INTRODUCTION

Welcome to another issue of Cognitia! Thank you to everyone who contributed to this newsletter. We hope you all had an enjoyable and productive summer and are looking forward to the upcoming Annual HFES Meeting in San Francisco!

This issue starts with a message from the CEDM-TG Chair, Dave Kaber, discussing new TG program development and initiatives that have taken place over the past year. A look ahead to the Annual HFES Meeting can be found on page 3. In addition, you will find details about the new CEDM Student Annual Meeting Award program on pages 3-4. Congratulations to the 2010 winners!

We are also featuring introductions to a new company – Applied Decision Sciences, LLC and a new faculty member – Dr. Enid Montague at the University of Wisconsin-Madison on pages 4-5. There is information about National Ergonomics Month on page 5. Lastly, announcements of fellowship opportunities at the University of Virginia and a faculty position at Michigan Technological University are on page 6.

MESSAGE FROM THE CHAIR
An Update on CEDM-TG Programs and Activities

By Dave Kaber, Ph.D., CHFP
CEDM Technical Group Chair
Professor of Industrial & Systems Engineering
North Carolina State University

The CEDM-TG comes to you again with its second newsletter for the 2009-2010 membership year. This year has been particularly productive for the TG in terms of new program development and implementation.

We began the year with a commitment to boost the subscribership in the TG’s Journal of Cognitive Engineering & Decision Making (JCEDM) by subsidizing new on-line subscriptions. The TG was prepared to invest up to $5K in new subscriptions. Through the initiative there was a modest increase of 11 new subscriptions to the Journal. As many of you know from your current subscriptions, JCEDM has developed to be a very high technical quality publication by delivering some of the best research reports from our community. Through HFES support, the Journal does this in a timely and highly usable manner, including an on-line companion. JCEDM has also delivered special issues on current topics including: “Augmented Cognition” and “Human Performance Modeling”. Up and coming special issues include “Naturalistic Decision Making” and “Human-Robot Interaction”. Such content makes the Journal an excellent resource for advancing CEDM research and information on “hot” issues. The TG hopes to continue the JCEDM subscription subsidy program next year in order to make the Journal as accessible as possible and to further increase circulation.

If you have published, or are interested in publishing an article in JCEDM, increased subscribership is advantageous to you in terms of exposure of your research.

The second major program the TG developed this year was the Student Annual Meeting Awards. The objective of this program was to increase annual meeting attendance and participation by students with papers accepted to TG sessions. The program was funded at the

Please direct questions, comments, suggestions, and/or submissions to the newsletter editor,
Leigh Baumgart - lab3h@virginia.edu.

Visit the CEDM website at: http://www.hfes.org/cedm/

Please also visit (and join!) -
CEDM on Facebook: http://www.facebook.com/group.php?gid=7636301315
CEDM on LinkedIn: http://www.linkedin.com/groups?gid=44516&trk=myg_ugrp_ovr
level of $3500, comprising five fixed-amount awards of $700 each. There were a number of strong applications for awards and the top-five recipients were selected from several different academic institutions. (The process and outcomes of this program are reported in greater detail in another article in this issue of Cognitia.)

For this year’s HFES Annual Meeting, the TG officers voted to financially support the keynote address by Captain Sullenberger regarding his landing of US Airways Flight 1549 in the Hudson River. The officers thought the address would have direct relevance for the research and practice of many TG members. We are proud to be involved in the sponsorship of Sullenberger’s talk with the Society.

As has occurred through the Annual Meeting since 2003, the TG will deliver Best Student Paper Awards this year in San Francisco. Three awards will be made in the amounts of $500 for 1st place, $250 for 2nd place and $125 for 3rd place. The TG officers previously voted to increase the award amounts in order to give students additional incentive to submit research for consideration this year and in future competitions.

This year TG will continue its new tradition of an Annual Meeting Scavenger Hunt to promote business meeting participation and social engagement. Karen Feigh (secretary/treasurer) will organize and coordinate the hunt at the meeting. This year the TG will give out two $50 restaurant gift certificates to a winner and runner-up. We hope to see everyone at the TG business meeting on Wednesday, September 29 from 4:30-5:30 p.m. Related to this, the TG will provide light hors d’oeuvres and soft drinks at the business meeting. Please join us at 4:30 p.m. to partake.

Beyond the funded programs we have implemented this year, the TG has made significant enhancements in its on-line presence. Our Webmaster, Mark Pfaff, completely revamped the TG website, including creating a “Job Postings” page (http://www.hfes.org/cedm/p_jobs.htm) that delivers to the membership updated position announcements through government, industry and academia. Along with our new “Activities” page (http://www.hfes.org/cedm/p_activities.htm), the TG website has become a more dynamic and useful information resource. Related to this, our LinkedIn (http://www.linkedin.com/groups?gid=44516&trk=myg_ugrp_ovr) and Facebook (http://www.facebook.com/group.php?gid=7636301315) networking and social site memberships continue to increase dramatically. As of July 20, the TG included 721 dues paying members and the LinkedIn site had 603 members, up from 534 this past winter. That said, the site has realized sporadic discussions and the TG officers invite postings for conferences, new publications and positions as well as technical questions, etc. The Facebook site currently has 162 members, up from 100 members last year. As with the LinkedIn site, the frequency of discussions is limited, however, a number of students have posted questions regarding their thesis or dissertation research seeking input from more senior researchers. The TG officers encourage members with research experience to comment and provide encouragement to the up and coming generation of CEDM researchers.

Thank you once again for your interest and involvement in the TG as well as subscriptions and contributions to our Journal of Cognitive Engineering & Decision Making. Please contact any of the TG officers (http://www.hfes.org/cedm/p_officers.htm) if you would like to provide feedback on our new programs or offer ideas on additional initiatives that you think might have an impact for the membership.

Finally, I would like to extend a special thank you to Leigh Baumgart for her editing of the Cognitia Newsletter this year. Each issue has included updates on TG activities, announcements of current events as well as brief articles. The TG will seek to deliver similar high quality newsletters to the membership next year.

Please join us at:

**The CEDM-TG business meeting!**

(as part of the HFES annual meeting)

Wednesday, 9/29/10
4:30 - 5:30 p.m.

Including:
light refreshments, a scavenger hunt (with two $50 prizes), and the announcement of the 2010 CEDM-TG Best Student Paper Winners!
A LOOK AHEAD TO THE 54th ANNUAL HFES MEETING IN SAN FRANCISCO

By Ellen Bass, Ph.D. and Jennifer Ockerman, Ph.D.
CEDM Program Chair and Program Chair Elect

First, we would like to extend a big thank you to the 140 reviewers who volunteered their time to review submissions to the CEDM-TG and helped to make the technical program a success! Thank you also to those who have volunteered to serve as session chairs and co-chairs at the upcoming meeting! Your continued support of the CEDM-TG is greatly appreciated.

The CEDM-TG is excited to deliver a strong program at the 54th Annual HFES Meeting. There will be eleven CEDM sessions spanning the four days of the meeting, including one joint session with the Healthcare TG. These sessions will include a total of 44 lecture presentations, of which 17 are the result of student work. There will also be two CEDM discussion panels and 9 CEDM-related posters presented at the meeting.

The sessions as part of the CEDM-TG program will address topics ranging from cognitive engineering methodologies, workload and situation awareness, decision making, human-automation interaction, design and evaluation of human-system interfaces, supporting teams, and interruptions and task switching.

Tips to view this year’s program:

- First, go to: http://submissions.miracd.com/hfes2010/Itinerary/login.asp
- Choose the “Browse” button.
- In the Technical Group box, select “Cognitive Engineering & Decision Making.”

INTRODUCING THE NEW CEDM-TG STUDENT ANNUAL MEETING AWARD PROGRAM

By Farzan Sasangohar
CEDM Student Awards and Affairs Officer

The CEDM TG has initiated a new Student Annual Meeting Award to increase student participation in the 2010 HFES Annual Meeting. This year, five students were awarded $700 each to help with costs associated with attending the HFES Annual Meeting.

Congratulations to the 2010 Winners!

Maryam Ashoori, University of Waterloo, Canada
Mathew Thompson, Queensland University, Australia
Manida Swangnetr, North Carolina State University, US
Biwen Zhu, North Carolina State University, US
Adam Eubery, University of Waterloo, Canada

Requirements for Award Eligibility

- Applicant must be a full-time student (undergraduate or graduate) at the time of the HFES Annual Meeting.
- Applicant must be a member of HFES.
- Applicant must have an accepted paper submission to the CEDM TG.
- Awards will be prioritized on the basis of student need for support, including the number of sources and amount of funding a student has already received (or will receive) for participation in the Annual Meeting.

Application

Students wishing to apply for an Annual Meeting award next year must complete an application in May (available through the CEDM website - http://www.hfes.org/cedm/documents/CEDM_Student_Annual_Meeting_Award_Application.pdf) with the following enclosures:

1. CV or resume (maximum of 2 pages)
2. Proposed budget for participation in the conference
3. One-page essay identifying reasons for seeking an award and an explanation of how attendance of the conference will enhance your academic experience
4. Proof of paper acceptance by the CEDM TG
5. Letter of recommendation for the Annual Meeting award from your academic advisor (1 page)
6. CEDM TG Student Annual Meeting Award Endorsement Form

The application, along with all completed enclosures, should be sent to the CEDM Secretary/Treasurer, Dr. Karen Feigh, via email (karen.feigh@gatech.edu). Applicants will be evaluated and selected on a need basis by the CEDM TG Program Chair-Elect (Dr. Jennifer Ockerman), Secretary/Treasurer, and Student Awards and Affairs Officer (Farzan Sasangohar).

Award Process
Awards are made one week prior to the deadline for final paper submissions to HFES, around mid-June. All awards are made to student recipients as gifts to their home institutions. HFES will make gifts by check and a university or college must have an established gift account through which to receive the gift. The student’s academic advisor and/or department is responsible for overseeing disbursement of award to the student recipient from the gift account. All award funds must be used to support student participation in the Annual Meeting.

PROFILES IN PRACTICE:
Introduction to Applied Decision Sciences, LLC

By Steve Wolf, CEO
Applied Decision Sciences, LLC

Applied Decision Science (ADS) is a new research and development company focused on supporting human cognition in environments that are characterized by high stakes, high time-pressure and/or high complexity. Frequently these are environments where mistakes can result in the loss of human life or in outsize financial or materiel costs. ADS develops decision support tools, training programs and human-computer interface redesign services to support and to improve both information processing and decision-making. The company primarily provides its services in military and health care environments but is currently expanding its suite of services to encompass the business sector.

The research methods and approach at ADS are based on Naturalistic Decision Making (NDM) theory. NDM’s focus is on the decision-maker in the context of his/her environment and stands in contrast to traditional models of decision-making (e.g., Bayesian or other normative approaches). NDM places its emphasis on studying how decision-makers really operate in the field and strongly leverages field research to generate its findings. We conduct our field research using applied Cognitive Task Analysis (CTA). We rely on a suite of CTA tools and techniques to develop the user models that drive the eventual client solution.

At the core of our research approach is the Recognition-Primed-Decision Model, developed by Dr. Gary Klein, one of the co-founders of ADS. The RPD model was developed specifically to explain the cognition behind the rapid, instinctual (or gut) decisions that are required in environments where conditions are complex and evolving rapidly. We leverage our understanding of naturalistic decision making to structure and evaluate decision-making challenges. We combine that framework with aspects of the emerging field of behavioral economics -- structuring environments to incent desired behavior -- to deliver powerful new solutions.

For more information about ADS, please visit: www.applieddecisionscience.com or contact Steve Wolf, CEO at: s.wolf@applieddecisionscience.com.

FOCUS ON NEW FACULTY:
Dr. Enid Montague at the University of Wisconsin-Madison

Dr. Enid Montague is a new Assistant Professor and Anna Julia Cooper Fellow at the University of Wisconsin-Madison in the department of Industrial and Systems Engineering. Her research focuses on understanding the antecedents, facets and outcomes of human trust or distrust of technologies in complex systems such as health care. As director of the Human-Computer Interaction Lab, Montague is studying the factors that lead to trust and how to design for trust. “My goal is to have a real impact on creating healthier, safer systems,” she says.

A portion of this research is concerned with trust in high-impact systems, such as construction and
Montague is currently working with a team at Virginia Polytechnic Institute and State University (Virginia Tech) to improve the adoption of safer dust-control technologies in the construction industry. The National Institute for Occupational Safety and Health/Centers for Disease Control and Prevention funds the project, which is one of seven projects funded by the agency to address critical safety and health issues in construction. Montague brings her expertise in risk perception, organizational trust and trust in technology to the project.

Montague also is researching how technology changes interpersonal relationships between doctors and patients. This work is funded by the UW Institute for Clinical and Translational Research, where Montague has received a K12 early career development award to study trust in health technologies.

These health-related projects build on Montague’s previous experience studying trust in obstetric technologies at Virginia Tech, where she worked with Drs. Brian Kleiner, Woodrow Winchester III and Tonya Smith-Jackson. She received her master’s and PhD in industrial and systems engineering in 2006 and 2008, respectively. In Montague’s recent research article published in the journal Behaviour and Information Technology she reports that patients and care providers in obstetric work systems develop trust in health technologies used to provide care in different ways, which affects interpersonal relationships in addition to important system and health outcomes. “As we increase our reliance on technologies in hospitals and clinical care, trust is important,” she says.

Montague’s academic background is uniquely suited for the complicated questions related to trust and how to measure it. The Virginia native completed interdisciplinary coursework in computer science, psychology at Mary Washington College. She received her bachelor’s degree in psychology, specializing in Human Factors and Ergonomics, with undergraduate advisor Dr. Jim Bliss, from Old Dominion University in 2003 before she studied at Virginia Tech.

At UW-Madison, Montague teaches courses in human-computer interaction and health systems engineering. She is currently seeking creative and hard-working PhD students to join the Human-Computer Interaction Lab. If you are interested in creating healthier systems and understanding the role of trust in technology use, please contact Dr. Montague (emontague@wisc.edu).

October marks the eighth year that we have been celebrating and promoting National Ergonomics Months (NEM). Over that time, NEM volunteers throughout the Society have focused on four specific outreach programs: (a) Media Outreach, (b) Corporate and Government Outreach, (c) School Outreach, and (d) Student Member Outreach. As the professionals and students in the field of human factors and ergonomics (HF/E), it falls upon us to promote our field in interesting and compelling ways. If you have already conducted NEM activities in the past or are planning an event for 2010, then I applaud your commitment to HF/E and to placing importance on the future of HF/E. If you hadn’t considered participating or developing your own NEM activities, then I hope that you will be inspired this year to take the next step.

This year at the NEM session on Monday afternoon, we are conducting the first ever NEM Expo. We have solicited participants who have had experiences with outreach in the past and who are willing to share those experiences with the meeting attendees. The Expo will be an interactive session in which you can show up and dive right in at any time during the session. Various organizations will have booths set up to provide information about their outreach activities and lessons learned. The goal for the NEM Expo is to provide the opportunity to “train the trainer” and encourage the exchange of ideas in a casual and interactive forum. In addition, the results of this year’s NEM Best Action and Implementation Plans will be announced. Please plan to show your support for NEM by stopping by and checking out the NEM Expo!

In addition to planning the NEM Expo, we have been actively updating the NEM website. One of the new additions is the list of articles that are now available. We scoured the previous HFES proceedings for articles that showcased unique ideas in teaching HF/E or demonstrating the importance of HF/E. You all now have access to these articles through our website, www.hfesnem.org. We also now have active groups on Facebook and LinkedIn for you to become involved with NEM activities and discussions. Information about these is also available on our website.

If you have an event planned, or are in the process of planning one, please send your information to me at...
raegan.m.hoefl@lmco.com so that we can post the information on the NEM website. Furthermore, we have NEM trinkets available for your events. You simply need to request them with an estimate of the amount of people you anticipate participating in your event. Even if you aren’t planning an event per se, but would like some NEM materials to distribute, you can still make a request for materials. Remember, no effort is too small! I hope to see you all at the NEM Expo this year in San Francisco!

POSITION VACANCIES:

MINDSET Program at the University of Virginia

The Medical Informatics/Systems Engineering training program at the University of Virginia (UVa MINDSET) is seeking to fill two funded positions in each of the following categories: Ph.D. graduate study, postdoctoral research fellow and short-term mentored research experience. Selected fellows will conduct research in the general area of human-automation interaction in the healthcare domain mentored by both researchers with expertise in systems engineering (including human factors, haptics, modeling, simulation, training, formal methods, control theory, and algorithm development) and by researchers in the healthcare field (including pediatrics, internal medicine, urology, emergency medicine, diabetes, cancer, global health, and nursing). Ideal candidates will have a background in systems engineering, computer science, cognitive science, or a closely related discipline and have strong software development skills, excellent writing skills, and a demonstrated ability to participate in interdisciplinary collaborations. Those with a healthcare background but strong aptitude for engineering will also be considered. US Citizenship or permanent residency is required.

Michigan Tech, with 22 Ph.D. and 34 master’s programs, is a public mid-sized institution classified as a Research University with high research activity (RU/H). Michigan Tech is ranked in the top tier of national universities according to U.S. News & World Report’s “America’s Best Colleges 2011” and received “Best in the Midwest” honors in Princeton Review’s The Best 373 Colleges, 2011 Edition.

Michigan Tech is located in the heart of Michigan’s Upper Peninsula and is rated as one of the Top 10 summer travel destinations, as well as one of the Top 10 outdoor adventure spots in the country for our bike trails, Olympic-caliber cross country ski trails, Lake Superior shoreline, and numerous inland lakes.

Review of applications will begin November 1st. Candidates must send an electronic <psych@mtu.edu> AND physical copy of their application materials, including a letter of application summarizing research and teaching goals, re(pre)prints, curriculum vita, and 3 letters of recommendation to Psychology Search Committee, 310 Chem Sci Bldg, 1400 Townsend Dr., Houghton, MI 49931-1295. Michigan Technological University is an equal opportunity educational institution/equal opportunity employer.

Don’t forget to register and book your travel plans for the 54th Annual HFES Meeting in San Francisco!

For more information, see: http://www.hfes.org/web/HFESMeetings/2010AMtg
mtgs.html
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Newsletter of the Cognitive Engineering and Decision Making Technical Group

Cognitia is published by the CEDM-TG of the Human Factors and Ergonomics Society. For membership information, see the HFES website at hfes.org. Questions, comments, or submissions for publications in this newsletter should be directed to the newsletter editor.

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