Madison Section Newsletter

A Signal-Processing Approach to Modeling Vision and Applications

Date: **November 8, 2010**
Time: 11:30am to 01:00pm
Speaker: Dr. Sheila S. Hemami, Cornell University
Agenda: Informal networking will begin at 11:30am.
Mr. Marca's presentation will begin at 12:00 noon.

Location: Promega Corporation
5445 East Cheryl Parkway   Promega   Map
Fitchburg, WI 53711 … telephone: 608-277-2669

Menu: Pizza buffet, salad, and pop will be available: $5 for IEEE members, $10 for non-members.
RSVP: by October 18 to Charles Gervasi (cj@cgervasi.com). Register online at:
http://meetings.vtools.ieee.org/meeting_view/list_meeting/3465

Non-member guests are always welcome!

Abstract

Current state-of-the-art algorithms that process visual information for end use by humans treat images and video as traditional signals and employ sophisticated signal processing strategies to achieve their excellent performance. These algorithms incorporate characteristics of the human visual system (HVS) in a relatively simplistic manner, and performance is reaching asymptote. However, large gains are still realizable by aggressively incorporating HVS characteristics to a much greater extent, combined with a good dose of clever signal processing. This requires HVS characterizations which better model natural image perception ranging from sub-threshold perception (distortions are not visible) to supra-threshold perception (distortions are visible). In this talk, I will review results from our lab characterizing the responses of the HVS to natural images, contrast these results with 'classical' psychophysical results, and present examples of signal processing algorithms which have been designed to fully exploit these results.

Biography

Sheila S. Hemami, an IEEE Fellow, received the BSEE from Michigan, and MSEE and Ph.D. from Stanford. She was one of the first researchers on "error concealment." She was with HP Labs in 1994 and joined the School of EE at Cornell in 1995, as Professor and Director of the Visual Communications Lab. She has held many international teaching positions and numerous college and teaching awards. She is the Editor-in-Chief, IEEE Transactions on Multimedia.

IEEE Entrepreneurs & Consultants Network (ECN), Madison Section - Networking Meeting

Date: November 4, 2010
Time: 11:30am to 1:00pm
Purpose: Networking for projects, needs, resources. Special topics vary.
Agenda: Informal networking will begin at 11:30am.
Location: Madison Area Technical College (MATC, Truax Campus)
3550 Anderson Street, Room 141A
Madison, WI 53704 ... Telephone: 608-246-6100
Parking: In the gated lot (click logo for parking map).
At gate, click speaker phone and tell attendant that you are going to the IEEE meeting.
Process: Members are encouraged to make introductions, describe their consulting or entrepreneurial endeavors, and make requests for: contacts in target companies, needs (e.g. lab space, special machinery, etc.), and human resources. Bring your elevator speech and rolodex!
RSVP: Tim Chapman (PrettyGoodGUIs@TrueNym.NET)

Monthly Section Meetings

The third Thursday of Jan.-May and Sep.-Dec. is reserved for a meeting to provide recent research, developments, trends and/or innovations in one of our membership's technical areas.

Section Meeting Schedule for 2010

(schedule subject to change)

(past) **January 28,** Wind Power Half-Day Seminar.

(past) **February 18,** Growing Your Business through Government Sales.

(past) **March 18,** Why Doesn't My Electricity Come from the Sun? Future Materials for Harnessing Solar Energy.

(past) **April 15,** Building Accessibility Directly into the Global Internet: Making the Internet Easier to Use for People of All Ages and Abilities.

(past) **May 5,** Sustainable Thinking in an Age of Energy Challenges.

(past) **August 19,** Magnetic Reversal at the Nanoscale.

(past) **September 16,** Why Materials Degradation Is Different In Nuclear Systems.

October 21, Social Networks and e-Business.

November 8, (note date) A Signal-Processing Approach to Modeling Vision, and Applications.

December 16, (talk being planned). Also, voting for 2011 Section Board members will occur at this meeting.

Monthly Networking Meetings

The first Thursday of every month is reserved for a meeting to provide networking opportunities for members who are consultants or entrepreneurs. Bring your elevator speech and rolodex!

Networking Meeting Schedule for 2010

(schedule subject to change)

(past) **January 7,** Growing Your Business through Government Sales, plus Networking meeting.

(past) **February 4,** Tour of MATC Truax campus, plus Networking meeting.

(past) **March 4,** Networking meeting.

(past) **April 1,** Overview of ECN LinkedIn Group, plus Networking meeting.

(past) **May 6,** Networking meeting.

(past) **June 3,** The Process of Networking, plus Networking meeting.

(past) **July 1,** Networking meeting.

(past) **August 5,** Networking meeting.

(past) **September 2,** Networking meeting.

October 7, Innovation Briefing: Using Artificial Intelligence to improve e-Marketing, plus Networking meeting.

November 4, Networking meeting.

December 2, Networking meeting.

Join the Madison Section Network at **Linked** in.

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Section Notes

1) Voting for 2011 Section Board members will take place in December. List of candidates will be published next month.

2) Please note date for the November talk. We will be hosting this year's Distinguished Lecturer in coordination with the other IEEE Sections in the mid-West Region.

Nominations for Officers

At the December monthly meeting, the IEEE Madison Section will conduct its annual officer elections prior to the presentation.

The positions include:
- chair,
- vice-chair,
- secretary,
- treasurer,
- members-at-large.

Section Officers

Nominations may be made via e-mail to a any current Board member:

Dennis Bahr:
bahr@inxpress.net
Mitch Bradt:
bradt@wisc.edu
Charles (CJ) Gervasi:
cj@cgervasi.com
Craig Heilman:
craigh@bugsoft.com
Clark Johnson:
clarkjohnson@cpinternet.com
David Marca:
dmarca@openprocess.com
Sandy Rotter:
rotter@ieee.org

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IEEE Membership Level Upgrades

Those interested in upgrading their IEEE membership level should send their resumes or other information showing five years of significant performance in an IEEE-designated field to Charles J Gervasi (cj@cgervasi.com). Madison Section Board will attempt to find Senior IEEE members knowledgeable in the applicant's area of practice who may be able to provide references. You are invited to attend the informal networking portion of the monthly Section meetings (starting at 11:30am) to meet the Section Board members and discuss intentions.

Board Members

Sandy Rotter	Chair
David Marca	Vice Chair
Charles Gervasi	Secretary
Mitch Brandt	Treasurer
Clark Johnson	Member at Large
Dennis Bahr	Member at Large
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IEEE Madison Section Newsletter

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Our members have professional interests in computers, power engineering, signal processing, communications, industry applications and a number of other technical fields

For more information, contact Mitch Bradt at 608-263-1085 or bradt@wisc.edu.

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