



TECHNICAL PROGRAM COMMITTEE

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Special Sessions

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Student Forum

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Aging

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Augmented Cognition

Denise M. Nicholson

Cognitive Engineering and Decision Making

Ann M. Bisantz
Ellen J. Bass

Communications

Aaron W. Bangor

Computer Systems

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Education

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Environmental Design

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Forensics Professional

Marc L. Resnick

Health Care

Ayse P. Gurses

Human Performance Modeling

Dario D. Salvucci

Individual Differences in Performance

James L. Szalma

Industrial Ergonomics

Kermit G. Davis

Internet

Marc L. Resnick

Macroergonomics

Nancy L. J. Larson
Maria J. Brunette

Perception and Performance

Janae N. Lockett-Reynolds

Product Design

Steven M. Belz

Safety

William J. Vigilante

Surface Transportation

Miguel A. Perez
Louis Tijerina

System Development

Dennis White

Test and Evaluation

Lawrence Hettinger

Training

Camilla C. Knott

Virtual Environments

Jason S. Augustyn

SPECIAL THANKS FOR LOCATION PLANNING FOR THE 52ND ANNUAL MEETING

Technical Tours

Emily Friedman
Mark D. Lee
LTC James L. Merlo
Aideen J. Stronge

Student Lounge

Monifa Vaughn-Cooke
Christina Kokini

Volunteers Coordinators

Anand Tharanathan
John R. Morris

Newsletter

Douglas E. Fox

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52ND ANNUAL MEETING SPONSORS

HumanCentric Technologies, Inc.
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HFES Council of Technical Groups
“Brown Bag” Mentoring Luncheons

HFES Product Design Technical Group
Student Career and Professional Development Day

HFES Perception and Performance Technical Group
Student Lounge – Wednesday

HFES Test and Evaluation Technical Group
Student Lounge – Tuesday

HFES Old Dominion University & University of Idaho Student Chapters
Student Career and Professional Development Day Reception

Boren Family Foundation
Education Technical Group Business Meeting

HFES Education Technical Group
Student Lounge – Thursday Afternoon Break

Pacific Science and Engineering Group, Inc.
Augmented Cognition Technical Group Business Meeting

EXHIBITORS

Advanced Brain Monitoring	#12
Alion Science and Technology	#30
Ashgate Publishing Company	#14
Board of Certification in Professional Ergonomics	#TT5
Dassault Systemes/Safework	#6
Delsys, Inc.	#TT1
DTIC San Diego	#TT10
Embry-Riddle Aeronautical University	#23
HFES Accreditation Review Committee	#TT7
HFES Education and Training Committee	#TT6
HFES Education TG/Student Affairs Committee	#18
HFES 53rd Annual Meeting	#28
HFES Institute	#16-17
LC Technologies	#TT8
Morgan Kaufman Publishers/Elsevier.	#TT2
NASA Human Factors Research	#1-2
National Research Council	#3
Noldus Information Technology, Inc.	#13
Oxford University Press	#TT9
SAGE Publications	#8
Seeing Machines.	#20
SensoMotoric Instruments	#4
Smart Eye AB	#5
TaskArchitect, Inc.	#TT3
Taylor & Francis Group-CRC Press	#9-11
TechSmith Corporation	#7
University of Michigan Center for Ergonomics	#TT4
U.S. Nuclear Regulatory Commission	#22



CONTENTS

Registration & Facilities

Meeting Facilities	1
Registration Desk Location and Hours	1
On-Site Event Tickets.	1
Locator File	1
Room Capacity	1
Nonsmoking Policy	1
Pagers and Cell Phones	1
Refreshments	1

Resources

HFES Central	1
Business Center	1
Career Center.	1
Job Notices at the Annual Meeting.	1
Internet Café	1
Newsletter	2
Student Lounge	2
Wireless Internet	2
Birds of a Feather Room	2
Audiovisual Preview Room	2
Volunteers Assignment Room	2
Proceedings CD-ROM.	2

Exhibits

Location and Hours	2
Prize Drawings	2
Author Book Signings	3

Events

Human Performance in Extreme Environments 6th Annual Meeting.	3
Student Career and Professional Development Day.	3
“Brown Bag” Mentoring Luncheons.	3
Student Reception	3
Junior Faculty Social & Networking Event	3
National Ergonomics Month Event	3
Technical Group Membership – Open to All!	3

Program Reminders

Poster Sessions	3
University Lab Posters	3
Annual Meeting Survey	4
Audiotaping and Videotaping Policies.	4

Meetings and Tours

Meetings	4
Technical Group Business Meetings	5
Social Events	6
Technical Tours	6

Technical Program

Workshops	6
Technical Sessions	8
Program at a Glance	Center Spread

Author Index	43
Advertisers	45
Personal Planner	51
Facility Map	52, Inside back cover

REGISTRATION & FACILITIES

Meeting Facilities

All Annual Meeting functions will be held at the New York Marriott Marquis Times Square on the 4th, 5th, 6th, 7th, and 9th floors. Maps of the meeting space may be found on the inside back cover of this program and displayed on signs throughout the hotel.

Registration Desk Location and Hours

All persons attending workshops, technical sessions, tours, receptions, and other events and their guests are asked to wear their registration badges. Attendees and guests may register for Annual Meeting events at the Registration Counter on the 5th Floor.

Registration is open during the following hours:

Sunday	3:00 to 6:00 p.m.
Monday & Tuesday	7:00 a.m. to 6:00 p.m.
Wednesday	7:30 a.m. to 5:30 p.m.
Thursday	7:30 a.m. to 5:00 p.m.
Friday	8:00 a.m. to 12:00 noon

On-Site Event Tickets

For those events not sold out in advance, tickets for tours and events may be purchased at the Registration Counter during registration hours. No waiting lists will be established; tickets will be sold on a first-come, first-served basis.

Locator File

A list of all persons who have registered for the 52nd Annual Meeting will be available at the Registration Counter.

Room Capacity

Room selection for sessions is based on estimated attendance and facility restrictions. All efforts have been made to ensure that room capacity is adequate.

Nonsmoking Policy

Smoking is not permitted inside the New York Marriott Marquis Times Square or on technical tours.

Pagers and Cell Phones

Please turn off or mute all pagers and cell phones while attending sessions.

Refreshments

Beverage breaks will take place each morning (10:00–10:30) and afternoon (3:00–3:30). On Monday, Tuesday morning, and Friday morning, beverage breaks will be held adjacent to meeting rooms. The

Exhibit Hall (Westside Salon 3 on the 5th Floor) will be the location for the afternoon break on Tuesday and for both morning and afternoon breaks on Wednesday and Thursday.

RESOURCES

HFES Central

Staff from the HFES central office will be present at an information counter on the 5th Floor opposite the Registration Counter to provide information on membership, publications, and services. Nonmembers who submit applications and payment on site are entitled to the member price on all orders and purchases made at the meeting.

Business Center

The hotel's Business Center is located on the 8th floor.

Career Center

The Career Center is located in Westside Salon 2 (5th Floor) and is open the following hours:

Monday	1:00 to 6:00 p.m.
Tuesday–Wednesday	8:30 a.m. to 6:00 p.m.
Thursday	8:30 a.m. to 5:00 p.m.

Subscribers to the HFES online Career Center may reserve booths and/or tables at the on-site Career Center, subject to availability. If you have not already reserved space, you may sign up at the Career Center. The scheduling of formal or informal interviews at the Annual Meeting is the sole responsibility of the employer.

HFES members: You may post your résumé in the online Career Center free of charge. Visit hfes.org and click "Career Center."

Job Notices at the Annual Meeting

Any individual representing an organization that wishes to post a "for information only" job announcement during the Annual Meeting and has no plans to interview or collect résumés during the event may post such notices in the on-site Career Center for a \$100 fee. Job seekers will be directed to send their résumés directly to the organization advertising the job.

Any company that wishes to post a job in the on-site Career Center, has no plans to interview, but wants HFES to collect résumés to be mailed to them after the meeting can do so for a charge of \$150.

Internet Café

Computers with Internet access will be available adjacent to HFES Central (5th Floor) for attendees

who wish to check e-mail during the meeting. Hours are Sunday, 3:00–6:00 p.m.; Monday through Thursday, 7:00 a.m.–6:00 p.m.; and Friday, 7:30 a.m.–1:30 p.m.

Cork message boards will also be available for posting hard-copy messages and meeting and event announcements.

Newsletter

The daily newsletter, *Times Square Tribune*, containing important information about the meeting program and events, will be available in the registration area, Career Center, Exhibit Hall, and various other locations on the 4th, 5th, 6th, 7th, and 9th floors of the Marriott Marquis. Articles or news items may be dropped off at the Registration Counter. The newsletter editorial office is located in the Hart Room (4th Floor).

Student Lounge

The Student Lounge provides an informal setting to facilitate communication and networking among students and HFES student chapters. The lounge, located in the Wilder Room (4th Floor), is open Monday through Thursday, 8:00 a.m. to 7:00 p.m., and Friday, 8:00 a.m. to 1:30 p.m. and will offer snacks and beverages.

A corporate meet-and-greet will be held from 12:00 noon to 1:00 p.m. on Tuesday, Wednesday, and Thursday, where corporate representatives will discuss HF/E jobs at their companies. An afternoon student chapter social will be held on Wednesday from 5:00 to 6:30 p.m. to give department representatives an opportunity to introduce and promote their programs. Chapter posters will be displayed in the room, and a whiteboard will be provided for announcements and information sharing.

HFES thanks the Education, Perception and Performance, and Test and Evaluation Technical Groups for their sponsorship of the Student Lounge.

Wireless Internet

WiFi access is available to all attendees on the 8th floor at \$9.95 per 24-hour period. Marriott guests who have purchased the communications bundle in their guest rooms have access at no additional charge.

Birds of a Feather Room

The Brecht Room (4th Floor) has been set aside Monday through Thursday from 7:00 a.m. to 8:00 p.m. and on Friday from 7:00 a.m. to 1:30 p.m. for individuals with mutual interests to discuss pertinent topics or conduct meetings. A sign-up sheet will be provided at the room for advance reservations. Meeting times will be allocated on a first-come, first-served basis, although a few meetings have been prescheduled.

Audiovisual Preview Room

The Gilbert Room (4th Floor) has been reserved for presenters who wish to preview their audiovisual materials. Computers will be available for AV preview only. Preview hours on Monday–Thursday are 7:00 a.m. to 6:00 p.m. and on Friday from 7:00 a.m. to 12:00 noon.

Volunteers Assignment Room

Student volunteers who have been assigned duties should check in with Volunteers Coordinators Anand Tharanathan and John R. Morris in the Harlem Room (7th Floor). The room is open 8:00 a.m. to 5:00 p.m., Monday through Thursday, and 8:00 a.m. to 1:30 p.m. on Friday.

Proceedings CD-ROM

All registered attendees have been provided with a CD-ROM containing the proceedings. Workstations are available in the Internet Café near the Registration Counter for viewing the CD-ROM and printing out individual papers. If supplies allow, additional CD-ROMs may also be purchased at HFES Central.

EXHIBITS

Location and Hours

All attendees are encouraged to visit the exhibits, located in Westside Salon 3 (5th Floor). Coffee breaks will be held in the Exhibit Hall on Tuesday afternoon and on Wednesday and Thursday morning and afternoon.

The Exhibit Hall is open during the following hours:

Tuesday	3:00–6:00 p.m.
Wednesday	9:00 a.m.–5:00 p.m.
Thursday	9:00 a.m.–3:30 p.m.

Exhibitor List

The list of exhibitors appears on page iv.

Prize Drawings

HFES will be giving away two 2009 membership renewals and two registrations for the 53rd Annual Meeting in San Antonio, Texas, October 19–23, 2009. To enter a drawing to win these prizes, fill out the entry slips found in your portfolio bag and deposit it in the appropriate box inside the main entrance of the Exhibit Hall. In addition, some exhibitors will be offering prizes for the drawing; entry slips for these prizes may be obtained at each participating exhibitor's booth. All drawings will be held on Wednesday and Thursday during the morning refreshment break (10:00–10:30 a.m.). You must be present to claim your prize. Prizes are not transferable.

Author Book Signings

Exhibiting publishers may offer book signings at their booths in the Exhibit Hall in Westside Salon 3 (5th Floor). Check the daily on-site newsletter and signage for book signings.

HFES offers book signings for the following new titles, which are scheduled for official launch at the 52nd Annual Meeting. Come to Booth #19 in the Exhibit Hall to purchase these books:

Augmented Cognition: A Practitioner's Guide, edited by Dylan Schmorrow and Kay M. Stanney
Tuesday, September 23, 3:30 to 4:30 p.m.

Best of Human Factors: Thirty Classic Contributions to Human Factors/Ergonomics Science and Engineering, edited by Nancy J. Cooke & Eduardo Salas
Wednesday, September 24, 10:30 to 11:30 a.m.

EVENTS

Human Performance in Extreme Environments 6th Annual Meeting

The HPEE meeting sessions will be held on Sunday and Monday in the O'Neill Room (4th Floor).

Student Career and Professional Development Day

The HFES Student Affairs Committee is pleased to offer a special day devoted to events of interest to students, in the Broadhurst Room (5th Floor). See page 8 for a schedule of events.

"Brown Bag" Mentoring Luncheons

A series of mentor-mentee luncheons will again be held during the meeting to provide students and early-career and transitional professionals with information and opportunities to develop mentoring relationships with established professionals in the HF/E field. The goal of these dynamic, interactive sessions is to allow students and young professionals to freely meet in an informal setting and discuss their concerns and interests. The luncheons will be held from 12:00 noon to 1:30 p.m. on Tuesday, Wednesday, and Thursday, September 23–25. Complimentary lunch will be provided to all attendees who reserved a space.

The mentor-mentee lunch sessions will be held each day at Roxy Deli (1565 Broadway, between 46th and 47th streets). HFES thanks the Council of Technical Groups for its sponsorship.

Student Reception

All students attending the Annual Meeting are invited to a reception on Tuesday, September 23, from 5:00 to 6:00 p.m. in the Sky Lobby (16th Floor). Snacks and soft drinks will be provided along with a no-host bar.

Junior Faculty Social and Networking Event

The HFES Junior Faculty Social will be held on Tuesday, September 23, from 6:00 to 9:00 p.m. in the Alvin Room (5th Floor). This free networking event is an opportunity for nontenured tenure-track faculty to meet and discuss issues of common interest and concern. The event began in 2004 with a small group of nontenured faculty and has grown steadily in numbers and developed into an annual event. The group hosts a Facebook page, which facilitates communication throughout the year, and its informal members share news of research, funding, and other opportunities in this manner. All nontenured faculty are welcome and encouraged to attend this event.

National Ergonomics Month Event

All attendees and their guests and families are invited to attend the 2008 HFES National Ergonomics Month event on Monday, September 22, from 4:45 to 6:15 p.m. in Westside Salon 1 (5th Floor).

Technical Group Membership – Open to All!

HFES technical group memberships are open to all attendees, and TG business meetings are a great opportunity to meet and network with TG members. Dues in technical groups are low (\$0 to \$7/year), and it is not necessary to be an HFES member to join a TG. See pages 5–6 for the schedule of TG business meetings.

PROGRAM REMINDERS

Poster Sessions

Posters are available for viewing in the Imperial Room (5th Floor) for 90 minutes in three sessions throughout the week. See the program schedule on the following pages for lists of the posters to be presented during the meeting.

University Lab Posters

University lab posters will be on display in the Imperial Room (5th Floor) on Tuesday from 3:30 to 5:00 p.m. and Thursday from 10:30 a.m. to 12:00 noon. See pages 16, 31, and 32 for the lists of labs on display.

Annual Meeting Survey

For the first time, the Annual Meeting Survey will be e-mailed to all attendees immediately after the meeting. Please watch your e-mail for the link to the survey. In addition, you will be invited to participate in a general meetings survey that will be distributed near the end of the year.

Audiotaping and Videotaping Policies

Attendees are not permitted to audiotape or videotape any session without prior permission from the Human Factors and Ergonomics Society and all speakers participating in the session. Permission forms are available at HFES Central (5th Floor). Please complete a form for each presentation you wish to tape, obtain the speaker(s)' signature(s), and return it to HFES Central for authorization.

MEETINGS AND TOURS

Meetings

Saturday, September 20

HFES Executive Council
Ziegfeld (4th Floor)
8:30 a.m. to 5:00 p.m.

Sunday, September 21

HFES Executive Council
Ziegfeld (4th Floor)
8:30 a.m. to 5:00 p.m.

7th International Conference of Psychophysiology in
Ergonomics
Odets (4th Floor)
8:00 a.m. to 5:00 p.m.

Human Performance in Extreme Environments
6th Annual Meeting
O'Neill (4th Floor)
9:00 a.m. to 5:00 p.m.

Association for the Advancement of Medical
Instrumentation Human Factors Engineering Meeting
Barrymore (9th Floor)
9:00 a.m. to 5:00 p.m.

Monday, September 22

U.S. TAG to ISO/TC 159/SC4/WG5
Booth (5th Floor)
9:00 a.m. to 5:30 p.m.

Human Performance in Extreme Environments 6th
Annual Meeting
O'Neill (4th Floor)
9:00 a.m. to 5:00 p.m.

Association for the Advancement of Medical
Instrumentation Human Factors Engineering Meeting
Barrymore (9th Floor)
9:00 a.m. to 5:00 p.m.

Technical Group Newsletter Editors
Edison (5th Floor)
1:30 to 2:30 p.m.

Council of Technical Groups
Ziegfeld (4th Floor)
3:00 to 5:00 p.m.

Tuesday, September 23

U.S. TAG to ISO/TC 159/SC4/WG5
Booth (5th Floor)
9:00 a.m. to 5:30 p.m.

Human Factors Standardization Special Interest
Group
Lyceum (5th Floor)
10:30 a.m. to 12:00 noon

Human Factors Editorial Board
Plymouth (6th Floor)
12:00 noon to 1:30 p.m. (lunch)

Local Chapter Presidents
Uris (6th Floor)
12:00 noon to 1:30 p.m. (lunch)

Association for Aviation Psychology
Lyceum (5th Floor)
5:00 to 7:00 p.m.

HFES Business Meeting
Westside Salon I (5th Floor)
6:00 to 7:00 p.m.

HFES Junior Faculty Social
Alvin (5th Floor)
6:00 to 9:00 p.m.

Wednesday, September 24

HFES Publications Committee
Barrymore (9th Floor)
7:15 to 8:15 a.m.

HFES Awards Committee
Julliard (5th Floor)
7:15 to 8:30 a.m.

U.S. TAG to ISO/TC 159/SC4/WG5
Booth (5th Floor)
9:00 a.m. to 4:00 p.m.

Ergonomics in Design Editorial Board
Alvin (5th Floor)
12:00 noon to 1:30 p.m. (lunch)

Student Chapter Presidents
Columbia (7th Floor)
12:00 noon to 1:30 p.m. (lunch)

State of the Science on Universal Design
Julliard (5th Floor)
2:00 to 5:00 p.m.

GEIA G-45 Committee
Edison (5th Floor)
3:00 to 5:00 p.m.

Journal of Cognitive Engineering and Decision Making
Editorial Board
Westside Salon I (5th Floor)
3:30 to 4:30 p.m.

Thursday, September 25

HFES 200 Committee
Uris (6th Floor)
9:30 to 10:30 a.m.

HFES Institute Board of Supervisors
Uris (6th Floor)
10:30 to 11:30 a.m.

Education and Training Committee
Columbia (7th Floor)
12:00 noon to 1:30 p.m. (lunch)

U.S. TAG to ISO TC 159
Shubert (6th Floor)
12:30 to 1:30 p.m.

U.S. TAG to ISO/TC 159/SC1 and SC4
Barrymore (9th Floor)
1:30 to 4:00 p.m.

Technical Group Program Chairs
Lyceum (5th Floor)
5:15 to 6:30 p.m.

Friday, September 26

Technical Program Committee
Duffy/Columbia (7th Floor)
8:15 to 10:15 a.m. (breakfast)

Board of Certification in Professional Ergonomics
Hart (4th Floor)
8:00 a.m. to 5:00 p.m.

Technical Group Business Meetings

Monday, September 22

Council of Technical Groups
Ziegfeld (4th Floor)
3:00 to 5:00 p.m.

Technical Group Newsletter Editors
Edison (5th Floor)
1:30 to 2:30 p.m.

Tuesday, September 23

Product Design
O'Neill (4th Floor)
5:30 to 7:00 p.m. (reception)

Test and Evaluation
Carnegie (5th Floor)
7:30 to 8:30 a.m.

Wednesday, September 24

Aerospace Systems
Jolson (9th Floor)
3:30 to 5:30 p.m. (reception)

Aging
Lyceum (5th Floor)
12:00 noon to 1:30 (lunch)

Augmented Cognition
Odets (4th Floor)
3:30 to 5:30 p.m. (reception)

Cognitive Engineering and Decision Making
Westside Salon I (5th Floor)
4:30 to 5:30 p.m. (reception)

Communications
Marquis C (9th Floor)
3:30 to 4:30 p.m.

Computer Systems
Chelsea (7th Floor)
3:00 to 4:30 p.m. (reception)

Education – Sponsored by the Boren Family
Foundation
Lyceum (5th Floor)
7:00 to 8:30 a.m. (breakfast)

Environmental Design (with Macroergonomics)

O'Neill (4th Floor)

3:15 to 4:30 p.m. (reception)

Forensics Professional Group

O'Neill (4th Floor)

5:30 to 6:30 p.m. (reception)

Health Care

Empire (7th Floor)

3:15 to 4:30 p.m.

Human Performance Modeling

Chelsea (7th Floor)

5:30 to 6:30 p.m.

Industrial Ergonomics

Marquis A/B (9th Floor)

4:00 to 5:30 p.m. (reception)

Internet

Chelsea (7th Floor)

4:30 to 5:30 p.m.

Macroergonomics (with Environmental Design)

O'Neill (4th Floor)

3:15 to 4:30 p.m. (reception)

Perception & Performance

Duffy (7th Floor)

12:00 noon to 1:30 p.m. (lunch)

Safety

O'Neill (4th Floor)

4:30 to 5:40 p.m. (reception)

Surface Transportation

Empire (7th Floor)

5:00 to 6:30 p.m. (reception)

Training

Astor Ballroom (7th Floor)

3:30 to 4:30 p.m.

Virtual Environments

Ziegfeld (4th Floor)

3:30 to 4:30 p.m.

Thursday, September 25

Individual Differences in Performance

Havana Central – Times Square, 151 W 46th Street

12:00 noon to 1:30 p.m.

System Development

Ziegfeld (4th Floor)

5:00 to 6:00 p.m. (reception)

Social Events

Monday, September 22

Gala Opening Reception (ticket required)

Broadway Ballroom (6th Floor)

6:30 to 9:30 p.m.

Tuesday, September 23

Student Reception

Sky Lobby (16th Floor)

5:00 to 6:00 p.m.

Technical Tours

Buses will begin loading from the 45th Street entrance (right outside the Starbucks entrance) of the hotel 15 minutes prior to the departure times listed below. Tickets for events not sold out may be purchased at the Registration Counter. Tickets must be presented when buses are loading. At press time, the following tours were scheduled to take place; however, please check the daily on-site newsletter and the poster boards in the registration area for updates about canceled events.

Tuesday, September 23

T5, Google New York City Facility, 1:00 to 4:00 p.m.

T1, Humanscale, 2:00 to 6:00 p.m.

Wednesday, September 24

T2, New York Stock Exchange NYSE/Euronext Group, 9:00 a.m. to 1:00 p.m.

T3, Google New York City Facility, 1:00 to 4:00 p.m.

Thursday, September 25

T4, United States Military Academy at West Point, 9:00 a.m. to 3:00 p.m.

TECHNICAL PROGRAM

Monday, September 22

8:30 a.m. to 5:00 p.m.

Workshops

At press time, the following workshops were scheduled to take place; however, please check the daily on-site newsletter and the poster boards in the registration area for updates about canceled events.

Morning-Only Workshops

8:30 a.m. to 12:00 noon

WK3 – Identifying and Applying International Ergonomics Computing Standards
Jim A. Carter, U. of Saskatchewan
Monday, September 22, 2008, 8:30 a.m. to 12:00 p.m.
Carnegie (5th Floor)

Afternoon-Only Workshops

1:30 to 5:00 p.m.

WK5 – Cognitive Crash Dummies: Predictive Human Performance Modeling for Interactive System Design
Bonnie E. John, Carnegie Mellon U.
Monday, September 22, 2008, 1:30 to 5:00 p.m.
Carnegie (5th Floor)

Full-Day Workshops

9:00 a.m. to 4:30 p.m.

WK8 – Survey Construction and Use: A Primer for Practitioners and/or Researchers
William Moroney, U. of Dayton, and
Joyce Cameron, Writer/Teacher
Monday, September 22, 2008, 9:00 a.m. to 4:30 p.m.
Lyceum (5th Floor)

WK9 – Modeling and Simulation of Human Performance
John Keller, Alion Science and Technology,
MA&D Operation
Monday, September 22, 2008, 9:00 a.m. to 4:30 p.m.
Soho (7th Floor)

WK10 – Conducting Cognitive Work Analysis: Supporting Novices and Experts With a Software Tool
Daniel P. Jenkins and Neville A. Stanton, Brunel U.
Monday, September 22, 2008, 9:00 a.m. to 4:30 p.m.
Herald (7th Floor)

WK11 – Impacting System Design Through Human Performance Modeling
Charneta Samms and John F. Lockett, U.S. Army
Research Lab
Monday, September 22, 2008, 9:00 a.m. to 4:30 p.m.
Gramercy (7th Floor)

WK12 – Managing Human Error in Complex Systems
Scott A. Shappell, Clemson U.; and Douglas A. Wiegmann, U. of Wisconsin
Monday, September 22, 2008, 9:00 a.m. to 4:30 p.m.
Olmstead (7th Floor)

WK13 – Human-Systems Integration: Integrating the Domains
Dennis J. Folds, Georgia Tech Research Inst.
Monday, September 22, 2008, 9:00 a.m. to 4:30 p.m.
Empire (7th Floor)

WK14 – The Road to Cognitive Systems Engineering
Gavan Lintern, General Dynamics; Cindy Dominguez, Corey Fallon, and Gary Klein, Klein Assoc.; Laura G. Militello, U. of Dayton Research Inst.
Monday, September 22, 2008, 9:00 a.m. to 4:30 p.m.
Gotham (7th Floor)

WK15 – The World Is My Lab: Field Observations of Communication Behaviors
Cheryl L. Coyle and Heather Vaughn, Bell Labs
Monday, September 22, 2008, 9:00 a.m. to 4:30 p.m.
Columbia (7th Floor)

Monday
Sept. 22

Key to Abbreviations Used in This Program

AS	Aerospace Systems
A	Aging
AC	Augmented Cognition
CE	Cognitive Engineering & Decision Making
C	Communications
CS	Computer Systems
DEM	Demonstrations
E	Education
ED	Environmental Design
FP	Forensics Professional
GS	General Sessions
HC	Health Care
HP	Human Performance Modeling
ID	Individual Differences in Performance
IE	Industrial Ergonomics
I	Internet
ME	Macroergonomics
PL	Plenary Session
PP	Perception & Performance
PD	Product Design
POS	Posters
S	Safety
SS	Special Sessions
SF	Student Forum
ST	Surface Transportation
SD	System Development
TE	Test & Evaluation
T	Training
VE	Virtual Environments
WK	Workshops

Monday, September 22
9:00 a.m. to 4:00 p.m.

Technical Sessions

SFI – STUDENT CAREER AND PROFESSIONAL DEVELOPMENT DAY

Alternative Format

Monday, September 22, 2008, 9:00 a.m. to 4:00 p.m.

Broadhurst (5th Floor)

Student Forum

Part I: A Review of Student Resources Offered by the Human Factors and Ergonomics Society

9:00 to 9:30 a.m.

Sandra K. Garrett, Clemson U., Student Affairs Chair

Part II: Preparing for the Job Market and the All-Important Interview

9:30 a.m. to 12:00 noon

Chair: Sandra K. Garrett, Clemson U., Student Affairs Chair

Participants: Arnie Lund, Microsoft IT; Melinda McElheny, User Centric; Randy Pagulayan, Microsoft Game Studios; Sara L. Waxberg, Baxter Healthcare Corp.

Group lunches (organized on site)

Part III: Developing Human Factors and Ergonomics Society Student Chapters: Building New Chapters and Enhancing Existing Chapters Cohosted by the HFES Old Dominion U. and U. of Idaho Student Chapters

1:30 to 4:00 p.m.

Chair: Elizabeth T. Newlin, HFES Old Dominion U. Student Chapter President; *Cochair:* Rylan M. Clark, HFES U. of Idaho Student Chapter President-Elect
Participants: James P. Bliss, Old Dominion U.; Ernesto A. Bustamante, U. of Idaho; David M. Cades, George Mason U.; Joseph R. Keebler, U. of Central Florida

Monday, September 22
9:00 a.m. to 5:00 p.m.

SIXTH ANNUAL MEETING OF THE SOCIETY FOR HUMAN PERFORMANCE IN EXTREME ENVIRONMENTS

Monday, September 22, 2008, 9:00 a.m. to 5:00 p.m.

O'Neill (4th Floor)

Separate registration required at

<https://web.memberclicks.com/mclquickForm/viewForm.do?orgId=shpee&formId=44607>.

Monday, September 22
3:00 to 5:00 p.m.

Technical Group Meetings

Technical Group Newsletter Editors

1:30 to 2:30 p.m.

Edison (5th Floor)

Council of Technical Groups

3:00 to 5:00 p.m.

Ziegfeld (4th Floor)

Monday, September 22
4:45 to 6:15 p.m.

NEM – NATIONAL ERGONOMICS MONTH

Alternative Format

Monday, September 22, 2008, 4:45 to 6:15 p.m.

Westside Salon I (5th Floor)

Chair: Haydee Cuevas, Chair, National Ergonomics Month Committee

Monday
Sept. 22



Tuesday, September 23

7:30 to 8:30 a.m.

Technical Group Business Meeting

Test and Evaluation

7:30 to 8:30 a.m.

Carnegie (5th Floor)

Tuesday, September 23

8:00 a.m. to 10:15 a.m.

PLI – OPENING PLENARY SESSION

Plenary

Tuesday, September 23, 2008, 8:00 a.m. to 10:15 a.m.
Broadway Ballroom (6th Floor)

1. **Keynote Address: Human Factors Engineering at the FDA: Past, Present and Future**, Peter Carstensen, Wiklund Research & Design
2. **Presentation of HFES Fellows**
3. **Presentation of HFES Awards**
4. **Presidential Address: “Quo Vadis Ergonomia?” Redux**, John F. (“Jeff”) Kelley, HFES President

Tuesday, September 23

10:30 a.m. to 12:00 noon

ASI – STANLEY ROSCOE: TECHNICAL LEGACY, ENDURING INFLUENCE

Discussion Panel

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 noon
Jolson (9th Floor)

Aerospace Systems

Chair: Robert A. North, Human Centered Strategies

Panelists: Valerie J. Gawron, MITRE Corp.; Larry Scanlan, U. of California, Los Angeles; Hector Acosta, Northrop Grumman Information Technology; Diane L. Damos, Damos Aviation Services; Dennis B. Beringer, Federal Aviation Admin.

CEI – HUMAN TOTAL COST OF OWNERSHIP: MEASURING THE IMPACT OF HUMAN FACTORS ON SYSTEM ENGINEERING

Discussion Panel

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 noon
Westside Salon I (5th Floor)

Cognitive Engineering & Decision Making

Chair: Robert Hoffman, Inst. for Human and Machine Cognition

Panelists: Wayne Zachary, CHI Systems, Inc.; John Burns, U.S. Naval Air Warfare Ctr.; Michael Drillings, U.S. Army; Christopher R. Hale, Science Applications International Corp.; Michael Linegang, Federal Aviation Admin.

CSI – QUALITATIVE EVALUATION

Lecture

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 noon
Chelsea (7th Floor)

Computer Systems; cosponsored by Internet

Chair: Richard L. Henneman, IBM Internet Security Systems; *Cochair:* Laurel E. Allender, U. S. Army Research Lab

1. Brent-Kaan White and Jonathan I. Helfman, Oracle Corp., **Developing a Decision Support Tool for Design**
2. Lauren Lynne Murphy, Convergys Corp.; Kip Smith, Linköping Inst. of Technology; Peter A. Hancock, U. of Central Florida, **A Hedonomic Evaluation of the Effect of Repeated System Exposure on Pleasurable Human-System Experience**
3. Janet E. Miller, U.S. Air Force Research Lab; Emily S. Patterson, Ohio State U., **Playback Technique Using a Temporally Sequenced Cognitive Artifact for Knowledge Elicitation**
4. Anshu Agarwal, Salesforce.com; Alan Hedge, Cornell U., **The Impact of Web Page Usability Guideline Implementation on Aesthetics and Perceptions of the E-Retailer**
5. James Williams, Synergetic Applications; Thomas Geis, ProContext GmbH, **Conformance in Software Ergonomic Standards**

Tuesday
Sept. 23

GSI – PRESIDENT’S FORUM: HUMAN-SYSTEMS INTEGRATION: AN OLD WINE IN A NEW BOTTLE?

Discussion Panel

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 noon
Astor Ballroom (7th Floor)

General Sessions

Chair: Waldemar Karwowski, U. of Central Florida

Panelists: To be announced.

PDI – FRAMEWORK, METHODS, AND DESIGN IMPLICATIONS

Lecture

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 noon
O’Neill (4th Floor)

Product Design

Chair: M. Susan Hallbeck, U. of Nebraska

1. Marita O’Brien, Wendy A. Rogers, and Arthur D. Fisk, Georgia Tech, **Developing a Framework for Intuitive Human-Computer Interaction**
 2. Dinglong Huang, Pei-Luen Patrick Rau, Gavriel Salvendy, and Xiaoli Shang, Tsinghua U.; Ying Liu and Xia Wang, Nokia Research Ctr., **Perception of Information Security and Its Implications for Mobile Phone**
 3. Moin Rahman and Ira Jhangjani, Motorola, **Ecological Aesthetics Design: Presenting a Framework for Product Aesthetics**
 4. Meike Jipp, Christian Bartolein, and Essameddin Badreddin, U. of Heidelberg, **Analysis of Human Information Acquisition Behavior for Natural Gaze-Based Wheelchair Control**
 5. Kihyo Jung and Heecheon You, POSTECH; Ochaee Kwon, Samsung Electronic, **A Multivariate Evaluation Method for Representative Human Model Generation Methods: Application to Grid Method**
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PPI – PERCEPTION AND DISPLAYS: THE ROLE OF AESTHETIC PREFERENCE, SPATIAL DISPLAY CHARACTERISTICS, AND MUSIC

Lecture

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 noon
Empire (7th Floor)

Perception & Performance

Chair: Paul Havig, Wright-Patterson AFB;

Cochair: Brian Simpson, Wright-Patterson AFB

1. Irene Reppa and David Playfoot, Swansea U.; Sine McDougall, Bournemouth U., **Visual**

Aesthetic Appeal Speeds Processing of Complex But Not Simple Icons

2. Harvey S. Smallman, Maia Beth Cook, and Daniel Manes, Pacific Science & Engineering Group; Michael B. Cowen, Space and U.S. Naval Warfare Systems Ctr., San Diego, **Naive Realism in Terrain Appreciation: Advanced Display Aids for Routing**
 3. Karel Hurts, Leiden U., **Spatial Memory as a Function of Action-Based and Perception-Based Similarity**
 4. Anthony Hornof, Tim Halverson, Andy Isaacson, and Erik Brown, U. of Oregon, **Transforming Object Locations on a 2-D Visual Display Into Cued Locations in 3-D Auditory Space**
 5. Matthew Crisler and Richard A. Tyrrell, Clemson U., **Using Music in Spatial Audio Displays: Localization Ability with Complex Sounds**
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SI – WARNINGS AND RISK PERCEPTION

Lecture

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 noon
Majestic (6th Floor)

Safety

Chair: Al Karvelis, Packer Engineering; *Cochair:* Tonya Smith-Jackson, Virginia Tech

1. Kevin E. Hicks and Michael S. Wogalter, North Carolina State U., **Highlighting Validity and Placement of Risk Information in Drug Manufacturers’ Direct-to-Consumer Web Pages**
2. Jennifer Antonia Cowley and Michael S. Wogalter, North Carolina State U., **Analysis of Terms Comprising Potential Names for a Recall Notification Campaign**
3. Raymond Lim, Pierce College; Polin Keshishian and Jaime Hernandez, California State U., Los Angeles; William J. Vigilante, Robson Forensic, Inc., **Parents’ Expectations and Beliefs Toward the Relative Safety of Their Children Riding Bicycles at Night**
4. Adam Piper, Eric Boelhouwer, and Jerry Davis, Auburn U.; Grady T. Holman, U. of Wisconsin; Lacey Montgomery, Auburn U., **Using Hand-Drawn Images to Determine Warning Symbol Design Parameters Within Interactive Evolutionary Computation Software**
5. Carol Pollack-Nelson, Independent Safety Consulting; Michael R. Sutherland, U. of Massachusetts; James Lemonds, James Lemonds, LLC, **The Utility of Brief, On-Product Instructional Labels for a Fall Arrest Restraint Device**

SDI – FUTURE TRENDS IN DESIGN AND DEVELOPMENT OF CONTROL ROOMS

Discussion Panel

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 p.m.

Soho (7th Floor)

System Development

Chair: H. Barbara Sorensen, U.S. Air Force Research Lab; *Cochair:* Bettina A. Babbitt, Aerospace Corp.

Panelists: Arthur Lamont Borst, Lockheed Martin Information Systems and Global Solutions; Najmedin Meshkati, U. of Southern California; Steven Siegel, Lockheed Martin Information Systems & Global Solutions; Sophie Thatcher, U. of Southern California

STI – PREDICTION AND CONTROL OF DRIVER ADAPTATION TO VEHICLE SAFETY SYSTEMS

Discussion Panel

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 noon

Marquis A/B (9th Floor)

Surface Transportation

Chair: Neil D. Lerner, Westat; *Cochair:* James Jenness, Westat

Panelists: Timothy L. Brown, U. of Iowa; James P. Foley, Noblis; Raja Parasuraman, George Mason U.; James R. Sayer, U. of Michigan

VEI – HUMAN INTERFACES FOR VIRTUAL ENVIRONMENTS

Lecture

Tuesday, September 23, 2008, 10:30 a.m. to 12:00 noon

Gramercy (7th Floor)

Virtual Environments

Chair: David Kaber, North Carolina State U.;

Cochair: Laura Strater, SA Technologies, Inc.

1. Jennifer E. Tsai, U. of Illinois at Urbana-Champaign; Mark Stoklosa, Federal Law Enforcement Training Ctr., **Evaluation of Input Devices for an FPS Program Used in Law Enforcement Tactics Training**
2. Deborah R. Billings, U. of Central Florida; Paula J. Durlach, U.S. Army Research Inst., **The Effects of Input Device and Latency on Ability to Effectively Pilot a Simulated Micro-UAV**

3. Linda E. Sibert, James N. Templeman, Roy M. Stripling, Joseph T. Coyne, and Robert C. Page, U.S. Naval Research Lab; Zina La Budde, Alion Science and Technology; Daniel Afergan, Strategic Analysis, Inc., **Comparison of Locomotion Interfaces for Immersive Training Systems**
4. Eliana Medina, Ruth Fruland, and Suzanne Weghorst, U. of Washington, **VIRTUSPHERE: Walking in a Human-Size VR “Hamster Ball”**
5. David L. Jones, Adams Greenwood-Ericksen, Kelly S. Hale, and Matthew Johnston, Design Interactive, Inc., **The Physiological Assessment of VE Training System Fidelity**

Tuesday, September 23 1:30 to 3:00 p.m.

AS2 – AWARENESS AND ATTENTION IN FLIGHT

Lecture

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.

Jolson (9th Floor)

Aerospace Systems; cosponsored by Perception & Performance

Chair: Valerie J. Gawron, MITRE Corp.; *Cochair:* Paul R. Havig, U.S. Air Force Research Lab

1. Brett R. C. Molesworth and Ricky Young, U. of New South Wales, **Caffeine: Mitigating the Effects of Fatigue on the Flight Deck?**
2. Brian D. Simpson and Douglas S. Brungart, U.S. Air Force Research Lab; Ronald Dallman, General Dynamics; Richard Yasky, NASA Langley Research Ctr.; Griffin D. Romigh, U.S. Air Force Research Lab, **Flying by Ear: Blind Flight With a Music-Based Artificial Horizon**
3. Thomas Z. Strybel, Kim-Phuong L. Vu, Jerome Kraft, and Katsumi Minakata, California State U., Long Beach, **Assessing the Situation Awareness of Pilots Engaged in Self-Spacing**
4. Kathleen A. McGarry and Kevin Long, MITRE/CAASD, **Don't Go There: Using Runway Intersection Lights to Prevent Runway Incursions**
5. Angela T. Schriver and Daniel G. Morrow, U. of Illinois at Urbana-Champaign; Christopher D. Wickens, Alion Science and Technology; Donald A. Talleur, U. of Illinois at Urbana-Champaign, **Expertise Differences in Attentional Strategies Related to Pilot Decision Making**

Tuesday
Sept. 23

CE2 – DESIGNING ROBOTIC AND UNMANNED VEHICLES

Lecture

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.

Westside Salon I (5th Floor)

Cognitive Engineering & Decision Making

Chair: Caroline Hayes, U. of Minnesota; *Cochair:* Nathan Lau, U. of Toronto

1. Richard T. Stone, Ann M. Bisantz, James Llinas, and Victor Paquet, U. at Buffalo, SUNY, **Improving Telerobotic Landmine Detection Through Augmented Reality Devices**
2. Erik S. Connors, Laura Strater, Jennifer M. Riley, and Mica R. Endsley, SA Technologies, Inc., **Applying SA-Oriented Design to the Integrative Collaborative Control of Multiple Unmanned Vehicle Systems**
3. Shaun Hutchins and Patricia McDermott, Alion Science and Technology; Michael J. Barnes, U.S. Army Research Lab, **Frame Consistency in Multiattribute Risk Preference Decisions**
4. Ewart J. De Visser, George Mason U.; Melanie LeGoullon, Amos Freedy, Elan Freedy, and Gershon Weltman, Perceptronics Solutions, Inc; Raja Parasuraman, George Mason U., **Designing an Adaptive Automation System for Human Supervision of Unmanned Vehicles: A Bridge From Theory to Practice**
5. Aaron A. Pepe and Wayne Zachary, CHI Systems, Inc.; Stephen Read and Lynn Miller, U. of Southern California; Vassil Iordanov and Darius Miller, CHI Systems, Inc.; Gurveen Chopra, U. of Southern California, **Motive and Affect-Based Control for Uninhabited Vehicles**

CE3 – COGNITIVE ENGINEERING APPROACHES TO SAFETY IN HEALTH CARE

Discussion Panel

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.

Astor Ballroom (7th Floor)

Cognitive Engineering & Decision Making; cosponsored by Health Care

Chair: Robert L. Wears, U. of Florida, Jacksonville

Panelists: Ann M. Bisantz, U. at Buffalo, SUNY; Emily S. Patterson, Ohio State U.; Stephanie Guerlain, U. of Virginia; Jacob Seagull, U. of Maryland; Christopher P. Nemeth, U. of Chicago; Rollin J. (Terry) Fairbanks, U. of Rochester

FPI – CHALLENGES IN FORENSICS PRACTICE AND ETHICS FOR EXPERT WITNESSES

Discussion Panel

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.

Chelsea (7th Floor)

Forensics Professional

Chair: Richard J. Hornick, Hornick & Assoc.;

Cochair: Hal W. Hendrick, Hendrick & Assoc.

Panelists: Robert S. Kennedy, RSK Assessments, Inc.; Kenneth R. Laughery, Rice U.; David S. Thompson, Portola Assoc.

HPI – MODELS OF MOTOR CONTROL AND PERFORMANCE

Discussion Panel

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.

Empire (7th Floor)

Human Performance Modeling

Chair: Wayne D. Gray, Rensselaer Polytechnic Inst.

Panelists: David Rosenbaum, Pennsylvania State U.; Bernard Martin, U. of Michigan; Michael D. Byrne, Rice U.; Bonnie E. John, Carnegie Mellon U.; Ulrich Raschke, Siemens PLM Software

IEI – UPPER EXTREMITY ERGONOMICS

Lecture

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.

Gramercy (7th Floor)

Industrial Ergonomics

Chair: Sue Ferguson, Ohio State U.; *Cochair:* Kermit Davis, U. of Cincinnati

1. Heon-Jeong Kim and Bernard J. Martin, U. of Michigan, **Three-Dimensional Joint Kinematics of the Upper Extremity in Reach Movements Under Whole-Body Vibration Exposure**
2. Hector Jesus Sanchez and Richard W. Marklin, Marquette U., **Effect of a Manual Screwdriver With a Pistol-Grip Handle on Maximum Torque and Muscle Activity**
3. Che-Hsu (Joe) Chang, Harvard School of Public Health; Benjamin C. Amick, Inst. for Work and Health; Cammie Chaumont Menendez, National Inst. of Occupational Safety and Health; Michelle M. Robertson, Liberty Mutual Research Inst. for Safety; Rosa J. del Pino, U. of Texas; Jack T. Dennerlein, Harvard U., **Where and How College Students Use Their Laptop Computers**

4. Monica Johnson, Kimberly Vandlen, Erin Hutter, Ruchika Gahlot, Wei-Ting Yen, Sandeep Kommini, and Carolyn M. Sommerich, Ohio State U., **Comparing the Effects of Two Controller Algorithms on DC Torque Tool Operators**
5. Stacie M. Wieszczyk, Richard W. Marklin, and Hector J. Sanchez, Marquette U., **Industrial Hand Wheel Valves: Effects of Height and Torque Direction on Maximum Torque and Muscle Activity**

S2 – INDUSTRY SAFETY

Lecture

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.

Majestic (6th Floor)

Safety

Chair: Margaret Wan, Kaiser Permanente; *Cochair:* Joe Keebler, U. of Central Florida

1. Yu-Hsiu Hung and Woodrow W. Winchester, Virginia Tech, **Using Contextual Design Techniques to Identify Work Task Problems in Dynamic Work Environments: A Field Study of Isolating Safety Challenges for Small Builders**
2. Travis N. Terry, Pablo S. Burneo, Claudia M. Martinez, Juan S. Riofrio, and Tonya L. Smith-Jackson, Virginia Tech, **Construction Safety and Informal Training: A Two-Part Study**
3. Helena Broberg, Michael Hildebrandt, Salvatore Massaiu, and Per Øivind Braarud, OECD Halden Reactor Project, **A Simulator Experiment Investigating the Effects of Masked Indicators in an NPP Emergency Control Task**
4. Harold S. Blackman, David I. Gertman, and Ronald L. Boring, Idaho National Lab, **Human Error Quantification Using Performance-Shaping Factors in the SPAR-H Method**
5. Tate Kubose and David A. Krauss, Exponent, **Methodological Considerations for Using the English XL Tribometer for Post Hoc Slip-and-Fall Evaluations**



SD2 – TOOLS OF THE TRADE: SYSTEMS DEVELOPMENT TOOL TRENDS

Lecture

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.

Soho (7th Floor)

System Development

Chair: Regan Campbell, NAVSEA Human Systems Integration Directorate; *Cochair:* John Winters, BCI, Inc.

1. Roberto K. Champney, Meredith Carroll, Laura Milham, and Kelly S. Hale, Design Interactive, Inc., **Sensory-Perceptual Objective Task (SPOT) Taxonomy: A Task Analysis Tool**
2. Esa M. Rantanen and Jonathan A. Winkle, Rochester Inst. of Technology; Thomas J. Overbye, U. of Illinois at Urbana-Champaign, **Cognitive Task Analysis of Electric Power System Control Center Operations**
3. Diane Kuhl Mitchell, U.S. Army Research Lab, **United We Stand: Using Multiple Tools to Solve a Multidimensional Problem**
4. Rob Houghton, Chris Baber, and Eric Chaudemanche, U. of Birmingham, **Integrating Human Factors With Systems Engineering: Using WESTT to Design a Novel User Interface for Incident Command Systems**
5. Kristie Nemeth, Nicole Arbuckle, Andrea Snead, and Drew Bowers, U. of Dayton; Christopher Burneka, U.S. Air Force Research Lab; Laurie Quill, U. of Dayton, **Using an Avatar, RFID, & Speech Recognition for Hands-Free Data Collection**

SF2 – A COMPILATION OF INNOVATIVE STUDENT RESEARCH

Lecture

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.

Odets (4th Floor)

Student Forum

Chair: Thomas Ferris, U. of Michigan; *Cochair:* Prakriti Parijat, Virginia Tech

1. Kelly E. Caine, Kaylee Burnham, Arthur D. Fisk, and Wendy A. Rogers, Georgia Tech, **Privacy Concerns and Disclosure Behavior in a Health Setting**
2. Michael T. Curtis, David Schuster, Florian Jentsch, Michelle Harper-Sciarini, and Ron Swanson, U. of Central Florida, **Perceptual Cue Effects on Distance Estimation From Different Relative Approach Heading**

Tuesday
Sept. 23

3. Ranjana Mehta and Michael J. Agnew, Virginia Tech, **An Investigation of the Impact of Fatigue and Aging on the Performance of Spatially Constrained Assembly Tasks Commonly Found in the Construction Industry**
4. Courtney A. Haynes and Thurmon E. Lockhart, Virginia Tech, **Differences in Gait Parameters Between Nondisabled and Intellectually Disabled Adults**
5. Grace Desi Zwick and Keith Fine, U.S. Military Academy, **TeamMATE: A Virtual Sand Table**

ST2 – PEDESTRIANS AND TRANSPORTATION INFRASTRUCTURE

Lecture

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.
Marquis A/B (9th Floor)
Surface Transportation

Chair: Vicki L. Neale, Virginia Tech Transportation Inst.; *Cochair:* Jessica O’Connell, California PATH

1. Lisandra Garay-Vega, U.S. Dept. of Transportation Volpe Ctr.; Donald L. Fisher and Michael A. Knodler, U. of Massachusetts-Amherst, **Drivers’ Performance in Response to Sight-Limited Crash Scenarios at Midblock Crosswalks: Evaluation of Advance Yield Markings and Symbolic Signage**
2. Richard A. Tyrrell, Clemson U.; Joanne M. Wood, Queensland U. of Technology; Alex Chaparro, Wichita State U.; Trent P. Carberry, Byoung Sun Chu, and Ralph Marszalek, Queensland U. of Technology, **Seeing Pedestrians at Night: Visual Clutter Does Not Mask Biological Motion**
3. Amanda K. Emo and Ann H. Do, Federal Highway Admin., **Evaluating and Validating a New Pedestrian Exposure to Risk Metric**
4. Michael Edward Rakauskas, Michael Paul Manser, Janet Irene Creaser, and Daniel Allen Drew, U. of Minnesota, **Determining Effective Orientation and Location of Decision Support Signs at Rural Intersections**
5. Dillon Funkhouser, Susan Theresa Chrysler, Alicia Nelson, and Eun Sug Park, Texas Transportation Inst., **Traffic Sign Legibility for Different Sign Background Colors: Results of an Open-Road Study at Freeway Speeds**

TI – CHALLENGES IN TEAM-OF-TEAMS TRAINING AND ASSESSMENT

Discussion Panel

Tuesday, September 23, 2008, 1:30 to 3:00 p.m.
Marquis C (9th Floor)

Training

Organizer: Courtney Dean, Aptima, Inc.; *Chair:* Jean MacMillan, Aptima, Inc.

Panelists: Winston Bennett, Jr., U.S. Air Force Research Lab; Danielle Merket, U.S. Naval Air Warfare Ctr. TSD; Eduardo Salas, U. of Central Florida; Stephen J. Zaccaro, George Mason U.; Steve W. J. Kozlowski, Michigan State U.

Tuesday, September 23

3:30 to 5:00 p.m.

CE4 – HUMAN-ROBOT INTERACTION II: THE IMPACT OF HUMAN FACTORS ON UNMANNED SYSTEMS

Invited Symposium

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.
Westside Salon I (5th Floor)

Cognitive Engineering & Decision Making

Chair: Douglas Gillan, North Carolina State U.

1. Douglas Gillan, North Carolina State U., **Human-Robot Interaction II: The Impact of Human Factors on Unmanned Systems**
2. Jessie Y. C. Chen, U.S. Army Research Lab, **Effectiveness of Concurrent Performance of Military and Robotics Tasks and Effects of Cueing in a Simulated Multitasking Environment**
3. Jennifer M. Riley, Laura Strater, Arathi Sethumadhavan, Fleet Davis, Anand Tharanathan, and Christina Kokini, SA Technologies, Inc., **Performance and Situation Awareness Effects in Collaborative Robot Control With Automation**
4. Keryl Ann Cosenzo, U.S. Army Research Lab; Raja Parasuraman and Krishna Pillalamarri, George Mason U., **The Effect of Task-Based Automation for the Control of Unmanned Systems on Operator Performance**
5. Roger Chadwick, New Mexico State U., **Considerations for Use of Aerial Views in Remote Unmanned Ground Vehicle Operations**

6. Patricia L. McDermott and Alia M. Fisher, Alion Science and Technology; Laurel Allender, U.S. Army Research Lab, **The Transmission of Spatial Route Information in Distributed Unmanned Vehicle Teams**

CE5 – EXTENSIONS AND APPLICATIONS OF COGNITIVE WORK ANALYSIS I

Lecture

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.

Astor Ballroom (7th Floor)

Cognitive Engineering & Decision Making

Chair: Gavan Lintern, General Dynamics

1. Antony Hilliard and Laura Thompson, U. of Toronto; Cam Ngo, Atomic Energy of Canada Ltd., **Demonstrating CWA Strategies Analysis: A Case Study of Municipal Winter Maintenance**
2. Dal Vernon C. Reising and Peter T. Bullemer, Human Centered Solutions, LLP, **A Direct Perception, Span-of-Control Overview Display to Support a Process Control Operator's Situation Awareness: A Practice-Oriented Design Process**
3. Olivier St-Cyr, IBM Canada Ltd.; Ryan M. Kilgore, Charles River Analytics, Inc., **A Five-Phase CWA for Air Traffic Control: Example From a TRACON Microworld**
4. Tania Xiao, Penelope M. Sanderson, Martijn Mooij, and Selina Fothergill, U. of Queensland, **Work Domain Analysis for Assessing Simulated Worlds for ATC Studies**
5. Gavan Lintern, General Dynamics, **Structured Information for Support of Knowledge-Based Reasoning**

CS2 – CONTROLS AND DISPLAYS

Lecture

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.

Chelsea (7th Floor)

Computer Systems; cosponsored by Internet

Chair: Anita D'Amico, Applied Visions, Inc.;

Cochair: Eric M. Moyer, Northrop Grumman Corp.

1. Xin Wang and Alan Hedge, Cornell U., **A Usability Evaluation of a Laser Projection Virtual Keyboard**
2. Korey Johnson, User Centric, Inc.; Steffen Werner, U. of Idaho, **Graphical User Authentication: A Comparative Evaluation of Composite Scene Authentication vs. Three Competing Graphical Passcode Systems**

3. Douglas E. Fox, Barbara S. Chaparro, and Ed Merkle, Wichita State U., **Examining the Onscreen Legibility of the Number "0" and Number "1"**
4. Jesse S. Zolna and Richard Catrambone, Georgia Tech, **Constraining Presentation Pace and Using Multimodal Materials: Intertwined Design Considerations?**
5. David Sharek, Cameron Swofford, and Michael S. Wogalter, North Carolina State U., **Failure to Recognize Fake Internet Popup Warning Messages**

GS2 – THE REAL DEAL: LESSONS FROM HUMAN FACTORS LEADERS

Discussion Panel

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.

Marquis A/B (9th Floor)

General Sessions

Chair: Christopher Nemeth, U. of Chicago;

Cochair: Debra Jones, SA Technologies

Panelists: Gary Klein, Klein Assoc.; Nancy J. Cooke, Arizona State U.; John Carroll, Pennsylvania State U.; Christopher D. Wickens, Alion Science and Technology

HCI – HEALTH INFORMATION TECHNOLOGIES AND HUMAN FACTORS

Lecture

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.

Jolson (9th Floor)

Health Care

Chair: A. Ant Ozok, U. of Maryland Baltimore

1. Richard J. Holden, U. of Wisconsin-Madison; Matthew C. Scanlon, Medical College of Wisconsin; Roger L. Brown and Ben-Tzion Karsh, U. of Wisconsin-Madison, **What Is IT? New Conceptualizations and Measures of Pediatric Nurses' Acceptance of Bar-Coded Medication Administration Information Technology**
2. Jason J. Saleem, Alissa L. Russ, Connie F. Justice, Heather Hagg, Peter A. Woodbridge, and Bradley N. Doebbeling, Roudebush VAMC, **Paper Use With the Electronic Medical Record: An Important Supplement or Negative Circumvention?**
3. Rollin J. Fairbanks, Theresa K. Guarrera, and Keith S. Karn, U. of Rochester; Stanley H. Caplan, Usability Assoc.; Manish N. Shah, U. of Rochester; Robert L. Wears, U. of Florida, Jacksonville, **Interface Design Characteristics of a Popular Emergency Department Information System**

Tuesday
Sept. 23

4. Frank A. Drews and Patrick D. Lorimer, U. of Utah, **Development of a Patient Monitor for Critical Care**
5. Epaphrodite Uwimana, U. at Buffalo, SUNY; Miguel E. Ruiz, U. of North Texas, **Automatic Classification of Medical Images for Content-Based Image Retrieval (CBIR) Systems**

POSI – POSTERS

Poster Session

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.
Imperial (5th Floor)

Posters

Posters are 90 minutes only; presenters are required to be present throughout the session.

Input Devices

1. Thomas Kai Levine, Scarsdale High School, **Effect of the Number Pad on Mousing Location**
2. Robert Pastel, Michigan Technological U., **The Difficulty of Centering Circular Discs**
3. Curt B. Irwin, Robert H. Meyer, Thomas Y. Yen, David P. Kelso, and Mary E. Sesto, U. of Wisconsin-Madison, **Force and Impulse Production During Use of a Touch Screen by Individuals With Motor Control Disabilities**
4. Bryan A. Campbell, Katharine R. O'Brien, Michael D. Byrne, and Benjamin J. Bachman, Rice U., **Fitts' Law Predictions With an Alternative Pointing Device (Wiimote®)**

Automation

5. Stephen Rice, New Mexico State U.; Jason McCarley, UIUC; David Keller, New Mexico State U., **Do Automation False Alarms and Misses Affect Different Cognitive Processes? A State Trace Analysis of the Data**
6. Stephen Rice and Jamie Hughes, New Mexico State U.; Jason McCarley, UIUC; David Keller, New Mexico State U., **Automation Dependency and Performance Gains Under Time Pressure**
7. Elin J. Bahner, Monika F. Elepfandt, and Dietrich Manzey, Berlin Inst. of Technology, **Misuse of Diagnostic Aids in Process Control: The Effects of Automation Misses on Complacency and Automation Bias**
8. Randall D. Spain, Old Dominion U.; Ernesto A. Bustamante, U. of Idaho; James P. Bliss, Old Dominion U., **Toward an Empirically Developed Scale for System Trust: Take Two**
9. Jennifer M. Ross, James L. Szalma, and Peter A. Hancock, U. of Central Florida; John S. Barnett, U.S. Army Research Inst.; Grant S. Taylor, U. of

Central Florida, **The Effect of Automation Reliability on User Automation Trust and Reliance in a Search-and-Rescue Scenario**

Information Processing

10. Brian R. Johnson and Keith S. Jones, Texas Tech U., **When Do People Generate Their Best Ideas?**
11. Russell Branaghan and Christopher Sanchez, Arizona State U., **Feedback, Subjective Time Estimates, and User Satisfaction**
12. Alison Kate Klein and X. T. Wang, U. of South Dakota, **Discount Ratio Effect and Mental Accounting in Money-Saving Decisions**
13. Brian R. Johnson, Jacob T. Fleming, and Francis T. Durso, Texas Tech U.; Jerry Crutchfield, Federal Aviation Admin., **Information Needs of Ground and Local Air Traffic Controllers: When a Runway Becomes Unavailable**
14. Tuan Q. Tran, Idaho National Lab; Kimberly R. Raddatz and Abigail Werth, Kansas State U., **Improving Perceptual Judgments Under Emotional States**

Potpourri

15. Felix Berrigan, U. Laval; Olivier Hue, U. du Québec à Trois-Rivières; Normand Teasdale and Martin Simoneau, U. Laval, **Obesity Adds Constraint on Balance Control and Movement Performance**
16. Roger Jensen and Erin Jenrich, Montana Tech, **Formats for Section Safety Messages in Printed Manuals**
17. Shelby G. Thompson, Harry L. Litaker, and Ronald D. Archer, Lockheed Martin; Robert L. Howard, NASA, **Hatch Size Evaluation for the Altair Lunar Sortie Habitat**
18. Elizabeth L. Blickensderfer and Tiffany Nickens, Embry-Riddle Aeronautical U., **A Student Conference for Human Factors: Recommendations for Success**
19. Valerie K. Sims, Matthew G. Chin, and Linda U. Ellis, U. of Central Florida; Aaron A. Pepe, CHI Systems, Inc; Anne Marie Sinatra, U. of Central Florida; Neal Finkelstein, U.S. Army Research, Development, and Engineering Command, **Robot Features Are Examined as Artifacts, Not as "Faces"**
20. Shawn A. Weil and Andrew Duchon, Aptima Inc.; Jasmine L. Duran, Nancy J. Cooke, Jamie C. Gorman, and Jennifer L. Winner, Cognitive Engineering Research Inst., **Communications-Based Performance Assessment for Air and Space Operations Centers: Preliminary Research**
21. Karen Jacobs, Boston U., **University Students' Notebook Computer Use**

University Lab Posters

- Human Factors in Complex Environments Research Lab, Clemson University
- ARCH Lab, George Mason U.
- Occupational Safety and Ergonomics Lab and Human Factors Laboratory, Auburn U.
- Humans and Automation Lab, Massachusetts Inst. of Technology
- Human System and Engineering Lab, Mississippi State U.
- Human-Computer Interaction Lab, U. of Virginia
- Engineering Psychophysiology Lab, Central Michigan U.
- Applied Physics Lab, Johns Hopkins U.
- Dynamic Decision Making Lab, Carnegie Mellon U.
- California PATH, U. of California, Berkeley
- Engineering Psychology Lab, U.S. Military Academy

PP2 – PERCEPTUAL FACTORS IN THE DESIGN OF AVIATION SYSTEMS: MAXIMIZING PILOT PERFORMANCE AND SAFETY

Lecture

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.
Empire (7th Floor)

Perception & Performance; cosponsored by
Aerospace Systems

Chair: Darren Wilson, U.S. Dept. of Homeland Security

1. Amy L. Alexander and Emily M. Stelzer, Aptima Inc.; Sang-Hwan Kim and David B. Kaber, North Carolina State U., **Bottom-Up and Top-Down Contributors to Pilot Perceptions of Display Clutter in Advanced Flight Deck Technologies**
2. Marshall Dion and Thomas Z. Strybel, California State U., Long Beach, **Effect of Contrast Polarity Between Background and Foreground in Air Traffic Control Displays for Time-to-Contact (TTC) Judgments**
3. Michael Anthony Crognale, U. of Nevada, Reno; William Kip Krebs, Office of U.S. Naval Research, **Helicopter Pilot Performance: Inadvertent Flight Into Instrument Meteorological Conditions**
4. Brian Wotring, Brian P. Dyre, and Joseph Behr, U. of Idaho, **Cross-Talk Between Altitude Changes and Speed Control During Simulated Low-Altitude Flight**
5. Lloyd Dale Tripp, U.S. Air Force Research Lab; Joel S. Warm, Gerald Matthews, and Peter Y. Chiu, U. of Cincinnati; R. Bruce Bracken, U. of Cincinnati Medical Ctr., **Negative Acceleration and Adaptive Automation Approaches to Counter the Effect of Acceleration-Induced Loss of Consciousness**

PD2 – SEVENTH ANNUAL USER-CENTERED PRODUCT DESIGN AWARD

Alternative Format

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.

O'Neill (4th Floor)

Product Design

Chair: Stan Caplan, Usability Assoc., *Cochair:* Dianne McMullin, Boeing

Winner to be announced, followed by a presentation about the winning design.

SF3 – “THE REAL WORLD” HF/E: UNDERSTANDING THE REALITIES OF YOUR FIRST PROFESSIONAL JOB

Discussion Panel

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.

Odets (4th Floor)

Student Forum

Chair: Ronald G. Shapiro, IBM

Panelists: Anthony D. Andre, Interface Analysis Assoc.; Anshu Agarwal, Salesforce.com; Sharnnia Artis, Aptima, Inc.; Raegan M. Hoeft, Lockheed Martin – MS2

T2 – TRAINING EFFECTIVENESS: MODES AND FEEDBACK

Lecture

Tuesday, September 23, 2008, 3:30 to 5:00 p.m.

Gramercy (7th Floor)

Training

Chair: Benjamin Knott, U.S. Air Force Research Lab;
Cochair: Scott Galster, Aptima, Inc.

1. Mark W. Wiggins, U. of Western Sydney; Renee Glass, PTG Global, **A Comparison Between Cue-Based, Exemplar-Based, and Production-Based Training in an Air Traffic Control Scenario**
2. Tracy Lynn Mitzner and Cara Bailey Fausset, Georgia Tech; Julie B. Boron, Youngstown State U.; Anne Adams, Georgia Tech; Katinka Dijkstra, Erasmus U.; Chin Chin Lee, U. of Miami, Miller School of Medicine; Wendy A. Rogers and Arthur D. Fisk, Georgia Tech, **Older Adults' Training Preferences for Learning to Use Technology**
3. Joseph R. Keebler, Lee W. Sciarini, Florian Jentsch, Thomas Fincannon, and Denise Nicholson, U. of Central Florida, **Effects of Training Modality on Military Vehicle Identification in a Virtual Environment**

Tuesday
Sept. 23

Program at a Glance

Monday

Tuesday

8:30 – 10:00 a.m.

SF1 - Student Career and Professional Development Day, Broadhurst

Morning-Only Workshops, 8:30 a.m. – 12:00 noon

WK3 Ergonomic Computing Standards, *Carnegie*

All-Day Workshops, 9:00 a.m. – 4:30 p.m.

WK8 Survey Construction & Use, *Lyceum*

WK9 Modeling & Simulation Human Performance, *Soho*

WK10 Cognitive Work Analysis Software, *Herald*

WK11 System Design & Performance Modeling, *Gramercy*

WK12 Human Error in Complex Systems, *Olmstead*

WK13 Human-Systems Integration, *Empire*

WK14 Cognitive Systems Engineering, *Gotham*

WK15 Communication Behaviors, *Columbia*

8:00 – 10:15 a.m.

Opening Plenary Session, *Broadway Ballroom*

10:30 – 12:00 noon

Student Career and Professional Development Day continues

Morning-Only Workshops continue

All-Day Workshops continue

ASI Stanley Roscoe: Enduring Influence, *Jolson*
CE1 Impact of HF on System Engineering, *Westside Salon I*

CS1 Qualitative Evaluation, *Chelsea*

GS1 President's Forum, *Astor Ballroom*

PD1 Design Implications, *O'Neill*

PP1 Perception & Displays, *Empire*

S1 Warnings & Risk Perception, *Majestic*

SD1 Design of Control Rooms, *Soho*

ST1 Driver Adaptation to Safety Systems, *Marquis A/B*

VE1 Human Interfaces, *Gramercy*

1:30 – 3:00 p.m.

Student Career and Professional Development Day continues

All-Day Workshops continue

Afternoon-Only Workshops

WK5 Predictive Human Performance Modeling, *Carnegie*

AS2 Awareness & Attention in Flight, *Jolson*

CE2 Robotic & Unmanned Vehicles, *Westside Salon I*

CE3 Safety in Health Care, *Astor Ballroom*

FPI Ethics for Expert Witnesses, *Chelsea*

HPI Models of Motor Control, *Empire*

IE1 Upper Extremity Ergonomics, *Gramercy*

S2 Industry Safety, *Majestic*

SD2 Systems Development Tools, *Soho*

SF2 Innovative Student Research, *Odets*

ST2 Pedestrians & Transportation, *Marquis A/B*

T1 Team-of-Teams Training, Assessment, *Marquis C*

3:30 – 5:00 p.m.

Student Career and Professional Development Day continues

All-Day Workshops continue

Afternoon-Only Workshops continue

CE4 Human-Robot Interaction II, *Westside Salon I*

CE5 Cognitive Work Analysis I, *Astor Ballroom*

CS2 Controls & Displays, *Chelsea*

GS2 Lessons From HF Leaders, *Marquis A/B*

HCI Information Technologies & HF, *Jolson*

PD2 Product Design Award, *O'Neill*

POS1 Poster Session I, *Imperial*

PP2 Pilot Performance & Safety, *Empire*

SF3 "The Real World" HF/E, *Odets*

T2 Training Effectiveness, *Gramercy*

Evening

4:45 – 6:15 p.m.

National Ergonomics Month Session, *Westside Salon I*

6:30 – 9:00 p.m.

Gala Opening Reception, *Broadway Ballroom*

5:00 – 6:00 p.m.

Student Reception, *Sky Lobby (16th Floor)*

6:00 – 7:00 p.m.

HFES Business Meeting, *Westside Salon I*

Wednesday

A1 Older Adults & Technology, *Odets*
AS3 Design of the Orion Spacecraft, *Astor Ballroom*
CE6 Automation Design, *Westside Salon 1*
CS3 Accessibility, *Chelsea*
E1 Methods & Techniques in Education, *Gramercy*
GS3 Universal Design, *Jolson*
PD3 Boeing 787 Dreamliner, *O'Neill*
PP3 Theory, Research, & Design, *Empire*
S3 Roadway Safety, *Ziegfeld*
SD3 HSI Engineering in the Navy, *Marquis C*
ST3 Crashes: Warnings, Simulations, *Marquis A/B*

Thursday

AC2 Foundations of AC, *Odets*
CE8 Visual Search in Complex Systems, *Astor Ballroom*
GS5 Lectures Potpourri, *Soho*
HC2 Simulation in Health Care, *Jolson*
HP2 Human Performance in the Environment, *Chelsea*
I1 The Mobile Web, *Westside Salon 1*
ME1 Health Care Technology, *Gramercy*
S4 Safety Potpourri, *Ziegfeld*
SF4 Cognitive Human Factors, *O'Neill*
ST5 Vision & In-Vehicle Controls, *Marquis C*
T4 Aviation Environments, *Marquis A/B*

Friday

AS8 Human Error in Aviation, *O'Neill*
CE13 Successful Teams, *Astor Ballroom*
E3 HFES Education, Research, *Westside Salon 1*
HC6 Rehabilitation Ergonomics, *Jolson*
ID2 Potpourri, *Odets*
IE5 Neuromuscular Responses, *Westside Salon 3*
TE2 HF/E Issues, *Westside Salon 2*

DEMI Demonstrations Session 1, *Majestic/Music Box/Winter Garden*
POS2 Poster Session 2, *Imperial*

AS5 Air Traffic Control, *Soho*
C1 Rapid & Accurate Idea Transfer, *Odets*
CE9 Information Display, *Astor Ballroom*
GS6 Ergonomics for Children, *Marquis A/B*
HC3 Clinical Settings, *Jolson*
ID1 Performance Under Stress, *Chelsea*
IE2 Ergonomic Interventions, *Gramercy*
POS3 Poster Session 3, *Imperial*
PP5 Driver Performance, *O'Neill*
ST6 On-Road Driving Data, *Marquis C*
TE1 Usability Testing in Systems Design, *Westside Salon 1*

AS9 Space Human Factors, *O'Neill*
E4 Student Perspective, *Westside Salon 1*
HC7 Critical Health Care, *Jolson*
HP4 Cognitive, Visual, & Motor Performance, *Odets*
ME2 Macroergonomics in Practice, *Westside Salon 3*
TE3 TE Initiatives, *Westside Salon 2*

AC1 Perspectives on AC, *Odets*
AS4 NextGen HF Research, *Jolson*
CE7 CSE 20 Years After, *Westside Salon 1*
ED1 Posture & Backpack Usage, *Chelsea*
GS4 Arnold M. Small Lecture, *Astor Ballroom*
PD4 Product Potpourri, *O'Neill*
PP4 Perceptual Tasks, *Empire*
SD4 HSI Human Factors, *Marquis C*
ST4 Global Highway Safety, *Marquis A/B*
T3 Team Performance, *Gramercy*
VE2 Human Performance, *Ziegfeld*

AS6 Control of Unmanned Vehicles, *Marquis A/B*
C2 Facets of Communication, *Odets*
CE10 Cognitive Aspects of CEDM, *Astor Ballroom*
CE11 Complex Decision Making, *Marquis C*
E2 International HF Programs, *Soho*
HC4 Patient Safety, *Jolson*
HP3 HP Modeling in Aviation, *Westside Salon 1*
IE3 Low Back Pain & Lifting, *Gramercy*
PP6 Design of Commercial Products, *O'Neill*
SD5 Systems Engineering, *Ziegfeld*

3:00 – 6:30 p.m.

Technical Group Business Meetings (see pages 25–26)

AC3 Applications of AC, *Odets*
AS7 Cockpit & Display Design, *Marquis A/B*
CE12 Cognitive Work Analysis II, *Astor Ballroom*
DEM2 Demonstrations Session 2, *Majestic/Music Box/Winter Garden/Palace*
GS7 Nuclear Renaissance, *Westside Salon 1*
HC5 Teamwork, *Jolson*
I2 Quantitative Analytical Methods, *Chelsea*
IE4 Ergonomics in the Biosciences, *Gramercy*
PP7 Design of Military Systems, *O'Neill*
SD6 Design of Systems, *Ziegfeld*
ST7 New Techniques, *Marquis C*

- Anne Collins McLaughlin, North Carolina State U.; Wendy A. Rogers and Arthur D. Fisk, Georgia Tech, **Feedback Support for Training: Accounting for Learner and Task**
- Randolph Astwood and Wendi Van Buskirk, U.S. Naval Air Warfare Ctr. TSD; Jessica Cornejo, U. of Central Florida; Joseph Dalton, Kagen Corp., **The Impact of Different Feedback Types on Decision Making in Simulation-Based Training Environments**

Tuesday, September 23

5:30 to 7:30 p.m.

Technical Group Business Meeting

Product Design

5:30 to 7:00 p.m. (reception)
O'Neill (4th Floor)

Wednesday, September 24

7:00 to 8:30 a.m.

Technical Group Business Meeting

Education

7:00 to 8:30 a.m.
Lyceum (5th Floor)
Sponsored by the Boren Family Foundation

Wednesday, September 24

8:30 to 10:00 a.m.

AI – OLDER ADULTS AND TECHNOLOGY USE

Lecture
Wednesday, September 24, 2008, 8:30 to 10:00 a.m.
Odets (4th Floor)
Aging

Chair: Diana J. Schwerha, Ohio U.

- Sara J. Czaja, Chin Chin Lee, and Sankaran N. Nair, U. of Miami, Miller School of Medicine; Joseph Sharit, U. of Miami, **Older Adults and Technology Adoption**

- Arthur D. Fisk, Andrew K. Mayer, and Wendy A. Rogers, Georgia Tech, **Age Differences, Expectancy, and Resultant Reliance and Compliance Behavior Using an Automated System**
- Neil Charness, Florida State U.; Katinka Dijkstra, Erasmus U.; Tiffany Jastrzembski, U.S. Air Force Research Lab; Sallie J. Weaver and Michael Champion, Florida State U., **Monitor Viewing Distance for Younger and Older Workers**
- Nicole Schneider, Janet Wilkes, Morten Grandt, and Christopher Marc Schlick, RWTH Aachen U., **Investigation of Input Devices for the Age-Differentiated Design of Human-Computer Interaction**
- Frank Schieber, Ann Holtz, Ben Schlorholtz, and Robert McCall, U. of South Dakota, **Analysis of Visual Demands of In-Vehicle Text Displays Reveals an Age-Related Increase in Time Needed to Reallocate Attention to the Road**

AS3 – THE ROLE OF HUMAN ENGINEERING IN THE DESIGN OF THE ORION SPACECRAFT

Discussion Panel
Wednesday, September 24, 2008, 8:30 to 10:00 a.m.
Astor Ballroom (7th Floor)
Aerospace Systems

Chair: John A. Wise, Honeywell Labs

Panelists: Lee Morin and Mihriban Whitmore, NASA; Lila Laux, Alion Science and Technology; Christopher J. Hamblin, Honeywell Labs; John-Paul Stephens, Lockheed Martin; Sudhakar Rajulu, NASA; Kritina Holden, Lockheed Martin; Susan Baggerman, NASA; Lisa Farley, Lockheed Martin

CE6 – AUTOMATION DESIGN FOR TRUST AND RELIANCE

Lecture
Wednesday, September 24, 2008, 8:30 to 10:00 a.m.
Westside Salon I (5th Floor)
Cognitive Engineering & Decision Making

Chair: Karen Feigh, Georgia Tech; *Cochair:* Erik S. Connors, SA Technologies, Inc.

- Lu Wang, U. of Virginia; Greg A. Jamieson, U. of Toronto; Justin G. Hollands, Defence R&D Canada, **Selecting Methods for the Analysis of Reliance on Automation**
- Kathleen A. McGarry, Catholic U. of America; Raja Parasuraman, George Mason U., **Reliance and Compliance: How Automation Failures Affect User Trust in Automation**
- Lu Wang, U. of Virginia; Greg A. Jamieson, U. of Toronto; Justin G. Hollands, Defence R&D

- Canada, **Improving Reliability Awareness to Support Appropriate Trust and Reliance on Individual Combat Identification Systems**
4. Dietrich Manzey, Juliane Reichenbach, and Linda Onnasch, Berlin U. of Technology, **Performance Consequences of Automated Aids in Supervisory Control: The Impact of Function Allocation**
 5. Kenya Freeman Oduor, IBM; Eric N. Wiebe, North Carolina State U., **The Effects of Automated Decision Algorithm Modality and Transparency on Reported Trust and Task Performance**

CS3 – ACCESSIBILITY

Lecture

Wednesday, September 24, 2008, 8:30 to 10:00 a.m.
Chelsea (7th Floor)

Computer Systems; cosponsored by Internet

Chair: Kenneth R. Ohnemus, Ascentium Corp.;

Cochair: Richard Pak, Clemson U.

1. Lisa Tang, David Fourney, Fei Huang, and Jim A. Carter, U. of Saskatchewan, **Secondary Encoding**
2. David Fourney, Ryerson U.; Jim Carter, U. of Saskatchewan, **The Ongoing Evolution of Standards to Meet the Needs of the Deaf and Hard of Hearing**
3. David Fourney and Deborah I. Fels, Ryerson U., **“Thanks for Pointing That Out”: Making Sarcasm Accessible for All**
4. Jianwei Lu and Aries Ardit, Arlene R. Gordon Research Inst., Lighthouse International, **Accessible Web Browser Interface Design for Users With Low Vision**
5. Sang-Hwan Kim and David B. Kaber, North Carolina State U., **Design and Usability Evaluation of Foot Interfaces for Dynamic Text Editing**

EI – INSTRUCTIONAL METHODS AND TECHNIQUES IN EDUCATION

Lecture

Wednesday, September 24, 2008, 8:30 to 10:00 a.m.
Gramercy (7th Floor)

Education

Chair: Lesley Strawderman, Mississippi State U.;

Cochair: Chad Tossell, U.S. Air Force Academy

1. Joel S. Greenstein, Harskin Hayes, Benjamin R. Stephens, and Chris L. Peters, Clemson U., **The Effect of Supplementing Textual Materials With Virtual World Experiences on Learning and Engagement**

2. Cheryl L. Coyle and Heather Vaughn, Bell Labs, **Making Peanut Butter and Jelly Sandwiches: Do Students From Different Disciplines Approach This Exercise Differently?**
3. Marc L. Resnick, Florida International U., **Teaching Human Factors Through Popular Music: A Series of Human Information-Processing Demonstrations**
4. Carolyn M. Sommerich and Sahika Vatan Korkmaz, Ohio State U., **Survey Response Comparisons Between Student and Teacher Participants in a Mobile Instructional Technology Program in a High School Setting**
5. Jennifer Antonia Cowley, Eric N. Wiebe, James Minogue, Gail Jones, and Denise Louise Krebs, North Carolina State U., **Haptic Feedback in the Instructional Environment and Its Relationship to Visual Attention and Learning**

GS3 – MOVING FROM ACCOMMODATION TO UNIVERSAL DESIGN

Invited Symposium

Wednesday, September 24, 2008, 8:30 to 10:00 a.m.
Jolson (9th Floor)

General Sessions

Chair: Victor Paquet, U. at Buffalo, SUNY;

Cochair: Sehchang Hah, Federal Aviation Admin.

1. Victor Paquet, U. at Buffalo, SUNY, **Moving From Accommodation to Universal Design**
2. Colin Drury, U. at Buffalo, SUNY; Alicia Koontz, VA Ctr. of Excellence in Wheelchair and Associated Rehabilitation Engineering; David Feathers, U. at Buffalo, SUNY; P. Kankipati, VA Ctr. of Excellence in Wheelchair and Associated Rehabilitation Engineering; Victor Paquet and Jui Lin, U. at Buffalo, SUNY, **Controllability of Manual and Powered Wheelchairs for Spinal Cord Injury Users**
3. Mahiyar Nasarwanji, Victor Paquet, David Feathers, and James Lenker, U. at Buffalo, SUNY, **Usability Study of a Powered Lift for Wheelchair Users**
4. David Feathers and Edward Steinfeld, U. at Buffalo, SUNY, **Subjective Ratings of Accessibility Using Full-Scale Bathroom Environments**
5. Edward Steinfeld, U. at Buffalo, SUNY, **Evidence-Based Practice in Universal Design**

Wednesday
Sept. 24

PD3 – THE BOEING 787 DREAMLINER – A CASE STUDY IN LARGE-SCALE DESIGN INTEGRATION

Discussion Panel

Wednesday, September 24, 2008, 8:30 to 10:00 a.m.

O'Neill (4th Floor)

Product Design

Chair: Dianne McMullin, Boeing

Panelists: Alan R. Jacobsen, Dwaine C. Carvan, Richard J. Gardner, Janice A. Goegan, and Michael S. Koehn, Boeing

PP3 – THE REDLINE OF WORKLOAD: THEORY, RESEARCH, AND DESIGN

Discussion Panel

Wednesday, September 24, 2008, 8:30 to 10:00 a.m.

Empire (7th Floor)

Perception & Performance

Chair: Rebecca A. Grier, Aptima Inc.; *Cochair:* Adrian Salinas, Brooks AFB

Panelists: Christopher D. Wickens, Alion Science and Technology; David B. Kaber, North Carolina State U.; David L. Strayer, U. of Utah; Deborah A. Boehm-Davis, George Mason U.; J. Gregory Trafton, NRL; Mark St. John, Pacific Science & Engineering Group

S3 – ROADWAY SAFETY

Lecture

Wednesday, September 24, 2008, 8:30 to 10:00 a.m.

Ziegfeld (4th Floor)

Safety

Chair: Jeffrey Muttart, Accident Dynamics Research Ctr.; *Cochair:* Tuan Q. Tran, Idaho National Lab

1. Jeffrey John Smith, Jennifer Antonia Cowley, and Michael S. Wogalter, North Carolina State U., **Two New Tires Should Be Mounted on the Rear**
 2. Patrick Nyeste and Michael S. Wogalter, North Carolina State U., **On Adding Sound to Quiet Vehicles**
 3. Dyani Juanita Saxby, Gerald Matthews, Edward M. Hitchcock, Joel S. Warm, Greg J. Funke, and Thomas Gantzer, U. of Cincinnati, **Effect of Active and Passive Fatigue on Performance Using a Driving Simulator**
 4. Shaheen Ahmed, Lesley Strawderman, and Kari Babski-Reeves, Mississippi State U., **Evaluation of a Conceptual Warning System for Mobile Phone Use While Driving to Increase Public Awareness**
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5. Melissa Baysari and Andrew McIntosh, U. of New South Wales; John Wilson, U. of Nottingham, **Analysis of Australian and UK Rail Incidents and Accidents Using Retrospective TRACER Lite for Drivers**
-

SD3 – HSI ENGINEERING AT WORK IN THE NAVY

Discussion Panel

Wednesday, September 24, 2008, 8:30 to 10:00 a.m.

Marquis C (9th Floor)

System Development

Chair: Robert J. Beaton, U.S. Naval Sea Systems Command; *Cochair:* Melissa Weaver, BCI, Inc.

Panelists: Daniel F. Wallace, U.S. Naval Surface Weapons Ctr./Dahlgren Lab; Robert Smillie, SPAWAR Systems Command; Kurt Yankaskas, U.S. Naval Sea Systems Command; James A. Pharmed, NAVAIR/Orlando

ST3 – CRASHES: WARNINGS, SIMULATIONS, AND SAFETY ENHANCEMENTS

Lecture

Wednesday, September 24, 2008, 8:30 to 10:00 a.m.

Marquis A/B (9th Floor)

Surface Transportation

Chair: John K. Lenneman, General Motors R&D;

Cochair: William J. Horrey, Liberty Mutual Research Inst. for Safety

1. Carryl L. Baldwin, George Mason U.; Katrina Lewis, Old Dominion U., **Auditory Warnings Reduce Crash Probability in Young Drivers**
2. Christian Richard, John Campbell, and Jim Brown, Battelle, **A Procedure for Developing Warning Message Prioritization Rules in Integrated Collision Warning Systems for Heavy Trucks**
3. Paul Green, U. of Michigan, **Developing Complex Crash Warning Simulations for Human Factors Evaluations**
4. Russell Branaghan and Rob Gray, Arizona State U., **Nonconscious Activation of an Elderly Stereotype Leads to Safer Driving Behavior**
5. Nicholas J. Kelling, Christopher D. Ryan, Jeffery T. Halter, and Gregory M. Corso, Georgia Tech, **Drivers and Passengers: Are the Perceptions of Braking Time the Same?**

Wednesday, September 24

10:30 a.m. to 12:00 noon

DEMI – INNOVATIVE TRAINING TOOLS AND METHODS

Demonstrations

Wednesday, September 24, 2008, 10:30 a.m. to 12:00 p.m.
Majestic/Music Box/Winter Garden (6th Floor)

Demonstrations

Chair: Karin Laumann, Norwegian U. of Science and Technology; *Cochair:* Helena Broberg, OECD Halden Reactor Project

1. Amy L. Alexander, Jeff Beaubien, Yale Marc, and Sharnnia Artis, Aptima Inc., **Demonstration of a Teamwork Skills Training Program for the Dynamic Targeting Cell (Majestic)**
2. Evan D. Rapoport and Erin M. Nishimura, Archinoetics, LLC; Jonathan R. Zadra, U. of Virginia; Peter M. Wubbels, Archinoetics, LLC; Dennis R. Proffitt, U. of Virginia; Traci H. Downs and J. Hunter Downs, Archinoetics, LLC, **Engaging, Noninvasive Brain-Computer Interfaces (BCIs) for Improving Training Effectiveness & Enabling Creative Expression (Music Box)**
3. Jennifer Jo Ockerman, F. T. Case, Nathan Koterba, and Ben Huguenin, Johns Hopkins U. Applied Physics Lab; Oscar Garcia, U.S. Air Force Research Lab, **Automatic Collection of Process Data to Support Air Force Dynamic Targeting Instructors (Winter Garden)**

POS2 – POSTERS

Poster Session

Wednesday, September 24, 2008, 10:30 a.m. to 12:00 p.m.
Imperial (5th Floor)

Posters

Posters are 90 minutes only; presenters are required to be present throughout the session.

Military Applications

1. Fred Michael John Lichacz, Canadian Forces Experimentation Ctr., **A Brief Examination of How Situation Awareness and Confidence Are Affected in a Simulated Multinational Coalition C2 Headquarters**
2. Simon Banbury, CAE Professional Services; Sebastien Tremblay and Robert Rousseau, U. Laval; Kelly Forbes, CAE Professional Services;

Richard Breton, Defence R&D Canada – Valcartier, **Applying the Contextual Control Model (COCOM) to the Identification of Situation Awareness Requirements for Tactical Army Commanders**

3. Jessie Y. C. Chen, U.S. Army Research Lab; Peter I. Terrence, State Farm Insurance, **Individual Differences in Concurrent Performance of Military and Robotics Tasks With Tactile Cueing**
4. Jessie Y. C. Chen, U.S. Army Research Lab; Bryan Clark, U. of Central Florida, **UAV-Guided Navigation for Ground Robot Operations**
5. David Travis Feltner, U.S. Military Academy, **TigrFile: A Low-Fidelity Prototype Aimed at Integrating Social Network Information Into the TIGR System to Aid Leader Decision Making**

Teams

6. Kimberly Marie DeFiori, LaToya Cherise-Nekole Hall, Daniel Feldpausch, and Ericka Rovira, U.S. Military Academy, **Applying the Interaction Design Process to Mission Planning: Using TEAMMATE Platform**
7. Su Wong Chang, Kyung Soo Lee, Seong Soo Ham, Sun Ah Lee, Tae Kyung Hahn, and Young Woo Sohn, Yonsei U., **The Effects of Mutual Inclusiveness Between Captains and First Officers on Psychological Safety and Engagement in Flight Safety**
8. Heather C. Lum, Stephen M. Fiore, Michael A. Rosen, and Eduardo Salas, U. of Central Florida, **Complexity in Collaboration: Developing an Understanding of Macrocognition in Teams Through Examination of Task Complexity**
9. Katherine Wilson, U. of Miami, Miller School of Medicine; Michael A. Rosen and Eduardo Salas, U. of Central Florida; Donald Robinson, U.S. Army Trauma Training Ctr.; Jeffrey Augenstein, U. of Miami, Miller School of Medicine, **Improving Shared Cognition in Forward Surgical Teams: From Theory to Learning Strategies**
10. Nathaniel J. McNeese, Mark S. Pfaff, Gerald M. Santoro, and Michael D. McNeese, Pennsylvania State U., **Team Performance in Real and Virtual Worlds: The Perceived Value of Second Life**
11. Tamsen Taylor and Lora Bruyn Martin, HumanSystems Inc.; Renee Chow and David Smith, Defence R&D Canada - Toronto; Phil Farrell and Dave Allen, Canadian Forces Experimentation, **A Tool to Evaluate Information Exchange in a Joint, Interagency, Multinational, and Public (JIMP) Environment**

Wednesday
Sept. 24

12. April M. Bennett, Scott M. Galster, Allen W. Dukes, and W. Todd Nelson, U.S. Air Force Research Lab; Rebecca D. Brown, General Dynamics AIS, **Managing a Supply Chain: What Communication Patterns Might Divulge About Information Availability and Team Performance**

Usability

13. Veronica Hinkle, Shannon Riley, and Barbara S. Chaparro, Wichita State U., **A Usability Comparison of Computerized Card Sorting Applications From the Researcher's Perspective**
14. Edward Trautman, Benjamin Trautman, Judy Kirchner, and Mary Ann Trautman, Duplicate Literacy, **Lessons Learned While Considering Usability in a Developing World Classroom**
15. Spring S. Hull, Barbara S. Chaparro, and Michael J. Jorgensen, Wichita State U., **Perceived Usability of Ergonomic Interventions for Steel Bucking Bars**
16. Cristina do Carmo Lucio, Maringa State U.; Luis Carlos Paschoarelli, Sao Paulo State U.; Bruno Montanari Razza, Maringa State U., **Accessibility and Usability of Health Care Equipment for Obese Patients: A Case Study in a Brazilian Public Hospital**

Health Care

17. Bonnie L. Paris, Pascale Carayon, and Tosha B. Wetterneck, U. of Wisconsin-Madison; Mary Ann Blosky and James M. Walker, Geisinger Health System, **Safety of the Antibiotic Medication Use Process in the Intensive Care Unit**
18. Kristin Moore and Stacy Balk, Clemson U., **A Call to Quantify and Classify Hospital Medication Errors: Results From a Meta-Analysis**
19. Brittany Lee Anderson, Mark W. Scerbo, and Lee A. Belfore, Old Dominion U.; Alfred Abuhamad, Eastern Virginia Medical School, **Detecting Critical Patterns in Maternal-Fetal Heart Rate Signals**

Tools and Methods

20. Ron Mourant, Namrata Gundewadi, Zhishuai Yin, and Beverly Jaeger, Northeastern U., **A New Measure to Evaluate Left Turns of Novice Drivers**
21. Liat Lampel, Tal Oron-Gilad, and Adi Ronen, Ben-Gurion U., **The Development of the Driving Skill Assessment Tool (DSAT)**
22. Davin Pavlas, Michael A. Rosen, U. of Central Florida Inst. for Simulation and Training; Stephen Fiore, U. of Central Florida; and Eduardo Salas, U. of Central Florida Inst. for Simulation and Training, **Using Visual**

- Attention Video Games and Traditional Interventions to Improve Baggage Screening**
23. Brad R. Gusich and Thomas J. Armstrong, U. of Michigan; Na Jin Seo, Rehabilitation Inst. of Chicago; D. Christian Grieshaber, Illinois State U., **Development of a Computerized Model for Evaluation of Manual Insertion of Flexible Hoses in Automobile Assembly**
24. Beth M. Plott, Alion Science and Technology, **Control and Display Evaluation Using the Engineering Control Analysis Tool (ECAT)**

Workload/Stressors

25. Justin F. Morgan, Virginia Tech Transportation Inst.; Timothy J. Smoker, Andre J. Garcia, and Peter A. Hancock, U. of Central Florida, **Workload Transitions in Driving**
26. James L. Szalma, Peter A. Hancock, and Stephanie Quinn, U. of Central Florida, **A Meta-Analysis of the Effect of Time Pressure on Human Performance**
27. Philip Kortum, Alicia Ling, and Andy Su, Rice U.; S. Camille Peres, U. of Houston-Clear Lake; Kurt Stallmann, Rice U., **Subjective Workload Assessment for On-Hold Telephone Stimuli**
28. Ernesto A. Bustamante, U. of Idaho; Randall D. Spain, Old Dominion U., **Measurement Invariance of the NASA TLX**
29. Jihun Kang and Kari Babski-Reeves, Mississippi State U., **Detecting Mental Workload Fluctuation During Learning of a Novel Task Using Thermography**
30. Russell Grant, C. Melody Carswell, Cindy Hui Lio, William Brent Seales, and Duncan Clark, U. of Kentucky, **Equivalent-Forms Reliability of Printed and Spoken Versions of the NASA-TLX**
31. Roger Lew, Brian P. Dyre, Steffen Werner, and Brian Wotring, U. of Idaho; Tuan Q. Tran, Idaho National Lab, **Exploring the Potential of Short-Time Fourier Transforms for Analyzing Skin Conductance and Pupillometry in Real-Time Applications**

Driving

32. Franck Mars, IRCCyN, **Steering and Gaze Control Modifications From Directed or Spontaneous Use of a Visual Augmentation Cue**
33. William J. Horrey and Mary F. Lesch, Liberty Mutual Research Inst. for Safety, **Factors Related to Drivers' Self-Reported Willingness to Engage in Distracting In-Vehicle Activities**
34. Christopher A. Monk and David Kidd, George Mason U., **Recovering From Unexpected Lane Drifts**

35. Nichole Leann Morris, Cooper Phillips, Kathleen Rose Thibault, and Alex Chaparro, Wichita State U., Sources of Secondary Task Interference With Driving: Executive Processes or Verbal and Visuospatial Rehearsal Processes?

Wednesday, September 24
12:00 noon to 1:30 p.m.

Technical Group Business Meeting

Aging

12:00 noon to 1:30 p.m.
Lyceum (5th Floor)

Wednesday, September 24
1:30 to 3:00 p.m.

ACI – NEW KIDS ON THE BLOCK: MULTIDIMENSIONAL PERSPECTIVES ON AUGMENTED COGNITION

Discussion Panel

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.
Odets (4th Floor)
Augmented Cognition

Chair: Julie Drexler, U. of Central Florida Inst. for Simulation and Training; *Cochair:* Leah Reeves, Potomac Inst. for Policy Studies

Panelists: Dylan Schmorrow, Office of U.S. Naval Research; Denise Nicholson, U. of Central Florida Inst. for Simulation and Training; Dennis McBride, Potomac Inst. for Policy Studies; Kay Stanney, Design Interactive, Inc.; Chris Berka, Advanced Brain Monitoring, Inc.; Blair Dickson, QinetiQ

AS4 – NEXTGEN HUMAN FACTORS RESEARCH AND ENGINEERING REQUIREMENTS

Discussion Panel

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.
Jolson (9th Floor)
Aerospace Systems

Chair: Dino Piccione, Federal Aviation Admin.

Panelists: Kathy Abbott, Federal Aviation Admin.; Patty Jones, NASA Ames Research Ctr.; Michele Merkle, Federal Aviation Admin.; Amy R. Pritchett, NASA; Ron Stroup, Federal Aviation Admin.

CE7 – ADAPTING TO CHANGE AND UNCERTAINTY: CSE 25 YEARS AFTER

Invited Symposium

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.
Westside Salon I (5th Floor)

Cognitive Engineering & Decision Making

Chair: Christopher Nemeth, U. of Chicago

1. Christopher Nemeth, U. of Chicago, **Adapting to Change and Uncertainty: CSE 25 Years After**
2. Helen Altman Klein, Wright State U., **Adaptation at the Edge: When the System Is Complex, the Stakes High, and the Operator Novice**
3. Brett Gerke and Emily S. Patterson, Ohio State U., **Dynamics of Reciprocal Collaborative Trust in Sensitive Information Repositories**
4. Robert Wears and Shawna J. Perry, U. of Florida, Jacksonville, **Semper Gumby Sub Rosa: Adaptability in a Health Care Setting**
5. Cynthia Dominguez, Klein Assoc./ARA; Jennifer A. B. McKneely, Johns Hopkins U. Applied Physics Lab; Corey Fallon, Klein Assoc., Div. of Applied Research Assoc., Inc., **Submarine Systems Development as a Lens for CSE Progress: Pushing the Envelope of CSE Methods**
6. Sam Mahoney, Jonathan Pfautz, Ted Fichtl, Sean Guarino, and Eric Carlson, Charles River Analytics, Inc.; Gerald M. Powell, HQ, U.S. Army RDECOM CERDEC I2WD; Emilie Roth, Roth Cognitive Engineering, **Cognitive Systems Engineering for Evolvable Human-in-the-Loop Data Fusion**

ED1 – SEATING, SEATING POSTURE, AND BACKPACK USAGE

Lecture

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.
Chelsea (7th Floor)
Environmental Design

Chair: Jay Brand, Haworth; *Cochair:* Jennifer Blume, Jacobs Engineering

1. Erin Lawler, U.S. Dept. of Defense; Alan Hedge, Cornell U., **Task-Specific Speed Preferences When Sitting on a Rotary Dynamic Seat**
2. Dan Nathan-Roberts, U. of Michigan; BingYune Chen, U. of California, Berkeley; Gretchen Marie Gscheidle, Herman Miller, Inc.; David Rempel, U. of California, San Francisco, **Comparisons of Seated Postures Between Office Tasks**
3. Scott Haynes, Georgia Tech, **Impact of Position Optimization on Comfort and Working Posture Preference for Computer Operators With Chronic Low Back Pain**

Wednesday
Sept. 24

4. June Mung Yuing Hu and Karen Jacobs, Boston U., **Backpack Usage and Self-Reported Musculoskeletal Discomfort in University Students**

GS4 – ARNOLD SMALL LECTURE IN SAFETY

Invited Address

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.
Astor Ballroom (7th Floor)

Chair: Michael Kalsher, Rensselaer Polytechnic Inst.;
Cochair: Laura Strater, SA Technologies

Charles Perrow, Yale U., **Software Failures, Internet Security, and Microsoft**

PD4 – PRODUCT DESIGN POTPOURRI

Lecture

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.
O'Neill (4th Floor)

Product Design

Chair: Pat Patterson, Texas Tech U.

1. James Crowe, Pamela Castillejos, Scarlett Rae Herring, and M. Susan Hallbeck, U. of Nebraska-Lincoln, **Evaluation of Input Control Type and Screen View Orientation for a Hand-Held Neutron Detector**
2. Scarlett Rae Herring, Pamela Castillejos, and M. Susan Hallbeck, U. of Nebraska-Lincoln, **Improving Neutron Detection: Usability Analysis of Control Mechanisms and Control Orientations for Use in Hand-Held Devices**
3. Lisa Devlin, San Jose State U., **A Study of Firearms Mode Indicators**
4. James A. Kleiss, Whirlpool Corp., **Sensory Quality Evaluation of Clothes Washing Machine Selector Knobs**
5. James A. Kleiss, Whirlpool Corp., **Characterizing and Differentiating the Semantic Qualities of Auditory Tones for Products**

PP4 – MEASURING ATTENTIONAL RESOURCES FOR PERCEPTUAL TASKS: IS AUTOMATION THE ANSWER?

Lecture

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.
Empire (7th Floor)

Perception & Performance; cosponsored by
Cognitive Engineering & Decision Making

Chair: Jocelyn M. Keillor, Defence R&D Canada;
Cochair: Barry Goettl, U.S. Air Force Research Lab

1. Victor S. Finomore, Tyler H. Shaw, Joel S. Warm, Gerald Matthews, and Michael A. Riley, U. of Cincinnati; David B. Boles, U. of Alabama; David Weldon, JXT Application, Inc., **Measuring the Workload of Sustained Attention: Further Evaluation of the Multiple Resources Questionnaire**
2. William S. Helton, Nicole Lopez, and Sarah Tamminga, Michigan Technological U., **Performance on a Sustained Attention to Response Task**
3. Christopher Brill, Michigan Technological U.; Mustapha Mouloua, Richard D. Gilson, and Edward J. Rinalducci, U. of Central Florida; Robert S. Kennedy, RSK Assessments, Inc., **Effects of Secondary Task Modality on Attentional Reserve Capacity**
4. Jocelyn M. Keillor, Fatin Haque, Matthew Lamb, and Nada Pavlovic, Defence R&D Canada, **Effects of Automated Scanning in a Search-and-Rescue Detection Task**
5. Rebecca A. Grier, Aptima, Inc.; Raja Parasuraman, George Mason U.; Elliott E. Entin, Aptima, Inc.; Nathan Bailey, FMP Consulting; Emily M. Stelzer, Aptima, Inc., **A Test of Intra- Versus Intermodality Interference as a Function of Time Pressure in a Warfighting Simulation**

SD4 – HUMAN-SYSTEMS INTEGRATION – HUMAN FACTORS AND A WHOLE LOT MORE!

Lecture

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.
Marquis C (9th Floor)
System Development

Chair: Larry Avery, BMT Designers & Planners, Inc.;
Cochair: Rene dePontbriand, U.S. Army Research Lab

1. Thomas B. Malone, Carlow International, Inc.; James A. Pharmer, U.S. Naval Air Warfare Training Ctr.; Janae Lockett-Reynolds, U.S. Dept. of Homeland Security; Katherine Muse-Duma, Booz Allen Hamilton, **Integrated HSI**
2. Jennifer McGovern Narkevicius, Jenius LLC; Teresa Alley, Defense Technical Information Agency, **Human-Systems Integration – In the Trenches**
3. Jennifer McGovern Narkevicius, Jenius LLC, **Human Factors and Systems Engineering – Integrating for Successful Systems Development**
4. Robert J. Beaton, U.S. Naval Sea Systems Command; Ken Harmon and Kostas Triantos, Virginia Tech; Michael Smith, U. of Virginia, **Building the HSI Education Community**

ST4 – GLOBAL PERSPECTIVES ON THE USE OF NATURALISTIC DRIVING DATA TO IMPROVE HIGHWAY SAFETY

Discussion Panel

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.

Marquis A/B (9th Floor)

Surface Transportation

Chair: Gregory M. Fitch, Virginia Tech Transportation Inst.; *Cochair:* Jonathan M. Hankey, Virginia Tech Transportation Inst.

Panelists: Joerg Breuer, Mercedes-Benz; Raymond Kiefer, General Motors; Tomohiro Yamamura, Nissan

T3 – THE PSYCHOSOCIAL FACTOR: A NEGLECTED ASPECT OF TEAM PERFORMANCE?

Discussion Panel

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.

Gramercy (7th Floor)

Training; cosponsored by Cognitive Engineering & Decision Making

Chair: Judith Orasanu, NASA Ames Research Ctr.

Panelists: Bonny Parke, NASA Ames Research Ctr.; Ute Fischer, Georgia Tech; Lori McDonnell, NASA Ames Research Ctr.; David G. Rogers, Science Applications International Corp.; Elliot E. Entin, Aptima, Inc.

VE2 – APPLICATIONS OF VIRTUAL ENVIRONMENTS FOR TRAINING AND HUMAN PERFORMANCE ASSESSMENT

Lecture

Wednesday, September 24, 2008, 1:30 to 3:00 p.m.

Ziegfeld (4th Floor)

Virtual Environments

Chair: Jennifer Riley, SA Technologies, Inc.; Wade Allen, Systems Technology

1. Takahiro Wada and Toyokazu Takeuchi, Kagawa U., **A Training System for EMG Prosthetic Hand in Virtual Environment**
2. Jonathan Bakdash, Sally Linkenauger, and Dennis R. Proffitt, U. of Virginia, **Comparing Decision Making and Control for Learning a Virtual Environment: Backseat Drivers Learn Where They Are Going**
3. Lee William Sciarini, Don Kemper, Laura Guay, and Denise Nicholson, U. of Central Florida, **Performance of Egocentric Range Estimation in a Laptop-Based Virtual Environment**

4. Adrienne J. Ephrem, Wright-Patterson AFB; Victor S. Finomore, General Dynamics; Robert H. Gilkey, Wright State U.; Rihana M. Newton, Griffin D. Romigh, Brian D. Simpson, and Douglas S. Brungart, Wright-Patterson AFB; Jeffery L. Cowgill, Wright State U., **An “Audio Annotation” Technique for Intuitive Communication in Spatial Tasks**
5. Maria Kozhevnikov, George Mason U., **The Role of Immersive 3-D Environments in Three-Dimensional Mental Rotation**

**Wednesday, September 24
3:00 to 6:30 p.m.**

Technical Group Business Meetings

Aerospace Systems

3:30 to 5:30 pm.

Ziegfeld (4th Floor)

Augmented Cognition

3:30 to 5:30 p.m.

Odets (4th Floor)

Cognitive Engineering and Decision Making

4:30 to 5:30 p.m.

Westside Salon I (5th Floor)

Communications

3:30 to 4:30 p.m.

Marquis C (9th Floor)

Computer Systems

3:00 to 4:30 p.m.

Chelsea (7th Floor)

Environmental Design

3:15 to 4:30 p.m.

O'Neill (4th Floor)

Forensics Professional Group

5:30 to 6:30 p.m.

O'Neill (4th Floor)

Health Care

3:15 to 4:30 p.m.

Empire (7th Floor)

Human Performance Modeling

5:30 to 6:30 p.m.

Chelsea (7th Floor)

Wednesday
Sept. 24

Industrial Ergonomics

4:00 to 5:30 p.m.
Marquis A/B (9th Floor)

Internet

4:30 to 5:30 p.m.
Chelsea (7th Floor)

Macroergonomics

3:15 to 4:30 p.m.
O'Neill (4th Floor)

Safety

4:30 to 5:40 p.m.
O'Neill (4th Floor)

Surface Transportation

5:00 to 6:30 p.m.
Empire (7th Floor)

Training

3:30 to 4:30 p.m.
Astor Ballroom (9th Floor)

Virtual Environments

3:30 to 4:30 p.m.
Ziegfeld (7th Floor)

Thursday, September 25 8:30 to 10:00 a.m.

AC2 – FOUNDATIONS OF AUGMENTED COGNITION

Lecture
Thursday, September 25, 2008, 8:30 to 10:00 a.m.
Odets (4th Floor)
Augmented Cognition

Chair: Joseph Cohn, DARPA; *Cochair:* Sherry Ogretan, U. of Central Florida Inst. for Simulation and Training

1. Mamadou Seck, Claudia Frydman, and Norbert Giambiasi, LSIS, **A Dynamic Model of Stress in the G-DEVS Formalism**
2. Elizabeth Biddle, Boeing; Dennis McBride, Potomac Inst. for Policy Studies; Linda Malone, U. of Central Florida, **Advancing the Modeling of Student Performance Through the Inclusion of Physiological Measures**

3. Ron H. Stevens and Trysha L. Galloway, UCLA School of Medicine; Chris Berka and Robin Johnson, Advanced Brain Monitoring, Inc.; Marcia Sprang, Esperanza High School, **Assessing Students' Mental Representations of Complex Problem Spaces With EEG Technologies**
4. Lisette de Koning, Peter-Paul van Maanen, and Kees van Dongen, TNO Human Factors, **Effects of Task Performance and Task Complexity on the Validity of Computational Models of Attention**
5. Pablo Quinones, Jigar Vora, Aaron Steinfeld, Asim Smailagic, Peter Phadhana-Anake, and Abhishek Shah, Carnegie Mellon U., **The Effects of Highlighting and Pop-Up Interruptions on Task Performance**

CE8 – IMPROVING VISUAL SEARCH AND IDENTIFICATION IN COMPLEX SYSTEMS

Lecture
Thursday, September 25, 2008, 8:30 to 10:00 a.m.
Astor Ballroom (7th Floor)
Cognitive Engineering & Decision Making;
cosponsored by Perception & Performance

Chair: Laura Militello, U. of Dayton Research Inst.;
Cochair: Haydee M. Cuevas, SA Technologies, Inc.

1. Jeremy R. Brown and Poornima Madhavan, Old Dominion U., **Effects of Training Base Rates and Transfer Similarity: A Comparison of Two Visual Search Scenarios**
2. Maria Gabriela Mancero and William Wong, Middlesex U., **An Evaluation of Perceptual Depth to Enhance Change Detection**
3. Jim Staszewski, Carnegie Mellon U.; Alan Davison, U.S. Army Research Lab; David Dippel and Julia Tischuk, Carnegie Mellon U., **Using Expert Knowledge to Identify Visual Cues for Landmine Detection**
4. Frank C. Lacson, Pacific Science & Engineering Group; Cleotilde Gonzalez, Carnegie Mellon U.; Poornima Madhavan, Old Dominion U., **Framing and Context Effects in Visual Search Training**
5. Kimberly Michelle Ghylin, U. at Buffalo, SUNY; Adrian Schwaninger, U. of Zurich; Colin Drury, Josh Redford, Li Lin, and Rajan Batta, U. at Buffalo, SUNY, **Screening Enhancements: Why Don't They Enhance Performance?**

GS5 – LECTURES POTPOURRI

Lecture

Thursday, September 25, 2008, 8:30 to 10:00 a.m.
Soho (7th Floor)
General Sessions

Chair: Kelly Caine, Georgia Tech; *Cochair:* Arathi Sethumadhavan, Texas Tech U.

1. Ronald Laurids Boring, Idaho National Lab; Andreas Bye, OECD Halden Reactor Project, **Bridging Human Factors and Human Reliability Analysis**
2. Paul O'Connor, U.S. Navy Postgraduate School; Dale Hyde and John Clarke, U.S. Navy Experimental Diving Unit, **The Cognitive and Physiological Effects of Heating the Torso of a Submerged Diver**
3. David William Eccles, Paul Ward, and Christopher Janelle, U. of Florida; Tim Woodman, Bangor U.; Christine Le Scanff, U. Paris XI, **Shared Interests in Solving Common Problems: How Sport Psychology Might Inform Human Factors and Ergonomics**
4. Scott A. C. Flemming, Antony Hilliard, and Greg A. Jamieson, U. of Toronto, **The Need for Human Factors in the Sustainability Domain**
5. Michael A. Rosen, Jessica L. Wildman, Wendy L. Bedwell, U. of Central Florida Inst. for Simulation and Training; Barbara Fritzsche, U. of Central Florida; Eduardo Salas and C. Shawn Burke, U. of Central Florida Inst. for Simulation and Training, **Diagnosing Friction Points in Multicultural Team Performance: A Rationale and Measurement Approach**

HC2 – SIMULATION IN HEALTH CARE

Lecture

Thursday, September 25, 2008, 8:30 to 10:00 a.m.
Jolson (9th Floor)
Health Care

Chair: F. Jacob Seagull, U. of Maryland, Baltimore

1. Michael A. Rosen, Elizabeth H. Lazzara, Rebecca Lyons, Sallie J. Weaver, and Eduardo Salas, U. of Central Florida; Teresa S. Wu and Salvatore Silvestri, Orlando Regional Medical Ctr.; Heidi B. King, Office of the Asst. Secretary of Defense, **SMARTER-Team: Adapting Event-Based Tools for Simulation-Based Team Training in Health Care**
2. Susan Leigh Chisholm and Jonas Shultz, Calgary Health Region; Jeff K. Caird, U. of Calgary; Jason Lord and Paul Boiteau, Calgary Health Region; Jan Davies, U. of Calgary, **Identification of**

Intensive Care Unit (ICU) System Integration Conflicts: Evaluation of Two Mock-Up Rooms Using Patient Simulation

3. Chang S. Nam, Steve Johnson, and Yueqing Li, U. of Arkansas, **Environmental Noise and P300-Based Brain-Computer Interface (BCI)**
4. Tobias Grundgeiger, David Liu, and Penelope M. Sanderson, U. of Queensland; Terry Leane, Royal Adelaide Hospital, **Effects of Interruptions on Prospective Memory Performance in Anesthesiology**
5. Ninghuan Wang, Gregory J. Gerling, Reba Moyer Childress, and Marcus L. Martin, U. of Virginia, **Characterizing Finger Palpation in the Detection of Prostate Cancers and Abnormalities**

HP2 – MODELING HUMAN PERFORMANCE IN THE ENVIRONMENTAL CONTEXT

Lecture

Thursday, September 25, 2008, 8:30 to 10:00 a.m.
Chelsea (7th Floor)
Human Performance Modeling

Chair: Laurel Allender, U.S. Army Research Lab; *Cochair:* Robert Feyen, U. of Minnesota – Duluth

1. William S. Helton and Katrina Ellis, Michigan Technological U., **Human Judgments of Stress State in Performance Settings**
2. Elida C. Smith, The MITRE Corp., **Flight Management System (FMS) Execution Task Time Modeling for Loading Terminal Area Navigation (RNAV) Procedure Changes**
3. Carl Nehme, Massachusetts Inst. of Technology; Ryan Kilgore, CRA; M. L. Cummings, Massachusetts Inst. of Technology, **Predicting the Impact of Heterogeneity on Unmanned Vehicle Team Performance**
4. Thomas B. Sheridan, U.S. Dept. of Transportation Volpe Ctr., **Rating Severity of Aircraft Separation Violations From Logic of Collision Probability**

II – INFORMATION EVERYWHERE: EXPLORING THE POTENTIAL OF THE MOBILE WEB

Discussion Panel

Thursday, September 25, 2008, 8:30 to 10:00 a.m.
Westside Salon I (7th Floor)
Internet; cosponsored by Computer Systems

Chair: Katherine Del Giudice, U. of Central Florida; *Cochair:* Ania Rodriguez, Keynote Systems
Panelists: Gavin Lew, User Centric, Inc.; Brent White and Chad Sampanes, Oracle Corp.; Steven Herbst, Motorola; James Pratt, AT&T Labs

Thursday
Sept. 25

MEI – MACROERGONOMIC CHALLENGES IN IMPLEMENTATION OF HEALTH CARE INFORMATION TECHNOLOGY

Discussion Panel

Thursday, September 25, 2008, 8:30 to 10:00 a.m.

Gramercy (7th Floor)

Macroergonomics

Chair: Carla J. Alvarado, U. of Wisconsin;

Cochair: Pascale Carayon, U. of Wisconsin

Panelists: Ben-Tzion Karsh, U. of Wisconsin-Madison;

Rainu Kaushal, Cornell U.; Shawna J. Perry, U. of

Florida; James M. Walker, Geisinger Health System

S4 – SAFETY POTPOURRI

Lecture

Thursday, September 25, 2008, 8:30 to 10:00 a.m.

Ziegfeld (4th Floor)

Safety

Chair: Pat Patterson, Texas Tech U.; *Cochair:* Paul O'Connor, U.S. Navy

1. Emily S. Patterson, Stephanie McNee, Daniel Zelik, and David D. Woods, Ohio State U., **Insights From Applying “Rigor Metric” to Health Care Incident Investigations**
2. Michael J. Kalsher, Charlotte Kaplan, and James Fisher, Rensselaer Polytechnic Inst., **Evaluation of the Hazards Due to the Misunderstanding of Patient Medication Information Sheets**
3. Denise H. Bauer and Andris Freivalds, Pennsylvania State U., **A Comparison of Two Middle School Backpacks With Varying Comfort Features Under an Increasing Load**
4. Tracey B. Wortham, Murray State U., **Published Covers: A Snapshot of the Visibility of Women in Safety and Engineering**

SF4 – STUDENT RESEARCH IN COGNITIVE HUMAN FACTORS

Lecture

Thursday, September 25, 2008, 8:30 to 10:00 a.m.

O'Neill (4th Floor)

Student Forum

Chair: Katie Berry, Clemson U.; *Cochair:* Enid Montague, Virginia Tech

1. Matthew Crisler, Berry Davenport, and Andrew T. Duchowski, Clemson U., **Aurally Aided Visual Search with Musical Stimuli – An Eye-Tracking Analysis**

2. Rohan Tilak, Ilir Xholi, Diane Schowalter, Thomas Keith Ferris, Shameem Hameed, and Nadine Sarter, U. of Michigan, **Crossmodal Links in Attention in the Driving Environment: The Roles of Cueing Modality, Signal Timing, and Workload**
3. Michael A. Nees and Bruce N. Walker, Georgia Tech, **Encoding of Information in Auditory Displays: Initial Research on Flexibility and Processing Codes in Dual-Task Scenarios**
4. Christopher Kelley and Anne Collins McLaughlin, North Carolina State U., **How Individual Differences and Task Load May Affect Feedback Use When Learning a New Task**
5. Cara Bailey Fausset, Wendy A. Rogers, and Arthur D. Fisk, Georgia Tech, **Understanding the Required Resources in Line Graph Comprehension**

ST5 – VISION AND IN-VEHICLE CONTROLS

Lecture

Thursday, September 25, 2008, 8:30 to 10:00 a.m.

Marquis C (9th Floor)

Surface Transportation

Chair: Michael P. Manser, U. of Minnesota;

Cochair: Ernesto A. Bustamante, U. of Idaho

1. Frank Schieber and Jess Gilland, U. of South Dakota, **Visual Entropy Metric Reveals Differences in Drivers' Eye Gaze Complexity Across Variations in Age and Subsidiary Task Load**
2. Julie Lockhart and Linda Ng Boyle, U. of Iowa; Birsen Donmez, Massachusetts Inst. of Technology, **Variability in Forward Gaze Position of Distracted Drivers**
3. Gregory Malcolm Fitch, Walter W. Wierwille, William A. Schaudt, and Richard J. Hanowski, Virginia Tech Transportation Inst., **Toward Developing an Indirect Visibility System for Large Trucks**
4. Helen J. A. Fuller, U. of Michigan; Omer Tsimhoni and Matthew P. Reed, U. of Michigan Transportation Research Inst., **Effect of In-Vehicle Touch Screen Position on Driver Performance**
5. Erin Harley, Doris Trachtman, Genevieve Heckman, and Douglas Young, Exponent, **Driver Gear-Shifting Behaviors and Errors**

T4 – TRAINING AND ASSESSMENT IN AVIATION ENVIRONMENTS

Lecture

Thursday, September 25, 2008, 8:30 to 10:00 a.m.
Marquis A/B (9th Floor)

Training; cosponsored by Aerospace Systems

Chair: Mike Curtis, U. of Central Florida;

Cochair: Dave Schuster, U. of Central Florida

1. Douglas A. Wiegmann, U. of Wisconsin; Donald A. Talleur and Chris Johnson, U. of Illinois, **Evaluating Weather-Related Training and Testing of General Aviation Pilots**
2. Karen Feigh, William Rogers, and Kelly A. Burke, Honeywell Labs, **Comparison of Training Efficiency and Usability for a Graphical Flight Planning (GFP) System and a Conventional Multifunction Control Display Unit (MCDU)**
3. Jemma Maria Harris and Mark W. Wiggins, U. of Western Sydney, **Evaluating Cognitive Competence: Does Eye Movement Behavior Represent the Missing Piece of the Puzzle?**
4. Jerzy Jarmasz, Defence R&D Canada – Toronto; Richard Zobarich, Tab Lamoureux, and Lora Bruyn Martin, HumanSystems Inc., **Avoiding Friendly Fire: Constructing Behaviorally Anchored Rating Scales to Assess Team Cognition in Distributed Mission Training for Close Air Support**

Thursday, September 25

10:30 a.m. to 12:00 noon

AS5 – AIR TRAFFIC CONTROL

Lecture

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Soho (7th Floor)

Aerospace Systems

Chair: John W. Ruffner, SI International; *Chair:* Ashley Nunes, CSSI, Inc.

1. Russell Stewart Pierce, U. of California, Riverside; Kim-Phuong L. Vu, Jimmy Nguyen, and Thomas Z. Strybel, California State U., Long Beach, **The Relationship Between SPAM, Workload, and Task Performance on a Simulated ATC Task**
2. Selina Fothergill and Andrew Neal, U. of Queensland, **The Effect of Workload on Conflict Decision-Making Strategies in Air Traffic Control**

3. Sehchang Hah and Ben Willems, Federal Aviation Admin., **The Relationship Between Aircraft Count and Controller Workload in Different En-Route Workstation Systems**
4. Paul Ung-Joon Lee and Joey Mercer, San Jose State U., **Examining Controller Task Redistribution as an Indicator of Peak Workload**
5. Kenneth R. Allendoerfer, Federal Aviation Admin.; Shantanu Pai, Engility Corp.; Ferne J. Friedman-Berg, Federal Aviation Admin., **The Complexity of Signal Detection in Air Traffic Control Alert Situations**

CI – BEYOND POWERPOINT: TOOLS FOR RAPID AND ACCURATE IDEA TRANSFER

Discussion Panel

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Odets (4th Floor)

Communication

Chair: Christopher Allan Miller, Smart Information Flow Technologies; *Cochair:* Tammy Ott, Smart Information Flow Technologies

Panelists: Douglas Frosst, Harmonia, Inc.; Terrance Goan, Stottler Henke Assoc., Inc.; J. Christopher Ramming, Consultant; Dan Thomsen, Smart Information Flow Technologies

CE9 – INFORMATION DISPLAY AND COGNITIVE ARTIFACTS

Lecture

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Astor Ballroom (7th Floor)

Cognitive Engineering & Decision Making

Chair: Matthew L. Bolton, U. of Virginia; *Cochair:* Liz Quoetone, NWS Training Division/Warning Decision Training Branch

1. Jim Nixon, Sarah Sharples, and Mike Jackson, U. of Nottingham, **Less Is More? Navigating With Different Types of Information on a Small-Screen Device**
2. Priyadarshini Ravichandran Pennathur, U. at Buffalo, SUNY; Theresa K. Guarrera, U. of Rochester; Ann M. Bisantz, U. at Buffalo, SUNY; Rollin J. Fairbanks, U. of Rochester; Shawna J. Perry and Robert L. Wears, U. of Florida, Jacksonville, **Cognitive Artifacts in Transition: An Analysis of Information Content Changes Between Manual and Electronic Patient Tracking Systems**

Thursday
Sept. 25

3. Mark St. John, Pacific Science & Engineering Group, **Designing a Better Shared Whiteboard: Interruption Recovery, Message Prioritization, and Decluttering**
4. Emmanuel Letsu-Dake, Celestine A. Ntuen, Younho Seong, and Xiaochun (Steve) Jiang, North Carolina A&T State U., **Evaluation of an Adaptive Interface for Fault Management**
5. Jan Willem Streefkerk, TNO Human Factors; Caro Wiering, Leiden U.; Myra Van Esch-Bussemakers and Mark Neerinx, TNO Human Factors, **Effects of Presentation Modality on Team Awareness and Choice Accuracy in a Simulated Police Team Task**

GS6 – ERGONOMICS FOR CHILDREN: FORWARD DIRECTIONS

Discussion Panel

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Marquis A/B (9th Floor)

General Sessions; cosponsored by
Macroergonomics

Chair: ConneMara Bazley, JimConna, Inc.;

Cochair: Sarah Acton, SA Technologies, Inc.

Panelists: Valerie Rice, General Ergonomics; Rani Lueder, Humanics ErgoSystems, Inc.; Karen Jacobs, Boston U.; Hal Hendrick, Hendrick & Assoc.; Jake Pauls, Jake Pauls Consulting Services; Michael S. Wogalter, North Carolina State U.

HC3 – COMMUNICATION IN CLINICAL SETTINGS

Invited Symposium

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Jolson (9th Floor)

Health Care

Chair: Anne Miller, Vanderbilt U. Medical Ctr.

1. Anne Miller, Vanderbilt U. Medical Ctr., **Overview – Communication in Clinical Settings**
2. Steven Yule and Rhona Flin, U. of Aberdeen; J. M. Davies, U. of Calgary; Lorna McKee, U. of Aberdeen, **Health Care CEOs' Leadership Style and Patient Safety**
3. Yan Xiao, Danny Ho, and Vinay Vaidya, U. of Maryland; Paul Gorman, Oregon Health & Sciences U.; Brian Hazelhurst, Kaiser Permanente, **Three Angles on Rounds: Understanding Communication in a Pediatric Intensive Care Unit**
4. Tom Reader, Rhona Flin, Kathryn Mearns, and Brian Cuthbertson, U. of Aberdeen, **Communication and the Perceived Involvement of Team Members During the ICU Morning Round**

5. Anne Miller, Richard Miller, Sarah Hutchison, Matt Weinger, and Peter Buerhaus, Vanderbilt U. Medical Ctr., **Clinical Communication in a Trauma Intensive Care Unit (ICU): A Case Study**

IDI – INDIVIDUAL DIFFERENCES IN PERFORMANCE UNDER STRESS

Lecture

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Chelsea (7th Floor)

Individual Differences in Performance

Chair: William S. Helton, Michigan Technological U.;

Cochair: Jason Augustyn, U.S. Army Natick Soldier Research, Development, and Engineering Ctr.

1. William S. Helton and Richard Holmstrom, Michigan Technological U., **Relationships Between Caffeine Consumption, Cognitive Slips-Failures, Daily Stress, and Sleep**
2. Kahyun Kim, Kyunghui Oh, Dongsik Lee, and Changgeun Carlos Oh, Virginia Tech, **The Effect of Stereotype Threat on Math Performance of Students With Different Majors**
3. Roos Delahaj and Tony Gaillard, TNO Defence, Security, and Safety, **Individual Differences in Performance Under Acute Stress**
4. Cheryl Bolstad, Haydee Cuevas, and Anthony Costello, SA Technologies, Inc.; Bettina Babbitt, Usability MDx, **Predicting Cognitive Readiness of Deploying Military Medical Teams**

IE2 – ERGONOMIC INTERVENTIONS

Lecture

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Gramercy (7th Floor)

Industrial Ergonomics

Chair: Steve Lavender, Ohio State U.; *Cochair:* Susan Kotowski, U. of Cincinnati

1. Rosa Padilla, Jennifer Baltich, and Fadi A. Fathallah, U. of California, Davis, **Development of an Ergonomic Waste Container for Hospitals**
2. Peter W. Johnson and Han (Robin) Chen, U. of Washington; Sylvain Sauvage, Logitech, **Evaluation of the Logitech Wave Keyboard**
3. David Rempel, Demetra Star, Alan Barr, and Billy Gibbons, U. of California, San Francisco, **Interventions for Overhead Drilling in Construction**
4. Bochen Jia, Linsey M. Barker, Sunwook Kim, Michael Agnew, and Maury A. Nussbaum, Virginia Tech, **Ergonomic Design in Hospital Beds: Comparison of Brake Pedal Design and Steering-Assistance Features**

5. Michael Jorgensen and Khurram Khan, Wichita State U., **Use of Tungsten to Reduce Hand-Arm Vibration Exposure in Aircraft Manufacturing**
6. Monica Lynn Haumann Jones, Rebecca L. Kirschweg, Thomas J. Armstrong, and Matthew P. Reed, U. of Michigan, **Force-Exertion Postures With External Bracing in Industrial Tasks: Data From an Automotive Assembly Plant**

POS3 – POSTERS

Poster Session

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Imperial (5th Floor)

Posters

Posters are 90 minutes only; presenters are required to be present throughout the session.

Training

1. Marc Winterbottom, U.S. Air Force Research Lab; Robert Patterson, Washington State U.; James Gaska and Ryan Amann, Link Simulation and Training; Justin Prost, Lumir Research, **Effect of Field of View on Roll Control**
2. Kelsi Marie Lenz, Alex Chaparro, and Barbara S. Chaparro, Wichita State U., **The Effect of Input Device on First-Person Shooter Target Acquisition**
3. Dustin Chertoff, U. of Central Florida; Christian Jerome, U.S. Army Research Inst. for the Behavioral and Social Sciences; Glenn Martin, U. of Central Florida; Bruce Knerr, U.S. Army Research Inst. for the Behavioral and Social Sciences, **GamePAB: A Game-Based Performance Assessment Battery Application**
4. Ewart Jan De Visser, Carl Smith, and Daniel Brooks, George Mason U., **Using the Wii to Improve Control of Small Unmanned Aerial Vehicles**

Eye Tracking

5. Eliana Medina, Elisabeth Cuddihy, Eli Goldberg, and Judith A. Ramey, U. of Washington, **Uses of Eye-Tracking Technology in Design**
6. Moshe Feldman, Heather C. Lum, Valerie Kathryn Sims, Kimberly A. Smith-Jentsch, and Nicholas Lagattuta, U. of Central Florida, **Do You See What I See? Eye Tracking and Shared Mental Models**
7. Yingzi Lin, Northeastern U., **Extending Eye Tracking for Wide Field-of-View Virtual Environment by Integrating Head Pose Tracking**
8. Joshua A. Gomer, Alexander Walker, Florian Gilles, and Andrew T. Duchowski, Clemson U., **Eye Tracking in a Dual-Task Design: Investigating Eye Movements, Mental Workload, and Performance**

9. Justin Owens, Saurav Shrestha, and Barbara S. Chaparro, Wichita State U., **Eye-Tracking Patterns of Web Portal Browsing**
10. Saurav Shrestha, Justin Owens, and Barbara S. Chaparro, Wichita State U., **Eye Movements on a Single-Column and Double-Column Text Web Page**

Sensation and Perception

11. Lynda J. Kramer, NASA; Steven P. Williams, NASA Langley Research Ctr., **Testing the Efficacy of Synthetic Vision During Nonnormal Operations as an Enabling Technology for Equivalent Visual Operations**
12. Douglas J. Gillan, North Carolina State U., **Visual Representation of Arithmetic Properties**
13. Linda Upham Ellis, Valerie Kathryn Sims, Matthew Glenn Chin, Jeremy D. Ellis, Lisa J. Upham, and Sheana Reiss Jannone, U. of Central Florida, **Perception and Displays for Teleoperated Robots**
14. Nick Perham, UWIC; Simon Banbury, CAE Professional Services, **You Cannot Ignore It: Attention to “Irrelevant” Sound During a Pre-Exposure Period Does Not Reduce Its Disruption of Serial Recall**
15. Enid Nicole Headen Montague, Virginia Tech, **Sound Exposure Levels of Occupational Musicians**

Virtual Environments

16. Ines Ann Heber, Sarah Siebertz, Marc Wolter, Torsten Kuhlen, and Bruno Fimm, U. Hospital RWTH Aachen, **Attentional Asymmetries in Virtual Space**
17. Jason Moss, Jenna Scisco, and Eric Muth, Clemson U., **Simulator Sickness During Head Mounted Display (HMD) of Real World Video Captured Scenes**
18. Sylvain Pronovost and Robert West, Carleton U., **Bridging Cognitive Modeling and Model-Based Evaluation: Extending GOMS to Model Virtual Sociotechnical Systems and Strategic Activities**
19. Harry L. Litaker, Shelby Glynn Thompson, and Ronald D. Archer, Lockheed Martin, **An Evaluation of the Long-Duration Use of a Head-Mounted Display**

University Lab Posters

- Visual Performance Lab, Texas Tech U.
- Distracted Driver Lab, Texas Tech U.
- Dr. Keith Jones’s Lab, Texas Tech U.
- Ohio State University Institute for Ergonomics
- Team Performance Lab, U. of Central Florida
- Human Factors and Aging Lab, Georgia Tech

- Problem Solving and Educational Technology Lab, Georgia Tech
- Cognitive Engineering Research Group, U. of Queensland
- Human Factors Division, U. of Michigan Transportation Institute

PP5 – PERCEPTUAL TASK CHARACTERISTICS AND DRIVER PERFORMANCE

Lecture

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
O'Neill (4th Floor)

Perception & Performance

Chair: Erin Harley, Exponent; *Cochair:* Jeff Muttart, Accident Dynamics Research Ctr.

1. Peter Matthias Hofmann, Gerhard Rinkenauer, and Dietmar Gude, U. of Dortmund, **Head-Up Displays Support Response Preparation in a Lane-Change Task**
2. James Szalma, Peter A. Hancock, and Jennifer Thropp, U. of Central Florida, **Combining Spatial and Temporal Task Demands: Effects on Performance, Workload, and Stress**
3. Christopher J. Edwards, Virginia Tech Transportation Inst.; Jeff K. Caird, U. of Calgary; Susan L. Chisholm, Calgary Health Region, **The Effect of Driving Experience on Change Blindness at Intersections: Decision Accuracy and Eye Movement Results**
4. Marco Camilli, Michela Terenzi, and Francesco Di Nocera, U. of Rome "La Sapienza," **Effects of Temporal and Spatial Demands on the Distribution of Eye Fixations**
5. Lauren E. Reinerman, Joel S. Warm, Gerald Matthews, and Lisa K. Langheim, U. of Cincinnati, **Cerebral Blood Flow Velocity and Subjective State as Indices of Resource Utilization During Sustained Driving**

ST6 – ETHICAL AND PRIVACY ISSUES WITH ON-ROAD DRIVING DATA

Discussion Panel

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Marquis C (9th Floor)

Surface Transportation

Chair: Susan Theresa Chrysler, Texas Transportation Inst.; James Sayer, U. of Michigan Transportation Research Inst.

Panelists: John D Lee, U. of Iowa; Suzanne Lee, Virginia Tech Transportation Inst.

TEI – SUCCESSFUL APPLICATION OF USABILITY TESTING IN SYSTEMS DESIGN

Discussion Panel

Thursday, September 25, 2008, 10:30 a.m. to 12:00 noon
Westside Salon I (5th Floor)

Test & Evaluation

Chair: James Pharmed, U.S. Naval Air Warfare Ctr.

Panelists: Lawrence J. Hettinger, Northrop Grumman Information Technology; Dennis White, U.S. Naval Surface Warfare Ctr.; Stephen Boyne, Defence R&D Canada; Patricia M. Jones, NASA Ames Research Ctr.; Christopher R. Hale, Science Applications International Corp.; Vince Quintana, General Dynamics; Paul Sherman, Sage Software; Peter N. Squire, U.S. Naval Surface Warfare Ctr.

**Thursday, September 25
12:00 noon to 1:30 p.m.**

Technical Group Business Meeting

Individual Differences in Performance

12:00 noon to 1:30 p.m.

Havana Central – Times Square, 151 W 46th Street

**Thursday, September 25
1:30 to 3:00 p.m.**

AS6 – SUPERVISORY CONTROL OF MULTIPLE UNMANNED VEHICLES: INTERNATIONAL PERSPECTIVES ON METHODOLOGIES AND ENABLING INTERFACE TECHNOLOGIES

Discussion Panel

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

Marquis A/B (9th Floor)

Aerospace Systems

Chair: Mark H. Draper, U.S. Air Force Research Lab;
Cochair: Christopher Allan Miller, Smart Information Flow Technologies

Panelists: Robert Taylor, DSTL; Leo van Breda, TNO Human Factors; Axel Schulte, Bundeswehr U. Munich; Ming Hou, Defence R&D Canada; Peter Svenmarck, FOI; R. Jay Shively, U.S. Army Aeroflightdynamics Directorate

C2 – THE MANY FACETS OF COMMUNICATIONS

Lecture

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

Odets (4th Floor)

Communication

Chair: Rebecca Grier, Aptima, Inc.; *Cochair:* Aaron Bangor, AT&T Labs, Inc.

1. Joshua D. Hoffman, John D. Lee, and Bobbie D. Seppelt, U. of Iowa, **Identifying Display Concepts to Support Distributed Collaboration of Unmanned Vehicle Teams**
2. Susan Stevens, Courtney Dornburg, Stacey Hendrickson, and George Davidson, Sandia National Labs, **Individual and Group Electronic Brainstorming in an Industrial Setting**
3. Jason Laberge, Honeywell Advanced Technology; Peter T. Bullemer, Human Centered Solutions, LLP; Stephen D. Whitlow, Honeywell Advanced Technology, **Communication and Coordination Failures in the Process Industries**
4. Maranda McBride, Embry-Riddle Aeronautical U.; Phuong Tran and Tomasz Letowski, U.S. Army Research Lab, **Head Mapping: Search for an Optimum Bone Microphone Placement**
5. Jennifer M. Allen, Leslie A. McFarlin, and Thomas Green, User Centric, Inc., **An In-Depth Look Into the Text Entry User Experience on the iPhone**

CEI0 – COGNITIVE ASPECTS OF COGNITIVE ENGINEERING AND DECISION MAKING

Lecture

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

Astor Ballroom (7th Floor)

Cognitive Engineering & Decision Making

Chair: John Burns, U.S. Naval Air Warfare Ctr. Training Systems Division; *Cochair:* Priya Pennathur, U. at Buffalo, SUNY

1. Laura G. Militello, U. of Dayton Research Inst.; Robert R. Hoffman, Inst. for Human and Machine Cognition, **The Forgotten History of Cognitive Task Analysis**
2. Tao Zhang, David B. Kaber, and Simon Hsiang, North Carolina State U., **Characterization of Mental Models in a Virtual Reality-Based Multitasking Scenario**
3. Raj Ratwani, Alyssa Andrews, and Jenny Souk, George Mason U.; J. Gregory Trafton, U.S. Naval Research Lab, **The Effect of Interruption Modality on Primary Task Resumption**

4. David M. Cades and Nicole Werner, George Mason U.; J. Gregory Trafton, U.S. Naval Research Lab; Deborah A. Boehm-Davis and Christopher A. Monk, George Mason U., **Dealing With Interruptions Can Be Complex, But Does Interruption Complexity Matter: A Mental Resources Approach to Quantifying Disruptions**
5. Christopher A. Monk, and David G. Kidd, George Mason U., **The Effects of Brief Interruptions on Task Resumption**

CEI1 – SUPPORTING COMPLEX DECISION MAKING

Lecture

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

Marquis C (9th Floor)

Cognitive Engineering & Decision Making

Chair: Jennifer Ockerman, Johns Hopkins U. Applied Physics Lab; *Cochair:* Sandra K. Garrett, Clemson U.

1. Sarah Miller, Alex Kirlik, Alex Kosorukoff, and Jennifer E. Tsai, U. of Illinois at Urbana-Champaign, **Supporting Joint Human-Computer Judgment Under Uncertainty**
2. Jennifer E. Tsai, Alex Kirlik, Alex Kosorukoff, and Sarah Miller, U. of Illinois at Urbana-Champaign, **Rule- and Instance-Based Strategies in Expert Judgment**
3. Nathan Perry and Mark Wiggins, U. of Western Sydney, **Cue Generation Among Firefighters: Competent vs. Expert Differences**
4. Martin Voshell, Ohio State U.; Stoney Trent, U.S. Military Academy; Brian Prue and Lisa C. Fern, Ohio State U., **Cultivating Resilience in Urban Firefighting: Supporting Skill Acquisition Through Scenario Design**
5. Caroline Clarke Hayes and Farnaz Akhavi, U. of Minnesota, **Design Decision Making: Adapting Mathematical Paradigms to Fit Designers' Actual Needs**

E2 – THE NEED FOR INTERNATIONAL HUMAN FACTORS ENGINEERING EDUCATION PROGRAMS

Invited Symposium

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

Soho (7th Floor)

Education

Chair: Stephanie Guerlain, U. of Virginia;

Cochair: Denise Bauer, Pennsylvania State U.

1. Stephanie Guerlain, U. of Virginia, **The Need for International Human Factors Engineering Education Programs: Symposium Overview**

Thursday
Sept. 25

2. Stephanie Guerlain and Amy Peckinpaugh, U. of Virginia, **The Need for International Human Factors Engineering Education Programs: Barriers, Benefits and an Evaluation Methodology**
3. Stephanie Guerlain, U. of Virginia; David D. Woods, Ohio State U.; Jose Orlando Gomes, U. Federale do Rio de Janeiro, **U.S.–Brazil Cognitive Systems Engineering Exchange Program**
4. Brian Kleiner, Virginia Tech, **U.S.–France Exchange Programs for Undergraduate and Graduate Engineers: 10 Years of Lessons Learned**
5. William Ferrell and Anand Gramopadhye, Clemson U., **U.S.–Mexico Industrial Engineering Education Partnership: Clemson University and University of Sonora**

HC4 – PATIENT SAFETY: PERSPECTIVES FROM A BROAD SPECTRUM

Invited Symposium

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

Jolson (9th Floor)

Health Care

Chair: Sonja Koneczny, U. Hospital Tuebingen

1. M. Susan Hallbeck, U. of Nebraska-Lincoln; Sonja Koneczny, U. Hospital Tuebingen, **Symposium on Patient Safety**
2. Alison G. Vredenburgh and Ilene B. Zackowitz, Vredenburgh & Assoc., Inc., **Drug Labeling and Its Impact on Patient Safety**
3. Sue Hignett, Loughborough U.; Roger Coleman, Royal College of Art; Emma Crumpton, Loughborough U., **Transport to Hospital: Design for Patient and Staff Safety**
4. Calvin K. L. Or, Rupa S. Valdez, Gail R. Casper, and Pascale Carayon, U. of Wisconsin-Madison; Laura J. Burke, Aurora Health Care; Patricia Flatley Brennan and Ben-Tzion Karsh, U. of Wisconsin-Madison, **Human Factors and Ergonomic**



Concerns and Future Considerations for Consumer Health Information Technology in Home Nursing Care

5. Sonja Koneczny, U. Hospital Tuebingen, **Potential Hazards in the Operating Room**

HP3 – ISSUES AND CHALLENGES IN HUMAN PERFORMANCE MODELING IN AVIATION: GOALS, ADVANCES, AND GAPS

Discussion Panel

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

Westside Salon I (5th Floor)

Human Performance Modeling

Chair: Michael D. Byrne, Rice U.; *Cochair:* Alex Kirlik, U. of Illinois, Urbana-Champaign

Panelists: Terry Allard, Federal Aviation Admin.; David C. Foyle, NASA Ames Research Ctr.; Becky L. Hooey, San Jose State U. Research Foundation at NASA Ames Research Ctr.; Kevin A. Gluck, U.S. Air Force Research Lab; Christopher D. Wickens, Alion Science and Technology; Amy R. Pritchett, NASA

IE3 – LOW BACK PAIN AND LIFTING

Lecture

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

Gramercy (7th Floor)

Industrial Ergonomics

Chair: Michael Jorgensen, Wichita State U.;

Cochair: Carolyn Sommerich, Ohio State U.

1. Susan Kotowski and Kermit G. Davis, U. of Cincinnati; William S. Marras, Ohio State U., **Box Weight or Lift Rate: Which Factor Matters More During Lifting?**
2. Kristof Kipp and Michael Pavol, Oregon State U., **Effects of the Seat Armrest and Assistive Devices on Trunk Kinematics During Dependent Transfers on an Aircraft**
3. Kermit G. Davis, U. of Cincinnati; Yangfeng Hou, U. of Louisville; William S. Marras, Ohio State U.; Waldemar Karwowski, U. of Central Florida; Jacek M. Zurada, U. of Louisville; Susan E. Kotowski, U. of Cincinnati, **Utilization of a Hybrid Neuro-Fuzzy Engine to Predict Trunk Muscle Activity for Sagittal Lifting**
4. Sue Ann Ferguson, Deborah L. Burr, W. Gary Allread, Sato Ashida, and Kaori Fujishiro, Ohio State U.; Catherine Heaney, Stanford U.; William S. Marras, Ohio State U., **Prevalence of Low Back Disorder in Furniture Distribution Centers**

PP6 – FROM ICON CHARACTERISTICS IN MENU DESIGN TO REQUIREMENTS FOR LAPAROSCOPIC POINTING DEVICES: PERCEPTION PLAYS A KEY ROLE IN THE DESIGN OF COMMERCIAL PRODUCTS

Lecture

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

O'Neill (4th Floor)

Perception & Performance

Chair: Sehchang Hah, Federal Aviation Admin.;

Cochair: Hisham Besheer, Dell Computer

1. Sine Jane Petra McDougall, Bournemouth U.; Irene Reppa, Swansea U., **Why Do I Like It? The Relationships Between Icon Characteristics, User Performance, and Aesthetic Appeal**
2. Dianne Kathryn Palladino and Bruce N. Walker, Georgia Tech, **Navigation Efficiency of Two-Dimensional Auditory Menus Using Spearcon Enhancements**
3. Lin Ye and Robin D. Thomas, U. of Miami; Douglas L. Gardner, LexisNexis, **The Perception of Multiple Affordances: A Multidimensional Scaling Approach**
4. Felix Portnoy and Paul Milgram, U. of Toronto, **The Effect of Low-Pass Filtering on Target Detection in Simulated Ultrasound Images**
5. Anthony Soung Yee and Paul Milgram, U. of Toronto, **A Multivariate Method for Analyzing Time and Space Components of Highly Disparate Movement Trajectories**

SD5 – SYSTEMS ENGINEERING – THE CUTTING EDGE OF PRACTICAL HUMAN FACTORS

Lecture

Thursday, September 25, 2008, 1:30 to 3:00 p.m.

Ziegfeld (4th Floor)

System Development

Chair: James Pharmer, NAVAIR Orlando;

Cochair: Kristina Lauche, Delft U. of Technology

1. Keryl Ann Cosenzo and Regina Pomranky, U.S. Army Research Lab; Erin Capstick, DCS Corp., **Impact of Advanced Display Features on Situation Awareness, Workload, and Performance of Complex Military Tasks**
2. Pamela Ann Savage-Knepshield, U.S. Army Research Lab-HRED, **Incorporating Reverse Engineering and Competitive Analysis Techniques Into the System Design Process: A JTRS HMS Case Study**

3. Janet E. Miller and Cheryl Batchelor, U.S. Air Force Research Lab; LeeAnn Perkins, Advanced Virtual Engine Test Cell (AVETEC), Inc., **Eliciting Expectations to Develop Trust in Systems**
4. Christopher R. Hale, Science Applications International Corp., **Visualization Design Using an Integrated Joint Cognitive System Development Methodology**
5. Carin Rencrantz and Jan Andersson, FOI, Swedish Defence Research Agency; Jens Alfredson, Saab AB; Jenny Elisabeth Lindoff, FOI, Swedish Defence Research Agency, **A Comparison of Two Alternatives for Presenting a Situational Picture**

**Thursday, September 25
3:30 to 5:00 p.m.**

AC3 – APPLICATIONS OF AUGMENTED COGNITION

Lecture

Thursday, September 25, 2008, 3:30 to 5:00 p.m.

Odets (4th Floor)

Augmented Cognition

Chair: Roy Stripling, Office of U.S. Naval Research;

Cochair: Christian Jerome, U.S. Army Research Inst. for the Behavioral & Social Sciences

1. Kelly S. Hale, Sven Fuchs, and Par Axelsson, Design Interactive, Inc.; Chris Berka, Advanced Brain Monitoring, Inc.; Andrew Cowell, Pacific Northwest National Lab, **Using Physiological Measures to Discriminate Signal Detection Outcome During Imagery Analysis**
2. Jennifer J. Vogel-Walcutt, Clint A. Bowers, Sae Schatz, Juliana Gebrim, Lee William Sciarini, and Denise Nicholson, U. of Central Florida, **Augmented Cognition and Training in the Laboratory: DVTE System Validation**
3. Susan Eitelman Dean, Laura Milham, Kelly Hale, and Sven Fuchs, Design Interactive, Inc., **Challenges of Real-Time Training and Performance Support Mitigations Using AugCog Technology**
4. Chris Berka, Robin Johnson, Melissa Nicole Whitmoyer, Adrienne Behneman, and Djordje Popovic, Advanced Brain Monitoring, Inc.; **Biomarkers for Effects of Fatigue and Stress on Performance: EEG, P300, and Heart-Rate Variability**

Thursday
Sept. 25

- Alexander James Casson and Esther Rodriguez-Villegas, Imperial College London, **Considerations on Analogue-to-Digital Converter Architectures for EEG Acquisition in Augmented Cognition Applications**

AS7 – COCKPIT AND DISPLAY DESIGN

Lecture

Thursday, September 25, 2008, 3:30 to 5:00 p.m.

Marquis A/B (9th Floor)

Aerospace Systems

Chair: Roni Prinzo, Federal Aviation Admin.;

Cochair: Jane Barrow, George Mason U.

- Dennis B. Beringer, Federal Aviation Admin./CAMI, **An Updating of Data Regarding the Forces Pilots Can Apply in the Cockpit, Part II: Yoke, Rudder, Stick, and Seatbelt-Release Forces**
- Fenne Roefs, Joris Koeners, and Erik Theunissen, Delft U. of Technology, **Input Application for Taxi Instructions: Design Strategy**
- Joseph C. Jenkins, U.S. Air Force; Jennie J. Gallimore, Wright State U., **A Flight Test Evaluation of the Arc Segment Attitude Reference for Use as a Primary Flight Reference in Helmet-Mounted Displays**
- William Knecht, Maneuver Space Technologies, **Testing a Nonveridical Aircraft Collision Avoidance System: Experiment 2**
- Hwasoo Lee and Paul Milgram, U. of Toronto, **An Integrated Air Traffic Control Display Concept for Conveying Temporal and Probabilistic Conflict Information**

CE12 – EXTENSIONS AND APPLICATIONS OF COGNITIVE WORK ANALYSIS II

Lecture

Thursday, September 25, 2008, 3:30 to 5:00 p.m.

Astor Ballroom (7th Floor)

Cognitive Engineering & Decision Making

Chair: Chang S. Nam, U. of Arkansas; *Cochair:* Shawn Weil, Aptima, Inc.

- Bardia Bina, Huei-Yen Winnie Chen, and Paul Milgram, U. of Toronto, **A Model of Expert Decision Making in Post-Flop Betting in Poker**
- Daniel Paul Jenkins, Neville A. Stanton, Paul M. Salmon, and Guy Harrison Walker, Brunel U., **Using Work Domain Analysis to Evaluate the Impact of Digitization on Command and Control**

- Stacy Lovell Pfautz, National Security Innovations; Jonathan Pfautz, Charles River Analytics, Inc., **Understanding Social and Organizational Aspects of the Work Domain Using Techniques and Technologies from Intelligence Analysis**
- Nathan Ka Ching Lau, U. of Toronto; Gyrd Skraaning, OECD Halden Reactor Project; Greg A. Jamieson, U. of Toronto; Catherine M. Burns, U. of Waterloo, **Enhancing Operator Task Performance During Monitoring for Unanticipated Events Through Ecological Interface Design**
- Rosemary Hwee Mei Lim, Janet Anderson, and Peter Buckle, U. of Surrey, **Analyzing Care Home Medication Errors: A Comparison of the London Protocol and Work Domain Analysis**

DEM2 – NEW FRONTIERS: INTELLIGENCE, SPACE, AND ROBOTS

Demonstrations

Thursday, September 25, 2008, 3:30 to 5:00 p.m.

Majestic/Music Box/Winter Garden/Palace (6th Floor)

Demonstrations

Chair: Harold S. Blackman, Idaho National Lab;

Cochair: Ronald L. Boring, Sandia National Labs

- Jarvis J. Arthur, Lawrence J. Prinzel, Steven P. Williams, Kevin L. Shelton, Lynda J. Kramer, and Randall E. Bailey, NASA Langley Research Ctr.; Robert M. Norton, Boeing Phantom Works, **Synthetic Vision Displays for Planetary and Lunar Lander Vehicles (Majestic)**
- R. Darin Ellis, Thomas G. Edwards, Lavie Golenberg, and Abhilash Pandya, Wayne State U., **Human Factors in Space Exploration: Fitts' Law Activity for Middle-School Girls (Music Box)**
- Caroline Clarke Hayes, U. of Minnesota, **An Intelligence Application Providing Multiple Coordinated Data Views (Winter Garden)**
- Don Kemper, Larry Davis, Cali Fidopiastis, and Denise Nicholson, U. of Central Florida, **A First Step Toward a Generalized Physiological Measurement Framework (Palace)**



GS7 – HUMAN FACTORS AND THE NUCLEAR RENAISSANCE

Discussion Panel

Thursday, September 25, 2008, 3:30 to 5:00 p.m.

Westside Salon I (5th Floor)

General Sessions

Chair: Ronald Laurids Boring, Idaho National Lab;

Cochair: Jeff Sorge, SA Technologies

Panelists: John M. O'Hara, Brookhaven National Lab; Jacques Hugo, Pebble Bed Modular Reactor; Greg A. Jamieson, U. of Toronto; Johanna Oxstrand, Vattenfall Ringhals; Ruiqi Ma, Westinghouse Electric Co.; Michael Hildebrandt, OECD Halden Reactor Project

HC5 – IMPROVING COMMUNICATION AND TEAMWORK IN HEALTH CARE SETTINGS

Lecture

Thursday, September 25, 2008, 3:30 to 5:00 p.m.

Jolson (9th Floor)

Health Care

Chair: Frank Drews, U. of Utah

1. Sarah Elizabeth Henrickson, Rishi Wadhwa, Andrew ElBardissi, and Thoralf Sundt, Mayo Clinic; Douglas A. Wiegmann, U. of Wisconsin, **Implementation of a Preoperative Briefing Protocol**
2. Stuart Duncan Marshall, Julia Harrison, and Brendan Flanagan, Monash U., **The Evaluation of Structured Communication Tools in Health Care**
3. Anne Miller, Laurie Novak, Matt Weinger, and Peter Buerhaus, Vanderbilt U. Medical Ctr., **Processes and Support Tools for Interhospital Neonatal Patient Transfer: A Preliminary Study**
4. Shilo Anders, Emily S. Patterson, David D. Woods, and Sharon Schweikhart, Ohio State U., **Shifts in Functions of a New Technology Over Time: An Analysis of Logged Electronic Intensive Care Unit Interventions**
5. Sarah Elizabeth Henrickson, Mayo Clinic; Douglas A. Wiegmann, U. of Wisconsin-Madison; Jacqueline Arnold, Mayo Clinic, **Assessing the Inter- and Intrarater Reliability of a Teamwork Rating Scale for Health Care**

I2 – QUANTITATIVE ANALYTICAL METHODS

Lecture

Thursday, September 25, 2008, 3:30 to 5:00 p.m.

Chelsea (7th Floor)

Internet; cosponsored by Computer Systems

Chair: David B. Kaber, North Carolina State U.,

Cochair: Lashanda Lee, North Carolina State U.

1. Christopher N. Chapman, Microsoft Corp.; Edwin Love, U. of Washington; Russell P. Milham and Paul ElRif, Microsoft Corp.; James L. Alford, Volt Information Sciences, **Quantitative Evaluation of Personas as Information**
2. Cheng-Jhe Lin, Wanyan Yu, and Changxu Wu, U. at Buffalo, SUNY, **Improving Link Analysis Method in User Interface Design Using a New Computational Optimization Algorithm**
3. Vettrivel Gnaneswaran, Prashant S. Pujari, and Ram R. Bishu, U. of Nebraska-Lincoln, **Evaluating Web Site Quality Using E-Service Quality Dimensions**
4. Sav Shrestha, Sue Abdinnour-Helm, and Barbara S. Chaparro, Wichita State U., **Using the Analytic Hierarchical Process to Create a Single Usability Score for Web Site Interfaces**
5. Lashanda Lee and David B. Kaber, North Carolina State U., **Assessing Interactive System Effectiveness With Usability Heuristics and Markov Models of User Behavior**

IE4 – ERGONOMICS IN THE BIOSCIENCES

Discussion Panel

Thursday, September 25, 2008, 3:30 to 5:00 p.m.

Gramercy (7th Floor)

Industrial Ergonomics

Chair: David Rempel, U. of California, Berkeley;

Cochair: Victor Paquet, U. at Buffalo, SUNY

Panelists: Cindy Burt, U. of California, Los Angeles; Ira Janowitz, Lawrence Berkeley National Lab; Maria Junge, Bureau Veritas North America; Martin Pollard, Joint Genome Inst.

Thursday
Sept. 25

PP7 - THE ROLE OF PERCEPTION IN THE DESIGN OF MILITARY SYSTEMS

Lecture

Thursday, September 25, 2008, 3:30 to 5:00 p.m.
O'Neill (4th Floor)

Perception & Performance

Chair: Jennifer McKneely, Johns Hopkins U. Applied Physics Lab

1. Lars Eriksson, Swedish Defence Research Agency, FOI; Aseel Berglund and Bengt Willén, Saab Aero-systems; Jonathan Svensson, Swedish Defence Research Agency, FOI; Michael Petterstedt, Saab Aerosystems; Otto Carlander, Swedish Defence Research Agency, FOI, **On Visual, Vibrotactile, and 3-D Audio Directional Cues for Dismounted Soldier Waypoint Navigation**
2. Per-Anders Oskarsson, Lars Eriksson, Lif Patrik, Björn Lindahl, Johan Hedström, Swedish Defence Research Agency, FOI, **Multimodal Threat Cueing in Simulated Combat Vehicle**
3. Matthew Brandon Thompson and Penelope M. Sanderson, U. of Queensland, **Multisensory Integration With a Head-Mounted Display and Auditory Display**
4. James L. Merlo, U.S. Military Academy; Richard D. Gilson and Peter A. Hancock, U. of Central Florida, **Crossmodal Congruency Benefits for Tactile and Visual Signaling**
5. Sven Fuchs, Matthew Johnston, Kelly S. Hale, and Pär Axelsson, Design Interactive, Inc., **Results From Pilot Testing a System for Tactile Reception of Advanced Patterns (STRAP)**

SD6 – APPLICATIONS OF HUMAN FACTORS TO THE DESIGN OF SYSTEMS

Lecture

Thursday, September 25, 2008, 3:30 to 5:00 p.m.
Ziegfeld (4th Floor)

System Development

Chair: Peter Squire, U.S. Naval Surface Warfare Ctr.;

Cochair: John Burns, U.S. Naval Air Warfare Ctr.

1. Mary Theofanos, Brian Stanton, Charles Sheppard, Ross Micheals, and Nien-Fan Zhang, NIST, **Does the Angle of a Fingerprint Scanner Affect User Performance?**
2. Vicki Ahlstrom, Federal Aviation Admin., **The Usability Paradox of the Human Factors Standard**
3. Barry William Tillman and Lynn K. Pickett, Lockheed Martin at NASA, **Human Factors Engineering Standards at NASA**

4. Shanqing Yin, Angela Li Sin Tan, and Martin Helander, Nanyang Technological U., **Proactive Process Control Monitoring Using Trends**
5. Raja Parasuraman, George Mason U., **Adaptive Interfaces for Human Supervision of Unmanned Vehicles**

ST7 – CELL PHONES, INTERSECTIONS, SNOWPLOWS, AND NEW TECHNIQUES

Lecture

Thursday, September 25, 2008, 3:30 to 5:00 p.m.
Marquis C (9th Floor)

Surface Transportation

Chair: Srinivas Raghavan, Qualcomm; *Cochair:* Anthony J. Masalonis, MITRE Corp.

1. Jason Andrew Telner, David L. Wiesenhal, and Ellen Bialystok, York U.; Martin York, York Computer Technologies, **Is There a Bilingual Advantage When Driving and Speaking Over a Cellular Telephone?**
2. Thomas Smahel, Alison Smiley, and Don Donderi, Human Factors North, **The Effects of Cellular Phone Use on Novice and Experienced Driver Performance: An On-Road Study**
3. Ben Dow, Tim Brown, and Dawn Marshall, U. of Iowa, **Response to Intersection Conflict Situations Across Driver Age and Experience**
4. David L. Strayer, Joel M. Cooper, and Frank A. Drews, U. of Utah, **Part-Task and Variable-Priority Simulator-Based Training for Snowplow Operators**
5. Joel Michael Cooper and David L. Strayer, U. of Utah, **New Insights Into Driving Using Recurrence Quantification Analysis**

Thursday, September 25
5:00 to 6:00 p.m.

Technical Group Business Meeting

System Development

5:00 to 6:00 p.m.

Ziegfeld (4th Floor)

Thursday
Sept. 25

Friday, September 26

8:30 to 10:00 a.m.

AS8 – HUMAN ERROR IN AVIATION

Lecture

Friday, September 26, 2008, 8:30 to 10:00 a.m.

O'Neill (4th Floor)

Aerospace Systems

Chair: Dennis Beringer, Federal Aviation Admin.;

Cochair: Anthony J. Masalonis, MITRE Corp.

1. Takahiro Suzuki, Terry L. von Thaden, and William D. Geibel, U. of Illinois at Urbana-Champaign, **Coordination and Safety Behaviors in Commercial Aircraft Maintenance**
 2. William D. Geibel, Terry L. von Thaden, and Takahiro Suzuki, U. of Illinois at Urbana-Champaign, **Issues That Precipitate Errors in Airline Maintenance**
 3. Bruce G. Coury, Joseph M. Kolly, Erin Gormley, and Aaron Dietz, National Transportation Safety Board, **The Central Role of Principal Issues in Aviation Accident Investigation**
 4. Ferne Joi Friedman-Berg and Kenneth Allendoerfer, Federal Aviation Admin.; Shantanu Pai, Engility Corp., **Nuisance Alerts in Operational ATC Environments: Classification and Frequencies**
 5. Keryn Anne Pauley and David O'Hare, U. of Otago, **Implicit Attitudes and Aeronautical Decision Making**
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CE13 – ANALYSIS AND DESIGN OF SUCCESSFUL TEAMS

Lecture

Friday, September 26, 2008, 8:30 to 10:00 a.m.

Astor Ballroom (7th Floor)

Cognitive Engineering & Decision Making

Chair: Richard Stone, Iowa State U.; *Cochair:* Michael Linegang, Federal Aviation Admin.

1. Guy Harrison Walker, Neville A. Stanton, Paul Salmon, Daniel Jenkins, Shaj Monnan, and Simone Handy, Brunel U., **An Empirical Evaluation of Network-Centric Team Organization Versus Hierarchical Team Organization**
2. Ketut Sulistyawati and Yoon Ping Chui, Nanyang Technological U.; Christopher D. Wickens, Alion Science and Technology, **Multimethod Approach to Team Situation Awareness**

3. Laura D. Strater, Haydee M. Cuevas, and Erik S. Connors, SA Technologies, Inc.; Diane Ungvarsky, U.S. Army Research Lab; Mica R. Endsley, SA Technologies, Inc., **Situation Awareness and Collaborative Tool Usage in Ad Hoc Command-and-Control Teams**
 4. Bart van Bezooijen and Peter Essens, TNO Defence, Security, and Safety, **Self-Synchronization in Networked Teams: Initializing and Monitoring Inter-team Collaboration**
 5. Susan G. Hutchins and Tony Kendall, U.S. Naval Postgraduate School, **Patterns of Team Collaboration Employed to Solve Unique Problems**
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E3 – SELF-GLOBALIZATION: STRATEGIES IN HFES EDUCATION, RESEARCH, AND PRACTICE

Discussion Panel

Friday, September 26, 2008, 8:30 to 10:00 a.m.

Westside Salon I (5th Floor)

Education

Chair: Tonya L. Smith-Jackson, Virginia Tech;

Cochair: Rebecca Boren, Arizona State U.

Panelists: Sharnnia Artis, Aptima, Inc.; Maria Brunette, U. of Massachusetts, Lowell; Kayenda Johnson, Virginia Tech; Graciela Perez, GlaxoSmithKline; Marc Resnick, Florida International U.

HC6 – REHABILITATION ERGONOMICS: THE CLINICAL UTILITY OF ERGONOMIC TOOLS AND METHODOLOGY

Discussion Panel

Friday, September 26, 2008, 8:30 to 10:00 a.m.

Jolson (9th Floor)

Health Care; cosponsored by Industrial Ergonomics

Chair: Marco A. Campello, NYU Hospital

Panelists: Manny Halpern, NYUHJD; Katia Costa-Black, U. of Montreal Polytechnic School; Jangwhon Yoon and Anglea Lis, NYUHJD; Valerie Berg Rice, General Ergonomics; Ellen Rader Smith, Ergonomics & Rehabilitation Services

Friday
Sept. 26

ID2 – INDIVIDUAL DIFFERENCES POTPOURRI

Lecture

Friday, September 26, 2008, 8:30 to 10:00 a.m.

Odets (4th Floor)

Individual Differences in Performance

Chair: Luz-Eugenia Cox-Fuenzalida, U. of Oklahoma;

Cochair: Peter Khooshabeh, U. of California, Santa Barbara

1. Jenny Elisabeth Lindoff, Defence Analysis; Jan Andersson, Man-System-Interaction; Carin Rencrantz, Defence Analysis, **How Do Military Teams From Different Nations Perform in a Game-Based Simulated Environment?**
2. Achim Wagner, Christian Bartolein, Meike Jipp, and Essameddin Badreddin, U. of Heidelberg, **Assessment of the User's Dependability-Relevant Abilities for Enhanced Human-Technology Interaction**
3. Rachel R. Phillips and Poornima Madhavan, Old Dominion U., **The Relationship Between Computer Self-Efficacy and Human-Automation Integrated Performance**
4. Meike Jipp, U. of Heidelberg; Werner W. Wittmann, U. of Mannheim; Essameddin Badreddin, U. of Heidelberg, **Concurrent Validity of Individual Differences in Intelligence in Activity Differences of Handicapped Wheelchair Users**
5. Thomas Fincannon, A. William Evans, Florian Jentsch, and Joseph Roland Keebler, U. of Central Florida, **Interactive Effects of Backup Behavior and Spatial Abilities in the Prediction of Team-mate Workload Using Multiple Unmanned Vehicles**

IES – NEUROMUSCULAR RESPONSES

Lecture

Friday, September 26, 2008, 8:30 to 10:00 a.m.

Westside Salon 3 (5th Floor)

Industrial Ergonomics

Chair: Thurman Lockhart, Virginia Tech; *Cochair:* Riley Splittstoesser, Ohio State U.

1. Prakriti Parijat, Jian Liu, and Thurmon E. Lockhart, Virginia Tech, **Knee Joint Kinetics During Reactive Recovery: Effects of Localized Muscle Fatigue**

2. Amrisha Chourasia and Mary Elizabeth Sesto, U. of Wisconsin-Madison, **The Relationship Between Stiffness, Dynamic Strength, and Static Strength Following Eccentric or Concentric Activity**
3. Hongbo Zhang and Maury A. Nussbaum, Virginia Tech, **Frequencies in Center of Pressure Time Series Above 1 Hz During Quiet Upright Stance Reflect the Use of a Hip Strategy**
4. Gwanseob Shin, Clive R. D'Souza, and Yu-Hsun Liu, U. at Buffalo, SUNY, **Changes in the EMG of Low Back Muscles During Static Lumbar Flexion**
5. Kenneth Alan Philbrick and Michael Pavol, Oregon State U., **Spatial Consumption and Kinematics for an Assisted Transfer in an Aircraft Lavatory**

TE2 – HUMAN FACTORS AND ERGONOMICS ISSUES IN TEST & EVALUATION

Lecture

Friday, September 26, 2008, 8:30 to 10:00 a.m.

Westside Salon 2 (5th Floor)

Test & Evaluation

Chair: Rene dePontbriand, U.S. Army Research Lab

1. Anna Trujillo and Alan Pope, NASA Langley Research Ctr., **Using Simulation Speeds to Differentiate Controller Interface Concepts**
2. Linda Ann Roberts, Natasha Barrett, and Emily Marr, AT&T Labs, **How Much to Share With Users During Usability Testing**
3. Chantal Gauvin, IRSST, Montreal, Quebec, Canada; Patricia Dolez and Lotfi Harrabi, ÉTS – École de technologie supérieure; Jérôme Boutin, IRSST; Yvan Petit and Toan Vu-Khanh, ÉTS – École de technologie supérieure; Jaime Lara, IRSST, **Mechanical and Biomechanical Approaches for Measuring Protective Glove Adherence**
4. Xianjun Sam Zheng, Ishani Chakraborty, James J. W. Lin, and Robert Rauschenberger, Siemens Corporate Research, **Developing Quantitative Metrics to Predict Users' Perceptions of Interface Design**
5. Jason Augustyn, Tad Brunye, Kathy Rock, Lisa Hepfinger, and Caroline R. Mahoney, U.S. Army Natick Soldier Research, Development, and Engineering Ctr., **Evaluating Camouflage Effectiveness Using Virtual Reality**

Friday, September 26

10:30 a.m. to 12:00 noon

AS9 – SPACE HUMAN FACTORS

Lecture

Friday, September 26, 2008, 10:30 a.m. to 12:00 noon

O'Neill (4th Floor)

Aerospace Systems

Chair: Yvonne L. Simms, Boeing; *Cochair:* Lori K. McDonnell, NASA Ames Research Ctr.

1. Sarah Margerum, Lockheed Martin; Sudhakar Rajulu, NASA Johnson Space Ctr., **Human Factors Analysis of Crew Height and Weight Limitations in Space Vehicle Design**
 2. Sherry Thaxton, Lockheed Martin; Sudhakar Rajulu, NASA Johnson Space Ctr., **Population Analysis: Communicating About Anthropometry in Context**
 3. Olu A. Olofinboba, Robert E. De Mers, Michael Christian Dorneich, Christopher J. Hamblin, and John A. Wise, Honeywell Labs, **A Systematic Tool for Deriving Crew Console Layouts**
 4. Christopher J. Hamblin, Robert E. DeMers, and Olu A. Olofinboba, Honeywell Labs, **Design of a Cursor Control Device for the Orion Crew Exploration Vehicle**
 5. Aniko Sandor and Kritina L. Holden, Lockheed Martin, **Cursor Control Device Test Battery: Development and Application**
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E4 – TOPICS IN EDUCATION AND TRAINING FROM A STUDENT PERSPECTIVE

Lecture

Friday, September 26, 2008, 10:30 a.m. to 12:00 noon

Westside Salon I (5th Floor)

Education

Chair: Elliot Entin, Aptima, Inc.; *Cochair:* Camilla Knott, Aptima, Inc.

1. Sahika Vatan Korkmaz, Carolyn M. Sommerich, and Steven A. Lavender, Ohio State U., **A Pilot Test of Participatory Ergonomics and Technology Teams Among High School Teachers**
2. Paul Lawrence Derby, Keith S. Jones, and Elizabeth A. Schmidlin, Texas Tech U., **Replications in Human Factors Research: Implications for Education**
3. Elsa Eiriksdottir and Richard Catrambone, Georgia Tech, **How Do People Use Instructions in Procedural Tasks?**

4. Sandro Scielzo, Stephen M. Fiore, and Florian Jentsch, U. of Central Florida; Sherri A. Rehfeld, State Farm Insurance, **Criterion Shift and Anchoring in a Discrimination Training Paradigm: The Importance of Pretraining**
 5. Helena Hong and Ann M. Williamson, U. of New South Wales, **Speed and Accuracy: A Complex Interplay in Skill Development**
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HC7 – HUMAN PERFORMANCE DURING CRITICAL HEALTH CARE PROCEDURES

Lecture

Friday, September 26, 2008, 10:30 a.m. to 12:00 noon

Jolson (9th Floor)

Health Care

Chair: Caroline G. L. Cao, Tufts U.

1. Mi Zhou and Susan Tse, Tufts U.; Alexandre Deverianko and Daniel B. Jones, Beth Israel Deaconess Medical Ctr.; Steven D. Schwaitzberg, Cambridge Health Alliance; Caroline G. L. Cao, Tufts U., **The Effect of Haptic Feedback on Laparoscopic Suturing and Knot-Tying: A Learning-Curve Study**
2. Martina Inge Klein, Waldorf College; Joel S. Warm, Michael A. Riley, Gerald Matthews, Krishnanath Gaitonde, James F. Donovan, and Charles R. Doarn, U. of Cincinnati, **Performance, Stress, Workload, and Coping Profiles in 1st-Year Medical Students' Interaction with the Endoscopic/Laparoscopic and Robot-Assisted Surgical Techniques**
3. David R. Burnett and Naira H. Campbell-Kyureghyan, U. of Louisville, **Ergonomic and Biomechanical Evaluation of Work-Related Risk Factors in Sonography**
4. Patricia Rose DeLucia and Eston T. Betts, Texas Tech U., **Separated Versus Integrated Displays in Minimally Invasive Surgery**
5. Felix Portnoy, Paul Milgram, and Colin J. McCartney, U. of Toronto, **The Use of Low-Pass Image Filtering to Facilitate Detection of Peripheral Nerve for Ultrasound-Guided Nerve Block Procedures**

Friday
Sept. 26

HP4 – TOWARD INTEGRATED MODELS OF COGNITIVE, VISUAL, AND MOTOR PERFORMANCE

Lecture

Friday, September 26, 2008, 10:30 a.m. to 12:00 noon
Odets (4th Floor)

Human Performance Modeling

Chair: Esa M. Rantanen, Rochester Inst. of Technology;

Cochair: Dario Salvucci, Drexel U.

1. Ronald Laurids Boring, David I. Gertman, and Tuan Q. Tran, Idaho National Lab; Brian F. Gore, San Jose State U. Foundation, **Framework and Application for Modeling Control Room Crew Performance at Nuclear Power Plants**
2. Jungaa Michelle Moon and Wai-Tat Fu, U. of Illinois at Urbana-Champaign, **A Situated Cognitive Model of the Routine Evolution of Skills**
3. Divya Srinivasan and Bernard Martin, U. of Michigan, **Object and Target Size Interactions in Placement Tasks**
4. Clayton T. Stanley, Michael D. Byrne, and Katherine R. Ramos, Rice U., **Effects of Frequency Sorting: Toward Finding Optimal Organizations of Hierarchical File Structures**
5. Leonghwee Teo and Bonnie E. John, Carnegie Mellon U., **Toward a Tool for Predicting Goal-Directed Exploratory Behavior**

ME2 – MACROERGONOMICS IN PRACTICE

Lecture

Friday, September 26, 2008, 10:30 a.m. to 12:00 noon
Westside Salon 3 (5th Floor)

Macroergonomics

Chair: Nancy L. J. Larson, 3M; *Cochair:* Maria J.

Brunette, U. of Massachusetts, Lowell

1. Sara Kraemer, Christopher A. Thorn, and Jeffery G. Watson, U. of Wisconsin-Madison, **Macroergonomics of Education Reform: A Framework for Transforming Merit-Based Educator Compensation Systems**
2. Petra Saskia Bayerl, Kristina Lauche, and Petra Badke-Schaub, Delft U. of Technology, **Collaborative Environments for Distributed Teams: Comparing Effects of Different Concepts**
3. Thomas J. Albin, High Plains Engineering Services LLC; Scott D. Openshaw, Allsteel, Inc., **Assessment of the Effect of a Pivoting Backrest and Activity Level on Spinal Shrinkage**

4. Dana Lynn Black and S. Camille Peres, U. of Houston-Clear Lake; Franklin Tamborello II, Rice U., **Computer-Based Training With a Twist: Leveraging Peer-to-Peer Learning to Improve Training Effectiveness**

TE3 – IS THERE A BETTER WAY TO DO THIS? WORKS-IN-PROGRESS FORUM FOR HUMAN FACTORS/ERGONOMICS TEST & EVALUATION INITIATIVES

Alternative Format

Friday, September 26, 2008, 10:30 a.m. to 12:00 noon

Westside Salon 2 (5th Floor)

Test & Evaluation

Chair: Karla Eve Allan, U.S. Army Natick Soldier RDE Ctr.; *Cochair:* Rebecca A. Grier, Aptima, Inc.

Case Study 1: Assessment of an Alternate Reality Game (ARG) Training Event, Shawn Weil, Alexandra Geyer, and Paul Picciano, Aptima, Inc.; Alice Leung and Bill Ferguson, BBN Technologies.

Case Study 2: Selection of Measurement and Analysis Methods for Luminance Criteria for Shipboard Pilot House Displays, John Winters, Basic Commerce and Industries, Inc.; Margery J. Doyle and Scott Higgins, Lockheed Martin Maritime Systems and Sensors

Case Study 3: Service Blueprinting: Designing and Assessing the Customer Service Experience, Susan L. Spraragen, IBM T. J. Watson Research Ctr.



AUTHOR INDEX

- Abbott, Kathy, 23
Abdinnour-Helm, Sue, 37
Abuhamad, Alfred, 22
Acosta, Hector, 9
Acton, Sarah, 30
Adams, Anne, 17
Afergan, Daniel, 11
Agarwal, Anshu, 9, 17
Agnew, Michael J., 14, 30
Ahlstrom, Vicki, 38
Ahmed, Shaheen, 20
Akhavi, Farnaz, 33
Albin, Thomas J., 42
Alexander, Amy L., 17, 21
Alford, James L., 37
Alfredson, Jens, 35
Allan, Karla E., 42
Allard, Terry, 34
Allen, Dave, 21
Allen, Jennifer M., 33
Allender, Laurel, 9, 15, 27
Allendoerfer, Kenneth R., 29, 39
Alley, Teresa, 24
Allread, W. Gary, 34
Alvarado, Carla J., 28
Amann, Ryan, 31
Amick, Benjamin C., 12
Anders, Shilo, 37
Anderson, Brittany L., 22
Anderson, Janet, 36
Andersson, Jan, 35, 40
Andre, Anthony D., 17
Andrews, Alyssa, 33
Arbuckle, Nicole, 13
Archer, Ronald D., 16, 31
Arditi, Aries, 19
Armstrong, Thomas J., 22, 31
Arnold, Jacqueline, 37
Arthur, Jarvis J., 36
Artis, Sharnnia, 17, 21, 39
Ashida, Sato, 34
Astwood, Randolph, 18
Augenstein, Jeffrey, 21
Augustyn, Jason, 30, 40
Avery, Larry, 24
Axelsson, Pär, 35, 38
- Babbitt, Bettina A., 11, 30
Baber, Chris, 13
Babski-Reeves, Kari, 20, 22
Bachman, Benjamin J., 16
Badke-Schaub, Petra, 42
Badreddin, Essameddin, 10, 40
Baggerman, Susan, 18
Bahner, Elin J., 16
Bailey, Nathan, 24
Bailey, Randall E., 36
Baldwin, Carryl L., 20
Bakdash, Jonathan, 25
Balk, Stacy, 22
Baltich, Jennifer, 30
Banbury, Simon, 21, 31
Bangor, Aaron, 33
Barker, Linsey M., 30
Barnes, Michael J., 12
Barnett, John S., 16
- Barr, Alan, 30
Barrett, Natasha, 40
Barrow, Jane, 36
Bartolein, Christian, 10, 40
Batchelor, Cheryl, 35
Batta, Rajan, 26
Bauer, Denise H., 28, 33
Bayerl, Petra S., 42
Baysari, Melissa, 20
Bazley, ConneMara, 30
Beaton, Robert J., 20, 24
Beaubien, Jeff, 21
Bedwell, Wendy L., 27
Behneman, Adrienne, 35
Behr, Joseph, 17
Belfore, Lee A., 22
Bennett, April M., 22
Bennett, Winston Jr., 14
Berglund, Aseel, 38
Beringer, Dennis B.9, 36, 39
Berka, Chris, 23, 26, 35
Berrigan, Felix, 16
Berry, Katie, 28
Besheer, Hisham, 35
Betts, Eston T., 41
Bialystok, Ellen, 38
Biddle, Elizabeth, 26
Billings, Deborah R., 11
Bina, Bardia, 36
Bisantz, Ann, M., 12, 29
Bishu, Ram R., 37
Black, Dana L., 42
Blackman, Harold S., 13, 36
Blickensderfer, Elizabeth L., 16
Bliss, James P., 8, 16
Blosky, Mary Ann, 22
Blume, Jennifer, 23
Boehm-Davis, Deborah A., 20, 33
Boelhouwer, Eric, 10
Boiteau, Paul, 27
Boles, David B., 24
Bolstad, Cheryl A., 30, 42
Boren, Rebecca, 39
Bolton, Matthew, 29
Boring, Ronald L., 13, 27, 36, 37, 42
Boron, Julie B., 17
Borst, Arthur L., 11
Boutin, Jérôme, 40
Bowers, Clint A., 35
Bowers, Drew, 13
Boyle, Linda Ng, 28
Boyne, Stephen, 32
Braarud, Per Øivind, 13
Bracken, R. Bruce, 17
Branaghan, Russell, 16, 20
Breton, Richard, 21
Breuer, Joerg, 25
Brill, Christopher, 24
Broberg, Helena, 13, 21
Brooks, Daniel, 31
Brown, Erik, 10
Brown, Jeremy R., 26
Brown, Jim, 20
Brown, Rebecca D., 22
Brown, Roger L., 15
- Brown, Tim, 38
Brunette, Maria, 39, 42
Brungart, Douglas S. I., 25
Brunye, Tad, 40
Bruyn Martin, Lora, 21, 29
Buckle, Peter, 36
Buerhaus, Peter, 30, 37
Bullemer, Peter T., 15, 33
Burke, C. Shawn, 27
Burke, Kelly, 29
Burke, Laura J., 34
Burneka, Christopher, 13
Burneo, Pablo S., 13
Burnett, David R., 41
Burnham, Kaylee, 13
Burns, Catherine M., 36
Burns, John, 9, 33, 38
Burr, Deborah L., 34
Burt, Cindy, 37
Bustamante, Ernesto A., 8, 16, 22, 28
Bye, Andreas, 27
Byrne, Michael D., 12, 16, 34, 42
- Cades, David M., 8, 33
Caine, Kelly E., 13, 27
Caird, Jeff K., 27, 32
Caldwell, Barrett S., 42
Cameron, Joyce A., 7
Camilli, Marco, 32
Campbell, Bryan A., 16
Campbell, John, 20
Campbell-Kyureghyan, Naira H., 41
Campbell, Regan, 13
Campello, Marco A., 39
Cao, Caroline G. L., 41
Caplan, Stanley H., 15, 17
Capstick, Erin, 35
Carayon, Pascale, 22, 28, 34
Carberry, Trent P., 14
Carlander, Otto, 38
Carlson, Eric, 23
Carroll, John, 15
Carroll, Meredith, 13
Carswell, C. Melody, 22
Carter, Jim A., 6, 19
Carvan, Dwaine C., 20
Case, F.T., 21
Casper, Gail R., 34
Casson, Alexander J., 36
Castillejos, Pamela, 24
Catrambone, Richard, 15, 41
Chadwick, Roger, 14
Chakraborty, Ishani, 40
Champion, Michael, 18
Champney, Roberto K., 13
Chang, Che-Hsu (Joe), 12
Chang, Su Wong, 21
Chaparro, Alex, 14, 23, 31
Chaparro, Barbara S., 15, 22, 31, 37
Chapman, Christopher N., 37
Charness, Neil, 18
Chaudemanche, Eric, 13
Chaumont Menendez, Cammie, 12
Chen, BingYune, 23
Chen, Han (Robin), 30
- Chen, Hwei-Yen Winnie, 36
Chen, Jessie Y. C., 14, 21
Chertoff, Dustin, 31
Childress, Reba M., 27
Chin, Matthew G., 16, 31
Chisholm, Susan L., 27, 32
Chiu, Peter Y., 17
Chopra, Gurveen, 12
Chourasia, Amrish, 40
Chow, Renee, 21
Chrysler, Susan T., 14, 32
Chu, Byoung Sun, 14
Chui, Yoon Ping, 39
Ciriello, Vincent, 34
Clark, Bryan, 21
Clark, Duncan, 22
Clark, Rylan M., 8
Clarke, John, 27
Coleman, Roger, 34
Connors, Erik S., 12, 18, 39
Cook, Maia B., 10
Cooke, Nancy J., 15, 16
Cooper, Joel M., 38
Cornejo, Jessica, 18
Corso, Gregory M.
Cosenzo, Keryl A., 14, 35
Costa-Black, Katia, 39
Costello, Anthony, 30
Coury, Bruce G., 39
Cowell, Andrew, 35
Cowen, Michael B., 10
Cowgill, Jeffery L., 25
Cowley, Jennifer A., 10, 19, 20
Cox-Fuenzalida, Luz-Eugenía, 40
Coyle, Cheryl L., 7, 19
Coyne, Joseph T., 11
Creaser, Janet I., 14
Crisler, Matthew, 10, 28
Crognalet, Michael A., 17
Crowe, James, 24
Crumpton, Emma, 34
Crutchfield, Jerry, 16
Cuddihy, Elisabeth, 31
Cuevas, Haydee M., 26, 30, 39
Cummings, M. L., 27
Curtis, Michael T., 13, 28, 29
Cuthbertson, Brian, 30
Czaja, Sara J., 18
- D'Amico, Anita, 15
Dallman, Ronald, 11
Dalton, Joseph, 18
Damos, Diane L., 9
Davenport, Berry, 28
Davidson, George, 33
Davies, J. M., 30
Davies, Jan, 27
Davis, Fleet, 14
Davis, Jerry, 10
Davis, Kermit G., 12, 34
Davis, Larry, 36
Davison, Alan, 26
DeFiori, Kimberly M., 21
de Koning, Lisette, 26
De Mers, Robert E., 41
De Visser, Ewart J., 12, 31
Dean, Courtney, 14
Dean, Susan E., 35
Del Giudice, Katherine, 27

- del Pino, Rosa J., 12
dePontbriand, Rene, 24, 40
Delahajj, Roos, 30
DeLucia, Patricia R., 41
Dennerlein, Jack T., 12
Derby, Paul L., 41
Deverianko, Alexandre, 41
Devlin, Lisa, 24
Di Nocera, Francesco, 32
Dickson, Blair, 23
Dietz, Aaron, 39
Dijkstra, Katinka, 17, 18
Dion, Marshall, 17
Dippel, David, 26
Do, Ann H., 14
Doarn, Charles R., 41
Doebbeling, Bradley N., 15
Dolez, Patricia, 40
Dominguez, Cynthia, 7, 23
Donderi, Don, 38
Donmez, Birsen, 28
Donovan, James F., 41
Dornburg, Courtney, 33
Dorneich, Michael C., 41
Dow, Ben, 38
Downs, J. Hunter, 21
Downs, Traci H., 21
Doyle, Margery J., 42
Draper, Mark H., 32
Drew, Daniel A., 14
Drews, Frank A., 16, 37, 38
Drexler, Julie, 23
Drillings, Michael, 9
Drury, Colin, 19, 26
D'Souza, Clive R., 38
Duchon, Andrew, 16
Duchowski, Andrew T., 28, 31
Dukes, Allen W., 22
Duran, Jasmine L., 16
Durlach, Paula J., 11
Durso, Francis, 16
Dyre, Brian P., 17, 22
- Eccles, David William, 27
Edwards, Christopher J., 32
Edwards, Thomas G., 36
Eiriksdottir, Elsa, 41
ElBardissi, Andrew, 37
Elepfandt, Monika F., 16
Ellis, Jeremy D., 31
Ellis, Katrina, 27
Ellis, Linda U., 16, 31
Ellis, R. Darin, 36
ElRif, Paul, 37
Emo, Amanda K., 14
Endsley, Mica R., 12, 39
Entin, Elliott E., 24, 25, 41
Ephrem, Adrienne J., 25
Eriksson, Lars, 38
Essens, Peter, 39
Evans, A. William, 40
- Fairbanks, Rollin J. (Terry), 12, 15, 29
Fallon, Corey, 7, 23
Farley, Lisa, 18
Farrell, Phil, 21
Fathallah, Fadi A., 30
- Fausset, Cara B. 17, 28
Feathers, David, 19
Feigh, Karen, 18, 29
Feldman, Moshe, 31
Feldpausch, Daniel, 21
Fels, Deborah I., 19
Feltner, David T., 21
Ferguson, Bill, 42
Ferguson, Sue A., 12, 34
Fern, Lisa C., 33
Ferrell, William, 34
Ferris, Thomas K. 13, 28
Feyen, Robert, 27
Fichtl, Ted, 23
Fidopiastis, Cali, 36
Fimm, Bruno, 31
Fincannon, Thomas, 17, 40
Fine, Keith, 14
Finkelstein, Neal, 16
Finomore, Victor S., 24, 25
Fiore, Stephen M., 21, 22, 41
Fischer, Ute, 25
Fisher, Alia M., 15
Fisher, Donald L., 14
Fisher, James, 28
Fisk, Arthur D., 10, 13, 17, 18, 28
Fitch, Gregory M., 25, 28
Flanagan, Brendan, 37
Flatley Brennan, Patricia, 34
Fleming, Jacob T., 16
Flemming, Scott A. C., 27
Flin, Rhona, 30
Folds, Dennis J., 7
Forbes, Kelly, 21
Fothergill, Selina, 15, 29
Fourney, David, 19
Fox, Douglas E., 15
Foyle, David C., 34
Freedy, Amos, 12
Freedy, Elan, 12
Freivalds, Andris, 28
Friedman-Berg, Ferne J., 29, 30
Fritzsche, Barbara, 27
Frosst, Douglas, 29
Fruland, Ruth, 11
Frydman, Claudia, 26
Fu, Wai-Tat, 42
Fuchs, Sven, 35, 38
Fujishiro, Kaori, 34
Fuller, Helen J.A., 28
Funke, Greg J., 20
Funkhouser, Dillon, 14
- Gahlot, Ruchika, 13
Gaillard, Tony, 30
Gaitonde, Krishnanath, 41
Gallimore, Jennie J., 36
Galloway, Trysha L., 26
Galster, Scott M., 17, 22
Gantzer, Thomas, 20
Garay-Vega, Lisandra, 14
Garcia, Andre J., 22
Garcia, Oscar, 21
Gardner, Douglas L., 35
Gardner, Richard J., 20
Garrett, Sandra K., 8, 33
Gauvin, Chantal, 40
Gaska, James, 31
- Gawron, Valerie J., 9, 11
Gebrim, Juliana, 35
Geibel, William D., 39
Geis, Thomas, 9
Gerke, Brett, 23
Gerling, Gregory J., 27
Gertman, David I., 13, 42
Geyer, Alexandra, 42
Ghylin, Kimberly M., 26
Giambiasi, Norbert, 26
Gibbons, Billy, 30
Gilkey, Robert H., 25
Gillan, Douglas J., 14, 31
Gilland, Jess, 28
Gilles, Florian, 31
Gilson, Richard D., 24, 38
Glass, Renee, 17
Gluck, Kevin A., 34
Gnaneswaran, Vettrivel, 37
Goan, Terrance, 29
Goegan, Janice A., 20
Goettl, Barry L., 24
Goldberg, Eli, 31
Golenberg, Lavie, 36
Gomer, Joshua A., 31
Gomes, Jose O., 34
Gonzalez, Cleotilde, 26
Gordon, Arlene, 19
Gore, Brian F., 42
Gorman, Jamie C., 16
Gorman, Paul, 30
Gormley, Erin, 39
Gramopadhye, Anand, 34
Grandt, Morten, 18
Grant, Russell, 22
Gray, Rob, 20
Gray, Wayne D., 12
Green, Paul, 20
Green, Thomas, 33
Greenstein, Joel S., 19
Greenwood-Ericksen, Adams, 11
Grier, Rebecca A., 20, 24, 33, 42
Grieshaber, D. Christian, 22
Grundgeiger, Tobias, 27
Gscheidle, Gretchen M. 23
Guarino, Sean, 23
Guarrera, Theresa K., 15, 29
Guay, Laura, 25
Gude, Dietmar, 32
Guerlain, Stephanie, 12, 33, 34
Gundewadi, Namrata, 22
Gusich, Brad R., 22
- Hagg, Heather, 15
Hah, Sehchang, 19, 29, 35
Hahn, Tae Kyung, 21
Hale, Christopher R., 9, 32, 35
Hale, Kelly S., 11, 13, 35, 38
Hall, LaToya Cherise-Nekole, 21
Hallbeck, M. Susan, 10, 24, 34
Halpern, Manny, 39
Halter, Jeffery T., 20
Halverson, Tim, 10
Ham, Seong Soo, 21
Hamblin, Christopher J., 18, 41
Hameed, Shameem, 28
Hancock, Peter A., 9, 16, 22, 32, 38
Handy, Simone, 39
Hankey, Jonathan M., 25
Hanowski, Richard J., 28
Haque, Fatin, 24
Harley, Erin, 28, 32
Harmon, Ken, 24
Harper-Sciarini, Michelle, 13
Harrabi, Lofti, 40
Harris, Jemma M., 29
Harrison, Julia, 37
Havig, Paul, 10, 11
Hayes, Caroline C., 12, 33, 36
Hayes, Harskin, 19
Haynes, Courtney A., 14
Haynes, Scott, 23
Hazelhurst, Brian, 30
Heaney, Catherine, 34
Heber, Ines A., 31
Heckman, Genevieve, 28
Hedge, Alan, 9, 15, 23
Hedström, Johan, 38
Helander, Martin, 38
Helfman, Jonathan I., 9
Helton, William S., 24, 27, 30
Hendrick, Hal W., 12, 30
Hendrickson, Stacey, 33
Henneman, Richard L., 9
Henrickson, Sarah E., 37
Hepfinger, Lisa, 40
Herbst, Steven, 27
Hernandez, Jaime, 10
Herring, Scarlett R., 24
Hettinger, Lawrence, 32
Hicks, Kevin E., 10
Higgins, Scott, 42
Hignett, Sue, 34
Hildebrandt, Michael, 13, 37
Hilliard, Antony, 15, 27
Hinkle, Veronica, 22
Hitchcock, Edward M., 20
Ho, Danny, 30
Hoeft, Raegan M., 17
Hoffman, Joshua D., 33
Hoffman, Robert R., 9, 33
Hofmann, Peter M., 32
Holden, Kritina L., 18, 41
Holden, Richard J., 15
Hollands, Justin G., 18
Holman, Grady T., 10
Holmstrom, Richard, 30
Holtz, Ann, 18
Hong, Helena, 41
Hooey, Becky L., 34
Hornick, Richard J., 12
Hornof, Anthony, 10
Horrey, William J., 20, 22
Hou, Ming, 32
Hou, Yangfeng, 34
Houghton, Rob, 13
Howard, Robert L., 16
Hsiang, Simon, 33
Huang, Dinglong, 10
Huang, Fei, 19
Hue, Olivier, 16
Hughes, Jamie, 16
Hugo, Jacques, 37
Huguenin, Ben, 21
Hull, Spring S., 22
Hung, Yu-Hsiu, 13
Hurts, Karel, 10

- Hutchins, Shaun, 12
Hutchins, Susan G., 39
Hutchison, Sarah, 30
Hutter, Erin, 13
Hyde, Dale, 27
- Iordanov, Vassil, 12
Irwin, Curt B., 16
Isaacson, Andy, 10
- Jackson, Mike, 29
Jacobs, Karen, 16, 24, 30
Jacobsen, Alan R., 20
Jaeger, Beverly, 22
Jamieson, Greg A., 18, 27, 36, 37
Janelle, Christopher, 27
Jannone, Sheana R., 31
Janowitz, Ira, 37
Jarmasz, Jerzy, 29
Jastrzembski, Tiffany, 18
Jenkins, Daniel P., 7, 36, 39
Jenkins, Joseph C., 36
Jenness, James, 11
Jenrich, Erin, 16
Jensen, Roger, 16
Jentsch, Florian, 13, 17, 40, 41
Jerome, Christian, 31, 35
Jhangiani, Ira, 10
Jia, Bochen, 30
Jiang, Xiaochun S., 30
Jipp, Meike, 10, 40
John, Bonnie E., 7, 12, 42
Johnson, Brian R., 16
Johnson, Chris, 29
Johnson, Korey, 15
Johnson Kayenda, 39
Johnson, Monica, 13
Johnson, Peter W., 30
Johnson, Robin, 26, 35
Johnson, Steve, 27
Johnston, Matthew, 11, 38
Jones, Daniel B., 41
Jones, David L., 11
Jones, Debra, 15
Jones, Gail, 19
Jones, Keith S., 16, 41
Jones, Monica L. H., 31
Jones, Patty, 23, 32
Jorgensen, Michael J., 22, 31, 34
Jung, Kihyo, 10
Junge, Maria, 37
Justice, Connie F., 15
- Kaber, David B., 11, 17, 19, 20, 33, 37
Kalsher, Michael J., 24, 28
Kang, Jihun, 22
Kankipati, P., 19
Kaplan, Charlotte, 28
Karn, Keith S., 15
Karsh, Ben-Tzion, 15, 28, 34
Karwowski, Waldemar, 10, 34
Kaushal, Rainu, 28
Keebler, Joseph R., 8, 13, 17, 40
Keillor, Jocelyn M., 24
Keller, David, 16
Keller, John, 7
Kelley, Christopher, 28
- Kelley, John F. ("Jeff"), 9
Kelling, Nicholas J., 20
Kelso, David P., 16
Kemper, Don, 25, 36
Kendall, Tony, 39
Kennedy, Robert S., 12, 22
Keshishian, Polin, 10
Khan, Khurram, 31
Khooshabeh, Peter, 40
Kidd, David G., 22, 33
Kiefer, Raymond, 25
Kilgore, Ryan M., 15, 27
Kim, Heon-Jeong, 12
Kim, Kahyun, 30
Kim, Sang-Hwan, 17, 19
Kim, Sunwook, 30
King, Heidi B., 27
Kipp, Kristof, 34
Kirchner, Judy, 22
Kirluk, Alex, 33, 34
Kirschweg, Rebecca L., 31
Klein, Alison K., 16
Klein, Gary, 7, 15
Klein, Helen A., 23
Klein, Martina I., 41
Kleiner, Brian, 34
Kleiss, James A., 24
Knecht, William, 36
Knerr, Bruce, 31
Knodler, Michael A., 14
Knott, Benjamin, 17
Knott, Camilla, 41
Koehn, Michael S., 20
Koeners, Joris, 36
Kokini, Christina, 14
Kolly, Joseph M., 39
Kommini, Sandeep, 13
Koneczny, Sonja, 34
Koontz, Alicia, 19
Korkmaz, Sahika V., 41
Kortum, Philip, 22
Kosorukoff, Alex, 33
Koterba, Nathan, 21
Kotowski, Susan E., 30, 34
Kozhevnikov, Maria, 25
Kozlowski, Steve W. J., 14
Kraemer, Sara, 42
Kraft, Jerome, 11
Kramer, Lynda J., 31, 36
Krauss, David A., 13
Krebs, Denise L., 19
Krebs, William K., 17
Kubose, Tate, 13
Kuhlen, Torsten, 31
Kwon, Ocha, 10
- La Budde, Zina, 11
Laberge, Jason, 33
Lacson, Frank C., 26
Lagattuta, Nicholas, 31
Lamb, Matthew, 24
Lamoureux, Tab, 29
Lampel, Liat, 22
Langheim, Lisa K., 32
Lara, Jamie, 40
Larson, Nancy J., 42
Lau, Nathan Ka Ching, 12, 36
Lauche, Kristina, 35, 42
Laughery, Kenneth R., 12
- Laumann, Karin, 21
Laux, Lila, 18
Lavender, Steven A., 30, 41
Lawler, Erin, 23
Lazzara, Elizabeth H., 27
Le Scanff, Christine, 27
Leane, Terry, 27
Lee, Chin Chin, 17, 18
Lee, Dongsik, 30
Lee, Hwasoo, 36
Lee, John D., 32, 33
Lee, Kyung Soo, 21
Lee, Lashanda, 37
Lee, Paul Ung-Joon, 29
Lee, Sun Ah, 21
Lee, Suzanne, 32
LeGoullon, Melanie, 12
Lemons, James, 10
Lenker, James, 19
Lenneman, John K., 20
Lenz, Kelsi M., 31
Lerner, Neil D., 11
Lesch, Mary F., 22
Letowski, Tomasz, 33
Letsu-Dake, Emmanuel, 30
Leung, Alice, 42
Levine, Thomas K., 16
Lew, Gavin, 27
Lew, Roger, 22
Lewis, Katrina, 20
Li, Yueqing, 27
Lichacz, Fred M. J., 21
Lim, Rosemary H. M., 36
Lim, Raymond W., 10
Lin, Cheng-Jhe, 37
Lin, James J. W., 40
Lin, Jui, 19
Lin, Li, 26
Lin, Yingzi, 31
Lindahl, Björn, 38
Lindoff, Jenny E., 35, 40
Linegang, Michael, 9, 39
Ling, Alicia, 22
Linkenauger, Sally, 25
Lintern, Gavan, 7, 15
Lio, Cindy H., 22
Lis, Anglea, 39
Litaker, Harry L., 16, 31
Liu, David, 27
Liu, Jian, 40
Liu, Ying, 10
Liu, Yu-Hsun, 40
Linas, James, 12
Lockett, John F., 7
Lockett-Reynolds, Janae, 24
Lockhart, Julie, 28
Lockhart, Thurmon E., 14, 40
Long, Kevin, 11
Lopez, Nicole, 24
Lord, Jason, 27
Lorimer, Patrick D., 16
Love, Edwin, 37
Lu, Jianwei, 19
Lucio, Cristina do Carmo, 22
Lueder, Rani, 30
Lum, Heather C., 21, 31
Lund, Arnie, 8
Lyons, Rebecca, 27
- Ma, Ruiqi, 37
MacMillan, Jean, 14
Madhavan, Poornima, 26, 40
Mahoney, Caroline, 40
Mahoney, Sam, 23
Malone, Linda, 26
Malone, Thomas B., 24
Mancero, Maria G., 26
Manes, Daniel, 10
Manser, Michael P., 14, 28
Manzey, Dietrich, 16, 19
Marc, Yale, 21
Margerum, Sarah, 41
Marklin, Richard W.
Marr, Emily, 40
Marras, William S., 34
Mars, Franck, 22
Marshall, Dawn, 38
Marshall, Stuart D., 37
Marszalek, Ralph, 14
Martin, Bernard J., 12, 42
Martin, Glenn, 31
Martin, Marcus L., 27
Martinez, Claudia M., 13
Masalonis, Anthony J., 38, 39
Massaiu, Salvatore, 13
Matthews, Gerald, 17, 20, 24, 32, 41
McBride, Dennis, 23, 26
McBride, Maranda, 33
McCall, Robert, 18
McCarley, Jason, 16
McCartney, Colin J., 41
McDermott, Patricia L., 12, 15
McDonnell, Lori, 25, 41
McDougall, Sine J. P., 10, 35
McElheny, Melinda, 8
McFarlin, Leslie A., 33
McGarry, Kathleen A., 11, 18
McIntosh, Andrew, 20
McKee, Lorna, 30
McKneely, Jennifer A. B., 23, 38
McLaughlin, Anne C., 18, 28
McMullin, Dianne, 17, 20
McNee, Stephanie, 28
McNeese, Michael D., 21
McNeese, Nathaniel J., 21
Mearns, Kathryn, 30
Medina, Eliana, 11, 31
Mehta, Ranjana, 14
Mercer, Joey, 29
Merket, Danielle, 14
Merkle, Ed, 15
Merkle, Michele, 23
Merlo, James L., 38
Meshkati, Najmedin, 11
Meyer, Robert H., 16
Micheals, Ross, 38
Milgram, Paul, 35, 36, 41
Milham, Laura, 13, 35
Milham, Russell P., 37
Militello, Laura G., 7, 26, 33
Miller, Anne, 30, 37
Miller, Christopher A., 29, 32
Miller, Darius, 12
Miller, Janet E., 9, 35
Miller, Lynn, 12
Miller, Richard, 30
Miller, Sarah, 33
Minakata, Katsumi, 11

- Minogue, James, 19
 Mitchell, Diane K., 13
 Mitzner, Tracy L., 17
 Molesworth, Brett R. C., 11
 Monk, Christopher A., 22, 33
 Monnan, Shaj, 39
 Montague, Enid, 28, 31
 Montgomery, Lacey, 10
 Mooij, Martijn, 15
 Moon, JungAa M., 42
 Moore, Kristin, 22
 Morgan, Justin F., 22
 Morin, Lee, 18
 Moroney, William F., 7
 Morris, Nichole L., 23
 Morrow, Daniel G., 11
 Moss, Jason, 31
 Mouloua, Mustapha, 24
 Mourant, Ronald, 22
 Moyer, Eric M., 15
 Mung Yuing Hu, June, 24
 Murphy, Lauren L., 9
 Muse-Duma, Katherine, 24
 Muth, Eric, 31
 Muttart, Jeffery, 20, 32
- Nair, Sankaran N., 18
 Nam, Chang S., 27, 36
 Narkevicius, Jennifer M., 24
 Nasarwanji, Mahiyar, 19
 Nathan-Roberts, Dan, 23
 Neal, Andrew, 29
 Neale, Vicki L., 14
 Neerincx, Mark, 30
 Nees, Michael A., 28
 Nehme, Carl, 27
 Nelson, Alicia, 14
 Nelson, W. Todd, 22
 Nemeth, Christopher, 12, 15, 23
 Nemeth, Kristie, 13
 Newlin, Elizabeth T., 8
 Newton, Rihana M., 25
 Ngo, Cam, 15
 Nguyen, Jimmy, 29
 Nicholson, Denise, 17, 23, 25, 35, 36
 Nickens, Tiffany, 16
 Nishimura, Erin M., 21
 Nixon, Jim, 29
 Novak, Laurie, 37
 Ntuen, Celestine A., 20
 Nunes, Ashley, 29
 Nussbaum, Maury A., 30, 40
 Nyeste, Patrick, 20
- O'Brien, Katie, 16
 O'Brien, Marita, 10
 Ockerman, Jennifer J., 21, 33
 O'Connell, Jessica, 14
 O'Connor, Paul, 27, 28
 Oduor, Kenya F., 19
 Ogreten, Sherry, 26
 Oh, Changeun C., 30
 Oh, Kyunghui, 30
 O'Hara, John M., 37
 O'Hare, David, 39
 Ohnemus, Kenneth R., 19
 Olofinboba, Olu A., 41
- Onnasch, Linda, 19
 Openshaw, Scott D., 42
 Or, Calvin K. L., 34
 Orasanu, Judith, 25
 Oron-Gilad, Tal, 22
 Oskarsson, Per-Anders, 38
 Ott, Tammy, 29
 Overbye, Thomas J., 13
 Owens, Justin, 31
 Oxstrand, Johanna, 37
 Ozok, A.A., 15
- Padilla, Rosa, 30
 Page, Robert C., 11
 Pagulayan, Randy, 8
 Pai, Shantanu, 29, 39
 Palladino, Dianne K., 35
 Pandya, Abhilash, 36
 Paquet, Victor, 12, 19, 37
 Parasuraman, Raja, 11, 12, 14, 24, 38
 Parijat, Prakriti, 13, 40
 Paris, Bonnie L., 22
 Park, Eun Sug, 14
 Parke, Bonny, 25
 Paschoarelli, Luis C., 22
 Pastel, Robert, 16
 Patrik, Lif, 38
 Patterson, Emily S., 9, 12, 23, 28, 37
 Patterson, Pat., 24, 28
 Patterson, Robert, 31
 Pauley, Keryn A., 39
 Pauls, Jake, 30
 Pavlas, Davin, 22
 Pavlovic, Nada, 24
 Pavol, Michael, 34, 40
 Peckinpaugh, Amy, 34
 Pennathur, Priyadarshini R., 29, 33
 Pepe, Aaron A., 12, 16
 Peres, S. Camille, 22, 42
 Perez, Graciela, 39
 Perham, Nick, 31
 Perkins, LeeAnn, 35
 Perrow, Charles, 24
 Perry, Nathan, 33
 Perry, Shawna J., 23, 28, 29
 Peters, Chris L., 19
 Petterstedt, Michael, 38
 Pfaff, Mark S., 21
 Pfautz, Jonathan, 23, 36
 Pfautz, Stacy L., 36
 Phadhana-Anake, Peter, 26
 Pharmer, James A., 20, 24, 32, 35
 Philbrick, Kenneth A., 40
 Phillips, Cooper, 23
 Phillips, Rachel R., 40
 Picciano, Paul, 42
 Piccione, Dino, 23
 Pickett, Lynn K., 38
 Pierce, Russell S., 29
 Pillalamarri, Krishna, 14
 Piper, Adam, 10
 Playfoot, David, 10
 Plott, Beth M., 22
 Pollack-Nelson, Carol, 10
 Pollard, Martin, 37
- Pomranky, Regina, 35
 Pope, Alan, 40
 Popovic, Djordje, 35
 Portnoy, Felix, 35, 41
 Powell, Gerald M., 23
 Pratt, James, 27
 Prinzel, Lawrence J., 36
 Prinzo, Roni, 36
 Pritchett, Amy, 23, 34
 Proffitt, Dennis R., 21, 25
 Pronovost, Sylvain, 31
 Prost, Justin, 31
 Prue, Brian, 33
 Pujari, Prashant S., 37
- Quill, Laurie, 13
 Quinn, Stephanie, 22
 Quinones, Pablo, 26
 Quintana, Vince, 32
 Quoetone, Liz, 29
- Raddatz, Kimberly R., 16
 Rader-Smith, Ellen, 39
 Raghavan, Srinivas, 38
 Rahman, Moin, 10
 Rajulu, Sudhakar, 18, 41
 Rakauskas, Michael E., 14
 Ramey, Judith A., 31
 Ramming, J. Christopher, 29
 Ramos, Katherine R., 42
 Rantanen, Esa M., 13, 42
 Rapoport, Evan D., 21
 Raschke, Ulrich, 12
 Ratwani, Raj, 33
 Rau, Pei-Luen P., 10
 Rauschenberger, Robert, 40
 Razza, Bruno M., 22
 Read, Stephen, 22
 Reader, Tom, 30
 Redford, Josh, 26
 Reed, Matthew P., 28, 31
 Reeves, Leah, 23
 Rehfeld, Sherri A., 41
 Reichenbach, Juliane, 19
 Reinerman, Lauren E., 32
 Reising, Dal Vernon C., 15
 Rempel, David, 23, 30, 37
 Rencrantz, Carin, 35, 40
 Reppa, Irene, 10, 35
 Resnick, Marc L., 19, 39
 Rice, Stephen, 16
 Rice, Valerie B., 30, 39
 Richard, Christian, 20
 Riley, Jennifer M., 12, 14, 25
 Riley, Michael A., 24, 41
 Riley, Shannon, 22
 Rinalducci, Edward J., 24
 Rinkenauer, Gerhard, 32
 Riofrio, Juan S., 13
 Roberts, Linda A., 40
 Robertson, Michelle M., 12
 Robinson, Donald, 21
 Rock, Kathy, 40
 Rodriguez, Ania, 27
 Rodriguez-Villegas, Esther, 36
 Roefs, Fenne, 36
 Rogers, Wendy A., 10, 13, 17, 18, 28
- Rogers, David G., 25
 Rogers, William, 29
 Romigh, Griffin D., 11, 25
 Ronen, Adi, 22
 Rosen, Michael A., 21, 22, 27
 Rosenbaum, David, 12
 Ross, Jennifer M., 16
 Roth, Emilie, 23
 Rousseau, Robert, 21
 Rovira, Ericka, 21
 Ruffner, John W., 29
 Ruiz, Miguel E., 16
 Russ, Alissa L., 15
 Ryan, Christopher D., 20
- Salas, Eduardo, 14, 21, 22, 27
 Saleem, Jason J., 15
 Salinas, Adrian, 20
 Salmon, Paul M., 36, 39
 Salvendy, Gavriel, 10
 Salvucci, Dario, 42
 Samms, Charneta, 7
 Sampanes, Chad, 27
 Sanchez, Christopher, 16
 Sanchez, Hector J., 12, 13
 Sanderson, Penelope M., 15, 27, 38
 Sandor, Aniko, 41
 Santoro, Gerald M., 21
 Sarter, Nadine, 28
 Sauvage, Sylvain, 30
 Savage-Knepshield, Pamela A., 35
 Saxby, Dyani J., 20
 Sayer, James, 11, 32
 Scanlan, Larry, 9
 Scanlon, Matthew C., 15
 Scerbo, Mark W., 22
 Schatz, Sae, 35
 Schaudt, William A., 28
 Schieber, Frank, 18, 28
 Schlick, Christopher M., 18
 Schlorholtz, Ben, 18
 Schmidlin, Elizabeth A., 41
 Schmorrow, Dylan, 23
 Schneider, Nicole, 18
 Schowalter, Diane, 28
 Schriever, Angela T., 11
 Schulte, Axel, 32
 Schuster, David, 13, 29
 Schweitzberg, Steven D., 41
 Schweikhart, Sharon, 37
 Schwerha, Diana J., 18
 Sciarini, Lee W., 17, 25, 35
 Scielzo, Sandro, 41
 Scisco, Jenna, 31
 Seagull, F. Jacob, 12, 27
 Seales, William B., 22
 Seck, Mamadou, 26
 Seo, Na Jin, 22
 Seong, Younho, 30
 Seppelt, Bobbie D., 33
 Sesto, Mary E., 16, 40
 Sethumadhavan, Arathi, 14
 Shah, Abhishek, 26
 Shah, Manish N., 15
 Shang, Xiaoli, 10
 Shapiro, Ronald G., 17
 Shappell, Scott A., 7



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Sharek, David, 15
Sharit, Joseph, 18
Sharples, Sarah, 29
Shaw, Tyler H., 24
Shelton, Kevin L., 36
Sheppard, Charles, 38
Sheridan, Thomas B., 27
Sherman, Paul, 32
Shin, Gwanseob, 40
Shively, R. Jay, 32
Shreshta, Saurav, 31, 37
Shultz, Jonas, 27
Sibert, Linda E., 11
Siebertz, Sarah, 31
Siegel, Steven, 11
Silvestri, Salvatore, 27
Simms, Yvonne L., 41
Simon, Harvey, 10
Simoneau, Martin, 16
Simpson, Brian D., 10, 11, 25
Sims, Valerie K., 16, 31
Sinatra, Anne M., 16
Skraaning, Gyrd, 36
Smahel, Thomas, 38
Smailagic, Asim, 26
Smallman, Harvey S., 10
Smiley, Alison, 38
Smillie, Robert, 20
Smith, Carl, 31
Smith, David, 21
Smith, Elida C., 27
Smith, Jeffrey J., 20
Smith, Kip, 9
Smith, Michael, 24
Smith-Jackson, Tonya L., 10, 12, 39
Smith-Jentsch, Kimberly A., 31
Smoker, Timothy J., 22
Snead, Andrea, 13
Sohn, Young Woo, 21
Sommerich, Carolyn M., 13, 19, 34, 41
Sorensen, Barbara H., 11
Sorge, Jeff, 37
Soung Yee, Anthony, 35
Souk, Jenny, 33
Spain, Randall D., 16, 22
Splittstoesser, Riley, 40
Sprang, Marcia, 26
Spraragen, Susan, 42
Squire, Peter, 32, 38
Srinivasan, Divya, 42
St. John, Mark, 20, 30
Stallmann, Kurt, 22
Stanley, Clayton T., 42
Stanney, Kay, 23
Stanton, Brian, 38
Stanton, Neville A., 7, 36, 39
Star, Demetra, 30
Staszewski, Jim, 26
St-Cyr, Olivier, 15
Steinfeld, Aaron, 26
Steinfeld, Edward, 19
Stelzer, Emily M., 17, 24
Stephens, Benjamin R., 19
Stephens, John-Paul, 18
Stevens, Ron H., 26
Stevens, Susan, 33
Stoklosa, Mark, 11
Stone, Richard T., 12, 39
Strater, Laura D., 11, 12, 14, 24, 39
Strawderman, Lesley, 19, 20
Strayer, David L., 20, 38
Streefkerk, Jan W., 30
Stripling, Roy M., 11, 35
Stroup, Ron, 23
Strybel, Thomas Z., 11, 17, 29
Su, Andy, 22
Sulistiyawati, Ketut, 39
Sundt, Thoralf, 37
Sutherland, Michael R., 10
Suzuki, Takahiro, 39
Svenmarck, Peter, 32
Svensson, Jonathan, 38
Swanson, Ron, 13
Swofford, Cameron, 15
Szalma, James L., 16, 22, 32
Takeuchi, Toyokazu, 25
Talleur, Donald A., 11, 29
Tamborello, Franklin II, 42
Tammaing, Sarah, 24
Tan, Angela L. S., 38
Tang, Lisa, 19
Taylor, Grant S., 16
Taylor, Robert, 32
Taylor, Tamsen, 21
Teasdale, Normand, 16
Telner, Jason A., 38
Templeman, James N., 11
Teo, Leonghwee, 42
Terenzi, Michela, 32
Terrence, Peter I., 21
Terry, Travis N., 13
Thacher, Sophie, 11
Tharanathan, Anand, 14
Thaxton, Sherry, 41
Theofanos, Mary, 38
Theunissen, Erik, 36
Thibault, Kathleen R., 23
Thomas, Robin D., 35
Thompson, David S., 12
Thompson, Laura, 15
Thompson, Matthew B., 38
Thompson, Shelby G., 16, 31
Thomsen, Dan, 29
Thorn, Christopher A., 42
Thropp, Jennifer, 32
Tilak, Rohan, 28
Tillman, Barry W., 38
Tischuk, Julia, 26
Trachtman, Doris, 28
Trafton, J. Gregory, 20, 33
Tran, Phuong, 33
Tran, Tuan Q., 16, 20, 22, 42
Trautman, Benjamin, 22
Trautman, Edward, 22
Trautman, Mary Ann, 22
Tremblay, Sebastien, 21
Triantos, Kostas, 24
Trent, Stoney, 33
Tripp, Lloyd D., 17
Trujillo, Anna, 40
Tsai, Jennifer E., 11, 33
Tse, Susan, 41
Tsimhoni, Omer, 28
Tyrrell, Richard A., 10, 14

Author
Index

Ungvarsky, Diane, 39
Upham, Lisa J., 31
Uwimana, Epaphrodite, 16

Vaidya, Vinay, 30
Valdez, Rupa S., 34
van Bezooijen, Bart, 39
van Breda, Leo, 32
Van Buskirk, Wendi, 18
van Dongen, Kees, 26
Van Esch-Bussemakers, Myra, 30
van Maanen, Peter-Paul, 26
Vandlen, Kimberly, 13
Vatan Korkmaz, Sahika, 19, 41
Vaughn, Heather, 7, 19
Vigilante, William J., 10
Vogel-Walcutt, Jennifer J., 35
von Thaden, Terry L., 39
Vora, Jigar, 26
Voshell, Martin, 33
Vredenburg, Alison G., 34
Vu, Kim-Phuong L., 11, 29

Wada, Takahiro, 25
Wadhwa, Rishi, 37
Wagner, Achim, 31
Walker, Alexander, 31
Walker, Bruce N., 28, 35
Wallace, Daniel F., 20
Walker, Guy H., 36, 39
Walker, James M., 22, 28
Wan, Margaret, 13
Wang, Lu, 18
Wang, Ninghuan, 27
Wang, X. T., 16
Wang, Xia, 10
Wang, Xin, 15
Ward, Paul, 27
Warm, Joel S., 17, 20, 24, 32, 41
Watson, Jeffery G., 42
Waxberg, Sara L., 8
Wears, Robert L., 12, 15, 23, 29
Weaver, Melissa, 20
Weaver, Sallie J., 18, 27
Weghorst, Suzanne, 11
Weil, Shawn A., 16, 42
Weinger, Matt, 30, 37
Weldon, David, 24
Weltman, Gershon, 12
Werner, Nicole, 33
Werner, Steffen, 15, 22
Werth, Abigail, 16
West, Robert, 31
Wetterneck, Tasha B., 22
White, Brent, 9, 27
White, Dennis, 32
Whitlow, Stephen D., 33
Whitmore, Mihriban, 18
Whitmoyer, Melissa N., 35
Wickens, Christopher D., 11,
15, 20, 34, 39
Wiebe, Eric N., 19
Wiegmann, Douglas A., 7, 29, 37
Wiering, Caro, 30
Wierwille, Walter W., 28
Wiesenthal, David L., 38
Wieszczyk, Stacie M., 13
Wiggins, Mark W., 17, 29, 33

Wildman, Jessica L., 27
Wilkes, Janet, 18
Willems, Ben, 29
Willén, Bengt, 38
Williams, James, 9
Williams, Steven P., 31, 36
Williamson, Ann M., 41
Wilson, Darren, 17
Wilson, John, 20
Wilson, Katherine, 21
Winchester, Woodrow W., 13
Winkle, Jonathan A., 13
Winner, Jennifer L., 16
Winterbottom, Marc, 31
Winters, John, 13, 42
Wise, John A., 18, 41
Wittmann, Werner W., 40
Wogalter, Michael S., 10, 15, 20,
30
Wolter, Marc, 31
Wong, William, 26
Wood, Joanne M., 14
Woodbridge, Peter A., 15
Woodman, Tim, 27
Woods, David D., 28, 34, 37
Wortham, Tracey B., 28
Wotring, Brian, 17, 22
Wu, Changxu, 37
Wu, Teresa S., 27
Wubbels, Peter M., 21

Xholi, Ilir, 28
Xiao, Tania, 15
Xiao, Yan, 30

Yamamura, Tomohiro, 25
Yankaskas, Kurt, 20
Yasky, Richard, 11
Ye, Lin, 35
Yen, Thomas Y., 16
Yen, Wei-Ting, 13
Yin, Shanqing, 38
Yin, Zhishuai, 22
Yoon, Jangwhon, 39
York, Martin, 38
You, Heecheon, 10
Young, Douglas, 28
Young, Ricky, 11
Yu, Wanyan, 37
Yule, Steven, 30

Zaccaro, Stephen J., 14
Zachary, Wayne, 9, 12
Zackowitz, Ilene B., 34
Zadra, Jonathan R., 21
Zelik, Daniel, 28
Zhang, Hongbo, 40
Zhang, Nien-Fan, 38
Zhang, Tao, 33
Zheng, Xianjun S., 40
Zhou, Mi, 41
Zobarich, Richard, 29
Zolna, Jesse S., 15
Zurada, Jacek M., 34
Zwick, Grace D., 14

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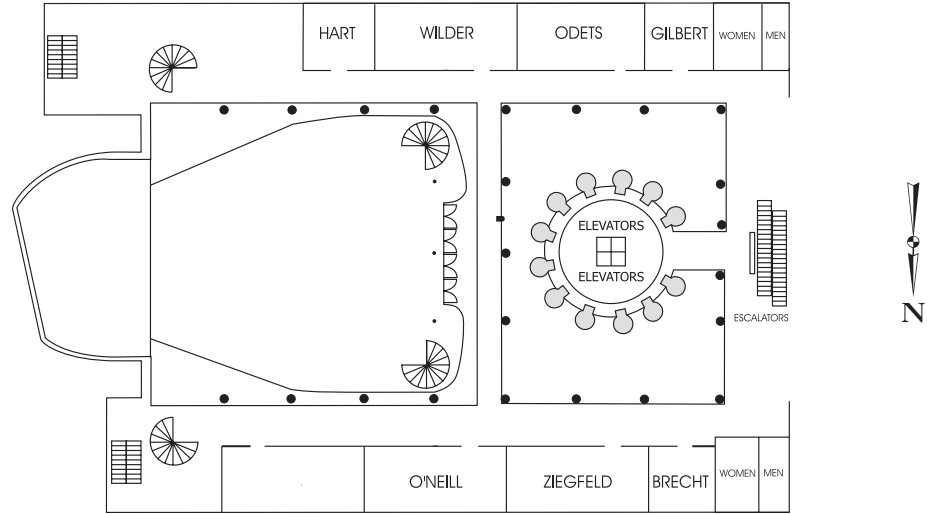
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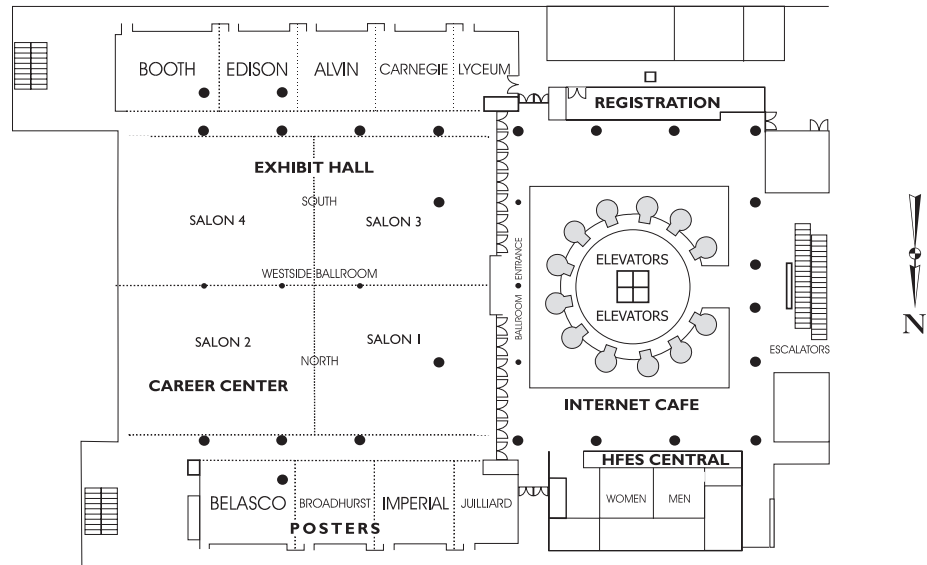
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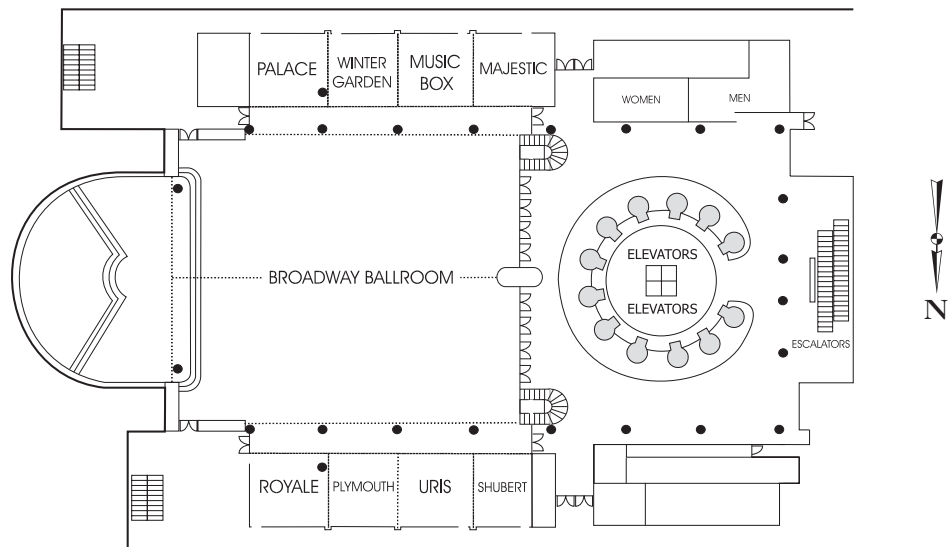
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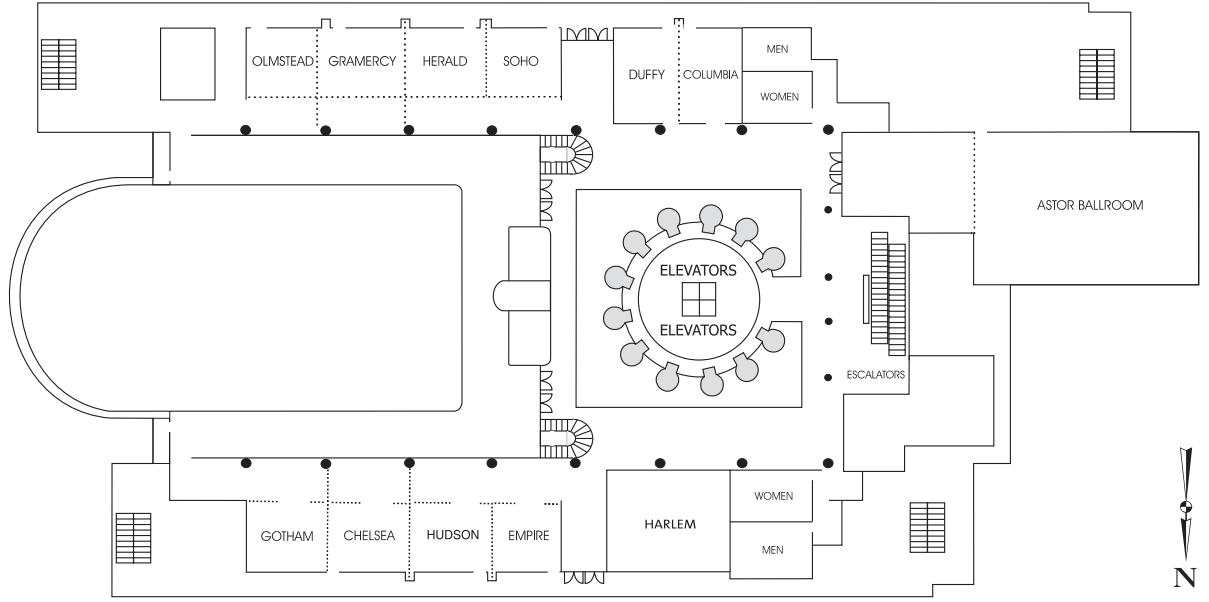
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