Welcome to the second issue of Cognitia for 2011. This issue begins with a message from CEDM-TG Chair, Dave Kaber, detailing the progress of the TG over the past year. On Page 3, you will find details regarding the upcoming CEDM-TG program at the 55th Annual HFES Meeting in Las Vegas. Winners of the 2011 CEDM-TG Student Annual Meeting Award are announced on Page 4. There are also announcements regarding faculty position vacancies, a new distance learning Master’s Degree program, and the upcoming Human Factors and Applied Psychology student conference on Pages 5-7. Thank you to everyone who contributed to the newsletter.

MESSAGE FROM THE CHAIR
2011 CEDM-TG Progress

By Dave Kaber, Ph.D., CHFP
CEDM Technical Group Chair

In this message, I summarize the progress the TG has made since early this year in terms of membership, programs administration, annual meeting session development, and officer elections. In general, the TG maintains a strong membership within the Society, a solid web presence, and multiple programs for supporting student activities and providing benefits to the membership.

As of August 18, there were 829 members of the TG. As in previous years, this represents the largest TG membership in the Society. Related to this, the number of members of the TG social networking websites continues to increase, including LinkedIn (http://www.linkedin.com/groups?gid=44516&trk=myg_ugrp_ovr) at 881 members (up from 680 in the spring) and the Facebook site (http://www.facebook.com/group.php?gid=7636301315) at 172 members (up from 167 in January). Although the LinkedIn site has activity with several postings each month, the Facebook site has realized limited use and is scheduled to be archived. The TG encourages all members to make use of the LinkedIn networking site for research discussions, questions to the membership, human factors-related event announcements, calls for participation in studies, job posting, etc.

Since the beginning of 2011, the TG has received dues from the membership amounting to approximately $2.8K. This does not include dues from new members or those who may renew by the close of the year, which typically amounts to another $2-2.5K.

This year member dues were used to fund the Student Annual Meeting Award Program. Per TG planning in 2010, three awards were made to students with a lecture accepted to a CEDM-TG technical session in order to facilitate their participation in the Annual Meeting. The amount of awards is fixed at $700 each. Details of the program can found at (http://tg.hfes.org/cedm/announcements.htm#TG_studen t_award). This year award recipients are identified later in Farzan Sasangohar’s article on the program. Information regarding the schedule of student lectures is also provided on Page 3. The TG plans to continue the Student Annual Meeting Awards Program in the future.

TG funds were also used this year to support various aspects of the Annual Meeting program, including continuing sponsorship of the Student Lounge (third year in a row) and a special panel session presenting “CEDM Pioneers of Human-Automation Interaction (HAI)”. The TG will provide catering at a reception for the “Pioneers” to be combined with the usual hospitality as part of the Annual Business Meeting.
Another program investment the TG will make before the close of the year is the Best CEDM Student Paper Awards at the Annual Meeting. The amounts of these awards were increased in 2010 to $500 for 1st place, $250 for 2nd place and $125 for 3rd place and will be applied in this year. Student lecture submissions are currently under review by an officer committee led by Farzan Sasangohar (Students Awards and Affairs Officer).

Karen Feigh will provide a complete financial report for the TG at the Annual Business meeting with more information on expenses and a planned budget for 2011-2012.

Regarding the 2011 Annual Meeting technical program, the CEDM-TG will host 12 lecture sessions, including several co-sponsored with healthcare, aerospace systems, human performance modeling, augmented cognition and systems development, four poster sessions, two panels, one invited symposium and one invited address (by the Pioneers in HAI). Thanks to the work of Ellen Bass and Jennifer Ockerman, this program includes one of the highest numbers of jointly sponsored sessions in the TG’s history making the program highly multidisciplinary in nature.

The special Pioneers in HAI session will include Drs. Peter Hancock, Richard Jagacinski, Raja Parasuraman, Chris Wickens and Glenn Wilson. They will give presentations on physiological approaches to adaptive automation, parallels among control and decision theories, tracing the history of adaptive automation, understanding the impact of levels of automation on human performance, and methods of operator functional state assessment in complex systems. The session is expected to provide attendees with insights on the origins of concepts, theories and design principles of HAI and why we are at where we are today.

Finally, this past summer, the CEDM-TG held its bi-annual officer elections. All positions were open for nominations, except the Program-Chair. As a result of her service as program-chair elect, Jennifer Ockerman will be the Program Chair for the CEDM-TG from 2011-2013. Congratulations to Jennifer. With respect to the elections, Ann (Amy) Bisantz will serve as the new Program-Chair Elect for a 2-year term. Amy has previously served as Program Chair, Program-Chair Elect and Secretary-Treasurer for the TG. She brings a substantial experience to the position. (Although a motion for a TG-Chair elect position was made through the 2010 Annual Business, the motion was tabled and may be revisited at this year’s meeting.) Karen Feigh, having completed her term as Secretary-Treasurer, will serve as the new Program-Chair Elect for a 2-year term. This post also involves automatic continuation as Program Chair from 2013-2015.) Mark Pfaff recently completed service to the TG as the Electronic Communications Director. He will now serve as Secretary-Treasurer from 2011-2013. Similarly, Farzan Sasangohar will continue his service to the TG as he moves from the position of Student Awards and Affairs Officer to the Electronic Communications Director position for a 2-year term. New additions to the group of TG officers include Lisa Jo Elliott, as the Newsletter Editor (2-year term), and Miranda Cornelissen as the Student Awards and Affairs Officer (2-year term). Congratulations go to all the new officers along with thanks to the candidates who ran for office. Thanks also go to all CEDM members who voted.

We look forward to a new TG executive board sustaining the high-quality technical program of the Annual Meeting we have come to enjoy; developing additional member programs; and further enhancing TG communication and internet resources for member networking and information sharing.

Please join us at:

**The CEDM-TG business meeting!**

(as part of the 55th HFES Annual Meeting)
Wednesday, 9/21/10
3:30 - 5:15 pm

Including refreshments and the announcement of the 2011 CEDM-TG Best Student Paper Winners!

Come early for the “Pioneers in CEDM Research - Foundational Contributions to the Science of Human-Automation Interaction” from 1:30 - 3:30 pm.
A LOOK AHEAD TO THE 55th ANNUAL HFES MEETING IN LAS VEGAS!

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

First, we would like to extend our sincere thanks to the 127 reviewers who volunteered their time to evaluate submissions. Thank you also to those who volunteered to organize symposia and discussion panels, to demonstrate software, to review the submissions to the student paper competition, and to serve as session chairs and co-chairs at the upcoming meeting. It takes many volunteers to create a high-quality technical program and the continuing support of the TG by the human factor community is greatly appreciated.

The CEDM-TG is excited to deliver a very special program this year. On Wednesday, September 21st from 1:30-3:00pm, we have a set of invited addresses as part of the "Pioneers in Cognitive Engineering and Decision Making Research" panel session. Peter Hancock, Richard Jagacinski, Raja Parasuraman, Chris Wickens and Glenn Wilson will review major contributions to the area of human-automation interaction and identify future steps. The session will include time for questions and discussion.

To provide for additional interaction with the Pioneers, we have arranged for a reception, following the panel from 3:30-4:00pm on Wed. This will also serve as the hospitality for the TG business meeting, which is scheduled from 4:00-5:15pm.

Please join us for two other discussion panels, including:
- Current State of Human Factors in Systems Design (Tues. 1:30-3:00 pm)
- Addressing Human-Automation Challenges for the Control of UAS (Thur. 3:30-5:00 pm)

Please also attend our invited symposium on Friday, September 23rd from 10:30am to noon, which will focus on human-robot teams: “From Teleoperation to Teammate: Applying Theory and Method from the Cognitive and Computational Sciences to Create Human-Robot Teams.”

In addition, please make sure to review the nine CEDM related posters as part of the sessions:
- Methods and Metrics (Tues. 1:30-3:00 pm)
- Automation and Team Cognition and Performance (Wed. 10:30-noon)
- Robotics Research and Application and Simulations and Games (Thur. 10:30-noon)

Other highlights include an exciting demonstration during the Tuesday afternoon session (3:30-5:00pm): Instance-based Learning Tool.

Due to the number of sessions, the TG and HFES could not avoid overlapping sessions. This is also due to several joint lecture sessions with other TGs, including:
- Tasks and Needs Analysis in Healthcare (Joint Session with Healthcare on Tues., 3:30-5:00pm)
- Impact of Automation in Aviation Systems (Joint Session with Aerospace Systems on Tues., 3:30-5:00pm)
- Engineering and Augmenting with Psychophysiological Measurement (Joint Session with Augmented Cognition on Thur., 8:30-10am)
- Modeling Cognition (Joint Session with Human Performance Modeling on Thur., 10:30am-noon)
- System Design Concepts and Methods to Support Cognitive Work (Joint Session with System Development on Thur., 1:30-3:00pm)

Other lecture sessions rounding out the CEDM-TG program address a range of topics, including:
- Team Performance (Tues., 10:30-noon)
- Effects of Interruption and Memory on Human Performance (Wed., 8:30-10am)
- Measures and Methods in Complex Environments (Thur., 8:30-10am)
- Situation Awareness (Thur., 10:30am-noon)
- Visualizations and Displays (Thur., 10:30am-noon)
- Models of Cognitive Workflow and Readiness (Thur., 1:30-3:00pm)
- Human-Robot Interaction (Fri., 8:30-10am)

Tips to view this year’s program:
- Choose the “Browse” button.
- In the Technical Group box, select “Cognitive Engineering & Decision Making.”
WINNERS OF THE 2011 CEDM-TG
STUDENT ANNUAL MEETING AWARD

By Farzan Sasangohar  
CEDM Student Awards and Affairs Officer

The CEDM Technical Group congratulates the recipients of this year's Student Annual Meeting Award. This award provides $700 to each recipient to facilitate participation in the HFES Annual Meeting. Applicants must be HFES student members and have a paper accepted for presentation at the Annual Meeting. The winners and presenters during the annual meeting, include:

Antony Hilliard and Greg Jamieson  
University of Toronto

Energy Management in Large Enterprises:  
A Field Study  
Thursday, September 22, 2011  
01:30 pm - 03:00 pm

Heidi Kramer and Frank Drews  
University of Utah

Using Salience to Guide Searches in Digital Displays  
Thursday, September 22, 2011  
10:30 am - 12:00 pm

Nicole Werner, David Cades, Deborah Boehm-Davis, Jessica Chang, Hibah Khan, and Gia Thi  
1George Mason University, 2Exponent

What Makes Us Resilient to Interruptions? Understanding the Role of Individual Differences in Resumption  
Wednesday, September 21, 2011  
08:30 am - 10:00 am

Congratulations to Antony, Heidi, and Nicole, and we look forward to seeing you present your work in Las Vegas!

These papers can be found in the CEDM program at:  

- Choose the “Browse” button.  
- In the “Author Last Name”, enter the last name.  
- In the “Technical Group” box, select “Cognitive Engineering & Decision Making.”

If you meet the applicant criteria, please consider applying for the 2012 Student Annual Meeting Award. The submission deadline is May 15 of each year. Details of the program can be found at:  
(http://tg.hfes.org/cedm/announcements.htm#TG_student_award).

Congratulations to the incoming CEDM-TG Officers:

CEDM-TG Chair:  
Amy Bisantz (2 year term)

Program-Chair Elect:  
Karen Feigh (2 year term plus continuation as program chair)

Secretary & Treasurer:  
Mark Pfaff (2 year term)

Electronic Communications Director:  
Farzan Sasangohar (2 year term)

Newsletter Editor:  
Lisa Jo Elliott (2 year term)

Student Awards and Affairs Officer:  
Miranda Cornelissen (2 year term)

Thank you to all the candidates who ran for office and thank you to all CEDM members who voted.
**POSITION VACANCIES:**

**Michigan Technology University Faculty Positions in Transportation**

Michigan Technological University is conducting a Strategic Faculty Hiring Initiative (SFHI) in Transportation. Applications are invited for up to 7 tenure-track positions, open in rank, during the 2011-2012 and 2012-2013 academic years.

The development, management and maintenance of a vibrant transportation system that allows for the safe, effective and environmentally benign movement of people and goods are crucial to a successful economy. To be sustainable, future transportation systems will need to be multi-modal, and require cutting-edge research and skilled professionals to guide development and implementation.

The SFHI in Transportation is designed to address these needs and the goals of the USDOT strategic plan for 2010-2015 (USDOT, 2010). Candidates are sought with expertise in areas of strategic growth and/or existing strength at Michigan Tech, specifically: Asset Management, Human Factors, Policy & Planning, Rail Transportation Systems, Systems Modeling, and Transportation Materials.

We are seeking candidates at either the assistant, associate or full professor level. All applicants should identify how their specific field of interest aligns with the areas listed above. Ideal candidates will be capable of integrating with at least one other highlighted area or an existing strength at Michigan Tech, will inspire collaboration and scholarship, and be leaders in uniting faculty with common interests in transportation. Successful applicants should adopt multi-scale approaches and/or use advanced technologies to conduct interdisciplinary and synergistic research with the expectation of establishing a nationally recognized, externally funded research program. Required qualifications include a PhD; prior success in obtaining, or the demonstrated potential to obtain, external funding; and a commitment to excellence in undergraduate teaching and graduate education. The application review process will begin on October 1, 2011. Details on the hiring initiative (including required application materials and the submission process) are available at www.mtu.edu/sfhi.

Michigan Tech is located on Michigan's scenic Upper Peninsula, on the south shore of Lake Superior. The area provides a unique setting where natural beauty, culture, education, and a diversity of residents from around the world come together to share a superb living and learning experience.

Michigan Tech is an ADVANCE institution, one of a select group of universities in receipt of NSF funds in support of our commitment to increase diversity and the participation and advancement of women in STEM.

**University of Virginia Faculty Position in Health Care Systems Engineering**

The Department of Systems and Information Engineering (SIE) at the University of Virginia invites faculty applications at all levels (assistant, associate, or full professor). We are seeking an accomplished scholar whose interests complement those of our faculty and who has a proven track record in health care systems engineering. All areas of SIE specialization will be considered: human factors, computational statistics and simulation, risk and decision analysis, optimization and control, and system integration. Candidates must possess an earned doctorate in Systems Engineering or a related discipline, with a demonstrated record of academic scholarship as appropriate to the candidate’s rank and commitment to teaching excellence.

The ideal candidate has a broad perspective on the application of systems engineering to health care, with interest in research collaborations with the medical community that could range from basic to applied research. Candidates should be engaged in ongoing funded research that demonstrates both individual research capabilities and the collaboration with members of the medical and engineering research communities. In addition to developing an externally funded research program, duties include teaching at the undergraduate and graduate levels and service to the department, university, and professional organizations.

The Department’s high NRC PhD program ranking, existing collaborative relationships with the School of Medicine, peer relationship with the Department of Bioengineering, and the School of Engineering and Applied Science’s (SEAS) strategic commitment to medical innovation and translational research, create an unusual opportunity for significant contributions to a growing area of opportunity. The Department currently consists of 18 full-time faculty members. Its ABET-accredited undergraduate program currently admits...
approximately 100 undergraduate majors per class year (the largest undergraduate program in SEAS). 88 graduate students are currently enrolled within its on-grounds PhD, MS, and MEng degree programs.

Screening of applicant will continue until the position is filled. The expected start date is 16 August 2012. To apply please submit a cover letter, research and educational plans, curriculum vitae, and names and contact information for at least three references. Please address questions to the search committee chair, Professor Stephen Patek (SIEHealthCareSearch@virginia.edu).

For complete job description and to apply online go to:
https://jobs.virginia.edu/
Click on the Faculty button.
Search on "Systems and Information Engineering."
The position posting is 0606842.

Screening of applicants continues until the position is filled. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.

For more job postings, please visit the CEDM-TG website at:

http://tg.hfes.org/cedm/jobs.htm

Current postings include:

• Three Human Factors positions at the University of Iowa (Iowa City)
• Senior Scientist at Adaptive Cognitive Systems, LLC
• Senior Mobile User Experience Specialist at BB&T
• Research faculty position in behavioral modeling at Old Dominion University
• Research Associate at MacroCognition, LLC
• Three openings at Honeywell (Phoenix, AZ):
  o Senior Technical Manager
  o Principal Systems Engineer - Human Factors
  o Systems Engineer III - Human Factors
• Program Manager at NHTSA in Human Factors Research
• Human Factors Research Engineer at Vanderbilt University

GRADUATE PROGRAMS:

The Naval Postgraduate School
Distance Learning Master of Human Systems Integration Degree

Now Open for Applications!
Contact HumanSys@nps.edu for more information

The Naval Postgraduate School is pleased to announce the nation’s first distance learning Master of Human Systems Integration degree program. The program is open to all federal government employees (military and civilian) and defense contractor employees (on a space available basis).

Human Systems Integration (HSI) acknowledges that the human is a critical component in any complex system. HSI is an interdisciplinary approach that considers the domains of Manpower, Personnel, Training, Human Factors Engineering, Environmental Safety and Occupational Health, Habitability, and Survivability. HSI practitioners work alongside designers and engineers and make explicit the underlying tradeoffs across the HSI domains, facilitating optimization of total system performance in both non-materiel and materiel solutions to address the capability needs of organizations.

Program length is two years (eight consecutive academic quarters) with plans to have one synchronous and one asynchronous class per quarter.

Prerequisites for the Program:

• Baccalaureate Degree
• GPA of 2.2 or better
• Two or more pre-calculus courses with B or better average
• Waivers may be considered

Graduates earn both an MHSI degree and an HSI Certificate!

Application Process:
To apply please visit:
http://www.nps.edu/Academics/Admissions/ApplyOnline/ApplyNow.html and complete the online application packet.

Contact humansys@nps.edu and/or visit
http://www.nps.edu/dl/Degree_Progs/MHSI.asp
for more information!
HUMAN FACTORS AND APPLIED PSYCHOLOGY STUDENT CONFERENCE

Over the past 5 years, the Human Factors and Applied Psychology student conference has become a respected event in the Southeastern United States. With attendees coming from farther away each year, the diversity of students and presentations has grown exponentially. For most students, the notion of presenting at a professional conference for the first time seems quite challenging. HFAP offers a friendly and constructive environment for students to present their research and receive professional advice and counsel, prior to presenting at a professional meeting such as HFES. Past keynote speakers include Dr. Scott Shappell and Dr. Frank Durso, and attendees have represented a variety of universities in Florida and Alabama, as well as West Point Military Academy. This year's conference is Thursday April 6th 2012. Our keynote speaker is Dr. John Flach, and abstracts will be due in mid-February. Check us out online at www.hfapconference.com.

Antoine D. Juhel
HFAP Student Chair
antoinejuhel@me.com

Elizabeth Blickensderfer, Ph.D.
HFAP Faculty Chair
elizabeth.blickensderfer@erau.edu