatings	www.dupont.com	248-583-8345
Flex Products, Inc.	www.colorshift.com	707-525-7337
GretagMacbeth, LLC	www.gretagmacbeth.com	800-622-2384
Hewlett-Packard Company	www.hp.com	650-857-6713
Hunter Associates Laboratory, Inc.	www.hunterlab.com	703-471-6870
Labsphere, Inc.	www.labsphere.com	603-927-4266
Minolta Corporation	www.minoltainstruments.com	201-529-6055
Pantone, Inc.	www.pantone.com	201-935-5500
PPG Industries, Inc.	www.ppg.com	724-274-3532
Prime-Color, Inc.	watprime@hotmail.com	908-272-5759
SPC Software	www.spc-software.com	+33-1-4784-0066

ISCC Member-Bodies

American Association of Textile Chemists and Colorists (AATCC)

American Society for Testing and Materials International (ASTM)

American Society for Photogrammetry & Remote Sensing (ASPRS)

The Color Association of the United States, Inc. (CAUS)

Color Marketing Group (CMG)

Color Pigments Manufacturing Association (CPMA)

Council on Optical Radiation Measurements (CORM)

Detroit Colour Council (DCC)

Federation of Societies for Coatings Technology (FSCT)

Gemological Institute of America (GIA)

Graphic Arts Technical Foundation (GATF)

Illumination Engineering Society of N. America (IESNA)

National Association of Printing Ink Manufacturers (NAPIM)

Optical Society of America (OSA)

Society for Information Display (SID)

Society of Plastics Engineers, Color & Appearance Div.(SPE)

Society for Imaging Science and Technology (IS&T)

Technical Association of the Graphic Arts (TAGA)

Technical Association of the Pulp and Paper Industry (TAPPI)

ISCC News Editor

Prof. Gultekin (Tek) Celikiz 1309 Paper Mill Rd, Erdenheim, PA 19038-7025 celikizg@aol.com 215-836-5729 215-836-0448

ISCC Office Manager

Cynthia J. Sturke, Office Mgr. iscc@compuserve.com

11491 Sunset Hills Road., Reston, VA 20190

703-318-0263 703-318-0514

http://www.iscc.org