

ROCHESTER INSTITUTE OF TECHNOLOGY
Center for Imaging Science / Munsell Color Science Laboratory

SIMC 801 Color Science Seminar

Meeting Times: Thursdays, 3:00-4:00P, 18-1080 (MCSL Group Meeting)
 Thursdays, 12:00N-1:00P, 18-1080 (Recitation, Journal Club)

Required Text:

D.L. MacAdam, Ed., *Selected Papers on Colorimetry—Fundamentals*, SPIE Milestone Series Volume MS 77, SPIE, Bellingham, (1993).

Course Plans & Requirements:

Color science seminar meets each week for all three quarters of the academic year. Meeting times will include the weekly MCSL group meeting and a second recitation/journal club time.

Students in *Color Science Seminar* will be required to prepare and present material in the MCSL Group meeting 2-3 times each quarter. These assignments will be created as we go and sometimes be group efforts.

In addition, we will read and discuss a journal, conference, or historical paper each week. These discussions will take place during the recitation period (over lunch if possible) and other faculty, staff, and students of the lab will attend. Papers discussed will be selected by the instructor for historical importance (many from the text) and by the students for general interest. These will include papers on the fundamentals of colorimetry (*e.g.* Vienot & Walraven), the history of color science (*e.g.* Plato, Newton, Grassmann, Maxwell), and more recent advances of general interest. The papers will be selected a week in advance of each discussion.

Each week, at the recitation time, students are required to hand in a 1-paragraph summary of the previous week's MCSL group meeting and a 1-paragraph summary of the paper being read in the current week's journal club. Grades will be determined based on the content of the summaries and participation in the meetings.

Some Possible Papers (* = in text):

Vienot & Walraven (2006) on Physiology of Color Matching Functions.

Plato (360BCE) on The Law of Proportion.

Newton (1671 /72) on Light and Colors.*

Grassmann (1853) on Compound Colors.*

Maxwell (1858-62) on Three Primary Colors.

& Evans (1961) on Why It Didn't Work.

Helmholtz (1866) on Physiological Optics.*

Hering (1920) on Theory of Vision.

Thurstone (1927) on Comparative Judgments.

Judd *et al.* (1964) on Spectral Distributions of Daylight.

Stone *et al.* (1988) on Gamut Mapping.

Stokes *et al.* (1992) on Color Tolerances in Images.

Vienot & Walraven (2006) on Physiology of Color Matching Functions.

Random selections from the text* ...

Random selections from recent literature ...