Save the Date!

At the forefront of patient safety

You are invited to attend an international symposium that expands your knowledge of human factors/ergonomics applied to health-care devices, environments, and end-users!

- Get insights on the latest science and best practices
- Understand innovations in the safety of health-care providers and patients
- Sharpen the focus of your HF/E initiatives
- Improve your regulatory approaches

The Health-Care Symposium offers leading human factors experts, pharmaceutical and medical device companies, biomedical engineers, health-care providers, FDA representatives, and patient safety researchers the opportunity to share knowledge and find solutions for issues and challenges in health-care.

The symposium is organized into four program tracks:

- Consumer and Clinical Health-Care IT
- Health-Care Environments
- Medical and Drug-Delivery Devices
- Patient Safety Research and Initiatives

It also features workshops, presentations, and interactive posters in a format that allows for interaction and exchange among participants and presenters.

Learn more at www.hfes.org
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BATTLE

HAYDEE M. CUEVAS

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DSO NATIONAL LABS
Sponsors (As of September 18, 2017)

Alphonse Chapanis Best Student Paper Award
HFES COUNCIL OF TECHNICAL GROUPS
WALDEMAR KARWOWSKI

HCTG/PDTG Networking Reception
BOSE
CAFÉ ERGO
CORE HUMAN FACTORS
DEPAUL UNIVERSITY COLLEGE OF COMPUTING AND DIGITAL MEDIA
DESIGN SCIENCE
EMERSON AUTOMATION SOLUTIONS
HEALTH CARE AND PRODUCT DESIGN TECHNICAL GROUPS
HEALTHCARE SAFETY STRATEGIES, LLC
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NEWELL BRANDS
USABILITY ASSOCIATES
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Student Career and Professional Development Day – “The Mentoring Game”
HAYDEE CUEVAS
BARON C. SUMMERS
TWO ANONYMOUS DONORS

Mentor-Mentee Luncheons
HAYDEE CUEVAS
STATE FARM (UX Day)

Student Lounge
BOARD OF CERTIFICATION IN PROFESSIONAL ERGONOMICS (Tuesday)
EMERSON AUTOMATION SOLUTIONS (Wednesday – UX Day)

UX Day Marc Resnick Best Paper Competition
STATE FARM

UX Day PechaKucha-Style Session
EMERSON AUTOMATION SOLUTIONS

UX Day Leadership Development Workshop
EMERSON AUTOMATION SOLUTIONS

Exhibitors (As of September 18, 2017)

Booth 1 Biopac Systems, Inc.
Tabletop 3 Board of Certification in Professional Ergonomics

Booths 23–24 CRC Press/Taylor & Francis Group
Tabletop 4 Foundation for Professional Ergonomics (FPE)

Booths 10–12 HFES Technical Standards

Booth 16 Levitate Technologies, Inc.
Booth 2 Morgan & Claypool Publishers
Booth 14 NexGen Ergonomics
Booth 22 Noldus Information Technology

Tabletop 1 Northwestern University Occupational Ergonomics and Health Master's Program

Booth 8 SAGE Publishing
Booth 3 Smart Eye
Booth 17 Tobii Pro

Tabletop 2 University of Michigan Center for Ergonomics

Booth 13 VALCRI
Booth 9 Xsens
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Registration & Facilities

Meeting Facilities
All Annual Meeting functions other than technical tours and some networking events will be held at the JW Marriott Austin unless otherwise noted in the program. A map of the meeting space may be found at the end of the program. Electronic signage is also available.

Registration Counter Location and Hours
Registration is open during the following hours in Lone Star South Foyer (Level 3):
- Sunday 3:00–6:00 p.m.
- Monday 7:00 a.m.–7:30 p.m.
- Tuesday 7:00 a.m.–6:00 p.m.
- Wednesday 7:30 a.m.–5:30 p.m.
- Thursday 7:30 a.m.–5:00 p.m.
- Friday 8:00 a.m.–12:30 p.m.

On-Site Event Tickets
For those events not sold out or canceled, tickets for tours and social events may be purchased at the Registration Counter (Lone Star South Foyer, Level 3) during registration hours. No waiting lists will be established; tickets will be sold on a first-come, first-served basis.

Refreshments
Beverage breaks will take place in the following locations. Note that due to the 8:00 a.m. plenary sessions Wednesday through Friday, the refreshment breaks are 15 minutes in duration.
- Monday 10:00–10:30 a.m.  Griffin Hall Foyer (Level 2)
  3:00–3:30 p.m.  Griffin Hall Foyer (Level 2)
- Tuesday 10:00–10:30 a.m.  Lone Star South Foyer (Level 3)
  3:00–3:30 p.m.  Griffin Hall (Exhibits – Level 2)
  5:00–7:00 p.m.  Griffin Hall (Exhibits) – Poster Reception (cash bar)
- Wednesday 10:45–11:00 a.m.  Griffin Hall (Exhibits)
  3:30–3:45 p.m.  Griffin Hall (Exhibits)
- Thursday 10:45–11:00 a.m.  Griffin Hall (Exhibits)
  3:30–3:45 p.m.
- Friday 9:00–9:15 a.m.  Lone Star South Foyer & Griffin Hall Foyer
  10:45–11:00 a.m.

Resources
HFES Services
Members of the HFES team will be present in the Lone Star South Foyer, Level 3, to provide information on membership,
publications, and services. Nonmembers who are registered for the full week are entitled to HFES member prices on publication orders.

**On-Site Career Center**
The Career Center is located in Lone Star Salon B (Level 3) and is open during the following hours:

<table>
<thead>
<tr>
<th>Day</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>1:00–6:00 p.m.</td>
</tr>
<tr>
<td>Tuesday</td>
<td>8:30 a.m.–6:00 p.m.</td>
</tr>
<tr>
<td>Wednesday</td>
<td>8:30 a.m.–5:30 p.m.</td>
</tr>
<tr>
<td>Thursday</td>
<td>8:30 a.m.–5:00 p.m.</td>
</tr>
</tbody>
</table>

Employers who have a current job posting, or are registered to search résumés, in the HFES Online Career Center may reserve interview booths and/or tables at the On-Site Career Center, subject to availability. If you have not already reserved space, you may reserve an interview space at the HFES Services desk. The scheduling of interviews at the Annual Meeting is the sole responsibility of the employer.

**Job Notices at the Annual Meeting**
Companies that wish to post a job in the On-Site Career Center, and are NOT interviewing, may opt to have HFES staff collect résumés and mail them after the meeting. The charge is $150.

 Organizations not interviewing or collecting résumés may post a “for information only” job notice at the On-Site Career Center for a $75 fee. Job seekers will be directed to send their résumés directly to the organization advertising the position.

**Internet Café**
Computers with Internet access will be available in Lone Star South Foyer (Level 3). Please limit your time to 10 minutes per session.

**Internet Access**
Complimentary WiFi is available throughout the meeting space. Connect to the JW Marriott Conference wireless network and enter the passcode: HFES2017. Complimentary WiFi is also available in the hotel lobby.

**Message Board**
A cork message board will be available in Lone Star South Foyer (Level 3) for posting hard-copy messages and announcements about meetings and events.

**News and Announcements**
Notifications and news alerts will be sent via the mobile program app and Twitter.

**Follow Us on Twitter @HFES**
Check out the Twitter feed @HFES and post at #HFES2017.

**Mobile Program App**
Download the HFES 2017 Annual Meeting mobile app from Google Play and the App Store. The app provides details about technical sessions, workshops, tours, events, and more. Updates to the program will be provided via push notifications through the app.

**Student Lounge**
The Student Lounge, located in Room 208 (Level 2), has been set aside for students to meet, network, participate in special student activities, and relax. Hours are Tuesday through Thursday, 8:00 a.m. to 7:00 p.m.

**Audiovisual Preview Room**
Room 207 (Level 2) has been reserved for presenters who wish to preview their audiovisual materials. Computers will be available for AV preview only. Preview hours are as follows:

<table>
<thead>
<tr>
<th>Day</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday−Tuesday</td>
<td>7:00 a.m.–6:00 p.m.</td>
</tr>
<tr>
<td>Wednesday</td>
<td>7:30 a.m.–5:30 p.m.</td>
</tr>
<tr>
<td>Thursday</td>
<td>7:30 a.m.–5:00 p.m.</td>
</tr>
<tr>
<td>Friday</td>
<td>7:30 a.m.–12:00 p.m.</td>
</tr>
</tbody>
</table>

**Birds of a Feather Room**
Room 307 (Level 3) 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 12:00 p.m. for individuals with mutual interests to discuss pertinent topics or conduct meetings. A sign-up sheet is provided at the room for advance reservations. Meeting times are allocated on a first-come, first-served basis.

**Volunteers Assignment Room**
Student volunteers who have been assigned duties should check in with Volunteer Coordinators Sarah Williams and Shelby Long in Room 209 (Level 2).

**Exhibits**
Location and Hours
All attendees are encouraged to visit the exhibits, located in Griffin Hall (Level 2). Refreshment breaks will be held in the Exhibit Hall on Tuesday afternoon and on Wednesday and Thursday morning and afternoon. Cash bar service is available on Tuesday from 5:00 to 7:00 p.m. during the poster session.

<table>
<thead>
<tr>
<th>Day</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>Tuesday</td>
<td>3:00–7:00 p.m.</td>
</tr>
<tr>
<td>Wednesday</td>
<td>10:00 a.m.–5:00 p.m.</td>
</tr>
<tr>
<td>Thursday</td>
<td>10:00 a.m.–3:30 p.m.</td>
</tr>
</tbody>
</table>

**Exhibitor List**
The list of exhibitors appears on page 1.
Prize Drawings in the Exhibit Hall
HFES will be giving away two 2018 membership renewals and two registrations for the 2018 Annual Meeting, to be held in Philadelphia, Pennsylvania, October 1–5. To enter a drawing to win these prizes, fill out the entry slip found in your portfolio bag and deposit it in the appropriate box inside the Exhibit Hall. Some exhibitors are also offering a drawing.

Drawings will be held on Wednesday and Thursday during both the morning and afternoon refreshment breaks (10:45–11:00 a.m. and 3:30–3:45 p.m.). Names of winners will be posted on a sign board in the Exhibit Hall. You must be present to claim your prize.

Event Highlights

MONDAY, OCTOBER 9

Student Career & Professional Development Day
The HFES Student Affairs Committee is pleased to offer a special day devoted to events of interest to students on Monday in Lone Star Salon A (Level 3). The Mentoring Game takes place during a sponsored lunch in the same room. The Speed Networking session will be held in Room 301. See page 9 for a schedule of events.

National Ergonomics Month Expo
Celebrate National Ergonomics Month! All HFES meeting attendees and their guests are invited to a special 90-minute NEM Expo, to be held on Monday from 4:45 to 6:15 p.m. in the Lone Star West Foyer (Level 3). The Expo will feature several entertaining and interactive booths with live demonstrations illustrating successful human factors/ergonomics outreach activities. Stop by any time during the session to peruse the booths and learn how you can participate in NEM this year.

Opening Reception
Join friends and colleagues in Lone Star Ballroom D (Level 3) from 6:30 to 9:30 p.m. for this festive kickoff reception. See old friends and meet new ones while you enjoy beverages and hors d’oeuvres. Guest tickets are available to those not attending the annual meeting. All guest tickets must be purchased at the Registration Counter prior to 7:00 p.m. on Monday.

TUESDAY, OCTOBER 10

Mentor-Mentee Brown Bag Luncheons (Tuesday–Thursday)
A series of mentor-mentee luncheons will be held to assist students and early-career professionals and those in career transition to develop mentoring relationships with established professionals in the HF/E field. These small-group, dynamic, interactive sessions enable students and young professionals to meet in an informal setting and discuss their concerns and interests.

The luncheons will be held from 12:00 to 1:30 p.m. on Tuesday and 12:30–1:45 p.m. on Wednesday and Thursday at Uncle Julio’s (off site) for those who reserved a space with Haydee Cuevas prior to the meeting. A waiting list will be available at HFES Services near the Registration Counter (Lone Star South Foyer, Level 3).

Early-Career Professionals Luncheon
During this networking lunch on Tuesday from 12:00 to 1:15 p.m. in Room 212 (Level 2), early-career professionals will have the opportunity to dine and converse with established academic, industry, and government professionals. Attendance is by prior reservation.

Posters Reception
Technical posters will be presented in a dedicated session on Tuesday from 5:00 to 7:00 p.m. in the Exhibit Hall (Griffin Hall, Level 2).

HFES Annual Business Meeting
The Business Meeting will be held on Tuesday from 7:00 p.m. to 7:30 p.m. in Room 303 (Level 3).

WEDNESDAY, OCTOBER 11

Plenary Session
A panel titled “Applying Human-Systems Integration to America’s Policing System” – organized by the National Academies of Science, Engineering, and Medicine’s Board on Human Systems Integration and the Society for Industrial and Organizational Psychology – will take place in Lone Star Salon D (Level 3).

User Experience Day
User Experience Day is a dedicated track of programming specifically geared for user experience professionals. The event will take place on Wednesday from 8:30 a.m. to 8:00 p.m. in various locations. See http://userexperiencedayhfes.com for a summary of the day’s activities.

Interactive Demonstration Session
Three interactive demonstrations will be presented at 9:15–10:45 a.m. in three locations: Rooms 210, 211, and 212.
The presenters will repeat their demonstrations as attendees move from one room to the next throughout the 90-minute session.

**Fellows Poster Session**
HFES Fellows will once again display posters of some of their latest work. The session will be held from 10:00 to 11:00 a.m. in Griffin Hall (Level 2).

**University Lab Posters**
Labs will display their posters in Lone Star West Foyer (Level 3) on Wednesday, between 9:00 a.m. and 12:30 p.m. and Thursday between 9:00 a.m. and 12:30 p.m. and 2:00–5:15 p.m.

**Student Reception**
The Student Reception will take place in Lone Star Salon E (Level 3) from 5:30 to 6:30 p.m. Snacks, beverages, and a no-host bar will be provided, and student awards will be presented.

**Early-Career Professionals Reception**
If you indicated at registration that you would attend this event, join your early-career colleagues in Room 502 (Level 5) from 5:00 to 6:00 p.m. The reception is intended for professionals in their first five years following graduation who are working in industry and academia. In addition to networking with one another and with prominent HFES members, a short program will target specific topics of interest to early-career professionals.

**THURSDAY, OCTOBER 12**

**Plenary Session**
“Human Factors Engineering Can Prevent the Next Major Incident in the Oil and Gas Industry” will be presented from 8:00 to 9:00 a.m. in Lone Star Salon D (Level 3).

**Women’s Networking Lunch**
Those who reserved a seat in advance will meet at Max’s Wine Dive from 12:30 to 1:45 p.m.

**FRIDAY, OCTOBER 13**

**Plenary Session**
“Beyond Gamification: From Here to Affinity” will be presented from 8:00 to 9:00 a.m. in Lone Star Salon D (Level 3)

**Policies**

**Attendee Badges**
All persons attending workshops, technical sessions, exhibits, tours, receptions, and other events must wear their registration badges. Attendees may register for Annual Meeting events at the Registration Counter (Lone Star South Foyer, Level 3).

**Appropriate Conduct**
To provide all participants – members and other attendees, speakers, exhibitors, staff, and volunteers – the opportunity to benefit from the event, HFES is committed to providing a safe and productive meeting environment free of discrimination, hostility, and harassment, in any form, for everyone, regardless of gender, sexual orientation, gender identity, gender expression, physical or mental disability, medical condition, physical appearance, ethnicity, race, religion, political affiliation, nationality, or any other group identity or basis protected by federal or applicable state laws or local ordinances. The Society does not tolerate discrimination or any form of unlawful harassment and is committed to enforcing this Statement of Appropriate Conduct (the “Code”) at all HFES events. See the full policy at https://hfes.org/Web/HFESMeetings/codeofconduct.html

**Photography and Recording Policies**
Attendees may take photos and/or make audio or video recordings of speakers or their visual aids, or exhibitors and their displays, only with permission from HFES and the speakers or exhibitors. Permission forms are available at HFES Services near the Registration Counter. Please complete a form for each presentation you wish to record, obtain the speaker(s)’ signature(s), and return it to HFES Services.

HFES reserves the right to use photographs of attendees for promotional purposes. If you do not want HFES to use your photo, please send an opt-out message to Lois Smith at lois@hfes.org.

**Cell Phones**
Please mute mobile devices (cell phones, tablets, etc.) while attending sessions.

**Nonsmoking Policy**
Smoking is not permitted inside the JW Marriott Austin or on technical tours.

**Proceedings**
All registered attendees have been provided with a flash drive containing the proceedings. Those who reserved a CD-ROM at registration will be provided with a disc.

A computer and printer are located at the Internet Café (Lone Star South Foyer, Level 3) for attendees who wish to print papers from the proceedings. For printing needs not associated with obtaining printouts of papers from the proceedings, visit the Business Center, located on Level 5.

Annual Meeting proceedings papers are also available free to HFES members via SAGE Journals Online. To access the content, log in at http://hfes.org with your user name and password and select the appropriate link on the Welcome page.
MEETINGS

HFES Groups

SATURDAY–SUNDAY, OCTOBER 7–8

HFES Executive Council
7:30 a.m.–6:00 p.m.
Brazos (Level 2)

TUESDAY, OCTOBER 10

Human Factors Editorial Board
(Lunch)
12:00–1:15 p.m.
Room 502 (Level 5)

Local Chapter Presidents (Lunch)
12:00–1:15 p.m.
Room 504 (Level 5)

HFES Annual Business Meeting
7:00–7:30 p.m.
Room 303 (Level 3)

WEDNESDAY, OCTOBER 11

HFES Scientific Publications Committee (Breakfast)
7:00–8:00 a.m.
Room 210 (Level 2)

Outreach Division
(Breakfast)
7:00–8:00 a.m.
Room 505 (Level 5)

Ergonomics in Design Editorial Board
(Lunch)
12:30–1:45 p.m.
Room 504 (Level 5)

Student Chapter Presidents (Lunch)
12:30–1:45 p.m.
Room 502 (Level 5)

THURSDAY, OCTOBER 12

Education & Training Committee
(Breakfast)
6:45–7:45 a.m.
Osteria Pronto Restaurant (Lobby)

Journal of Cognitive Engineering and Decision Making Editorial Board
(Lunch)
12:30–1:45 p.m.
Room 212 (Level 2)

FRIDAY, OCTOBER 13

Education Division (Breakfast)
6:45–7:45 a.m.
Room 211 (Level 2)

Technical Program Committee
(Breakfast)
9:15–11:00 a.m.
Room 306 (Level 3)

ISO and ANSI Standards Committees

TUESDAY, OCTOBER 10

U.S. TAG to ISO/TC 159/SC4
10:30–11:30 a.m.
Room 308 (Level 3)

WEDNESDAY, OCTOBER 11

ANSI/HFES 100
8:30–10:30 a.m.
Room 308 (Level 3)

Technical Standards Division
4:00–5:00 p.m.
Room 308 (Level 3)

Other Groups

MONDAY, OCTOBER 9

Foundation for Professional Ergonomics
8:30 a.m.–4:30 p.m.
Room 211 (Level 2)

TUESDAY, OCTOBER 10

Board of Certification in Professional Ergonomics Reception
7:00–8:00 p.m.
Room 205 (Level 2)

WEDNESDAY, OCTOBER 11

SAE International G45 Human Systems Integration Committee
3:00–5:00 p.m.
Room 211 (Level 2)

FRIDAY, OCTOBER 13

Board of Certification in Professional Ergonomics Business Meeting
7:30 a.m.–5:00 p.m.
Room 210 (Level 2)

SATURDAY, OCTOBER 14

Board of Certification in Professional Ergonomics Business Meeting
7:30 a.m.–3:00 p.m.
Room 210 (Level 2)
Technical Groups

MONDAY, OCTOBER 9

Council of Technical Groups
3:30–5:00 p.m.
Brazos (Level 2)

Aerospace Systems (Reception)
5:15–6:00 p.m.
Room 303 (Level 3)

Aging (Lunch)
12:30–2:00 p.m.
Room 211 (Level 2)

Augmented Cognition
4:30–5:15 p.m.
Room 301 (Level 3)

Children’s Issues
4:30–5:15 p.m.
Room 306 (Level 3)

Cognitive Engineering & Decision Making (Reception)
3:45–4:30 p.m.
Lone Star Salon H (Level 3)

Communications
3:45–4:30 p.m.
Room 306 (Level 3)

Computer Systems / Internet
4:30–5:15 p.m.
Lone Star Salon A (Level 3)

Education (Breakfast)
6:30–8:00 a.m.
Room 310 (Level 3)

Environmental Design / Macroergonomics (Reception)
5:15–6:00 p.m.
Lone Star Salon G (Level 3)

Forensics Professional (Reception)
3:45–4:30 p.m.
Lone Star Salon F (Level 3)

Health Care (Reception)
Business Meeting
5:15–6:00 p.m.
Lone Star Salon F (Level 3)

Reception with Product Design Technical Group
6:30–8:30 p.m.
Off Site

Human Performance Modeling
5:15–6:00 p.m.
Room 301 (Level 3)

Internet / Computer Systems
4:30–5:15 p.m.
Lone Star Salon A (Level 3)

Macroergonomics / Environmental Design (Reception)
5:15–6:00 p.m.
Lone Star Salon G (Level 3)

Occupational Ergonomics
3:45–4:30 p.m.
Room 301 (Level 3)

Perception & Performance
4:30–5:15 p.m.
Lone Star Salon G (Level 3)

Product Design (Reception)
Business Meeting
3:45–4:30 p.m.
Lone Star Salon G (Level 3)

Reception with Health Care Technical Group
6:30–8:30 p.m.
Off Site

Safety (Reception)
4:30–5:15 p.m.
Lone Star Salon F (Level 3)

Surface Transportation (Reception)
5:30–8:00 p.m.
Malverde (off site)

System Development (Lunch)
12:30–2:00 p.m.
Off Site

Test & Evaluation
4:30–5:15 p.m.
Lone Star Salon H (Level 3)

WEDNESDAY, OCTOBER 11

Social Events

MONDAY, OCTOBER 9

Opening Reception
6:30–9:30 p.m.
Lone Star Ballroom D (Level 3)

WEDNESDAY, OCTOBER 11

Early-Career Professionals Reception
5:00–6:00 p.m.
Room 502 (Level 5)

Student Reception
5:30–6:30 p.m.
Lone Star Salon E (Level 3)

THURSDAY, OCTOBER 12

Individual Differences in Performance (Lunch)
12:30–1:45 p.m.
Room 311 (Level 3)

Technical Group Program Chairs
5:30–6:45 p.m.
Room 310 (Level 3)
Technical Tours

Buses will begin loading on in front of the hotel on 2nd Street 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 mobile program app and the poster boards in the registration area for updates about canceled events. Tours with low attendance are subject to cancellation.

**TUESDAY, OCTOBER 10**

Tour T1 – Information eXperience Lab (IX Lab), U. of Texas at Austin, 2:30−4:30 p.m.

**WEDNESDAY, OCTOBER 11**

Tour T2 – Toyota Manufacturing Plant, San Antonio, 11:15 a.m.−4:45 p.m.

**THURSDAY, OCTOBER 12**

Tour T3 – Stop 1: Human Interfaces – Human Factors and Usability Consultancy and Research Facilities; Stop 2: Design Institute for Health at the U. of Texas Dell Medical School, 9:15 a.m.−1:00 p.m.

Technical Program

**Annual Meeting Content Addressing NAE Grand Challenges**

A number of presentations this year relate to the 14 Grand Challenges (GC) posed by the National Academy of Engineering (http://www.engineeringchallenges.org/). HFES Past President William S. Marras categorized the Grand Challenges into four "buckets" (http://bit.ly/Cooke_GrandChallenges). The following codes appear in the titles of presentations as identified by the submitting authors.

- GC-ALL All four
- GC-HH Human Health
- GC-JOL Joy of Living
- GC-SUS Sustainability
- GC-VUL Vulnerability

Workshops

At press time, the following workshops were scheduled to take place. However, check the mobile program app for updates.

**Monday, October 9 1:30−5:00 p.m.**

**AFTERNOON-ONLY WORKSHOP**

**WK2 – Cognitive Skills Training**

Gary Klein, MacroCognition LLC

Monday, October 9, 1:30−5:00 p.m.

Room 201 (Level 2)

Key to Abbreviations Used in This Program

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<td>Aerospace Systems</td>
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<tr>
<td>WK</td>
<td>Workshops</td>
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</table>
Monday, October 9
9:00 a.m.–4:30 p.m.

ALL-DAY WORKSHOPS

WK3 – Systemic Contributor Investigator Training: Learning to See Production Pressure (GC-ALL)
Mike Rayo & David Woods, Ohio State U.
Monday, October 9, 9:00 a.m.–4:30 p.m.
Room 202 (Level 2)

WK4 – Cognitive Neuroscience for the Human Factors Practitioner (GC-HH)
Chang S. Nam, North Carolina State U.
Monday, October 9, 9:00 a.m.–4:30 p.m.
Room 203 (Level 2)

WK5 – Usability Testing: A Hands-On Workshop to Improve the User Experience
Pamela A. Savage-Knepshield, Diane L. Quarles, Christopher R. Paulillo, and Napoleon C. Gaither, U.S. Army Research Lab; Jeffrey A. Thomas, HQ Department of the Army, Deputy Chief of Staff G-1
Monday, October 9, 9:00 a.m.–4:30 p.m.
Room 204 (Level 2)

WK6 – Observing & Interviewing in Context: Methods to Fuel Design and Innovation (GC-ALL)
Keith S. Karn, Human Factors in Context LLC; Mark Rogers, Flince Research + Design
Monday, October 9, 9:00 a.m.–4:30 p.m.
Room 205 (Level 2)

Monday, October 9
10:30 a.m.–5:00 p.m.

SF1 – Student Career and Professional Development Day
STUDENT FORUM
Monday, October 9, 10:30 a.m.–5:00 p.m.
Lone Star Salon A and Room 301 (Level 3)
Alternative Format
Chair: Linsey Steege, U. of Wisconsin-Madison

10:30–11:45 a.m.
Session 1: Transitioning from Student to Industry Professional
Chair: Andrea Crosser, U. of Houston-Clear Lake
Panelists: Hannah Bowman, U. of Houston-Clear Lake; Mark Palmer, Lextant; Patricia McDermott, MITRE Corp.; Stephan Kotin, Facebook; Ashley Hughes, Michael E. DeBakey VA Medical Center

12:00–1:30 p.m.
The Mentoring Game Lunch Session
(complimentary for session attendees)

1:30–2:45 p.m.
Session 2: Human Factors Career Trends: Present, Past, and Future
Chair: Farzan Sasangohar, Texas A&M U.
Panelists: Lisa Billman, MITRE Corp.; Barry Goettl, U.S. Air Force Research Lab; Christy Harper, End to End Research; Christopher Parker, BP; Arathi Sethumadhavan, Core Human Factors Inc.

3:30–5:00 p.m.
Session 3: Building a Better Network Through Speed Networking
Room 301
Co-chairs: Carolina Rodriguez-Paras and Jukrin Moon, Texas A&M U.

Monday, October 9
3:30–5:00 p.m.

Council of Technical Groups
3:30–5:00 p.m.
Brazos (Level 2)

Monday, October 9
4:45–6:15 p.m.

SS1 – National Ergonomics Month Expo
SPECIAL SESSIONS
Monday, October 9, 4:45–6:15 p.m.
Lone Star West Foyer (Level 3)
Alternative Format
Chair: Elizabeth Phillips, Brown U., NEM Committee
Co-chair: Joseph Keebler, Embry-Riddle Aeronautical U., NEM Committee Cochair

Monday, October 9
6:30–9:30 p.m.

Opening Reception
6:30–9:30 p.m.
Lone Star Ballroom D (Level 3)
Tuesday, October 10
8:00–10:00 a.m.

PL1 – Opening Plenary Session
PLENARY
Tuesday, October 10, 8:00–10:00 a.m.
Lone Star Salon D (Level 3)
Chair: Christopher Mayhorn, Technical Program Committee
Chair
1. Presidential Address, Nancy J. Cooke, HFES President
2. Presentation of Newly Elected Fellows
3. Presentation of HFES Awards

Tuesday, October 10
10:30 a.m.–12:00 p.m.

AS1 – General Aviation Weather: Human Factors Issues and Current Research
AEROSPACE SYSTEMS
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Room 203 (Level 2)
Discussion Panel
Chair: Yolanda Ortiz, Embry-Riddle Aeronautical U.; Cochair: Jayde King, Embry-Riddle Aeronautical U.
Panelists: Beth Blickensderfer, Embry-Riddle Aeronautical U.; Ian Johnson, Federal Aviation Admin.; Chris Johnson, U. of Wisconsin; Barrett Caldwell, Purdue U.; Dennis Beringer, Federal Aviation Admin.

C1 – Communications and User Needs
COMMUNICATIONS
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Room 205 (Level 2)
Lecture
Chair: Elizabeth Gibson, AT&T
4. Virginia Counts, Arizona State U., De-Clutter Your Inbox: Transform Your Perspective to See E-mail as a Tool (GC-JOL)

CS1/I – Cyber Human Research From the Cyber Operator’s View (GC-VUL)
COMPUTER SYSTEMS; COSPONSORED BY INTERNET
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Room 303 (Level 3)
Discussion Panel
Chair: Robert Pastel, Michigan Technological U.
Cochair: Robert Gutzwiller, Space and Naval Warfare Systems Center Pacific
Panelists: Brett Borghetti, Air Force Inst. of Technology; Gregory Funke, U.S. Air Force Material Command, 711th Human Performance Wing; Aaron Banks, 33d Network Warfare Squadron, Joint Base San Antonio-Lackland, Texas; Robert Kaufman, 688th Cyberspace Wing, Joint Base San Antonio-Lackland, Texas; Markus M. Borneman, Air Force Inst. of Technology

FP1 – Nighttime Photography and Videography: Techniques and Tips
FORENSICS PROFESSIONAL
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Room 301 (Level 3)
Discussion Panel
Chair: Joseph Cohen, Error Analysis, Inc.
Panelists: Jason Young, Advantage Forensics Inc.; Jeffrey W. Muttart, Crash Safety Research Centre; Jeff Suway, Biomechanical Research and Testing

GS1 – Past President’s Forum – People Are Messy: TED-Style Talks That Help to Understand Human Variability and Complexity
GENERAL SESSIONS
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Lone Star Salon H (Level 3)
Alternative Format
Chair: William S. Marras, Ohio State U.

ME1 - Enhancing Business Effectiveness and Worker Sustainability Through HFE (GC-SUS)
MACROERGONOMICS
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Room 306 (Level 3)
Discussion Panel
Chair: Cristina Banks, U. of California, Berkeley
Panelists: Kathleen Mosier, Teamsource LLC; Michelle Robertson, MM Robertson & Associates, LLC; Meg Honan, Genentech; Wayne Cascio, U. of Colorado, Denver
OE1 - Ergonomic Risk Models, Guidelines, and an Industry Perspective of the HF/E Profession

OCCUPATIONAL ERGONOMICS
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Lone Star Salon A (Level 3)
Alternative Format
Chair: Christopher Reid, Boeing
3. Sean Gallagher, Richard F. Sesek, Mark C. Schall, Jr., and Rong Huangfu, Auburn U., Validation of the LiFFT Risk Assessment Tool and Guidance on Its Use
4. Amy May, Boeing Co., Invited Address: An Industry Perspective of the HF/E Profession (GC-HH)

PP1 - Perception & Performance 1
PERCEPTION AND PERFORMANCE
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Lone Star Salon F (Level 3)
Lecture
Chair: Erin Alves, Honeywell Aerospace; Cochair: Sara Riggs, Clemson U.
1. Carolyn Hartzell and Rick P. Thomas, Georgia Inst. of Technology, Expectations Influence Visual Search Performance (GC-HH)
2. Shivam Pandey, Michael D. Byrne, William H. Jantscher, Marcia K. O’Malley, and Priyanshu Agarwal, Rice U., Toward Training Surgeons With Motion-Based Feedback: Initial Validation of Smoothness as a Measure of Motor Learning (GC-HH)
4. Scott M. Betza, Clemson U.; Scott T. Reeves, Medical U. of South Carolina; James H. Abernathy III, Medical U. of South Carolina; Sara Lu Riggs, Clemson U., The Effect of Movement and Cue Complexity on Tactile Change Detection (GC-HH)
6. Edin Sabic and Jing Chen, New Mexico State U., Left or Right: Auditory Collision Warnings for Driving Assistance Systems

S1 – Safety in Aviation: Preventing Performance Decline and Measuring Safety in Aviation
SAFETY
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Room 201 (Level 2)
Lecture
Chair: Anthony Diefendorf, Textron Aviation; Cochair: Connor Hoover, Battelle Center for Human Performance and Safety
1. Steven Landry and Zixu Zhang, Purdue U., The Critical Pair Problem as a Measure of the Safety of Separation Assurance Systems in Air Traffic Control
3. Selina Fothergill, RMIT U., Challenges When U. Researchers Work Collaboratively With Industry in Aviation Safety: Why Can’t We All Just Get Along?
4. Andrew T. Miranda, Naval Safety Center, Using Conditional Probabilities to Understand “Human Error” in Military Aviation Mishaps
5. Eric T. Chancey, Leidos; Yusuke Yamani, Old Dominion U.; J. Christopher Brill, Air Force Research Lab; James P. Bliss, Old Dominion U., Effects of Alarm System Error Bias and Reliability on Performance Measures in a Multitasking Environment: Are False Alarms Really Worse Than Misses? (GC-VUL)

SD1 – Human-Systems Integration Stakeholders: Successes, Challenges, and Lessons Learned Across Government and Industry
SYSTEM DEVELOPMENT
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Room 213 (Level 2)
Discussion Panel
Chair: Stephen Dorton, Sonalysts, Inc.; Cochair: Petra Alfred, Pacific Science & Engineering Group

TRAINING
Tuesday, October 10, 10:30 a.m.–12:00 p.m.
Brazos (Level 2)
Discussion Panel
Chair: Scott Ososky, U.S. Army Research Lab
Panelists: Michael Dorneich and Stephen B. Gilbert, Iowa State U.; Benjamin Goldberg, U.S. Army Research Lab; Cheryl I. Johnson, Naval Air Warfare Center Simulation and Training; Anne M. Sinatra, U.S. Army Research Lab
Tuesday, October 10  
12:00–1:30 p.m.

Human Factors Editorial Board (Lunch)  
12:00–1:15 p.m.  
Room 502 (Level 5)

Local Chapter Presidents (Lunch)  
12:00–1:15 p.m.  
Room 504 (Level 5)
5. Murat Cubuktepe and Ufuk Topcu, U. of Texas at Austin, Intent Prediction in Shared Control with Delayed Feedback

I1/CS – The Intersections of Usability, Privacy, and Security
INTERNET; COSPONSORED BY COMPUTER SYSTEMS
Tuesday, October 10, 1:30–3:00 p.m.
Room 303 (Level 3)
Lecture
Chair: Julian Brinkley, U. of Florida; Cochair: Juan Gilbert, U. of Florida

1. Isis Chong, Huangyi Ge, Ninghui Li, and Robert W. Proctor, Purdue U., Influence of Privacy Priming and Security Framing on Android App Selection
2. Aiping Xiong, Huangyi Ge, Wanling Zou, Ninghui Li, and Robert W. Proctor, Purdue U., Increasing the Influence of Permission Safety on App Selections by Changes in Visual Representation

OE2 – Communicating the Value of Ergonomics to Management: Part 1 – Language, ROI, & Models
OCCUPATIONAL ERGONOMICS
Tuesday, October 10, 1:30–3:00 p.m.
Lone Star Salon A (Level 3)
Discussion Panel
Chair: David Rempel, Retired; Cochair: Christoper Reid, Boeing
Panelists: Blake McGowan, Humantech; Cindy Williamson, Boeing; David Alexander, Auburn Engineers; Cindy Whitehead, Naval Surface Warfare Center; Ahmad Sobhani, Oakland U.

PRODUCT DESIGN
Tuesday, October 10, 1:30–3:00 p.m.
Room 201 (Level 2)
Alternative Format
Chair: Stanley Caplan, Usability Associates
The winners of the 2017 Product Design Technical Group Stanley H. Caplan User-Centered Product Design Award will present their work.

PP2 – Perception & Performance 2
PERCEPTION AND PERFORMANCE
Tuesday, October 10, 1:30–3:00 p.m.
Lone Star Salon F (Level 3)
Lecture
Chair: Keith Karn, Human Factors in Context LLC; Cochair: Brian Simpson, U.S. Air Force Research Lab
1. Kylie M. Gomes and Sara L. Riggs, Clemson U., The Effect of Age on Crossmodal Matching Using Auditory Frequency
5. Youngbo Suh and Thomas K. Ferris, Texas A&M U., Examining Change Sensitivity to Vibrotactile Beats in a Hand-Held Touchscreen Device

S2 – Safety in a Transformational Era of Transportation
SAFETY
Tuesday, October 10, 1:30–3:00 p.m.
Room 203 (Level 2)
Discussion Panel
Chair: Jeffrey Homola, NASA Ames Research Center; Cochair: Quang Dao, NASA
Panelists: Tamsyn Edwards, NASA Ames Research Center; Lawrence Shattuck, Naval Postgraduate School; Alan Hobbs, San Jose State U. Foundation; Thomas Z. Strybel, California State U., Long Beach; Robert Proctor, Purdue U.; Erin Flynn-Evans, NASA Ames Research Center
SD2 – Human-Centered Analysis and Design in System Development
SYSTEM DEVELOPMENT
Tuesday, October 10, 1:30–3:00 p.m.
Room 213 (Level 2)
Lecture
Chair: Tina Mirchi, Pacific Science & Engineering Group; Cochair: Claudia Acemyan, Rice U.
1. Esa M. Rantanen and Ernest Fokoue, Rochester Inst. of Technology; Kathleen Gegner, U. of Illinois at Urbana-Champaign; Jacob Haut, Rochester Inst. of Technology; Thomas J. Overbye, Texas A&M U., Data Properties Underlying Human Monitoring Performance (GC-ALL)
2. Holly A. H. Handley, Old Dominion U., Comparison of Alternate Human Viewpoints
5. Christopher J. Garnick, Jason M. Bindewald, and Christina F. Rusnock, Air Force Inst. of Technology, Designing an Automated Agent to Encourage Human Reliance

SS-A – Honoring the Contributions and Career of Joel S. Warm
SPECIAL SESSION
Tuesday, October 10, 1:30-3:00 p.m.
Room 306
Discussion Panel
Chair: James Szalma, U. of Central Florida; Cochair: Peter A. Hancock, U. of Central Florida
Panelists: William S. Helton, George Mason U.; Gregory Funke, U.S. Air Force Research Lab; Tyler Shaw, George Mason U.; others TBA

ST1 – Driver Perception, Response, & Performance
SURFACE TRANSPORTATION
Tuesday, October 10, 1:30–3:00 p.m.
Lone Star Salon H (Level 3)
Lecture
Chair: Miguel Perez, Virginia Tech; Cochair: Shannon Roberts, U. of Massachusetts, Amherst
3. Jennifer Merickel, Robin High, Lynette Smith, Chris Wichman, Emily Frankel, Kaitlin Smits, Andjela Drincic, and Cyrus Desouza, U. of Nebraska Medical Center; Pujitha Gunaratne and Kazutoshi Ebe, Toyota; Matthew Rizzo, U. of Nebraska Medical Center, At-Risk Driving Behavior in Drivers With Diabetes: A Neuroergonomics Approach (GC-HH)
5. John G Gaspar, Omar Ahmad, and Daniel V McGehee, U. of Iowa, Classification of Driver Response to Sudden Unintended Acceleration

T2 – Training Advances in Computer Interaction, Transportation, and Teams
TRAINING
Tuesday, October 10, 1:30–3:00 p.m.
Room 205 (Level 2)
Lecture
Chair: Andy Dattel, Embry-Riddle Aeronautical U.; Cochair: Robert Gutzwiller, Space and Naval Warfare Systems Center Pacific
2. Ravi Agrawal, Micheal Knodler, Donald L. Fisher, and Siby Samuel, U. of Massachusetts, Advanced Virtual Reality Based Training to Improve Young Drivers’ Latent Hazard Anticipation Ability
3. Jessica Cruit, Christina Frederick, Beth Blickensderfer, Joseph R. Keebler, and Thomas Guinn, Embry-Riddle Aeronautical U., Predicting General Aviation Pilots’ Weather-Related Performance Through a Scenario-Based Assessment
5. Ronald Stevens, UCLA School of Medicine; Trysha Galloway, The Learning Chameleon, Inc.; Ann Willemsen-Dunlap, JUMP Simulation and Education Center, A Team’s Neurodynamic Organization Is More Than the Sum of Its Members (GC-HH)
TE2 – Quantitative and Qualitative Measurements in Test and Evaluation
TEST AND EVALUATION; COSPONSORED BY PERCEPTION & PERFORMANCE, SYSTEM DEVELOPMENT
Tuesday, October 10, 1:30–3:00 p.m.
Lone Star Salon G (Level 3)
Lecture
Chair: Lamar Garrett, U.S. Army Research Lab; Cochair: Christopher Paulillo, U.S. Army Research Lab
4. Thomas D. Parsons and Nicole Russo, U. of North Texas; Paul D. Schermerhorn, Soartech, Avatar Administered Neuropsychological Testing (AVANT): Stroop Interference Task (GC-HH)
5. Doug A. Peterson and Denis I. Kozhokar, U. of South Dakota, Peak-End Effects for Subjective Mental Workload Ratings

Tuesday, October 10
3:30–5:00 p.m.
CE1 – On Pedestrian Behavior, Drivers, Hazard Awareness, and Why This Is Important for Autonomous Vehicles (GC-HH)
COGNITIVE ENGINEERING AND DECISION MAKING
Tuesday, October 10, 3:30–5:00 p.m.
Room 203 (Level 2)
Invited Address
Chair: Stacy Balk, Leidos
Invited Speaker: Tal Oron-Gilad, Ben-Gurion U. of the Negev

CS2/I – Input Devices and Information-Rich Environments
COMPUTER SYSTEMS; COSPONSORED BY INTERNET
Tuesday, October 10, 3:30–5:00 p.m.
Room 303 (Level 3)
Lecture
Chair: Kapil Madathil, Clemson U.
1. Elliott Williams, Purdue U., Bridging User Research and Interface Design Through Information-Driven Conceptual Modeling
3. Jason J. Saleem and Dustin T. Weiler, U. of Louisville, Multiple Screens and Devices in an Information-Rich Environment
4. Han Zhang and Alan Hedge, Cornell U., Effects of Spatial Distribution of Heat and Grip Areas for Tablet Computer Use
5. Angie Avera and Nicholas Kelling, U. of Houston-Clear Lake; Christy Harper, End 2 End User Research; Rick Burks, HP Inc.; Hannah Bowman, U. of Houston-Clear Lake, Exploring the Optimal Number of Trials and Participants for Touchpad Testing Using Fitts-Based Tasks

E1 – Design, Development, and Theory: Understanding the Dynamics Facing Us in the Classroom
EDUCATION
Tuesday, October 10, 3:30–5:00 p.m.
Room 205 (Level 2)
Lecture
Chair: Heather Lum, Penn State Erie, The Behrend College
5. Heidi Ann Hahn, Los Alamos National Lab, Recruitment and Educational Alignment Use Cases for Competency Frameworks (GC-SUS)

FP2 – Cross-Border Testifying Tips: U.S. Experts in Canada and Canadian Experts in the U.S.
FORENSICS PROFESSIONAL
Tuesday, October 10, 3:30–5:00 p.m.
Room 301 (Level 3)
Discussion Panel
Chair: Alison Vredenburgh, Vredenburgh & Associates, Inc.
Panelists: Jason Young, Advantage Forensics Inc.; David Liske, LISKE Accident & Injury Experts; Stephen Young, Applied Safety & Ergonomics
GS2 – The HFES Diversity Committee: Challenges and Opportunities for Involvement (GC-ALL)
GENERAL SESSIONS
Tuesday, October 10, 3:30–5:00 p.m.
Lone Star Salon G (Level 3)
Discussion Panel
Chair: Erin Chiou, Arizona State U.
Panelists: Abigail R. Wooldridge and Morgan Price, U. of Wisconsin-Madison; Euniqué Mosqueda, Boeing Commercial Airplanes; Rod Roscoe, Arizona State U.

GS3 – HFES Contributions to International Ergonomics Association: Current Status and Opportunities for Engagement by HFES Members (GC-ALL)
GENERAL SESSIONS
Tuesday, October 10, 3:30–5:00 p.m.
Lone Star Salon H (Level 3)
Discussion Panel
Chair: Waldemar Karwowski, U. of Central Florida
Panelists: Nancy J. Cooke, Arizona State U.; Andrew S. Imada, AS Imada and Associates; Kathleen Rosier, Teamscape LLC; David Rempel, U. of California San Francisco

HEALTH CARE
Tuesday, October 10, 3:30–5:00 p.m.
Brazos (Level 2)
Discussion Panel
Chair: Deborah DiazGranados, Virginia Commonwealth U.
Panelists: Ralph Ron Clark and Shin-Ping Tu, Virginia Commonwealth U.; Joseph R. Keebler, Embry-Riddle Aeronautical U.; Michael Curtis, Bonsai Inst., LLC; Evan M. Palmer, San Jose State U.; Elizabeth Lazzara, Embry-Riddle Aeronautical U.

K1 – Children's Issues Lecture Session
CHILDREN’S ISSUES
Tuesday, October 10, 3:30–5:00 p.m.
Room 213 (Level 2)
Lecture
Chair: Karen Jacobs, Boston U.
1. Yi-Ching Lee, George Mason U.; Noelle LaVoie and James Parker, Parallel Consulting, LLC, Teen Drivers: Approach for Teaching Speed Management and Peer Passenger Interactions (GC-VUL)
3. Danielle Rokni, Hagai Tapiro, Yisrael Parmet, and Tal Oron-Gilad, Ben-Gurion U. of the Negev, Crossing the Road While Playing a Mobile Game App—Effects of Age, Environmental Load, and Game Complexity (GC-VUL)

ME2 – Macroergonomics Across Domains
MACROERGONOMICS
Tuesday, October 10, 3:30–5:00 p.m.
Room 306 (Level 3)
Lecture
Chair: Blake McGowan, Humantech, Inc.; Cochair: Edmond Ramly, U. of Wisconsin-Madison
2. Ann Schoofs Hundt and Pascale Carayon, U. of Wisconsin-Madison; Yushi Yang, Drexel U.; Jason Stamm and Vaibhav Agrawal, Geisinger Health System; Peter Kleinschmidt, U. of Wisconsin School of Medicine and Public Health; Peter Hoonakker, U. of Wisconsin-Madison, Role Network Analysis of Team Interactions and Individuals Activities: Application to VTE Prophylaxis (GC-HH)
3. Hong Luo, U. of Chinese Academy of Sciences; Yong Wang and Liqi Yi, CAS Key Lab of Mental Health, Inst. of Psychology, The Intermediate Effect of Psychological Capital Between Culture and Performance (GC-ALL)
4. Alex Ryan, Panagiotis Matsangas, Andrew Anglemeyer, and Nita Lewis Shattuck, Naval Postgraduate School, Improving Sleep Attributes of Military Personnel in Operational Settings by Controlling Exposure to Blue Light
5. Stephen Bao, Jia-Hua Lin, Dana Wilcox, and Amanda May, Washington State Department of Labor and Industries, Will Sit/Stand Workstations Solve Work-Related Musculoskeletal Disorders Among Office Workers? (GC-HH)

OE3 – The Occupational Low Back Pain Consortium
OCCUPATIONAL ERGONOMICS
Tuesday, October 10, 3:30–5:00 p.m.
Lone Star Salon A (Level 3)
Discussion Panel
Chair: William S. Marras, Ohio State U.

S3 – Operator Performance and Safety in Road Vehicles
SAFETY; COSPONSORED BY SURFACE TRANSPORTATION
Tuesday, October 10, 3:30–5:00 p.m.
Room 201 (Level 2)
Lecture
Chair: Jangwoon Park, Texas A&M U.-Corpus Christi; Cochair: Anuj Pradhan, U. of Michigan
2. Heejin Jeong and Yili Liu, U. of Michigan, Horizontal Curve Driving Performance and Safety Affected by Road Geometry and Lead Vehicle (GC-HH)
3. Husam Muslim and Makoto Itoh, U. of Tsukuba, Human Factors Issues Associated With Lane Change Collision Avoidance Systems: Effects of Authority, Control, and Ability on Drivers’ Performance and Situation Awareness (GC-JOL)
4. Ceyda Dündar, Pınar Bıçaksız, and Yusuke Yamani, Old Dominion U., Impact of Information Bandwidth of In-Vehicle Technologies on Young Drivers’ Attention Maintenance Performance: A Driving Simulator Study (GC-VUL)
5. Kenneth Nemire, HFE Consulting LLC, Seat Belt Use by Adult Rear Seat Passengers in Private Passenger, Taxi, and Rideshare Vehicles (GC-HH)

SS2 – Human Factors Prize and Journal Awards Session
SPECIAL SESSIONS
Tuesday, October 10, 3:30–5:00 p.m.
Lone Star Salon F (Level 3)
Alternative Format
Chair: Peter Johnson, U. of Washington, HFES Awards Committee Chair; Cochair: William J. Horrey, Scientific Publications Division Chair
Awards will be presented for the best papers published in Human Factors, Ergonomics in Design, and the Journal of Cognitive Engineering and Decision Making. The 2017 Human Factors Prize will also be presented.

Tuesday, October 10
5:00–7:00 p.m.
All technical and U. lab posters are presented during a reception in the Exhibit Hall.

POS – Interactive Posters Session and Reception
INTERACTIVE SESSIONS
Tuesday, October 10, 5:00 PM–7:00 PM
Griffin Hall (Level 2)
Poster Session
Chair: Ronald Boring, Idaho National Lab
All posters will be presented in 2 one-hour periods. This enables all poster authors to view other posters and exhibits when not required to be stationed at their poster boards to discuss their work with attendees. The schedule is as follows: 5:00–6:00 p.m.: Authors of odd-numbered posters (as shown below) will be present at their boards. 6:00–7:00 p.m.: Authors of even-numbered posters will be at their boards.

Aerospace Systems
2. Tianhua Li, Florida Inst. of Technology; Andrew R. Dattel, Amber Davis, Andrey Babin, Stefan Melendez, Qianru Yang, and Jie Chen, Embry-Riddle Aeronautical U., The Extent of Distraction of Cell Phone Conversations for Passengers in Simulated Flight (GC-VUL)

Aging
5. Rachel E. Stuck, Amy W. Chong, and Tracy L. Mitzner, Georgia Inst. of Technology; Wendy A. Rogers, U. of Urbana-Champaign, Medication Management Apps: Usable by Older Adults? (GC-HH)
6. Keith S. Jones, Texas Tech U.; Barbara Cherry, Texas Tech U. Health Sciences Center; Dennis J. Harris, Texas Tech U.; Mohan Sridharan, U. of Auckland, Formative Analysis of Aging in Place: Implications for the Design of Caregiver Robots

Augmented Cognition

Children’s Issues
9. Derek Mak and Dan Nathan-Roberts, San Jose State U., Design Considerations for Educational Mobile Apps for Young Children

Cognitive Engineering and Decision Making
10. Caitlin Lang Faerevaag, Blake A. Nguyen, Camilo A. Jimenez, and Florian Jentsch, U. of Central Florida, Attitudes Toward Unreliable Diagnostic Aiding in Dangerous Task Environments
12. Yelim Mun, U. of Twente; Esther Oprins, Karel van den Bosch, Anja van der Hulst, and Jan Maarten Schraagen, TNO, Serious Gaming for Adaptive Decision Making of Military Personnel
14. Daniel Lafond, Thales Research and Technology Canada; Benoit R. Vallières, François Vachon, and Sebastien Tremblay, Université Laval, Comparing Naval Decision Support Technologies Using Decision Models, Process Tracing, and Error Analysis

Communications

Computer Systems
23. Adam S. Mouloua, Mustapha Mouloua, and Peter A. Hancock, U. of Central Florida, The Effects of Computer User Handedness on a Mouse-Clicking Task (GC-ALL)

Education
25. Madison Goodyear and Dan Nathan-Roberts, San Jose State U., Gamification and the Design of Badges in Relation to Educational Achievement (GC-VUL)
26. Hung-Tao Chen, Eastern Kentucky U.; Michael Lee, U. of Kentucky, Redesigning a Practice Test Into a Game
29. Lixiao Huang, Duke U.; Douglas Gillan, North Carolina State U., Group Interactions With Robots in a Robotics Tournament

Environmental Design
31. Brittany Neilson, Theresa Nguyen, Alex Bukowski, and Martina Klein, Texas Tech U., Are All Types of Natural Environments Created Equal? A Comparison of Different Elements in Nature for Improving Restoration in Work Environments

Forensics Professional
32. Levi Dixon and Dan Nathan-Roberts, San Jose State U., Watch Out! Or Do We? A Review of Literature on Human Locomotion, Visual Gaze, and Expectation of Trip Hazards

General Sessions
33. Vasudha Varma and Dan Nathan-Roberts, San Jose State U., Gestural Interaction With Three-Dimensional Interfaces: Current Research and Recommendations (GC-JOL)

Health Care
34. Meiyuzi Gao and Philip Kortum, Rice U., Measuring the Usability of Home Health-Care Devices Using Retrospective Measures (GC-HH)
35. Nicholas DeFilippis, Beth Blickensderfer, and Joseph Keebler, Embry-Riddle Aeronautical U., Preoperative Care Challenges in Ambulatory Clinics: A Proposed Research Agenda (GC-HH)
37. Dustin T. Weiler, Stefanie O. Villajuan, Laura Edkins, Sean Cleary, and Jason J. Saleem, U. of Louisville, Wearable Heart Rate Monitor Technology Accuracy in Research: A Comparative Study Between PPG and ECG Technology (GC-HH)


39. Sung Hee Ahn, Gee Won Shin, Wonjoon Kim, and Yui-Yee Raymond Chan, Sarah D. Fouquet, and Brandan Kennedy, Children’s Mercy Kansas City; Tiffany Leverenz and Barbara S. Chaparro, Wichita State U., Breaking All the Rules: Does Heuristic Analysis Predict Usability Performance? A Look Inside a Native EMR Mobile Application

Human Performance Modeling
41. Igor Dolgov, New Mexico State U.; Elizabeth K. Kaltenbach, Sonos, Trust in Automation Inventories: An Investigation and Comparison of the Human-Computer Trust and Trust in Automated Systems Scales (GC-VUL)

Individual Differences in Performance
42. Alexis R. Neigel, Yu Miao, Nicole Montagna, Cristina A. Chirino, and James L. Szalma, U. of Central Florida, Individual Differences in Achievement Motivation Are Related to Vigilance Performance

43. Theresa T. Kessler and Kimberly T. Stowers, U. of Central Florida; J. Christopher Brill, U.S. Air Force Research Lab; Peter A. Hancock, U. of Central Florida, Comparisons of Human-Human Trust With Other Forms of Human-Technology Trust (GC-VUL)

44. Alexis R. Neigel, Victoria Claypoole, Kristen M. Waldorf, Daryn Dever, and James L. Szalma, U. of Central Florida, Motivational Correlates of Vigilance Task Engagement

45. Randall D. Spain and Jerry W. Hedge, RTI International; Jennifer K. Blanchard, Transportation Security Admin., Examining Predictors of Visual Search Success in Transportation Security Officers and Behavior Detection Officers

46. Michael L. Wilson, U.S. Army Aeromedical Research Lab; Amelia J. Kinsella, Clemson U., Absence of Gender Differences in Actual Induced HMD Motion Sickness vs. Prettrial Susceptibility Ratings (GC-VUL)

47. Eric T. Greenlee, Texas Tech U.; Gregory J. Funke, U.S. Air Force Research Lab; Lindsay Rice, Texas Tech U., Evaluation of the Team Workload Questionnaire (TWLQ) in a Team Choice Task


50. Dinesh Kaimal, Ravi Teja Sajja, and Farzan Sasangohar, Texas A&M U., Investigating the Effects of Social Media Usage on Sleep Quality (GC-JOL)


Macroergonomics

Occupational Ergonomics

54. Zachary Merrill, April Chambers, and Rakíé Cham, U. of Pittsburgh, Impact of Age and Body Mass Index on Anthropometry in Working Adults

55. Hunter DeBusk, Kari Babski-Reeves, and Harish Chander, Mississippi State U., Preliminary Analysis of StrongArm Ergoskeleton on Knee and Hip Kinematics and User Comfort (GC-HH)

56. Douglas Palmer, Carolyn M. Sommerich, and Amy R. Darragh, Ohio State U., Patient Care and Electronic Medical Record Entry Demands on Physical Therapists (GC-HH)


58. Stephanie Witman and April Chambers, U. of Pittsburgh, Weight-Shifting Strategies and Discomfort During Prolonged Standing (GC-HH)


60. Mattie N. Milner, Dylan Bush, Daniel Marte, Stephen Rice, Scott Winter, Evan Adkins, and Angela Roccasecca, Embry-Riddle Aeronautical U.; Gajapriya Tamilselvan, Florida Inst. of Technology, The Effect of Chart Type on Pilots’ Response Time

62. Spencer Castro, U. of Utah, How Handheld Mobile Device Size and Hand Location May Affect Divided Attention

63. Benjamin P. Widlus and Keith S. Jones, Texas Tech U., Do Exploratory Arm Movements Contribute to Reach-Ability Judgments?


67. Michael J. Crites, Texas Tech; Jamie C. Gorman, Georgia Inst. of Technology, Bimanual Coupling and the Intermanual Speed Advantage

**Product Design**

68. Mika Morishima, Kanazawa U.; Tamaki Mitsuno, Shinshu U., A Pilot Study on Measuring the Consecutive Macro Air Gap Between Three Types of Masks and a Female Face (GC-HH)

69. Chelsea Kramer and Shelley Kelsey, CAE Canada; Christina Rudin-Brown, Human Factors North; Robin Langerak, Carleton U.; Andrea Scipione, C3 Human Factors; Anthony Jaz and Peter Burns, Transport Canada, User-Centered Label Design Guidelines for Child Restraint Systems

70. Yushin Lee, Joong Hee Lee, Yong Min Kim, and Jihwan Lee, Seoul National U.; Sanghyun Kwon, Samsung Electronics; Hyungmin Sim and Myung Hwan Yun, Seoul National U., The Effects of Curvature of Edge Screen on Subjective Feelings in Smartphone Usage

71. Claudia Ziegler Acemyan and Philip Kortum, Rice U., Assessing the Usability of the Hart InterCivic eSlate During the 2016 Presidential Election


73. Travis M. Kent, C. Melody Carswell, Michael Lee, and Michelle A. Sublette, U. of Kentucky, Do Aesthetic Design Principles Predict Visual Appeal of a Simple Control Panel?


**Safety**


76. Sarah L. Hemler, Danielle N. Charbonneau, and Kurt E. Beschorner, U. of Pittsburgh, Effects of Shoe Wear on Slipping—Implications for Shoe Replacement Threshold (GC-HH)


**Surface Transportation**


80. Ben D. Sawyer, Bobbie Seppelt, Bruce Mehler, and Bryan Reimer, Massachusetts Inst. of Technology, Trust Impacts Driver Glance Strategy in Multitasking (GC-VUL)

81. J. Jay Todd, Young C. Bui, Abtine Tavassoli, and David A. Krauss, Exponent, Quantitative Method for Estimating Driver Eye Height

82. Curtis M. Craig, U. of Minnesota; Samuel J. Levulis, Texas Tech U., The Relationship Between Global and Information-Processing Factors and Self-Perceived Risky Driving Among Older Adults

83. Hallie Clark, Anne Collins McLaughlin, and Jing Feng, North Carolina State U., Situational Awareness and Time to Takeover: Exploring an Alternative Method to Measure Engagement With High-Level Automation

84. Michael J. Waltrip, Bridget A. Lewis, and Caryl L. Baldwin, George Mason U., Perceptual Categorization and Perceived Urgency of Auditory Looming Sounds

85. Shane Davis, Gerardo Lopez, Samuel Neff, and Benjamin Barton, U. of Idaho, Effects of Secondary-Task Processing Stage on Auditory Detection and Crossing Thresholds in Relation to Approaching Vehicle Noises

**System Development**


87. Ian Robertson and Philip Kortum, Rice U., The Effect of Mental Fatigue on Subjective Usability Scores

**Test and Evaluation**

89. Jung-Hyun Kim, CDC/NIOSH/NPPTL; Do-Hee Kim and Joo-Young Lee, Seoul National U.; Aitor Coca, CDC/NIOSH/NPPTL, Relationship Between Total Heat Loss and Thermal Protective Performance of Firefighter Protective Clothing and Consequent Influence on Burn Injury Prediction via Flame-Engulfment Manikin Test (GC-HH)

90. Emily Gonzalez-Holland, Daphne Whitmer, Larry Moralez, and Mustapha Mouloua, U. of Central Florida, Examination of the Use of Nielsen’s 10 Usability Heuristics and Outlooks for the Future


92. Stephanie A. T. Brown, Jay A. McNamara, and K. Blake Mitchell, U.S. Army NSRDEC, Comparison of the Effects of Software Zeroing on Performance While Using Two Sighting Technologies in a Marksmanship Simulator


**Training**


97. Nicholas W. Fraulini, Alexa L. Fistel, Monica A. Perez, Teresa L. Perez, and James L. Szalma, U. of Central Florida, Examining the Effects of Training Methods for Vigilance on Mental Workload and Stress

98. Adam M. Braly and Patricia R. DeLucia, Texas Tech U., Can Stroboscopic Training Improve Time-to-Collision Judgments of Approaching Objects?

99. Nicholas W. Fraulini, Monica A. Perez, Teresa L. Perez, Alexa L. Fistel, and James L. Szalma, U. of Central Florida, A Preliminary Study Examining the Effects of Training for Vigilance

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**Virtual Environments**

100. James Brooks, Riley Lodge, and Daniel White, Defence Science and Technology Group, Comparison of a Head-Mounted Display and Flat Screen Display During a Micro-UAV Target Detection Task


102. Jihye Song and Stephen M. Fiore, U. of Central Florida, VR What We Eat: Guidelines for Designing and Assessing Virtual Environments as a Persuasive Technology to Promote Sustainability and Health (GC-ALL)

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**Tuesday, October 10**

7:00−7:30 p.m.

**HFES Annual Business Meeting**

7:00−7:30 p.m.

Room 303 (Level 3)
Wednesday, October 11
6:30–8:00 a.m.

Education Technical Group Business Meeting (Breakfast)  
6:30–8:00 a.m.  
Room 310 (Level 3)

HFES Scientific Publications Committee (Breakfast)  
7:00–8:00 a.m.  
Room 210 (Level 2)

Outreach Division (Breakfast)  
7:00–8:00 a.m.  
Room 505 (Level 5)

Wednesday, October 11
8:00–9:00 a.m.

PL2 – Plenary – Applying Human-Systems Integration to America’s Policing System  
SPECIAL SESSIONS  
Wednesday, October 11, 8:00–9:00 a.m.  
Lone Star Salon D (Level 3)  

Chair: Fred Oswald, Department of Psychology, Rice U., and President, Society for Industrial and Organizational Psychology  
Organized by the National Academies of Science Engineering and Medicine Board on Human Systems Integration and the Society for Industrial and Organizational Psychology  
Panelists: Ronald L. Davis, Consultant, 21st Century Policing, former Executive Director for President Obama’s Task Force on 21st Century Policing and Director of the Office of Community Oriented Policing Services (COPS Office) of the United States Department of Justice; Chief Jim Bueermann (Ret.), President, Police Foundation

Wednesday, October 11
9:00 a.m.–12:30 p.m.

POS2 – University Lab Posters  
INTERACTIVE SESSIONS  
Wednesday, October 11, 9:00 a.m.–12:30 p.m.  
Lone Star West Foyer (Level 3)  

On display 9:00 a.m.–12:30 p.m., lab representative(s) available 9:00–10:00 a.m.
1. Arizona State U. Human Systems Engineering Labs
2. North Carolina State U. Human-Systems Engineering
3. San Jose State U. Human Factors Engineering Lab
4. Texas A&M U. Applied Cognitive Ergonomics Lab (ACE Lab)
5. U. at Buffalo, SUNY, Human Factors Engineering at UB
6. U. of Central Florida Machines in Thought / Minds in Technology (MIT²) Lab
7. U. of Illinois Urbana-Champaign Human Factors and Aging Laboratory
8. U. of Michigan Center for Ergonomics
9. U. of Texas at Austin Information eXperience Lab (IX Lab)
10. Vanderbilt U. Medical Center, Center for Research and Innovation in Systems Safety (CRISS)

Wednesday, October 11
9:15–10:45 a.m.

A1 – Aging Session 1  
AGING  
Wednesday, October 11, 9:15–10:45 a.m.  
Room 301 (Level 3)  

Lecture  
Chair: Ranjana Mehta, Texas A&M U.; Cochair: Lora Cavuoto, U. at Buffalo, SUNY
1. Stephanie A. Morey, Flinders U.; Laura H. Barg-Walkow, Georgia Inst. of Technology; Wendy A. Rogers, U. of Illinois Urbana-Champaign, Managing Heart Failure on the Go: Usability Issues With mHealth Apps for Older Adults (GC-HH)
3. Kenneth A. Blocker, Georgia Inst. of Technology; Kathleen C. Insel and Kari M. Koerner, U. of Arizona; Wendy A. Rogers, U. of Illinois Urbana-Champaign, Understanding the Medication Adherence Strategies of Older Adults With Hypertension (GC-HH)
4. Xian Wu, U. of South Carolina; Rebecca C. Thomas, George Mason U.; Emma C. Drobina, U. of South Carolina; Tracy L. Mitzner, Georgia Inst. of Technology; Jenay M. Beer, U. of South Carolina, Telepresence Heuristic Evaluation for Adults Aging With Mobility Impairment
5. Lyndsie M. Koon, U. of Illinois; Robert J. Brustad and Megan Babkes Stellino, U. of Northern Colorado, A Taxonomy to Aid in the Design of Complex Physical Activities for Older Adults
AC1 – Augmented Cognition
AUGMENTED COGNITION
Wednesday, October 11, 9:15–10:45 a.m.
Room 303 (Level 3)
Lecture
Chair: Brett Borghetti, Air Force Inst. of Technology
1. Nayoung Kim, Ellen Wittenberg, and Chang S. Nam, North Carolina State U., Working Memory Capacity, Memory Load, and Cognitive Control Network (GC-SUS)
2. Ellen Wittenberg, Na Young Kim, and Chang S. Nam, North Carolina State U., Executive Function Updating Level Modulates Connectivity Network Between Brain Regions in Alpha Band (GC-HH)

CE2 – Human-Human Interactions
COGNITIVE ENGINEERING AND DECISION MAKING
Wednesday, October 11, 9:15–10:45 a.m.
Room 203 (Level 2)
Lecture
Chair: Emily Stelzer, MITRE Corp.; Cochair: Heejin Jeong, U. of Michigan
1. Xin Zhang, David Mendonça, and Martha Grabowski, Rensselaer Polytechnic Inst.; Christopher Holmes, NYS Division of Homeland Security & Emergency Services, Improvising Organizational Structure and Process: The Case of Post-Disaster Debris Removal Operations (GC-SUS)
3. Peter Alden Crowe, Michael Collins, Othalia Larue, Randall Green, Alexander Hough, and Ion Juvina, Wright State U., Examining the Role of Trust in Peer-Assisted Learning
4. David A. Illingworth, Rick P. Thomas, and Agata Anthony Rozga, Georgia Inst. of Technology; Christopher J. Smith, Southwest Autism Research & Resource Center, Cue Use in Distal Autism Spectrum Assessment: A Lens Model Analysis of the Efficacy of Telehealth Technologies (GC-HH)

CE3 – Improving How We Weave Cognitive Engineering Into Military Acquisition: Understand, Design, Validate
COGNITIVE ENGINEERING AND DECISION MAKING
Wednesday, October 11, 9:15–10:45 a.m.
Brazos (Level 2)
Discussion Panel
Chair: Cynthia Dominguez, MITRE Corp.

CS3/I – UX in Varied Domains: Similarities and Differences Presented PechaKucha Style
COMPUTER SYSTEMS; COSPONSORED BY INTERNET
Wednesday, October 11, 9:15–10:45 a.m.
Lone Star Salon A (Level 3)
Alternative Format
Chair: Vickie Nguyen, U. of Texas Health Science Center at Houston
Presenters: Lara Cheng, Purdue U.; Sinlee Loh, Facebook

DEM – Demonstrations
DEMONSTRATIONS
Wednesday, October 11, 9:15–10:45 a.m.
Rooms 210−212 (Level 2)
Demonstrations
Chair: Ronald Boring, Idaho National Lab
Demonstrations are presented continuously throughout the session in different rooms. Attendees can move from room to room in any sequence to view all the demos.
1. ROOM 210: Eric G Sikorski, CTTSO; Amanda Palla, Vertex Solutions Group, Interactive Demonstration of an AC-130 Aircraft Virtual Reality Part Task Trainer
2. ROOM 211: Brittany Lee Anderson-Montoya, Carolinas Simulation Center; Robert Turner, Anne Arundel Medical Center, Demonstration of the Cognitive Interview Technique for Root Cause Analysis
E2 – Encouraging Cooperation Across Student Chapters in the Southeast Region

EDUCATION
Wednesday, October 11, 9:15–10:45 a.m.
Room 213 (Level 2)
Alternative Format
Chair: Anthony Baker, Embry-Riddle Aeronautical U.
Presenters: Federico Scholcover, North Carolina State U.; William Leidheiser, Clemson U.; Shelby K. Long, Old Dominion U.; Jesse Farnsworth, Laura Matalenas, and Stephen Cauffman, North Carolina State U.; Sean McGlynn, Georgia Inst. of Technology; Sarah Williams, U. of Central Florida

HC3 – Communication, Care Transitions, and Electronic Health Records

HEALTH CARE
Wednesday, October 11, 9:15–10:45 a.m.
Room 201 (Level 2)
Lecture
Chair: Tina Mirchi, Pacific Science & Engineering Group; Cochair: Siobhan Heiden, Purdue U.
2. Matthew B. Brzowski and Frank Drews, U. of Utah, Quality and Quantity: Communicating Effectively Using Descriptors and Narratives (GC-HH)
3. Nadine Marie Moacdieh, American U. of Beirut; Travis Ganje and Nadine Sarter, U. of Michigan, Ann Arbor, Physician Perceptions of Clutter in Electronic Medical Records (GC-HH)

HC4 – Going Mobile: Guiding the Development of Safer and More Effective Mobile Access in Health Care (GC-HH)

HEALTH CARE
Wednesday, October 11, 9:15–10:45 a.m.
Lone Star Salon H (Level 3)
Discussion Panel
Chair: Elizabeth Lazzara, Embry-Riddle Aeronautical U.
Panelists: Anthony L. Baker, Embry-Riddle Aeronautical U.; Natalie Abts, National Center for Human Factors in Healthcare-MedStar Health; Dan Nathan-Roberts, San Jose State U.; Justin Ranton, FollowMyHealth; Sarah Fouquet, Children’s Mercy Kansas City; Barbara Chaparro, Wichita State U.

PP3 – Perception & Performance 3

PERCEPTION AND PERFORMANCE
Wednesday, October 11, 9:15–10:45 a.m.
Lone Star Salon E (Level 3)
Lecture
Chair: Barry Goettl, U.S. Air Force Research Lab; Cochair: Nicole Karpinsky-Mosley, Old Dominion U.
2. Nicole D. Karpinsky, Shelby K. Long, and James P. Bliss, Old Dominin U., The Relationship of the Penny Beliefs Weapons Scale to Robotic Peacekeeper Compliance and Trust (GC-ALL)
3. Arielle R. Mandell, Melissa Smith, and Eva Wiese, George Mason U., Mind Perception in Humanoid Agents Has Negative Effects on Cognitive Processing
Wednesday, October 11
10:00–11:00 a.m.

SS2 – Posters With Fellows
SPECIAL SESSIONS
Wednesday, October 11, 10:00–11:00 a.m.
Griffin Hall (Level 2)
Poster Session
Chair: Philip Kortum, Rice U.; Cochair: S. Camille Peres, Texas A&M U.
1. James P. Bliss, Old Dominion U.
2. Deborah A. Boehm-Davis, George Mason U.
4. Sheryl L. Chappell, Federal Aviation Admin.
6. Diane L. Damos, Damos Aviation Services, Inc.
7. Kermit G. Davis, U. of Cincinnati
8. Valerie J. Gawron, MITRE Corp.
11. Paul Allan Green, U. of Michigan Transportation Research Inst.
12. Joel S. Greenstein, Clemson U.
13. M. Susan Hallbeck, Mayo Clinic
14. Peter A. Hancock, U. of Central Florida
15. Karen Jacobs, Boston U.
16. David B. Kaber, North Carolina State U.
17. Waldemar Karwowski, U. of Central Florida
18. Brian M. Kleiner, Virginia Tech
19. John D. Lee, U. of Wisconsin, Madison
20. William S. Marras, Ohio State U.
22. Amy R. Pritchett, Georgia Inst. of Technology
23. Robert W. Proctor, Purdue U.
24. Wendy A. Rogers, U. of Illinois, Urbana
25. Harvey S. Smallman, Pacific Science & Engineering Group
26. Kim-Phuong L. Vu, California State U., Long Beach
27. Matthew Weinger, Vanderbilt U. Medical Center
28. Christopher D. Wikens, Alion Science and Technology

Wednesday, October 11
11:00 a.m.–12:30 p.m.

CE4 – Decision Making in Multiple Domains
COGNITIVE ENGINEERING AND DECISION MAKING
Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Room 203 (Level 2)
Lecture
Chair: Barry Goettl, U.S. Air Force Research Lab; Cochair: Melissa Scheldrup, George Mason U.
1. Veena Chattaraman and Wi-Suk Kwon, Auburn U.; Wanda Eugene and Juan E. Gilbert, U. of Florida,
Developing and Validating a Naturalistic Decision Model for Intelligent Language-Based Decision Aids (GC-HH)
2. Mark S. Pfaff, Gary L. Klein, and Jill D. Egeth, MITRE Corp., Characterizing Crowdsourced Data Collected Using DESIM (Descriptive to Executable Simulation Modeling)
3. Smruti J. Shah and James P. Bliss, Old Dominion U., Does Accountability and an Automation Decision Aid’s Reliability Affect Human Performance in a Visual Search Task?

CE5 – Making Brittle Technologies Useful (GC-VUL)
COGNITIVE ENGINEERING AND DECISION MAKING
Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Brazos (Level 2)
Discussion Panel
Chair: Michael Rayo, Ohio State U.
Panelists: Philip J. Smith, Ohio State U.; Emilie Roth, Roth Cognitive Engineering; Nadine Sarter, U. of Michigan; Kathleen L. Mosier, Teamscape, LLC; Christopher A. Miller, Smart Information Flow Technologies
CS4/I – Marc Resnick Best Paper Competition
COMPUTER SYSTEMS; COSPONSORED BY INTERNET
Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Lone Star Salon A (Level 3)
Lecture
Chair: Anand Gramopadhye, Clemson U.
2. Sharan Ram, Anjan Mahadevan, Hadi Rahmat-Khah, Giuseppe Turini, and Justin G. Young, Kettering U., Effect of Control-Display Gain and Mapping and Use of Armrests on Accuracy in Temporally Limited Touchless Gestural Steering Tasks

ED1 – Environmental Design Potpourri
ENVIRONMENTAL DESIGN
Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Room 306 (Level 3)
Lecture
Chair: Karen Chen, North Carolina State U.; Cochair: Jia-Hua (Jim) Lin, SHARP Washington State Department of Labor and Industries
1. Gourab Kar, Kathryn S. Peditto, Sanjay Guria, Jacqueline R. Callan, Andrea E. Fronsman, Serena Seo Hyon Lee, Justine Stohler, Dan Moon, Manwen Li, Megan A. Cackett, and Alan Hedge, Cornell U., Effects of Active Sitting Chairs on Short-Duration Computer Task Performance, Postural Risks, Perceived Pain, Comfort, and Fatigue (GC-HH)
2. Gourab Kar, Sanjay Guria, Kathryn S. Peditto, Jacqueline R. Callan, Andrea E. Fronsman, Serena Seo Hyon Lee, Justine Stohler, Dan Moon, Manwen Li, Megan A. Cackett, and Alan Hedge, Cornell U., Effects of Active Versus Static Standing on Short-Duration Computer Task Performance, Postural Risks, Perceived Pain, Comfort, and Fatigue (GC-HH)
3. Wenbi Wang, Defence Research and Development Canada, An Algorithmic Solution to Improve Command Center Layout (GC-SUS)
4. Panagiotis Matsangas and Nita Lewis Shattuck, Naval Postgraduate School, Exploring Sleep-Related Habitability Issues in Berthing Spaces on U.S. Navy Ships

OE4 – Biomechanics of Human Mobility
OCCUPATIONAL ERGONOMICS
Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Room 301 (Level 3)
Lecture
Chair: Lora Cauvuto, U. at Buffalo, SUNY; Cochair: Han Kim, NASA
1. Arian Iraqi and Kurt E. Beschorner, U. of Pittsburgh, Vertical Ground Reaction Forces During Unexpected Human Slips
2. Justin M. Haney, Tianke Wang, and Clive D’Souza, U. of Michigan; Monica L. H. Jones, U. of Michigan Transportation Research Inst.; Matthew P. Reed, U. of Michigan, Spatial and Temporal Patterns in Sequential Precision Reach Movements (GC-HH)
4. Seobin Choi and Gwanseob Shin, Ulsan National Inst. of Science and Technology, Effects of an Intentional Gait Modification on Lower Limb Alignment
5. Erika Mae Pliner and Kurt E. Beschorner, U. of Pittsburgh, Effects of Ladder-Climbing Patterns on Fall Severity (GC-HH)
OE5 – Occupational Ergonomics

Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Room 303 (Level 3)
Lecture
Chair: Richard W. Marklin, Marquette U.; Cochair: Sherry Thaxton, NASA

1. Vishnu Mahesh, Yueqing Li, and Brian Craig, Lamar U., Effect of Flooring on Lower-Extremity Discomfort During Food Service Tray-Line Jobs (GC-SUS)
2. Rong Huangfu, Robert Granzow, Sean Gallagher, and Mark C. Schall, Jr., Auburn U., easyBLS, a Tool for Querying Nonfatal Injury Information From United States Bureau of Labor Statistics Database (GC-HH)
6. David Rempel, Andrea Antonucci, Alan Barr, and Bernard Martin, U. of California, Berkeley, Construction Ergonomics: Concrete Bit Wear Increases Handle Vibration and Drilling Time (GC-HH)

PD3 – Product Design in Health Care

Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Lone Star Salon G (Level 3)
Lecture
Chair: Denny Yu, Purdue U.; Cochair: Christina Harrington, Georgia Tech

1. Katherine Chen, Mary Zdorova, and Dan Nathan-Roberts, San Jose State U., Implications of Wearables, Fitness Tracking Services, and Quantified Self on Health Care (GC-HH)
2. Jeongmin Park, Ulsan National Inst. of Science and Technology; Hyun-hwa Hong, Hyndai Heavy Industries; Eunji Kim and Gwanseob Shin, Ulsan National Inst. of Science and Technology, Redesign Process of a Semipowered Patient Transfer Device

PP4 – Designing Artificial Agents as Social Companions (GC-JOL)

Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Lone Star Salon H (Level 3)
Discussion Panel
Chair: Jose Calvo, George Mason U.
Panelists: Eva Wiese, Tyler Shaw, Daniel Lofaro, and Carryl Baldwin, George Mason U.

S4 – Managing Human Operator Risk in Space and Aviation: Learning Across Domains (GC-JOL)

Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Lone Star Salon F (Level 3)
Discussion Panel
Chair: Jessica Marquez, NASA; Cochair: Tamsyn Edwards, San Jose State University at NASA Ames Research Center
Panelists: Marcum Reagan and David Korth, NASA Johnson Space Center; Barrett Caldwell, Purdue U.; Katie Berry, Fort Hill Group; Sabrina Woods, Federal Aviation Admin.; Gary Lohr, NASA Langley Research Center
SF2 – The Influence of Psychophysiological and Perceptual Factors on Behavior
STUDENT FORUM; COSPONSORED BY PERCEPTION & PERFORMANCE
Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Room 205 (Level 2)
Lecture
Chair: Hongbo Zhang, Virginia Polytechnic Inst. & State U.;
Cochair: Frank Lacson, Pacific Science & Engineering Group
3. Kryztopher D. Tung, Rami Shorti, Colton Ottley, Donald Bloswick, and Andrew S. Merryweather, U. of Utah, Evaluating the Effect of Simulated Altitude on the Metabolic Cost of Performing an Equivalent Task (GC-HH)

ST2 – Design and Road Safety
SURFACE TRANSPORTATION
Wednesday, October 11, 11:00 a.m.–12:30 p.m.
Room 201 (Level 2)
Lecture
Chair: Thomas Ferris, Texas A&M U.; Cochair: Jing Feng, North Carolina State U.
1. Vanessa Beanland, Eryn Grant, Gemma J. M. Read, Nicholas Stevens, and Miles Thomas, U. of the Sunshine Coast; Michael G. Lenné, Monash U.; Neville A. Stanton, U. of Southampton; Paul M. Salmon, U. of the Sunshine Coast, Applying Ecological Interface Design Principles to the Design of Rural Rail Level Crossing Infrastructure (GC-ALL)
3. Jeffrey W. Muttart and Swaroop Dinakar, CSRC, LLC; Jeffrey A. Suway, Biomechanical Research and Testing, LLC; Michael Kuzel, 4M Safety; Suntasy F. Gernhard, CSRC, LLC; Mitch Rackers, Schaefer Engineering, LLC; Thomas Schaefer, Schaefer Engineering, LLC; Thomas Vadnais, Vadnais Engineering; Jamie Aaranson Fischer, Fischer Forensic Services, Influence of Taillight Width on the Ability to Recognize Closing Speed, Closing Distance, and Closing Versus Separating (GC-HH)
4. Robert J. Sall, North Carolina State U.; Sijing Wu and Ian Spence, U. of Toronto; Jing Feng, North Carolina State U., Destination, Seen Unclearly: Relevance of Head-Up Display Information to Driving Is Unrelated to Its Processing
5. Christian Richard and Liberty Hoekstra-Atwood, Battelle Memorial Inst.; Brian H. Philips and Christian Jerome, Department of Transportation, Driver Responses to Incongruent V2V and V2I Safety-Critical Information in Left-Turn-Across-Path Scenarios

Wednesday, October 11
12:30–2:00 p.m.

Aging Technical Group Business Meeting (Lunch)
12:30–1:45 p.m.
Room 211 (Level 2)

Ergonomics in Design Editorial Board (Lunch)
12:30–1:45 p.m.
Room 504 (Level 5)

Student Chapter Presidents (Lunch)
12:30–1:45 p.m.
Room 502 (Level 5)
Wednesday, October 11
2:00–3:30 p.m.

AS2 – Space and Unmanned Vehicles
AEROSPACE SYSTEMS
Wednesday, October 11, 2:00–3:30 p.m.
Room 205 (Level 2)
Lecture
Chair: Diane Damos, Damos Aviation Services, Inc.; Cochair: Sheryl Chappell, Federal Aviation Admin.
1. James Perry Flores and Farzan Sasangohar, Texas A&M U., Human Factors Review of Space Habitat Feature Requirements (GC-JOL)
2. Carl Pankok and Ellen J. Bass, Drexel U., A Decadal Revisiting of the Assessment of Pilot Control Interfaces for Unmanned Aircraft Systems
4. Panagiotis Matsangas and Nita Lewis Shattuck, Naval Postgraduate School; Christiane Heinicke, Vrije Universiteit; Jocelyn Dunn, Purdue U., Sleep Patterns of Crewmembers in Mission IV of the Hawaii Space Exploration Analog and Simulation (HI-SEAS): A Pilot Study
5. Grant S. Taylor, Thomas J. Alicia, and Terry Turpin, U.S. Army Aviation Development Directorate; Amit Surana, United Technologies Research Center, Controlling Multiple Unmanned Aircraft from a Manned Helicopter: The Need for Advanced Autonomy and Refined Pilot-Vehicle Interface

CE6 – New CEDM Methods and Measures
COGNITIVE ENGINEERING AND DECISION MAKING
Wednesday, October 11, 2:00–3:30 p.m.
Room 203 (Level 2)
Lecture
Chair: Brandon Pitts, Purdue U.; Cochair: Keith Karn, Human Factors in Context LLC

CE7 – The War on Experts
COGNITIVE ENGINEERING AND DECISION MAKING
Wednesday, October 11, 2:00–3:30 p.m.
Brazos (Level 2)
Discussion Panel
Chair: Laura Miliotello, Applied Decision Science, LLC

E3 – 50 Years of Human Factors Psychology at Texas Tech U.
EDUCATION
Wednesday, October 11, 2:00–3:45 p.m.
Room 306 (Level 3)
Discussion Panel
Chair: Martina Klein, Texas Tech U.
Panelists: Charles Halcomb, Wichita State U.; Patricia R. DeLucia, Texas Tech U.; Greg Liddell, Human Interfaces; Barbara Chaparro, Wichita State U.; Mica Endsley, SA Technologies

HC5 – New Methods and Tools in Health Care
HEALTH CARE
Wednesday, October 11, 2:00–3:30 p.m.
Lone Star Salon H (Level 3)
Lecture
Chair: Rupa Valdez, U. of Virginia; Cochair: Tiffany Leverenz, Wichita State U.
2. Katherine L. Forsyth, Bethany R. Lowndes, and Erik Prytz, Linköping U.; Carl-Oscar Johnson, Linköping U.; Matthew D. Sztajnkrycer, Stephanie F. Heller, M. Susan Hallbeck, and Renaldo C. Blocker, Mayo Clinic, Improving Instructions to Stop the Bleed
3. L. Bryant Foster, Research Collective, Design Research Strategies for a Total Artificial Heart (GC-HH)
4. Nicholas Kelling, Christopher Ward, and David Malin, U. of Houston-Clear Lake; William Buras and Scott Hetherington, Tietronix Software Inc., The Use of Human Factors to Address Medical Research Replicability Through the Development of a Software-Based Solution (GC-HH)
5. Alissa L. Russ, Department of Veterans Affairs & Purdue U.; Michelle A. Jahn, Purdue U.; Himalaya Patel, Brian W. Porter, and Khoa A. Nguyen, Department of Veterans Affairs; Alan J. Zillich, Purdue U. College of Pharmacy; Amy Linksy and Steven R. Simon, Department of Veterans Affairs, Formative Usability Evaluation of a Novel Tool for Medication Reconciliation (GC-HH)
HC6 – Usability in Patient and Provider-Centered Design
HEALTH CARE
Wednesday, October 11, 2:00–3:30 p.m.
Room 201 (Level 2)
Lecture
Chair: Barbara Chaparro, Wichita State U.; Cochair: Denny Yu, Purdue U.
2. Jessica Jones, Alberta Health Services; Jeff K. Caird, U. of Calgary, The Usability of Blood Glucose Meters: Task Performance Differences Between Younger and Older Age Groups (GC-HH)
4. Jolie Dobre, CSRA; Craig Harrington, Jennifer Herout, and Charlene Weir, U.S. Department of Veterans Affairs; Ashley Cook and Tippy Carter, CSRA; Donna Baggetta, U.S. Department of Veterans Affairs; Walter “Bud” Rellihan, Accenture Federal Services, Rapid Heuristic Evaluation: Ensuring Fast and Reliable Usability Support (GC-HH)
5. Mary R. Yovanoff, David Pепley, Katelin Mirkin, Jason R. Moore, David Han, and Scarlett R. Miller, Pennsylvania State U., Personalized Learning in Medical Education: Designing a User Interface for a Dynamic Haptic Robotic Trainer for Central Venous Catheterization (GC-HH)

I2/CS – Usability, Accessibility, and Design
INTERNET; COSPONSORED BY COMPUTER SYSTEMS
Wednesday, October 11, 2:00–3:30 p.m.
Lone Star Salon A (Level 3)
Lecture
Chair: Kapil Madathil, Clemson U.; Cochair: Kelly Caine, Clemson U.
1. Chelsea Ann DeGuzman and Mark Chignell, U. of Toronto; Jie Jiang, TELUS Communications Company; Leon Zucherman, U. of Toronto, Testing the Effects of Peak, End, and Linear Trend on Evaluations of Online Video Quality of Experience
2. Guanlong Li, Yueqing Li, Jing Zhang, and Xiao Zhang, Lamar U., Design Feature and Cross-Culture Based Comparative Evaluation of Web Maps
3. Luciana Nunes and Claudia Mont’Alvão, PUC-Rio, Perspectives in Sustainable Interaction Design: A Preliminary Discussion Involving Human Values and HCI (GC-SUS)
4. Julian Brinkley, U. of Florida; Nasseh Tabrizi, East Carolina U., A Desktop Usability Evaluation of the Facebook Mobile Interface Using the JAWS Screen Reader With Blind Users (GC-JOL)
5. Ben D. Sawyer and Jonathan Dobres, Massachusetts Inst. of Technology; Nadine Chahine, Monotype; Bryan Reimer, Massachusetts Inst. of Technology, The Cost of Cool: Typographic Style Legibility in Reading at a Glance (GC-ALL)

OE6 – Communicating the Value of Ergonomics to Management – Part 2: Ergonomics ROI Case Studies
OCCUPATIONAL ERGONOMICS; COSPONSORED BY SAFETY
Wednesday, October 11, 2:00–3:30 p.m.
Room 301 (Level 3)
Discussion Panel
Chair: Christopher Reid, Boeing; Cochair: Peter Johnson, U. of Washington
Panelists: Richard W. Marklin, Jr., Marquette U.; Patricia Seeley, Consultant; Peregrin Spielholz, Boeing; Rick Goggins, Washington State Labor & Industries

OE7 – Musculoskeletal Disorders
OCCUPATIONAL ERGONOMICS
Wednesday, October 11, 2:00–3:30 p.m.
Room 303 (Level 3)
Lecture
Chair: Hongbo Zhang, Virginia Polytechnic Inst. & State U.; Cochair: Jonisha Pollard, National Inst. for Occupational Safety and Health
2. Jonathan Sisley and Kiana Kia, Oregon State U.; Peter W. Johnson, U. of Washington; Jeong Ho Kim, Oregon State U., Effects of Key Travel Distances on Biomechanical Exposures and Typing Performance During Ultra-Low Key Travel Keyboards (GC-HH)
4. Yaar Harari, Ben-Gurion U. of the Negev; Avital Bechar, Agricultural Research Organization; Raziel Riemer, Ben-Gurion U. of the Negev, Spinal Moments During Continuous Sequential Lifting, Carrying, and Lowering (GC-HH)
5. Sean Gallagher, Mark C. Schall, Jr., Richard F. Sesek, and Rong Huangfu, Auburn U., Job Rotation as a Technique for the Prevention of MSDs: The Fatigue Failure Perspective (GC-HH)
6. Xueke Wang, Steven Lavender, and Carolyn Sommerich, Ohio State U., Does Visual Access When the Lifting Unstable Objects Affect the Biomechanical Loads Experienced by the Spine and Shoulders? (GC-HH)
Wednesday, October 11
3:45–8:30 p.m.

Technical Group Business Meetings

**Aerospace Systems** (Reception)
5:15–6:00 p.m.
Room 303 (Level 3)

**Augmented Cognition**
4:30–5:15 p.m.
Room 301 (Level 3)

**Children’s Issues**
4:30–5:15 p.m.
Room 306 (Level 3)

**Cognitive Engineering & Decision Making** (Reception)
3:45–4:30 p.m.
Lone Star Salon F (Level 3)

**Communications**
3:45–4:30 p.m.
Room 306 (Level 3)

**Computer Systems / Internet**
4:30–5:15 p.m.
Lone Star Salon A (Level 3)

**Environmental Design / Macroergonomics** (Reception)
5:15–6:00 p.m.
Lone Star Salon G (Level 3)

**Forensics Professional** (Reception)
3:45–4:30 p.m.
Lone Star Salon F (Level 3)

**Health Care** (Reception)
*Business Meeting*
5:15–6:00 p.m.
Lone Star Salon F (Level 3)

**Reception with Product Design Technical Group**
6:30–8:30 p.m.
Off Site

**Human Performance Modeling** (Reception)
5:15–6:00 p.m.
Room 301 (Level 3)

**Internet / Computer Systems**
4:30–5:15 p.m.
Lone Star Salon A (Level 3)
# Program at a Glance

## Monday

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00−10:00 a.m.</td>
<td>9:00 a.m.–4:30 p.m. Full-Day Workshops</td>
</tr>
<tr>
<td>10:30 a.m.–12:00 p.m.</td>
<td>WK3 Systemic Contributor Investigation Training, Room 202</td>
</tr>
<tr>
<td>12:00−1:30 p.m.</td>
<td>Student Career and Professional Development Day, Lone Star Salon A</td>
</tr>
<tr>
<td>1:30–3:00 p.m.</td>
<td>WK2 Cognitive Skills Training, Room 201</td>
</tr>
<tr>
<td>3:30–5:00 p.m.</td>
<td>Afternoon workshop continues</td>
</tr>
<tr>
<td>5:00–7:00 p.m.</td>
<td>Nat’l Ergonomics Month Expo, Lone Star West Foyer</td>
</tr>
</tbody>
</table>

## Tuesday

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
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</thead>
<tbody>
<tr>
<td>8:00−10:00 a.m.</td>
<td>PL1 Opening Plenary Session, Lone Star Salon D</td>
</tr>
<tr>
<td>10:30 a.m.–12:00 noon</td>
<td>AS1 General Aviation Weather, Room 203</td>
</tr>
<tr>
<td>12:00–1:30 p.m.</td>
<td>Lunch break</td>
</tr>
<tr>
<td>1:30–3:00 p.m.</td>
<td>WK4 Cognitive Neuroscience for the HF Practitioner, Room 203</td>
</tr>
<tr>
<td>3:30–5:00 p.m.</td>
<td>Afternoon workshop continues</td>
</tr>
<tr>
<td>5:00–7:00 p.m.</td>
<td>Journal Awards Session, Lone Star Salon F</td>
</tr>
</tbody>
</table>

## Evening

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:00–7:00 p.m.</td>
<td>Interactive Posters Session and Reception, Griffin Hall</td>
</tr>
<tr>
<td>7:00–7:30 p.m.</td>
<td>HFES Annual Business Meeting, Room 303</td>
</tr>
</tbody>
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**Monday-Tuesday:**
- 8:00–10:00 a.m.
- 10:30 a.m.–12:00 p.m.
- 1:30–3:00 p.m.
- 3:30–5:00 p.m.
- Evening

**Wednesday-Friday:**
- 8:00–11:00 a.m.
- 10:30 a.m.–12:00 p.m.
- 12:00–1:30 p.m.
- 1:30–3:00 p.m.
- 3:30–5:00 p.m.
- Evening

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**Wednesday**

8:00–9:00 a.m.
PL2 Applying HSI to Policing, Lone Star Salon D

9:00 a.m.–12:30 p.m.
University Lab Posters, Lone Star West Foyer

9:15–10:45 a.m.
A1 Aging Session I, Room 301
AC1 Augmented Cognition, Room 303
CE2 Human–Human Interactions, Room 203
CE3 Improving Use of CE in Military Acquisition, Brazos
CS3/I UX in Varied Domains, Lone Star Salon A
DEM Demonstrations,
E2 Cooperation Across Student Chapters, Room 213
HC3 Communication, Care Transitions, Room 201
HC4 Going Mobile, Lone Star Salon H
K2 Adult Products That Kill Children, Room 205
PD2 Ergonomics of Handheld Devices, Lone Star Salon G
PP3 Perception & Performance 3, Lone Star Salon F

10:00–11:00 a.m.
S3 Posters With Fellows, Griffin Hall

11:00 a.m.–12:30 p.m.
CE4 Decision Making, Room 203
CE5 Making Britech Tech Useful, Brazos
CS4/I Resnick Best Paper Competition, Lone Star Salon A
ED1 Environmental Design Potpourri, Room 306
FP3 Forensic Practice & Case Studies, Room 213
OE4 Biomechanics of Mobility, Room 301
OE5 Occupational Ergonomics, Room 303
PD3 Product Design in Health Care, Lone Star Salon G
PD4 Artificial Agents as Social Comp., Lone Star Salon H
S4 Operator Risks in Space & Aviation, Lone Star Salon F
SF2 Psychophysiological Factors & Behavior, Room 205
ST2 Design & Road Safety, Room 201

12:30–2:00 p.m.
Lunch break
Aging TG Business Meeting, Room 211

2:00–3:30 p.m.
AS2 Space & Unmanned Vehicles, Room 205
CE6 New GEDM Methods, Room 203
CE7 War on Experts, Brazos
E3 HF Psych at Texas Tech, Room 306
HC5 New Methods & Tools, Lone Star Salon H
HC6 UX in Patient-Centered Design, Room 201
I2/CS UX, Accessibility, Design, Lone Star Salon A
OE6 Communication Ergo Value, Part 2, Room 301
OE7 Musculoskeletal Disorders, Room 303
PD4 Invited Address: Trust in AI Prod., Lone Star Salon G
S5 Arnold Small Lecture, Lone Star Salon F
VE1 Measurement in VE, Room 213

3:45–5:15 p.m.
AS4 Commercial Aviation and ATC, Room 201
CE12 Visualizing Information, Brazos
GS5 Interface Design & Human Reliability, Room 203
HC11 Infections, Interruptions, Lone Star Salon F
HC12 E-Learning & Decision Support, Lone Star Salon G
OE11 Industry-Sponsored HF/E Res., Lone Star Salon H
SF6 Improving Tools, Training, Room 303
VE4 Investigations of VE Tech, Room 205

**Thursday**

8:00–9:00 a.m.
PL3 HF in Oil & Gas Industry, Lone Star Salon D

9:00 a.m.–5:15 p.m.
University Lab Posters, Lone Star West Foyer

9:15–10:45 a.m.
AS3 Aviation Displays, Room 201
CEB Human–Agent Interactions, Brazos
GS4 Measurement, Methods, Room 203
HC7 HF in the Wild: Pediatrics, Lone Star Salon F
HC8 Patient Work Methods, Lone Star Salon G
HP2 Modeling Teamwork, Room 301
ID1 Individual Differences & Predictors, Room 213
OE8 Rel.of Psychophysical Methods, Lone Star Salon H
PD5 New Methods, Lone Star Salon A
SF3 UX for Drivers & Driverless Cars, Room 303
VE2 Trust, Engagement, Presence, Room 205

10:15–10:45 a.m.
AS8 New Research Areas in Emergent Cognitive Technologies, Room 301

11:00 a.m.–12:30 p.m.
A2 Aging Session 2, Room 201
C2 Communication & Teams, Room 301
CE10 Visual Inspection in 21st Century, Brazos
CE9 CE of Air & Space, Room 203
HC9 HF in the Wild: Interruptions, Lone Star Salon F
ID2 Individual Differences in Performance, Room 213
OE9 Industrial Exoskeletons, Lone Star Salon G
PD6 Starting UX Research Career, Lone Star Salon A
SF4 Systems for Caregivers, Patients, Room 303
ST3 Glance Behavior & Distraction, Lone Star Salon G
VE3gamification, Room 205

12:30–2:00 p.m.
Lunch break
Individual Differences TG Business Meeting, Room 311

2:00–3:30 p.m.
AS2 Space & Unmanned Vehicles, Room 205
CE6 New GEDM Methods, Room 203
CE7 War on Experts, Brazos
E3 HF Psych at Texas Tech, Room 306
HC5 New Methods & Tools, Lone Star Salon H
HC6 UX in Patient-Centered Design, Room 201
I2/CS UX, Accessibility, Design, Lone Star Salon A
OE6 Communication Ergo Value, Part 2, Room 301
OE7 Musculoskeletal Disorders, Room 303
PD4 Invited Address: Trust in AI Prod., Lone Star Salon G
S5 Arnold Small Lecture, Lone Star Salon F
VE1 Measurement in VE, Room 213

3:45–5:15 p.m.
AS4 Commercial Aviation and ATC, Room 201
CE12 Visualizing Information, Brazos
GS5 Interface Design & Human Reliability, Room 203
HC11 Infections, Interruptions, Lone Star Salon F
HC12 E-Learning & Decision Support, Lone Star Salon G
OE11 Industry-Sponsored HF/E Res., Lone Star Salon H
SF6 Improving Tools, Training, Room 303
VE4 Investigations of VE Tech, Room 205

**Friday**

8:00–9:00 a.m.
PL4 Beyond Gamification, Lone Star Salon D

9:00 a.m.–5:15 p.m.
University Lab Posters, Lone Star West Foyer

9:15–10:45 a.m.
CE13 Trust in Automation, Room 203
ED3 Updates to ANSI/HFES 100, Room 301
HC13 HF in Pharmacy, Brazos
OE12 Wearable Tech, Lone Star Salon H
SF7 Factors Affecting Performance, Lone Star Salon G
S4 On Being a Female Leader in HF/E, Lone Star Salon A
ST6 Automation, Lone Star Salon F

11:00 a.m.–12:30 p.m.
CE14 Perception Effect on Performance, Room 203
CE15 New Results in 5 Minutes, Brazos
HC14 Provider Performance, Lone Star Salon F
HP4 Mew Modeling Methods, Room 301
OE13 Wearable Sensor Tech, Lone Star Salon H
PD8 Founding a UX Consultancy, Lone Star Salon A
S8 Contributors to Risk & Mitigation, Room 201

Key to Abbreviations Used in This Program

- **AS**: Aerospace Systems
- **A**: Aging
- **AC**: Augmented Cognition
- **K**: Children’s Issues
- **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
- **I**: Internet
- **ME**: Macrogeneomics
- **OE**: Occupational Ergonomics (formerly industrial Ergonomics
- **PL**: Plenary Session
- **PP**: Perception & Performance
- **PD**: Product Design
- **POS**: Posters & Demonstrations
- **S**: Safety
- **SS**: Special Sessions
- **SF**: Student Forum
- **ST**: Surface Transportation
- **SD**: System Development
- **TE**: Test & Evaluation
- **T**: Training
- **VE**: Virtual Environments
- **WK**: Workshops
**Wednesday, October 11**

5:00–6:30 p.m.

**Social Events**

**Early-Career Professionals Reception**
5:00–6:00 p.m.
Room 502 (Level 5)

**Student Reception**
5:30–6:30 p.m.
Lone Star Salon E (Level 3)

**Macroergonomics / Environmental Design** (Reception)
5:15–6:00 p.m.
Lone Star Salon G (Level 3)

**Occupational Ergonomics**
3:45–4:30 p.m.
Room 301 (Level 3)

**Perception & Performance**
4:30–5:15 p.m.
Lone Star Salon G (Level 3)

**Product Design** (Reception)
*Business Meeting*
3:45–4:30 p.m.
Lone Star Salon G (Level 3)

*Reception with Health Care Technical Group*
6:30–8:30 p.m.
Off Site

**Safety** (Reception)
4:30–5:15 p.m.
Lone Star Salon F (Level 3)

**Surface Transportation** (Reception)
5:30–8:00 p.m.
Malverde (Off Site)

**System Development** (Lunch)
12:30–2:00 p.m.
Off Site

**Test & Evaluation**
4:30–5:15 p.m.
Lone Star Salon H (Level 3)

**Training**
4:30–5:15 p.m.
Room 303 (Level 3)

**Virtual Environments**
3:45–4:30 p.m.
Room 303 (Level 3)
Thursday, October 12
6:45−7:45 a.m.

Education & Training Committee (Breakfast)
6:45−7:45 a.m.
Osteria Pronto Restaurant (Lobby)

Thursday, October 12
8:00−9:00 a.m.

PL3 – Plenary – Human Factors Engineering
Can Prevent the Next Major Incident in the Oil and Gas Industry
SPECIAL SESSIONS
Thursday, October 12, 8:00–9:00 a.m.
Lone Star Salon D (Level 3)
Plenary
Chair: S. Camille Peres, Texas A&M U.
Invited Speakers: M. Sam Mannan, Texas A&M U. System; Liz McDaniel, Hunstman Corp.; Johan Hendrikse, Shell North America Advisor for the Americas

Thursday, October 12
9:00 a.m.–5:15 p.m.

POS3 – University Lab Posters
INTERACTIVE SESSIONS
Thursday, October 12, 9:00 a.m.–5:15 p.m.
Lone Star West Foyer (Level 3)
Poster Session
On display 9:00 a.m.–12:30 p.m., lab representative(s) available 9:00–10:00 a.m.
2. George Mason U. Arch Lab
3. Rochester Inst. of Technology
4. St. Mary’s U. Department of Engineering
5. U. of Central Florida Technology and Aging Lab
On display 2:00–5:15 p.m., lab representative(s) available 2:00–3:00 p.m.
1. Georgia Tech Engineering Psychology
2. Indiana U. School of Informatics and Computing – Indianapolis Health Innovation Lab
3. Purdue U. Healthcare Ergonomics Analytics Lab (HEAL) & Human Performance Lab
4. Texas Tech U. Human Factors Psychology Program

Thursday, October 12
9:15–10:45 a.m

AS3 – Aviation Displays and Information Presentation
AEROSPACE SYSTEMS
Thursday, October 12, 9:15–10:45 a.m.
Room 201 (Level 2)
Lecture
Chair: Barry Goettl, U.S. Air Force Research Lab; Cochair: Sonia Dodd, Honeywell
1. Simon Müller and Dietrich Manzey, Technische Universität Berlin, Moving-Horizon Versus Moving-Aircraft: Comparing the Effectiveness of Competing Attitude Indicator Formats on Recoveries From Discrete and Continuous Attitude Changes
2. Ding Ding and Robert W. Proctor, Purdue U., Interactions Between the Design Factors of Airplane Artificial Horizon Displays

CE8 – Human-Agent Interactions
COGNITIVE ENGINEERING AND DECISION MAKING
Thursday, October 12, 9:15–10:45 a.m.
Brazos (Level 2)
Lecture
Chair: Joe Manganelli, Kent State U.; Cochair: Sara Riggs, Clemson U.
1. Nicholas Hertz and Eva Wiese, George Mason U., Social Facilitation With Nonhuman Agents: Possible or Not?
2. Chris Gay, Air Force Inst. of Technology; Barry Horowitz, U. of Virginia; John Elshaw, Air Force Inst. of Technology; Philip Bobko, Gettysburg College; Inki Kim, U. of Virginia, Operator Suspicion and Decision Responses to Cyber-Attacks on Unmanned Ground Vehicle Systems (GC-VUL)
THURSDAY, OCTOBER 12

GS4 – Measurement, Methods, and Simulation
GENERAL SESSIONS
Thursday, October 12, 9:15–10:45 a.m.
Room 203 (Level 2)
Lecture
Chair: Colleen Vrbin, Analytical Insights
1. Seunghoon Lee, POSTECH; Jangwoon Park, Texas A&M U.–Corpus Christi; Kihyo Jung, U. of Ulsan; Xiaopeng Yang and Heecheon You, POSTECH, Development of Statistical Models for Predicting a Driver’s Hip and Eye Locations
3. Stefania Mereu, DataSense; Matt Newman and Michelle Peterson, Sentier Strategic Resources, LLC; Eric Taylor, DataSense; Jessica White-Sustaita, Sentier Strategic Resources, LLC; Dave Yeats, Indeed, Top-Down vs. Bottom-Up Approaches to User Segmentation: The Best of Both Worlds

HC7 – Human Factors in the Wild: Delivering Safety in the Pediatric World (GC-HH)
HEALTH CARE
Thursday, October 12, 9:15–10:45 a.m.
Lone Star Salon F (Level 3)
Discussion Panel
Chair: Adjhaporn (Nana) Khunlertkit, Johns Hopkins Medicine
Panelists: Shangling Yin, KKH Hospital; A. Joy Rivera, Children’s Hospital Wisconsin; Patrice Tremoulet, CHOP; James Won, U. of Pennsylvania; Grace Tran, National Center for Human Factors in Healthcare-MedStar Health; Laurie Wolf, Barnes Jewish Hospital

HC8 – Patient Work Methods: Current Methods of Engaging Patients in Systems Design in Clinical, Community, and Extraterrestrial Settings (GC-HH)
HEALTH CARE
Thursday, October 12, 9:15–10:45 a.m.
Lone Star Salon G (Level 3)
Discussion Panel
Chair: Rupa Valdez, U. of Virginia
Panelists: Richard J. Holden, IUPUI; Adjhaporn (Nana) Khunlertkit, Johns Hopkins Medicine; Jenna Marquard, U. of Massachusetts, Amherst; Kerry McGuire, NASA; Mustafa Ozkaynak, U. of Colorado-Denver; Edmond Ramly, U. of Wisconsin-Madison

HP2 – Modeling Teamwork and Team Behavior
HUMAN PERFORMANCE MODELING
Thursday, October 12, 9:15–10:45 a.m.
Room 301 (Level 3)
Lecture
Chair: Robert Gutzwiller, Space and Naval Warfare Systems Center Pacific; Cochair: Xi Zheng, U. at Buffalo, SUNY
1. Cara Bailey Fausset, Samuel Cheng, Alexandra N. Trani, Clayton J. Hutto, Chris R. Hale, Tom McDermott, Molly Nadolski, and Dennis J. Folds, Georgia Tech Research Inst., Developing a Model of Team Skill Decay
2. Alexandra N. Trani, Clayton J. Hutto, Cara B. Fausset, Samuel Cheng, Chris R. Hale, Thomas McDermott, and Dennis J. Folds, Georgia Tech Research Inst., Modeling and Simulation of Skill Decay at the Organizational Team Level
3. Desmond Bonner, Kaitlyn Ouverson, Stephen Gilbert, Michael Dorneich, and Eliot Winer, Iowa State U.; Anne M. Sinatra and Anastacia MacAllister, U.S. Army Research Lab; Adam Kohl, Iowa State U., Operationalizing the C’s of Teamwork in an Intelligent Tutoring System (GC-VUL)
4. Jayson G. Boubin, Christina F. Rusnock, and Jason M. Binnewald, Air Force Inst. of Technology, Quantifying Compliance and Reliance Trust Behaviors to Influence Trust in Human-Automation Teams

ID1 – Individual Differences in Performance and Their Predictors
INDIVIDUAL DIFFERENCES IN PERFORMANCE
Thursday, October 12, 9:15–10:45 a.m.
Room 213 (Level 2)
Lecture
Chair: Krystyna Gielo-Perczak, U. of Connecticut; Cochair: James Szalma, U. of Central Florida
1. Katlin M. Anglin, Corinne A. Novell, and Jennifer S. Murphy, Quantum Improvements Consulting; Gregory A. Goodwin, U.S. Army Research Lab, Identifying Predictors of Army Marksmanship: A Cognitive, Affective, and Psychomotor Perspective
3. Gerald Matthews, Lauren Reinerman-Jones, Shawn Burke, and Grace Teo, U. of Central Florida; David Scribner, U.S. Army Research Lab, Personality, Social Identity, and Individual Differences in Multinational Decision Making
OE8 – Relevance of Psychophysical Methods Research for the Practitioner (GC-HH)

OCCUPATIONAL ERGONOMICS
Thursday, October 12, 9:15–10:45 a.m.
Lone Star Salon H (Level 3)
Discussion Panel
Chair: Robert Fox, General Motors Corp.; Cochair: Rammohan Maikala, Providence Regional Medical Center
Panelists: Stephen Bao, Washington State Department for Labor and Industries; Patrick G. Dempsey, NIOSH Pittsburgh Mining Research Division; George Brogmus, Liberty Mutual Insurance Group; Joel Cort, U. of Windsor

PD5 – New Methods

PRODUCT DESIGN
Thursday, October 12, 9:15–10:45 a.m.
Lone Star Salon A (Level 3)
Lecture
Chair: Karen Chen, North Carolina State U.; Cochair: Shadeequa (Dee) Miller, Dell, Inc.
3. Cynthia Rando and Jennifer Fogarty, Sophic Synergistics LLC, Better Business by Design: Introduction of the SOPHIC Conceptual Model

SF3 – Designing the User Experience for Drivers and Driverless Cars

STUDENT FORUM; COSPONSORED BY SURFACE TRANSPORTATION
Thursday, October 12, 9:15–10:45 a.m.
Room 303 (Level 3)
Lecture
Chair: Pamela A. Savage-Knepshield, U.S. Army Research Lab; Cochair: Jeffrey Thomas, Department of Defense
1. Drew M. Morris, Jason M. Erno, and June J. Pilcher, Clemson U., Electrodermal Response and Automation Trust During Simulated Self-Driving Car Use (GC-HH)
2. Kathryn Sampson, Kelly Funkhouser, and Frank Drews, U. of Utah, Attention Allocation in Autonomous Vehicles
3. Cailee Lane Markosian, Kelly Funkhouser, and Frank Drews, U. of Utah, Attention-to-Driving Related and Unrelated Stimuli in Autonomous Vehicles
4. Heejin Jeong and Yili Liu, U. of Michigan, Driver Workload and Secondary Task Modality While Driving on Horizontal Curves (GC-HH)
5. Carl Pankok, Drexel U.; David Kaber, North Carolina State U., Influence of Task Knowledge and Display Features on Driver Attention to Cluttered Navigation Displays

VE2 – Trust, Engagement, and Presence in Virtual Environments

VIRTUAL ENVIRONMENTS
Thursday, October 12, 9:15–10:45 a.m.
Room 205 (Level 2)
Lecture
Chair: William Shelstad, Wichita State U.
1. Sean A. McGlynn, Georgia Inst. of Technology; Wendy A. Rogers, U. of Illinois Urbana-Champaign, Design Recommendations to Enhance Virtual Reality Presence for Older Adults (GC-JOL)
3. Alexandra B. Proaps, Shelby K. Long, Molly Liechty, and James P. Bliss, Old Dominion U., Investigating the Influence of Agency on Trust in a Collaborative Game-Based Scenario
4. Shelby K. Long, Nicole D. Karpinsky, and James P. Bliss, Old Dominion U., Trust of Simulated Robotic Peacekeepers Among Resident and Expatriate Americans (GC-VUL)

Thursday, October 12
11:00 a.m.–12:30 p.m.

A2 – Aging Session 2

AGING
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Room 201 (Level 2)
Lecture
Chair: Huiyang Li, State U. of New York at Binghamton; Cochair: Ranjana Mehta, Texas A&M U.
1. Marita A. O’Brien and Clarke T. Peterson, Franciscan U. of Steubenville, Age Differences in Tornado Warnings and Emotions
3. Christina N. Harrington and Kristin J. Hare, Georgia Inst. of Technology; Wendy A. Rogers, U. of Illinois Urbana-Champaign, Developing a Quick-Start Guide to Aid Older Adults in Interacting With Gesture-Based Video Games (GC-JOL)
4. Hallie Clark, Anne Collins McLaughlin, Billy Williams, and Jing Feng, North Carolina State U., *Performance in Takeover and Characteristics of Non-Driving-Related Tasks During Highly Automated Driving in Younger and Older Drivers*


C2 – Communication and Teams

COMMUNICATIONS
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Room 301 (Level 3)
Lecture
Chair: Linda Pierce, Federal Aviation Admin.
1. Patrick C. Carmody and Julio C. Mateo, 361 Interactive, LLC; Drew Bowers, U. of Dayton Research Inst.; Mike J. McCloskey, 361 Interactive, LLC, *Linguistic Coordination as a Nonobtrusive and Dynamic Indicator of Prosocial Team Processes and Performance in Team Communication*

2. Dominique Engome Tchupo, U. of Rhode Island; Sivamaranji Sreeramakavacham and Jung Hyup Kim, U. of Missouri; Gretchen A. Macht, U. of Rhode Island, *Fuzzy Logic Patterns Communication and Team Performance*


CE10 – The Role of Visual Inspection in the 21st Century

COGNITIVE ENGINEERING AND DECISION MAKING
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Brazos (Level 2)
Discussion Panel
Chair: Judi See, Sandia National Labs
Panelists: Colin G. Drury, U. at Buffalo, SUNY, Retired; Ann Speed, Sandia National Labs; Allison Williams, Pantex Plant; Negar Khalandi, Kansas City National Security Campus

HC9 – Human Factors in the Wild: Solutions for Mitigating the Negative Impact of Interruptions in Health Care (GC-HH)

HEALTH CARE
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Lone Star Salon F (Level 3)
Discussion Panel
Chair: Yan Xiao, U. of Texas, Arlington
Panelists: A. Joy Rivera, Children’s Hospital of Wisconsin; C. Adam Probst, Baylor Scott & White Health; Renaldo Blocker, Mayo Clinic; Laurie Wolf, Barnes-Jewish Hospital; Kathryn M. Kellogg, National Center for Human Factors in Healthcare-MedStar Health
ID2 – Individual Differences in Performance
INDIVIDUAL DIFFERENCES IN PERFORMANCE
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Room 213 (Level 2)
Lecture
Chair: Krystyna Gielo-Perczak, U. of Connecticut; Cochair: James Szalma, U. of Central Florida
1. Shu Ma, Jingyu Zhang, and Guozhen Zhao, CAS Key Lab of Behavioral Science, Inst. of Psychology/U. of Chinese Academy of Sciences; Changxu Wu, U. of Arizona; Xianghong Sun, CAS Key Lab of Behavioral Science, Inst. of Psychology/U. of Chinese Academy of Sciences, Do Type 2 Diabetes Patients Have Declined Driving Performance During Non-Hypoglycemia? A Preliminary Simulated Driving Study (GC-HH)
2. Shijing Liu, Nicholas V. Mudrick, Michelle Taub, Roger Azevedo, and Chang S. Nam, North Carolina State U., Investigating Eye Movements, Attention, and Multitasking With MATB-II
3. Joseph T. Coyne, Cyrus Foroughi, and Ciara Sibley, Naval Research Lab, Pupil Diameter and Performance in a Supervisory Control Task: A Measure of Effort or Individual Differences?

OE9 – Industrial Exoskeletons: Are We Ready for Prime Time Yet? (GC-HH)
OCCUPATIONAL ERGONOMICS; COSPONSORED BY PRODUCT DESIGN, SAFETY
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Lone Star Salon H (Level 3)
Discussion Panel
Chair: Christopher Reid, Boeing; Cochair: Maury Nussbaum, Virginia Polytechnic Inst. and State U.
Panelists: Karen Gregorczyk, Natick Soldier Research, Development, & Engineering Center; Carisa Harris-Adamson, U. of California, Berkeley; Kadon Kyte, Boeing; Brian Lowe, National Inst. for Occupational Safety and Health; Maury Nussbaum, Virginia Polytechnic Inst. and State U.; Ron Zmijewski, Puget Sound Naval Shipyard

SF4 – Designing Systems for Caregivers, Patients, and Support Groups
STUDENT FORUM; COSPONSORED BY HEALTH CARE
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Room 303 (Level 3)
Lecture
Chair: Denny Yu, Purdue U.; Cochair: Eva Parkhurst, U. of Central Florida
2. Mauritia T. Harris, U. of Illinois at Urbana-Champaign; Kenny A. Blocker, Georgia Inst. of Technology; Wendy A. Rogers, U. of Illinois at Urbana-Champaign, Understanding Older Adults’ Intentions to Use Health Care Technologies: A Work in Progress (GC-HH)

ST3 – Glance Behavior and Distraction
SURFACE TRANSPORTATION
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Lone Star Salon G (Level 3)
Lecture
Chair: Laura Stanley, Montana State U.; Cochair: Brian T. W. Lin, U. of Michigan
4. Thomas McWilliams, Joonbum Lee, Bruce Mehler, and Bryan Reimer, Massachusetts Inst. of Technology, Revisiting Radio Tuning: A Secondary Analysis Comparing Glance Behavior Across Five Vehicles

PD6 – Starting Your Career as a UX Research Professional
PRODUCT DESIGN
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Lone Star Salon A (Level 3)
Discussion Panel
Chair: Robert Youmans, Google
Panelists: Ivonne Figueroa, U.S. Census Bureau; Rabia Murtaza, YouTube; Jared Ramsburg, Facebook; Melissa A. Smith, YouTube; Christian Gonzalez, YouTube
VE3 – Gamification: Current Research and Applications (GC-JOL)
VIRTUAL ENVIRONMENTS
Thursday, October 12, 11:00 a.m.–12:30 p.m.
Room 205 (Level 2)
Discussion Panel
Chair: Shawn Doherty, Embry-Riddle Aeronautical U.
Panelists: Evan Palmer, San Jose State U.; Laura Strater, Raytheon Information, Intelligence and Services

Thursday, October 12
12:30–2:00 p.m.

Individual Differences in Performance Technical Group Business Meeting (Lunch)
12:30–1:45 p.m.
Room 311 (Level 3)

Journal of Cognitive Engineering and Decision Making Editorial Board (Lunch)
12:30–1:45 p.m.
Room 212 (Level 2)

Thursday, October 12
2:00–3:30 p.m.

CE11 – Analyzing Teams
COGNITIVE ENGINEERING AND DECISION MAKING
Thursday, October 12, 2:00–3:30 p.m.
Brazos (Level 2)
Lecture
Chair: Nathan McNeese, Clemson U.; Cochair: Dominique Engome Tchupo, U. of Rhode Island
3. Joanne Kitchin and Chris Baber, U. of Birmingham, The Dynamics of Distributed Situation Awareness
4. David A. P. Grimm and Jamie C. Gorman, Georgia Inst. of Technology; Ron H. Stevens and Trysha L. Galloway, The Learning Chameleon, Inc.; Ann M. Willemsen-Dunlap and Donald J. Halpin, Jump Trading Simulation and Education Center, Demonstration of a Method for Real-Time Detection of Anomalies in Team Communication

ED2 – Alternative Workstations: Magic Pills for Office Worker Health? (GC-HH)
ENVIRONMENTAL DESIGN
Thursday, October 12, 2:00–3:30 p.m.
Room 205 (Level 2)
Discussion Panel
Chair: Jia-Hua (Jim) Lin, U. of Washington; Cochair: Carisa Harris Adamson, U. of California, San Francisco
Panelists: Stephen Bao, Washington State Department of Labor and Industries; David Rempel, U. of California, San Francisco; Lora Cavuoto, U. at Buffalo, SUNY; Michelle M. Robertson, MM Robertson and Associates, LLC; Meg Honan, Genentech

HC10 – Applying Human Factors Science to Prevent Transmission of High-Consequence Pathogens: Discoveries and the Road Ahead (GC-VUL)
HEALTH CARE
Thursday, October 12, 2:00–3:30 p.m.
Lone Star Salon F (Level 3)
Discussion Panel
Chair: Aaron Dietz, Johns Hopkins U. School of Medicine
Panelists: Mike Bell, Centers for Disease Control and Prevention; Frank A. Drews, U. of Utah; Francis T. Durso, Georgia Inst. of Technology; Ayse P. Gurses, Johns Hopkins U. School of Medicine; Priyadarshini Pennathur, U. of Iowa

HP3 – The Strategic Task Overload Model: History, Status, Challenges, and Extensions Into New Domains
HUMAN PERFORMANCE MODELING
Thursday, October 12, 2:00–3:30 p.m.
Room 301 (Level 3)
Invited Symposium
Chair: Angelia Sebok, Alion Science and Technology
1. Angelia Sebok, Alion Science and Technology, The Strategic Task Overload Model: History, Status, Challenges, and Extensions Into New Domains
2. Christopher D. Wickens, Colorado State U.; Robert S. Gutzwiller, U.S. Navy Space and Naval Warfare System Center Pacific, Status of the Strategic Task Overload Model (STOM) for Predicting Multitask Management
5. Laura H. Barg-Walkow, Georgia Inst. of Technology; Wendy A. Rogers, U. of Illinois Urbana-Champaign, Modeling Task Scheduling in Complex Health-Care Environments: Identifying Relevant Factors (GC-HH)
OE10 – Ergonomics of Health Care

OCCUPATIONAL ERGONOMICS; COSPONSORED BY
PRODUCT DESIGN
Thursday, October 12, 2:00–3:30 p.m.
Lone Star Salon H (Level 3)
Lecture
Chair: Neal Wiggermann, Hill-Rom; Cochair: Steven Lavender, Ohio State U.
1. Jie Zhou, U. of California, Davis; Neal Wiggermann, Hill-Rom, Effects of Brake Pedal Horizontal Location of Hospital Beds on Force Exertions and Work Efficiency
2. Xuanxuan Zhang, Mark C. Schall, Jr., Richard Sesek, Sean Gallagher, and Jesse Michel, Auburn U., Burnout and Its Association With Musculoskeletal Pain Among Primary Care Providers (GC-HH)
3. Steven A. Lavender and Carolyn M. Sommerich, Ohio State U., Preventing Firefighter Injuries When Handling Obese Patients: Understanding the Patient Handling Scenarios (GC-HH)
4. Jing Li, Ohio State U./Baxter International, Inc.; Carolyn Sommerich, Steven A. Lavender, Esther Chippis, and Elizabeth Stasny, Ohio State U., Subjective and Objective Estimation of Physical Activities on the Lower Extremities for In-Patient Staff Nurses and Their Lower-Extremity Musculoskeletal Discomfort (GC-HH)
5. Neal Wiggermann, Hill-Rom, Relationship Between Anthropometric Attributes and Space Required to Turn From Supine to Side Lying (GC-HH)

PD7 – Considering Vision in Design

PRODUCT DESIGN
Thursday, October 12, 2:00–3:30 p.m.
Lone Star Salon A (Level 3)
Lecture
Chair: Han Zhang, Amazon; Cochair: Michael Schwartz, U. of Central Florida
2. Brianna Posadas, Imani Sherman, Divyalashmi, Mahendran, Gabriela Burgala, and Juan Gilbert, U. of Florida, A Focus Group Study of Blind Voters in Alachua County
3. John M. Hicks, Ashley A. Cain, and Jeremiah D. Still, Old Dominion U., Visual Saliency Predicts Fixations in Low-Clutter Web Pages

S6 – Identifying and Mitigating Risk in Safety-Critical Environments

SAFETY
Thursday, October 12, 2:00–3:30 p.m.
Room 201 (Level 2)
Lecture
Chair: Jiun-Yin Jian, Atkins; Cochair: Tamsyn Edwards, NASA Ames Research Center
2. Ronald L. Boring, Idaho National Lab; Martin Rasmussen, NTNU Social Research; Thomas A. Ulrich, U. of Idaho; Harold S. Blackman, Boise State U., Retrospective Application of Human Reliability Analysis for Oil and Gas Incidents: A Case Study Using the Petro-HRA Method (GC-HH)
3. Farzan Sasangohar, Shravan Shetty, and Mark Avnet, Texas A&M U., Improving the Understanding of Complex Nuclear Accidents: A Network Visualization Accident Modeling Approach (GC-VUL)
4. Salihya Hobbins, Arizona State U., Analyzing Last 10 Years Licensee Event Reports for Improved Teamwork and Nuclear Power Plant Safety During Outages
5. Sabrina Jocelyn, Institut de recherche Robert-Sauvé en santé et en sécurité du travail; Mohamed-Salah Ouali and Yuvin Chinniah, Polytechnique Montréal, Improving Machinery-Related Risk Identification and Estimation With Accident Reporting and Logical Analysis of Data

SF5 – Designing Automated and Autonomous Systems

STUDENT FORUM; COSPONSORED BY COGNITIVE ENGINEERING & DECISION MAKING
Thursday, October 12, 2:00–3:30 p.m.
Room 303 (Level 3)
Lecture
Chair: Anthony Baker, Embry-Riddle Aeronautical U.; Cochair: Linda Pierce, Federal Aviation Admin.
1. Daniel B. Quinn and Richard Pak, Clemson U.; Ewart J. de Visser, Perceptronics Solutions, Inc., Testing the Efficacy of Human-Human Trust Repair Strategies With Machines
2. Alexandra D. Kaplan, Tracy Sanders, and Peter A. Hancock, U. of Central Florida, The Influence of Extroversion on the Tendency to Anthropomorphize Robots
3. Meng Yuan Zhang and X. Jessie Yang, U. of Michigan, Evaluating Effects of Workload on Trust in Automation, Attention Allocation, and Dual-Task Performance (GC-VUL)
4. William Althoff, Steven C. Sutherland, and Julie Chambers, U. of Houston-Clear Lake, Emotional Factor Impacts on User Compliance With an Automated Advisor System
5. Tracy L. Sanders, Keith MacArthur, and William Volante, U. of Central Florida; Gabriella Hancock, California State U., Long Beach; Thomas MacGillivray, William Shugars, and Peter A. Hancock, U. of Central Florida, Trust and Prior Experience in Human-Robot Interaction (GC-HH)

6. Shannon P. Devlin and Sara L. Riggs, Clemson U., Analyzing Eye-Tracking Data Using a Markovian Framework to Assess Differences in Scan Patterns

**ST4 – Human Factors Concerns for a Mixed-Equipage Society**

**SURFACE TRANSPORTATION**

THURSDAY, OCTOBER 12, 2:00–3:30 p.m.
Lone Star Salon G (Level 3)
Discussion Panel
Chair: Bridget Lewis, George Mason U.
Panelists: Carryl L Baldwin, George Mason U.; Florian Jentsch, U. of Central Florida; Oliver Carsten, U. of Leeds; Tracy Lennertz, Volpe National Transportation Systems Center; John K. Lenneman, Toyota Collaborative Safety Research Center

**Thursday, October 12**

3:45–5:15 p.m.

**AS4 – Human Factors Issues in Commercial Aviation and Air Traffic Control**

**AEROSPACE SYSTEMS**

THURSDAY, OCTOBER 12, 3:45–5:15 p.m.
Room 201 (Level 2)
Lecture
Chair: Valerie Gawron, MITRE Corp.; Cochair: Linda Pierce, Federal Aviation Admin.

**CE12 – Visualizing and Summarizing Information**

**COGNITIVE ENGINEERING AND DECISION MAKING**

THURSDAY, OCTOBER 12, 3:45–5:15 p.m.
Brazos (Level 2)
Lecture
Chair: Harvey Smallman, Pacific Science & Engineering Group; Cochair: X. Jessie Yang, U. of Michigan
2. Seyed M. Miran, Chen Ling, and Joseph J. James, U. of Akron; Alan Gerard and Lans Rothfusz, National Severe Storms Lab, Effective Method to Convey Threat Information for Tornado: Probabilistic Hazard Information vs. Deterministic Hazard Information
3. Ashley J. Pugh, Christopher D. Wickens, Nathan Herdener, Benjamin A. Clegg, and C. A. P. Smith, Colorado State U., Effect of Visualization on Spatial Trajectory Prediction Under Uncertainty
5. Joachim Meyer, Tel Aviv U., Evaluating Alerting Systems From Descriptions

**GS5 – Interface Design and Human Reliability**

**GENERAL SESSIONS**

THURSDAY, OCTOBER 12, 3:45–5:15 p.m.
Room 203 (Level 2)
Lecture
Chair: Carolyn Hartzell, Georgia Inst. of Technology
1. Nuphar Katzman and Tal Oron-Gilad, Ben Gurion U. of the Negev, Who’s with Me? A Tactile Interface for Identification of Separation of Squad Members From Their Team
2. Anna Sjörs Dahlman, Panagiotis Matsangas, and Nita Lewis Shattuck, Naval Postgraduate School, The Effect of Habitual Exercise on Daytime Sleepiness and Mood of U.S. Navy Sailors (GC-HH)
4. Paul Allan Green, U. of Michigan, Improving the Timing of Conference Presentations Using Web Applications
HC11 – Infections, Interruptions, and Resilience
HEALTH CARE
Thursday, October 12, 3:45–5:15 p.m.
Lone Star Salon F (Level 3)
Lecture
Chair: Shadeequa (Dee) Miller, Dell, Inc.; Cochair: Michelle Rogers, Drexel U.
2. Katherine L. Forsyth and Hunter J. Hawthorne, Mayo Clinic; Anna R. Linden, St. Olaf College; Nibras El-Sherif, Rachelen S. Varghese, M. Susan Hallbeck, and Renaldo C. Blocker, Mayo Clinic, Do Trauma Activations Affect Interruptions in the Emergency Department?
3. Joel Mumma, Christina Gipson, Ashley Ferguson, and Francis T. Durso, Georgia Inst. of Technology; Colleen Kraft and Jesse Jacobs, Emory U.; for the CDC Prevention Epicenter of Emory and Atlanta Consortium Hospitals, Centers for Disease Control, Using Think Alouds to Gain Insight Into the Causes of Failure Modes While Doffing Personal Protective Equipment for Ebola Virus Disease (GC-HH)
4. Sudeep Hegde and Cullen Jackson, Beth Israel Deaconess Medical Center, RETIPS Revisited: Findings From a Pilot Stage Implementation of the Resilience Engineering Tool to Improve Patient Safety (GC-HH)

HC12 – E-learning and Decision Support Systems in Health Care
HEALTH CARE
Thursday, October 12, 3:45–5:15 p.m.
Lone Star Salon G (Level 3)
Lecture
Chair: Laura Barg-Walkow, Georgia Inst. of Technology; Cochair: Mustafa Ozkaynak, U. of Colorado Anschutz Medical Campus
1. Kunal R. Khanade, Farzan Sasangohar, and Mahnoosh Sadeghi, Texas A&M U.; Steven Sutherland and Karen Elaine Alexander, U. of Houston-Clear Lake, Deriving Information Requirements for a Smart Nursing System for Intensive Care Units (GC-HH)
2. Siobhan M. Heiden, Michelle A. Jahn, and Barrett S. Caldwell, Purdue U., Expanding Medication Decision Support in Community Pharmacies Without Sacrificing Usability (GC-HH)
3. Daniel Diethei, Franz Ertle, Tobias Grundgeiger, and Christoph Mengelkamp, Julius-Maximilians-Universität Würzburg; Volker Held, Missionsärztliche Klinik Würzburg, E-Learning vs. E-Learning With Hands-On: An Experimental Study to Improve Clinical Skills
4. Katrina M. Ellis, Florida Inst. of Technology; Brittany Nelson, Michigan Technological U., Understanding Diagnostic Test Results: Development of the Knowledge of Diagnostic Test Scale (GC-HH)

OE11 – Industry-Sponsored Human Factors & Ergonomics Research: Contributions from the Liberty Mutual Research Inst. for Safety
OCCUPATIONAL ERGONOMICS
Thursday, October 12, 3:45–5:15 p.m.
Lone Star Salon H (Level 3)
Discussion Panel
Chair: Waldemar Karwowiski, U. of Central Florida; Cochair: Barbara Webster, Retired
Panelists: Stover Snook, Retired; Tom Leamon, Harvard T. H. Chan School of Public Health; Rammohan Maikala, Providence Regional Medical Center; Jack T. Dennerlein, Northeastern U.

SF6 – Developing, Assessing, and Improving Tools, Training, and System Efficacy
STUDENT FORUM; COSPONSORED BY SYSTEM DEVELOPMENT, TEST & EVALUATION
Thursday, October 12, 3:45–5:15 p.m.
Room 303 (Level 3)
Lecture
Chair: Diane Quarles, U.S. Army Research Lab; Cochair: Petra Alfred, Pacific Science & Engineering Group
1. Daniel Endres amd Laura A. Whitlock, Clemson U., The Development of a Coding Scheme to Examine Technology Use in Diabetes Self-Management
2. Carolina Rodriguez-Paras and Farzan Sasangohar, Texas A&M U., Usability Assessment of a Post-Traumatic Stress Disorder (PTSD) mHealth App (GC-HH)
4. Makenzie Pryor, Garrett C. Millar, and Andrew McNamara, North Carolina State U.; Leah Kaufman, Lenovo; Anne Collins McLaughlin, North Carolina State U., Creating Content Guidelines for Consistent Display of Information on an Ecommerce Website
THURSDAY, OCTOBER 12

ST5 – Driver Assistance & Warning Systems
SURFACE TRANSPORTATION
Thursday, October 12, 3:45–5:15 p.m.
Room 301 (Level 3)
Lecture
Chair: Jeffrey Muttart, CSRC, LLC; Cochair: Anuj Pradhan, U. of Michigan
2. Erika E. Miller and Linda Ng Boyle, U. of Washington, Driver Adaptation to Lane-Keeping Assistance Systems: Do Drivers Become Less Vigilant?
3. Xingwei Wu and Linda Ng Boyle, U. of Washington; Dawn Marshall, U. of Iowa, Drivers’ Avoidance Strategies When Using a Forward Collision Warning (FCW) System
5. Ian J. Reagan, David G. Kidd, and Jessica B. Cicchino, Insurance Inst. for Highway Safety, Driver Acceptance of Adaptive Cruise Control and Active Lane-Keeping in Five Production Vehicles

VE4 – Investigations of Virtual Environment Technology
VIRTUAL ENVIRONMENTS
Thursday, October 12, 3:45–5:15 p.m.
Room 205 (Level 2)
Lecture
Chair: Tyler Rose, North Carolina State U.; Cochair: Karen Chen, North Carolina State U.
1. Tristan C. Endsley, Kelly A. Sprehn, Ryan M. Brill, Kimberly J. Ryan, Emily C. Vincent, and James M. Martin, Draper, Augmented Reality Design Heuristics: Designing for Dynamic Interactions (GC-JOL)
2. Jacob M. Read and Jason J. Saleem, U. of Louisville, Task Performance and Situation Awareness With a Virtual Reality Head-Mounted Display (GC-HH)
Friday, October 13
6:45–7:45 a.m.

Education Division (Breakfast)
6:45–7:45 a.m.
Room 211 (Level 2)

Friday, October 13
8:00–9:00 a.m.

PL4 – Plenary – Beyond Gamification: From Here to Affinity
SPECIAL SESSIONS
Friday, October 13, 8:00–9:00 a.m.
Lone Star Salon D (Level 3)
Plenary
Chair: Russell Branaghan, Arizona State U.
Speaker: James Paul Gee, Arizona State U.

Friday, October 13
9:15–11:00 a.m.

Technical Program Committee (Breakfast)
9:15–11:00 a.m.
Room 306 (Level 3)

Friday, October 13
9:15–10:45 a.m.

CE13 – Trust in Automation
COGNITIVE ENGINEERING AND DECISION MAKING
Friday, October 13, 9:15–10:45 a.m.
Room 203 (Level 2)
Lecture
Chair: Erin Chou, Arizona State U.; Cochair: Samuel Levulis, Texas Tech U.
1. Elizabeth Kristen Kaltenbach and Igor Dolgov, New Mexico State U., On the Dual Nature of Transparency and Reliability: Rethinking Factors That Shape Trust in Automation
2. Scott Mishler, Jing Chen, Edin Sabic, and Bin Hu, New Mexico State U.; Ninghui Li and Robert W. Proctor, Purdue U., Description-Experience Gap: The Role of Feedback and Description in Human Trust in Automation
3. Anthony J. Hillesheim, Christina F. Rusnack, Jason M. Bindewald, and Michael E. Miller, Air Force Inst. of Technology, Relationships Between User Demographics and User Trust in an Autonomous Agent
5. Kelly Satterfield, Oak Ridge Inst. for Science and Education; Caryl Baldwin, Ewart de Visser, and Tyler Shaw, George Mason U., The Influence of Risky Conditions in Trust in Autonomous Systems

ED3 – Updates to ANSI/HFES 100: A New Anthropometric Database and Introduction of Virtual Fit Testing
ENVIRONMENTAL DESIGN; COSPONSORED BY OCCUPATIONAL ERGONOMICS
Friday, October 13, 9:15–10:45 a.m.
Room 301 (Level 3)
Invited Symposium
Chair: Thomas Albin, High Plains Engineering Services
1. Thomas Joseph Albin, High Plains Engineering Services; Scott Openshaw, Herman Miller; Matt Parkinson, Pennsylvania State U.; Matthew P. Reed, U. of Michigan Transportation Research Inst., Updates to ANSI/HFES 100: A New Anthropometric Database and Introduction of Virtual Fit Testing (GC-ALL)
2. Matthew P. Reed, U. of Michigan, Ann Arbor; Matthew Parkinson, Pennsylvania State U., Augmenting ANSI/HFES 100 With Virtual Fit Testing (GC-ALL)
3. Scott Openshaw, Herman Miller, Understanding the Impact of New Anthropometric Tools to the ANSI/HFES 100 Standard (GC-ALL)

HC13 – Human Factors in Pharmacy
HEALTH CARE
Friday, October 13, 9:15–10:45 a.m.
Brazos (Level 2)
Discussion Panel
Chair: Michelle Chui, U. of Wisconsin-Madison
OE12 – Wearable Technologies: How Will We Overcome Barriers to Enhance Worker Performance, Health, and Safety? (GC-HH)

OCCUPATIONAL ERGONOMICS; COSPONSORED BY PRODUCT DESIGN, SAFETY
Friday, October 13, 9:15–10:45 a.m.
Lone Star Salon H (Level 3)
Discussion Panel
Chair: Christopher Reid, Boeing; Cochair: Mark C. Schall, Jr., Auburn U.
Panelists: Ryan Z. Amick, Wichita Sate U.; Jeffrey M. Schiffman; Ming-Lun Lu, National Inst. for Occupational Safety and Health; Marty Smets, Ford Motor Co.; Haifa R. Moses, NASA; Ryan Porto, General Motors

S7 – Improving Safety Compliance of Human Operators and Service Users
SAFETY
Friday, October 13, 9:15–10:45 a.m.
Room 201 (Level 2)
Lecture
Chair: Claudia Ziegler Acemyan, Rice U.; Cochair: Mahiyar Nasarwanji, National Inst. for Occupational Safety and Health
1. Colin G. Drury and Catherine Drury Barnes, Applied Ergonomics Group Inc.; Michelle R. Bryant, Federal Aviation Admin., Why Do We STILL Not Follow Procedures? (GC-VUL)
2. Jason P. Williams, Farzan Sasangohar, S. Camille Peres, Alec Smith, and M. Sam Mannan, Texas A&M U., Investigating Written Procedures in Process Safety: Qualitative Data Analysis of Interviews From High-Risk Facilities (GC-HH)
4. Caroline Crump, Robyn Brinkerhoff, and Douglas Young, Exponent, Passenger Seat Belt Usage Rates on Shuttle Buses (GC-HH)
5. Spencer Eggen and Farzan Sasangohar, Texas A&M U., Contribution of Technical and Human Factors to “No Fault Found” Events (GC-VUL)

SF7 – Analysis and Assessment of Factors Affecting Performance
STUDENT FORUM; COSPONSORED BY OCCUPATIONAL ERGONOMICS
Friday, October 13, 9:15–10:45 a.m.
Room 303 (Level 3)
Lecture
Chair: Charles Hernandez, U.S. Army Research Lab; Cochair: Julia Wright, U.S. Army Research Lab
1. Matthew David Meyers and Elizabeth Blickensderfer, Embry-Riddle Aeronautical U., An Ergonomic Analysis of Stress Caused by Maintenance and Material Loading in FDM-Based 3-D Printing
2. Angel M. Nardolillo, Amir Baghdadi, and Lora A. Cauvoto, U. at Buffalo, SUNY, Heart Rate Variability During a Simulated Assembly Task: Influence of Age and Gender (GC-HH)
3. Whitney Paige Mantooth, Texas A&M Health Science Center; Yibo Zhu and Ranjana K. Mehta, Texas A&M U., Ergonomic Evaluation of Office Furniture on Team Dynamics
4. Victoria L. Claypoole, Daryn Denver, Kody Denues, and James L. Szalma, U. of Central Florida, Utilizing Event Rate as a Manipulation of Task Difficulty in Vigilance
5. Yolanda Ortiz, Beth Blickensderfer, and Jayde M. King, Embry-Riddle Aeronautical U., Assessment of General Aviation Cognitive Weather Tasks: Recommendations for Autonomous Learning and Training in Aviation Weather
6. Lauren N. Tiller and James P. Bliss, Old Dominion U., Categorization of Near-Collision Close Calls Reported to the Aviation Safety Reporting System (GC-VUL)

SS4 – On Being a Female Leader in Human Factors/ Ergonomics
SPECIAL SESSIONS
Friday, October 13, 9:15–10:45 a.m.
Lone Star Salon A (Level 3)
Discussion Panel
Chair: Ashley Hughes, Michael E. DeBakey VA Medical Center
Panelists: Mica R. Endsley, SA Technologies Inc.; Patricia DeLucia, Texas Tech U.; Valerie Rice, U.S. Army Research Lab; Elizabeth Blickensderfer, Embry-Riddle Aeronautical U.; Arathi Sethumadhavan, Core Human Factors Inc.; Aideen Stronge, Google

ST6 – Automation
SURFACE TRANSPORTATION
Friday, October 13, 9:15–10:45 a.m.
Lone Star Salon F (Level 3)
Lecture
Chair: Shan Bao, U. of Michigan, Ann Arbor; Cochair: Ben Sawyer, Massachusetts Inst. of Technology
1. Kellie D. Kennedy and Chad L. Stephens, NASA; Ralph A. Williams, AMA; Paul C. Schutte, U.S. Army, Repeated Induction of Inattentional Blindness in a Simulated Aviation Environment
2. Angela Sebok and Brett Walters, Alion Science and Technology; Christopher D. Wickens, Consultant, Simulator-Based Investigations of Human Error Potential With Railroad Automation in the Locomotive Cab
4. Jürgen Schmidt, Mariella Dreißig, and Wolfgang Stolzmann, Daimler AG; Matthias Rötting, Technische Universität Berlin, The Influence of Prolonged Conditionally Automated Driving on the Takeover Ability of the Driver

**Friday, October 13**

**11:00 a.m.—12:30 p.m.**

**CE14 – Perception’s Effect on Performance**
COGNITIVE ENGINEERING AND DECISION MAKING
Friday, October 13, 11:00 a.m.—12:30 p.m.
Room 203 (Level 2)

Lecture
Chair: Lixiao Huang, Duke U.; Cochair: Shelby K. Long, Old Dominion U.
5. Nathan Herdener, Christopher D. Wickens, Benjamin A. Clegg, and C. A. P. Smith, Colorado State U., Spatial Anchoring and Adjustment Under Mental Workload

**HC14 – Tools, Technologies, and Provider Performance**
HEALTH CARE
Friday, October 13, 11:00 a.m.—12:30 p.m.
Lone Star Salon F (Level 3)
Lecture
Chair: Christine Jefferies, U. of Virginia; Cochair: Abigail Wooldridge, U. of Wisconsin, Madison
1. Dustin T. Weiler and Jason J. Saleem, U. of Louisville, Role Assignment in High-Fidelity Patient Simulation and the Effects on Nursing Students’ Self-Efficacy Development (GC-HH)
2. Amandeep Shergill, Veterans Admin. Hospital, San Francisco; Carisa Harris Adamson, David Lee, and David Rempel, U. of California, San Francisco, Evaluation of Endoscopist Thumb Force While Performing Routine Colonoscopy (GC-HH)
3. Katia M. Rojas and Huiyang Li, Binghamton U., Adverse Events and Over-the-Counter (OTC) Medications: Is Inappropriate Labeling the Problem? The Case of Acetaminophen (GC-HH)
4. Denny Yu, Kang-Yu Hsu, Joon Hong Kim, and Poching Delaurentis, Purdue U., Infusion Pump Informatics Approach to Quantify Impact of Alerts and Alarms on Health Care Delivery (GC-HH)

**HC15 – Vision, Attention, and Gesturing in Health-Care Design**
HEALTH CARE
Friday, October 13, 11:00 a.m.—12:30 p.m.
Lone Star Salon G (Level 3)
Lecture
Chair: Bethany Lowndes, Mayo Clinic; Cochair: Victoria Lew, Embry-Riddle Aeronautical U.
2. Katherina Jurewicz and David M. Neyens, Clemson U., Mapping 3-D Gestural Inputs to Traditional Touchscreen Interface Designs Within the Context of Anesthesiology (GC-HH)
4. Robert Keefer and Lisa Douglas, POMIET, Reducing Stress in Health Care: Evidence From Using an Integration Design Model (GC-HH)
5. Jenna Blumenthal, Tiffany Tong, and Mark Chignell, U. of Toronto, Gait-Guided Adaptive Interfaces: Managing Cognitive Load In Older Users (GC-HH)
HP4 – New Modeling Methods in Performance, Workload, and Ergonomics
HUMAN PERFORMANCE MODELING
Friday, October 13, 11:00 a.m.–12:30 p.m.
Room 301 (Level 3)
Lecture
Chair: Richard Steinberg, Raytheon; Cochair: Andrew Abbate, Drexel U.
1. Yiqi Zhang and Changxu Wu, U. at Buffalo, SUNY, Learn to Integrate Mathematical Models in Human Performance Modeling
2. Richard Steinberg, Dan Donohoo, Laura Strater, and Alice Diggs, Raytheon, Workload Thresholds for Human Performance Models (GC-ALL)
4. Hayoung Jung, Xiaopeng Yang, and Zhichan Lim, Pohang U. of Science and Technology; Wonsup Lee, Delft U. of Technology; Heecheon You, POSTECH, Estimation of Hand Joint Center of Rotation Using Surface Markers
5. Holly A. H. Handley, Old Dominion U., Defining Human Capability from Soldier and Task Data

OE13 – Wearable Sensor Tech
OCCUPATIONAL ERGONOMICS
Friday, October 13, 11:00 a.m.–12:30 p.m.
Lone Star Salon H (Level 3)
Lecture
Chair: Mark C. Schall, Jr., Auburn U.; Cochair: Ryan Porto, General Motors
3. Amir Baghdadi, U. at Buffalo, SUNY; Zahra S. Maman and Lin Lu, Auburn U.; Lora A. Cavuoto, U. at Buffalo, SUNY; Fadel M. Megahed, Miami U., Effects of Task Type, Task Duration, and Age on Body Kinematics and Subjective Fatigue (GC-HH)
5. Howard Chen, U. of Iowa; Mark C. Schall, Jr., Auburn U.; Nathan Fethke, U. of Iowa, Effects of Movement Speed and Magnetic Disturbance on the Accuracy of Inertial Measurement Units (GC-HH)

PD8 – Founding a UX Consultancy: Advice From the Experts
PRODUCT DESIGN
Friday, October 13, 11:00 a.m.–12:30 p.m.
Lone Star Salon A (Level 3)
Discussion Panel
Chair: Robert Turner, Anne Arundel Medical Center
Panelists: Brittany Anderson-Montoya, Carolinas HealthCare System; Arathi Sethumadhavan, Core Human Factors; Becca Kennedy, Kennason, LLC; Alex Proaps, Designology, LLC

S8 – Contributors to Safety Risk and Mitigation Through Design
SAFETY
Friday, October 13, 11:00 a.m.–12:30 p.m.
Room 201 (Level 2)
Lecture
Chair: David Fortenbaugh, Engineering Systems, Inc.; Cochair: Swaroop Dinakar, Crash Safety Research Center, LLC
1. Russell E. Jackson and William M. Felton, U. of Idaho, Barriers to Falling Risk (GC-HH)
2. Tim Horberry, Monash U.; Robin Burgess-Limerick, Tristan Cooke, and Lisa Steiner, U. of Queensland, Human-Centered Safe Design of Mining Equipment
5. W. Sloane Hoyle and S. Camille Peres, Texas A&M U., Situation Awareness Offshore: Relevant Influencing Factors and Risks
6. Yousif Abulhassan and Doug DeMoulin, Murray State U., Locating Firefighters in Immediately Dangerous to Life or Health Environments (GC-HH)
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Volume 1, Users’ Guides to Human Factors and Ergonomics Methods
By Philip Kortum

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7. Real-Life Example 1: Corporate Web Portal
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HFES is pleased to announce the release of *Readings in Training and Simulation, Volume 2: Research Articles from 2000 to 2014*, edited by Dee H. Andrews and Scotty D. Craig. The first edition, published in 2001 covering 30 years of research, is still a best-seller. This second edition has been released as an e-book for use on almost any type of device, including iPads and Kindles.

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- Training Devices and Simulators
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**Dee H. Andrews** has been a training developer, researcher, and human factors psychologist since 1976. He finished his 34-year career with the Department of Defense as a Directorate Senior Scientist for Training with the 711th Human Performance Wing of the Air Force Research Laboratory (AFRL).

**Scotty D. Craig** is an assistant professor in the Human Systems Engineering Program within the Ira A. Fulton Schools of Engineering at Arizona State University (ASU). He is also the supervising faculty member for the ASU Cognitive-Based Applied Learning Technology Laboratory (www.cobaltlab.org).

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- **Chapter 2**: *Transportation Issues in Forensic Human Factors/Ergonomics*, Paul L. Olson & Rudolf G. Mortimer
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- **Chapter 6**: *Practice Issues in Forensic Human Factors/Ergonomics*, David A. Thompson & H. Harvey Cohen

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