Munsell Color Science Laboratory Newsletter **Winter 1995**

Industrial Color Difference Evaluation Consortium Underway

Improvement of industrial color-difference evaluation is a critical need in U.S. and international industries as diverse as construction materials (carpet, paint, glass, building materials), automotive (paint, fabric, interior and exterior trim), consumer goods (apparel, home furnishings), and image reproduction (printing, photography, computer). In general these industries have effective process technologies for measurement, understanding and control of the coloration process but lack efficient means to evaluate the color fidelity of their product in agreement with the visual decisions of the product's consumers. Lack of an effective color-difference evaluation technology forces industry to adopt inefficient, labor-intensive solutions and is a major barrier to statistical process control, product design and specification and automated process control in these industries. The purpose of the Consortium is to improve the effectiveness of automated industrial-color difference evaluation.

At the time of this issue of the Chromazone, the following companies and organizations have joined: Datacolor, Detroit Color Council, DuPont Automotive, Inter-Society Color Council, Macbeth, Miles Laboratory, and 3M.

A meeting was held at MCSL on January 10 where a representative from each Consortium member participated in defining our first set of goals. We decided to extend our previous visual experiments in order to attain a greater global sampling of surface-color space. Rather than characterizing tolerance ellipsoids, we will measure tolerance vectors aimed in either chroma or hue directions as defined by CIELAB. In the purple blue region, we will add a diagonal vector since previous studies indicate rotation in this region of CIELAB color space. Lightness differences will be less sampled in favor of greater sampling of hue and chroma. About 40 tolerance vectors will be measured.

A Fuji Pictrography digital printer will be used to produce the tolerance samples. Its excellent spatial uniformity will well-simulate the glossy automotive coating used in our previous experiments.

The research will be carried out by Ms. Yue Qiao, a master's candidate in Imaging Science, under the direction of Lisa Reniff.

We are still seeking more members. If you're interested in joining, please contact us.

- Roy S. Berns

Grum Scholarship Award Presented

This winter quarter, it was a pleasure to present Rick Alfvin, an M.S. Color Candidate, with the 1994 Grum Scholarship Award. The scholarship was created in the memory of Dr. Franc Grum, the first Richard S. Hunter Professor in Color Science, Appearance, and Technology in RIT's Center for Imaging Science. He centered his professional life on advancing color science through a commitment to excellence in physical measurement. Late in his career, he devoted himself entirely to the development of RIT's Munsell Color Science Laboratory, the foremost academy laboratory in color science, Grum was killed in an automobile accident at a time when the Munsell Laboratory was gaining an international reputation for excellence in color science and education.

Rick is the fourth student who has received this distinctive award. He has modeled his ambition and commitment towards color science just as Franc did. A celebration was held in Rick's honor at the RIT Munsell Color Science Laboratory. The commemoration included several industrial liaisons, Rick's family and peers, Munsell Laboratory faculty and staff, and a special visit by Mrs. Albina Grum, her daughter, Eve, and her two grandsons. Everyone enjoyed appetizers, drinks, and mingling. Rick was presented with a $1,000 scholarship for academic excellence.

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- Lisa Reniff

It's That Time of Year Again!

The Munsell Color Science Laboratory will be offering a series of short courses for 1995. We are offering some popular courses as well as some new courses.

Courses in Color Measurement and Formulation include: Principles of Industrial Color Measurement, June 5-7 and an additional optional day on Industrial Instrumental Color Matching, June 8, 1995.

Courses in Color Science for Electronic Imaging Systems include: Device-Independent Color Imaging, June 12-14 and Color-Appearance Models: Theory & Practice, June 15-16, 1995.

If you would like a bunch of brochures for distribution, please call Colleen at 716-475-7189. Brochures will be mailed out to our mail list during the month of March. Be on the lookout.

Mark Receives Bartleson Award

Mark Fairchild was presented the 1995 C. James Bartleson Award at the ISCC Pan-Chromatic Conference in Williamsburg. The award was established by Mrs. C.J. Bartleson in memory of her late husband and is presented by The Colour Group (Great Britain) and the Department of Optometry and Visual Science of the City University, London. According to the citation prepared by the award's trustees, Mark was presented the award for "his wide-ranging and important contributions to the science of color vision, spectrophotometry, colorimetry, and color reproduction." Mark presented the Bartleson lecture, entitled "Considering the Surround in Device-Independent Color Imaging," prior to a banquet in Williamsburg on February 14.

DuPont Donation

This past quarter a donation from DuPont to the Center for Imaging Science has allowed us to purchase two computer systems from a portion of that donation. The computers are two Macintosh PowerPC 7100/66 computers with 40MB of RAM each which will be added to our existing computer and color imaging peripherals. This addition will help expand our ability to teach color imaging in a very hands-on way. Students taking Roy's challenging color modeling course spring quarter will make good use of these computers. The computers are named Kubelka and Munk continuing our practice of honoring color scientists by naming our computers them.
ping munk....munk is alive

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