March 5–8, 2017
Sheraton New Orleans
New Orleans, Louisiana

Human Factors and Ergonomics in Health Care

PROGRAM
We are human factors engineers, cognitive psychologists, and designers. We are dedicated to one thing; making your products and services simple to use.

**Consulting**
We develop, plan and perform human factors and user experience research.

- Usability Testing
- Medical Device Human Factors
  - Formative Testing
  - Validation Testing
- Design Research
  - Ethnography
  - Eye-tracking

**Facility**
Location! Location! Location! We are centrally located in the Phoenix metropolitan area, ten minutes from Phoenix Sky Harbor airport.

- Comfortable and inviting studios with natural light and high definition recordings
- Observation rooms with one-way window and a client lounge
- Ideal for usability and user experience research, interviews & participatory design sessions

**Recruitment**
We understand that successful research requires matching the right participant to the right study.

We recruit qualified, engaged target end-users for all research projects, these include:

- Physicians
- Nurses
- Patients with specific medical conditions
- General population

**Thoughtful. Engaged. Human-centered.**

[RESEARCH-COLLECTIVE.COM]
Welcome to the HFES 2017 International Symposium on Human Factors and Ergonomics in Health Care, being hosted in the “Big Easy.” The symposium offers a unique program of human factors/ergonomics (HF/E) perspectives on health-care human factors, technology, and patient safety, divided among four main tracks:

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

The meeting is designed to enable HF/E professionals to disseminate their science, principles, and best practices to the health-care product and provider communities, and to enable these communities to provide HF/E professionals with the proper context, requirements, and perspectives to better focus future HF/E efforts.

The 2017 program starts with our keynote speaker, Rafael Grossmann, MD, noted health-care futurist, technology innovator, and surgeon. His presentation, “The Future Is Here Today: Adventures in Surgical Technology and Beyond,” will explore the pivotal role of advanced technology in providing a new era of health care and a new climate of information sharing between providers and patients.

We have three unique elements to this year’s symposium. First, we are holding a special session, organized by Robert North, in honor of Ron Kaye, former Human Factors Pre-Market Evaluation Team lead with the FDA. Ron was instrumental in formalizing the FDA’s current focus on human factors.

Second, to encourage more health-care providers to attend our symposium, we are now offering CME credits for physicians, through the generous efforts of Children's Mercy Kansas City. Finally, we are holding a fundraising concert party with proceeds supporting the New Orleans Musicians’ Clinic & Assistance Foundation, sponsored by Design Science.

We would like to thank our symposium track chairs and their committee members for creating such a diverse and timely program. Special thanks also to our sponsors, exhibitors, advertisers, student volunteers, session chairs, and all the other individuals who supported the effort to produce this symposium.

We hope that this year’s symposium will enable all attendees to reach new heights in applying the perspectives and science of human factors/ergonomics to the future of health care. And we encourage you to take advantage of everything New Orleans has to offer!

Anthony D. Andre, PhD, CPE, and Joseph R. Keebler, PhD
Symposium Co-chairs
PROGRAM COMMITTEE

The Program Committee of the 2017 International Symposium on Human Factors and Ergonomics in Health Care consists of experts in a wide variety of domains and organizations.

Anthony D. Andre, Interface Analysis Associates/San Jose State U. – Cochair
Joseph R. Keebler, Embry-Riddle Aeronautical U. – Cochair

CLINICAL AND CONSUMER HEALTH-CARE IT TRACK

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HOSPITAL ENVIRONMENTS TRACK

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Russell J. Branaghan, Arizona State U.
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Linda C. Williams, VA National Center for Patient Safety
Jason Wise, GE Healthcare Surgery

Anping Xie, Armstrong Inst. for Patient Safety and Quality, Johns Hopkins U.
Shanqing "SQ" Yin, KK Women's & Children's Hospital, Singapore

MEDICAL AND DRUG-DELIVERY DEVICES TRACK

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Cheryl Kwinn, Farm Product Development – Cochair

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Pat Baird, Baxter Healthcare
Eric Bergman, Fresenius Medical Care
Paul A. Bowers, Abbvie
Joe Cafazzo, University Health Network
Christy Calder, FCA Fiat Chrysler Automobiles
Tressa Daniels, Becton Dickinson
Conall Dempsey, Unilife
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Shirley Sonesh, Tulane U. – Cochair

Tim Arnold, VA National Center for Patient Safety
Wendy L. Bedwell, U. of South Florida
Yuval Bitan, Cognitive Technologies Lab at the U. of Chicago

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Scott D. Wood, Veterans Administration
Melanie C. Wright, Trinity Health

“MOBILE HEALTH APPLICATIONS FOR CONSUMERS” STUDENT DESIGN COMPETITION

Richard Holden, Indiana U. - Indianapolis – Cochair
Rupa Valdez, U. of Virginia – Cochair

STUDENT VOLUNTEERS

Taylor Andre, Oakwood High School
Antonia Aguilar, San Jose State U.
Jackie Cha, Purdue U.
Laura Farrell, Virginia Tech Transportation Inst.
Monika Tomar, Purdue U.
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Health Care TG of HFES
Human Factors in Health Care

2017 International Symposium on Human Factors and Ergonomics in Health Care
REGISTRATION & FACILITIES

REGISTRATION DESK LOCATION AND HOURS
Registration is open during the following hours at the Grand Registration Desk:

- Sunday: 7:30 a.m.–6:30 p.m.
- Monday: 7:00 a.m.–5:00 p.m.
- Tuesday: 7:30 a.m.–5:00 p.m.
- Wednesday: 8:00 a.m.–2:00 p.m.

WIFI ACCESS
Complimentary WiFi is provided in the meeting space for HFES attendees. To connect to the Internet, please select the wireless access point: Sheraton-Meeting Rooms. Open a Web browser. You will then be directed to a Web page for login. Once connected, enter the passcode: HFES2017

LUNCH AND REFRESHMENT BREAKS
Lunch and refreshment breaks are included in the cost of registration and will take place at the following times and locations:

Refreshment Breaks
- Sunday – for workshop attendees only: Napoleon A; 8:45–9:15 a.m., 10:30–11:00 a.m., and 3:30–4:00 p.m.
- Monday–Tuesday: Grand Ballroom Foyer; 8:00–8:30 a.m., 10:00–10:30 a.m., and 3:00–3:30 p.m.
- Wednesday: Grand Ballroom Foyer; 8:00–8:30 a.m., 10:00–10:30 a.m.; for workshop attendees only: Grand Ballroom Foyer & Oak Alley; 3:30–3:45 p.m.

Lunch
Monday and Tuesday: Grand Ballroom C; 12:00–1:30 p.m.

VISIT OUR EXHIBITORS
The following companies invite you to visit their exhibits in the Grand Ballroom Foyer from 10:00 a.m. to 6:00 p.m. on Monday and from 8:00 a.m. to 6:00 p.m. on Tuesday.
- Board of Certification in Professional Ergonomics
- GfK
- Intuitive Surgical, Inc.
- Morgan & Claypool
- UL

POSTER RECEPTIONS
Poster receptions will be held from 4:30 to 6:00 p.m. on Monday and Tuesday in Grand Ballroom E. All attendees are invited to network and view the posters.

Posters may be set up on Monday and Tuesday between 12:00 and 4:00 p.m. Presenters can enter the poster area at 4:15 p.m. to staff their boards before attendees arrive.

Posters should be removed by 6:30 p.m. on their respective presentation days.

RESOURCES

HFES MEMBER SERVICES
HFES staff will be present at the Grand Registration Desk, located on the 5th floor, to provide information on membership, publications, and services.

JOB NOTICES AND OTHER MATERIALS
Organizations that are offering positions may post a flyer on the corkboard adjacent to the Grand Registration Desk. Attendees who are seeking a job may also post a one-page notice on the board. A materials table is also provided in this area for attendees to place information about events, programs, and other activities of interest to other attendees.

AUDIOVISUAL PREVIEW ROOM
Oakley, located on 4th floor, 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:
- Monday: 8:00 a.m.–5:00 p.m.
- Tuesday: 7:30 a.m.–5:00 p.m.
- Wednesday: 7:30 a.m.–2:00 p.m.

POLICIES

ATTENDEE BADGES
All persons attending any event at the symposium must wear their registration badges. Attendees and guests may register at the Grand Registration Desk, 5th floor.

AUDIOTAPING, PHOTOGRAPHING, AND VIDEOTAPING POLICIES
Attendees are not permitted to take photos or make audiocassette or videotape recordings of speakers or their visual aids, or exhibitors and their displays, without prior written permission from HFES and the speakers or exhibitors. Please submit written permission at the Grand Registration Desk, 5th floor.

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.

NONSMOKING POLICY
Smoking is not permitted inside the Sheraton New Orleans. There are designated smoking areas outside of building.
PROGRAM

SUNDAY, MARCH 5

REGISTRATION SERVICES
7:30 a.m.–6:30 p.m.
Location: Grand Registration Desk

REFRESHMENT BREAK
8:45–9:15 a.m.
Location: Napoleon A

PRE-SYMPOSIUM FDA WORKSHOP
(separate registration required)
9:00 a.m.–5:00 p.m.
Location: Napoleon A
Validation of Combination Drug Products: An FDA Workshop
Chair/Moderator: Anthony D. Andre, Interface Analysis Assoc./San Jose State U.
Presenters: QuynhNhu Nguyen, MS, Associate Director for Human Factors;
Mishale Mistry, PharmD, MPH, Associate Director (Acting)

REFRESHMENT BREAK
10:30–11:00 a.m.
For Workshop Attendees Only
Location: Napoleon A

LUNCH
12:00–1:15 p.m.

REFRESHMENT BREAK
3:30–4:00 p.m.
For Workshop Attendees Only
Location: Napoleon A

OPENING NETWORKING RECEPTION
5:30–6:30 p.m.
Location: Armstrong Ballroom
MONDAY, MARCH 6

REGISTRATION SERVICES
7:00 a.m.–5:00 p.m.
Location: Grand Registration Desk

REFRESHMENT BREAK
8:00–8:30 a.m.
Location: Grand Ballroom Foyer

OPENING PLENARY SESSION
8:30–10:00 a.m.
Location: Grand Ballroom C
Chair: Anthony D. Andre, Interface Analysis Assoc./San Jose State U.
The Future Is Here Today: Adventures in Surgical Technology and Beyond, Rafael Grossmann, MD, FACS, U. of Vermont College of Medicine

REFRESHMENT BREAK
10:00–10:30 a.m.
Location: Grand Ballroom Foyer

EXHIBITS
10:00 a.m.–6:00 p.m.
Location: Grand Ballroom Foyer

SESSIONS
10:30 a.m.–12:00 p.m.

Clinical and Consumer Health-Care IT Track
CCIT1 – EHR Usability in Policy and Practice
Location: Grand Chenier
Lecture Session
Chair: Michelle Rogers, Drexel U.
- Physician Burnout: A System-Oriented Approach for Analysis, Improvement, and New Designs in the Next-Generation Information Communications Technology, Younghoon Kwon and Yeilim Cho, U. of Virginia Health System; Inki Kim, U. of Virginia
- 3 Methods That Will Improve Physicians’ Electronic Medical Records Experience, Richard Wang, Kendra Cunningham, Anna Karpasov, and Felicity Saucier, athenahealth

Hospital Environments Track
HE1 – Understanding and Improving the Delivery of Robotic Surgery “in the Wild”
Location: Grand Couteau
Panel Session
Chair: Russell J. Branaghan, Arizona State U.
Panelists: Ken Catchpole, Medical U. of South Carolina; Ann Bisantz, U. at Buffalo, SUNY; M. Susan Hallbeck, Mayo Clinic; Rebecca Randell, U. of Leeds; Matthias Weigl, Ludwig-Maximilians-University; Merrick Kossack, UL-Wiklund

Medical and Drug-Delivery Devices Track
MDD1 – FDA CDER Perspective on the Role of Human Factors in Combination Product Design and Development
Location: Grand Ballroom A
Panel Session
Chair: Cheryl Kwinn, Farm Product Development Cochair: John Gosbee, Red Forest Consulting, LLC
Panelists: QuynhNhu Nguyen, MS, Associate Director for Human Factors; Mishale Mistry, PharmD, MPH, Associate Director (Acting)

Patient Safety Research and Initiatives Track
PSRI1 – Toward Proactive Safety Management: Adopting a Safety II Perspective
Location: Grand Ballroom B
Panel Session
Chair: Michael Rayo, Ohio State U.

LUNCH
12:00–1:30 p.m.
(Complimentary for registered attendees)
Location: Grand Ballroom C

SESSIONS
1:30–3:00 p.m.

Clinical and Consumer Health-Care IT Track
CCIT2 – Improving Clinician and Team Decision-Making by Understanding Cognition
Location: Grand Chenier
Lecture Session
Chair: Denny Yu, Purdue U.
- Objective Assessment of Patient Portal Requirements for a Large Hospital, Rachal Thomassie, Mahnoosh Sadeghi, and Farzan Sasangohar, Texas A&M U.; Stephan Kotin, Houston Methodist
• Toward the Design of mHealth and eHealth Tools to Support Home Dialysis Patients – User Needs and User-Perceived Barriers, Plinio Morita, U. of Waterloo; Areeba Zakir, Kathy Huynh, and Joseph Cafazzo, Healthcare Human Factors; MaryJo Raposo and Christopher Chan, University Health Network
• Usability Testing of PTSD Coach: A Mobile Health App for Post-Traumatic Stress Disorder, Carolina Rodriguez Paras and Farzan Sasangohar, Texas A&M U.

Hospital Environments Track
HE2 – How To: Methodologies of the Health-Care Environment Explored
Location: Grand Couteau
Lecture Session
Chair: David Eibling, VA Pittsburgh Healthcare System/U. of Pittsburgh
• Improving the Clinical Utility of Predictive Models in Obstetrics: An Innovative Application to Chorioamnionitis, Danielle Mosby and Muge Capan, Christiana Care Health System; Whitney York, Drexel U.; Kristen Miller, Linda Daniel, and Elizabeth Zadzielski, Christiana Care Health System
• Local-Term Extraction and Language Processing to Inform Design of Elements of the Environment of Care, Tim Arnold, VA NCPS; Helen Fuller, VA VERC
• A Novel Paradigm for Studying the Principles of Adherence Engineering, Tessa Sommer and Frank Drews, U. of Utah

Medical and Drug-Delivery Devices Track
MDD2 – Design and Human Factors
Location: Grand Ballroom A
Lecture Session
Chair: Mary Beth Privitera, HS Design/U. of Cincinnati
• The DNA of Design Excellence, Bryce Rutter, Metaphase Design Group
• Amplify Your HFE/UE Outcomes – Insights for Igniting a User-Centered Culture, Chelsea Wanta and Linda Kohli, GE Healthcare
• Best Practices of Safety Information Presentation in IFUs, Eric Shaver, Human Factors MD

Patient Safety Research and Initiatives Track
PSRI2 – Systems and Coordination
Location: Grand Ballroom B
Lecture Session
Chair: Mary Patterson, Children’s National Medical Center
Cochair: Shilo Anders, Vanderbilt U.
• The (Art and) Science of Care Coordination: Where Have We Been, Where Are We Heading? Sallie Weaver, National Cancer Inst.
• Optimizing Blood Administration Using a Systems Approach, Beatrice Podtschaske, Mitesh Rao, and Noraliza Salazar, Stanford Health Care
• An Analysis of Data-Driven, Targeted Interventions Implemented in a Level II Trauma Center, Tracy Litzinger, Jennifer Cabrera, Tara Cohen, and Scott A. Shappell, Embry-Riddle Aeronautical U.; Steven Miles, Michael Fabian, and Kevin Captain, Halifax Health; Albert Boquet, Embry-Riddle Aeronautical U.

REFRESHMENT BREAK/EXHIBITS
3:00–3:30 p.m.
Location: Grand Ballroom Foyer

SESSIONS
3:30–4:30 p.m.

Clinical and Consumer Health-Care IT Track
CCIT3 – “Mobile Health Applications for Consumers” Design Competition
Location: Grand Chenier
Lecture/Award Session
Chair: Richard Holden, Indiana U. - Indianapolis
Following presentation of the finalists listed below, the award will be presented.
• Videogame-Based Medication Adherence Reminder for Children Living with Chronic Illness and Their Caregivers, Paul Barclay, U. of Central Florida
• Health Links, A Mobile Application for Low-Socioeconomic Position Patients in Madison, Wisconsin Seeking Information about Community Resources, Nadejda Doutcheva, Michelle Tong, Thomas Martell, and Ashish Vishwanath V. Shenoy, U. of Wisconsin-Madison
• Claim Pro, An Integrated Health Insurance Management App for Managing Medical Claims from Multiple Insurance Plans and Finding Healthcare Providers, Meng Li and Xi Zheng, U. at Buffalo, SUNY

Hospital Environments Track
HE3 – Asynchronous EMR eConsult
Location: Grand Couteau
Panel Session
Chair: Tara Cohen, Embry-Riddle Aeronautical U.
Panelists: Lawrence Dardick, Alan D. Wu, and Samantha Cao, U. of California, Los Angeles
Medical and Drug-Delivery Devices Track
MDD3 – Best Practices: Human Factors for Combination Products
Location: Grand Ballroom A
Panel Session
Chair: Tor Alden, HS Design
Cochair: Evan T. Edwards, Kaleo, Inc.
Panelists: Sherri Biondi, Genentech; Molly Story, Sanofi; Valerie Fenster, Amgen, Inc.; Kevin Cluff, AbbVie, Inc.

Patient Safety Research and Initiatives Track
PSRI3 – Stress/Workload
Location: Grand Ballroom B
Lecture Session
Chair: Victoria Lew, Embry-Riddle Aeronautical U.
Cochair: Jie Xu, Vanderbilt U.

• Differentiating Between Stress, Fatigue, and Workload for Intensive Care Unit Nursing, Kunal Khanade and Farzan Sasangohar, Texas A&M U.
• Making MATLAB II-Medical: Pilot Testing Results to Determine a Novel Lab-Based, Stress-Inducing Task, Lauren Kennedy, Virginia Tech; Sarah Henrickson Parker, Virginia Tech Varilion Research Inst.

POSTER RECEPTION
4:30–6:00 p.m.
Location: Grand Ballroom E

Clinical and Consumer Health-Care IT Track
CCIT-POS1 – Clinical and Consumer Health-Care IT Posters Session 1
1. Ambient Activity Technologies for Managing Responsive Behaviors in Dementia, Andrea Wilkinson, U. of Toronto; Marc Kanik, Keebee Care; Judy O’Neill, Grandview Lodge; Mark Chignell, U. of Toronto
2. Applying Human Factors Engineering to Improve Usability and Workflow in Pathology Informatics, Austin Mount-Campbell, Ohio State U.; Dan Hosseinzadeh, Pathcore; Metin Gurcan and Emily Patterson, Ohio State U.
3. Evaluation of Microcontroller Technology to Enable a Smart, Connected Intensive Care Unit (ICU), Patricio Rodriguez Paras and Farzan Sasangohar, Texas A&M U.
4. Exploring Interactions in the Home Environment: Personal Health Information Management Strategies of Patients With Chronic Illness, Michelle Tong, Amy Borkenhagen, Gail Casper, Catherine Arnott Smith, and Nicole Werner, U. of Wisconsin-Madison
5. Grounded Theory, Health Behavior Model, and User Experience: A Qualitative Study of Medication Management and How We Can Learn From Public Health Models, Jessica White-Sustaita, Sentier Strategic Resources, LLC; Phaidra Harper, UT School of Public Health; Danielle Smith, Express Scripts Inc.
6. If (Integrating Data, Design, and Technology): Print (“Value Institute Design Lab”), Kristen Miller, Stephen Hoover, Muge Capan, Rebecca Kowalski, Rachel Kraft, Yaman Noaish, and Abhishek Surampudy, Christiana Care Health System; Elliot Ting and Ryan Arnold, Value Inst. at Christiana Care Health System
7. Investigating a Method to Identify Drivers Playing Virtual Reality Games, Kunal Khanade and Farzan Sasangohar, Texas A&M U.
8. Provider Perception of Patient-Initiated Communication for Nonessential Tasks, Anoosha Moturu, Rice U.; Stephan Kotin, Houston Methodist; Angela Avera, U. of Houston Clear Lake; Farzan Sasangohar, Texas A&M U.
11. Toward a Framework for Data-Driven Design – Lessons Learned and the Future of mHealth Evaluations, Plinio Morita, U. of Waterloo; Joseph Cafazzo, University Health Network

Hospital Environments Track
HE-POS1 – Hospital Environments Posters Session 1
2. Criticisms of Current Methodology Used to Measure Hand Hygiene Adherence in Hospital Settings, Tessa Sommer and Frank Drews, U. of Utah
3. Strategies for Multiple Task Coordination in Emergency Departments, Laura Barg-Walkow, Georgia Tech; Wendy Rogers, U. of Illinois at Urbana-Champaign

4. Studying Paramedics Working Environment in a Trauma Scene, Yuval Bitan, Ben-Gurion U. of the Negev; Eli Jaffe, Magen David Adom in Israel (National EMS)

5. Team Personas, Ryan Sohlden, Medtronic

6. The Environmental Services Perspective on Hospital Room Design: A Mixed-Methods Approach, Emily Patterson, Elizabeth Sanders, Carolyn Sommerich, Kevin Evans, Steve Lavender, and Jing Li, Ohio State U.

7. Workload Measurement During Robotic Surgical Skills Tasks Using Wearable Sensors, Jackie Cha and Denny Yu, Purdue U.

Medical and Drug-Delivery Devices Track

MDD-POS1 – Medical and Drug-Delivery Devices Posters Session 1

1. Are Your User Needs Usable? Writing User Needs That Don’t Leave Engineers Scratching Their Heads, Michael Lau, Insight Product Development


3. Conducting Cross-Cultural Usability Research, Arathi Sethumadhavan and Adam Shames, Core Human Factors Inc.

4. Designing a Device to Administer Multiparticulates to the Pediatric Population – What Do Children Think? Claire Lewis, Alexandra Lang, and Jonathan Burley, U. of Nottingham; James McGovern and Joanna Simmons, Pfizer; Joel Segal, U. of Nottingham

5. Designing Diagnostic Medical Devices for Your Lab Tests, Ilia Elson, Abbott Laboratories

6. From Phases of Flight to Phases of Care: Translating User Research Into Tools for Design, Pamela Munro, Feiji Consulting


8. Novel Techniques for Understanding Connected Device Users in Their Native Environment, Sherri Biondi, Genentech; Erica Bajars, Matchstick

9. The Clean and the Dirty of Redesigning Reprocessing Instructions for Use, Julia Choi, Stephanie Seraphina, and Kate Knudsen, Intuitive Surgical

10. The Missing Pathway for Human Factors Research, Mary Beth Privitera, HS Design/U. of Cincinnati; Tor Alden, HS Design

11. Understanding and Mitigating Use-Related Issues in Home Health-Care Devices, Limor Hochberg, Stephanie Bassock, and Merrick Kossack, UL-Wiklund


13. Using Data-Driven Research Techniques to Create Better Product Requirements, Peter Sneeringer and Lindsay Carrabine, Design Science

Patient Safety Research and Initiatives Track

PSRI-POS1 – Patient Safety and Initiatives Posters Session 1

1. A Human Factors Approach for Identifying Latent Failures in Health-Care Settings, Tara Cohen and Scott A. Shappell, Embry-Riddle Aeronautical U.

2. A Pilot Study of Precautions Regarding Macro Air Gaps While Wearing Hygiene Masks, Mika Morishima, Kanazawa U.; Tamaki Mitsuno, Shinhu U.

3. End Users’ Preference of Terms and Symbols for Electrosurgical Unit Labels, Airan Li, Matthew Taylor, and Jamie Estock, VA Pittsburgh Healthcare System

4. Flow Disruptions to Anesthesia Teams in Teaching and Nonteaching Cardiovascular Operating Room Analyzed with RIPCHORD-TWA Major and Minor Categories, Fawaaz A. Diljohn, Jennifer Cabera, Tara Cohen, and Tracy Litzinger, Embry-Riddle Aeronautical U.; Scott Reeves and Jake Abernathy, Medical U. of South Carolina; Scott Schappell and Albert Boquet, Embry-Riddle Aeronautical U.

5. Handover Redesign as Opportunity for High-Reliability Team Training, Isaac Lynch, UT Southwestern Medical Center in Dallas; Joseph Keebler, Embry-Riddle Aeronautical U.; Oren Gutman and Philip Greilich, UT Southwestern Medical Center in Dallas

6. Health Systems Improvement Collaborative, Joshua Gray, Najm Meshkati, Greg Placencia, John Franklin, and Yalda Khashe, U. of Southern California

7. Identifying Communication and Coordination Failures in Trauma Care: Toward a New Model of Threat and Error Management, Jordan E. Hilgers, Tracy L. Litzinger, Jennifer S. Cabrera, Mary O. Wilson, Olivia M. Villamagna, Fawaaz A. Diljohn, and John F. Herman, Embry-Riddle Aeronautical U.; Steven G. Miles, Michael A. Fabian, and Kevin A. Captain, Halifax Hospital; Scott A. Shappell and Albert J. Boquet, Embry-Riddle Aeronautical U.
8. Identifying Neural and Speech Correlates of Uncertainty During Health-Care Simulation Training, Ronald Stevens, UCLA School of Medicine; Ann Willemsen-Dunlap, JUMP Simulation and Education Center; Trystha Galloway, The Learning Chameleon, Inc.; Jamie Gorman, Georgia Tech; Donald Halpin, JUMP Simulation and Education Center


10. Leading Process Change Within the Veterans Health Administration: A Medication Reconciliation Demonstration Project, Kathleen Adams, Blake Lesselroth, and Victoria Church, Portland VA Health Care System

11. Optimizing athenahealth’s Streamlined EHR: Two Ways to Proactively Identify, Evaluate, and Minimize Potential Patient Safety Risks, Caroline Keogh and Richard Wang, athenahealth

12. Patient Perceptions on the Use of an Autopiloted Emergency Medical Transport: An Affective Perspective, Scott Winter, Florida Inst. of Technology; Stephen Rice and Joseph Keebler, Embry-Riddle Aeronautical U.; Rian Mehta, Florida Inst. of Technology

13. Patient Safety and Quality Needs Family-Centered Care, Elizabeth Papautsky, U. of Illinois at Chicago

14. Prevalence of Potentially Distracting, Noncare Activities and Their Effects on Vigilance, Workload, and Nonroutine Events During Anesthesia Care, Jason Slagle, Vanderbilt U.; Eric Porterfield and Amanda Lorinc, Vanderbilt U. Medical Center; David Afshartous and Matt Shotwell, Vanderbilt U. School of Medicine; Matthew Weinger, Vanderbilt U. Medical Center


17. The Impact of Improper Use of Safety Harness on Clinical Posturography Assessments, Qian Wang, Jaswandi Pitale, and Necip Berme, Bertec Corp.

18. Understanding Hand Hygiene in Health-Care Environments – A Management Perspective, Jun Rong Jeffrey Neo and Rana Sagha Zadeh, Cornell U.

19. Understanding the Nature of Questions in Interunit Handoff Communication, Iqra Mushtaq, Imade Ihianle, and Joanna Abraham, U. of Illinois at Chicago
TUESDAY, MARCH 7

REGISTRATION SERVICES
7:30 a.m.–5:00 p.m.
Location: Grand Registration Desk

REFRESHMENT BREAK
8:00–8:30 a.m.
Location: Grand Ballroom Foyer

EXHIBITS
8:00 a.m.–6:00 p.m.
Location: Grand Ballroom Foyer

SESSIONS
8:30–10:00 a.m.

Clinical and Consumer Health-Care IT Track
CCIT4 – Influencing Patient Behaviors with Persuasive Design
Location: Grand Chenier
Chair: Kaden Rushford, athenahealth

• A System for Rewarding Physical Exercise in Dementia, Tiffany Tong, Andrea Wilkinson, Farzad Nejatimohammari, Thomas He, and Mark Chignell, U. of Toronto

• Participatory Design of a Social Networking App to Support Type 2 Diabetes Self-Management in Low-Income Minority Communities, Wayne Zachary, Starship Health Technologies; Pamela Surkan, Johns Hopkins Bloomberg School of Public Health; Ngoc-Tung Nguyen, Starship Health Technologies, Georgia Michlig and Avril Kaplan, Johns Hopkins Bloomberg School of Public Health

• Capturing Workflow for Health Management in Daily Living, Mustafa Ozkaynak, U. of Colorado-Denver; Rupa Valdez, U. of Virginia

Medical and Drug-Delivery Devices Track
MDD4 – Usability Design Foundations
Location: Grand Ballroom A
Chair: Beth A. Loring, Loring Human Factors, LLC
Cochair: Tressa Daniels, Becton Dickinson

• Development and Validation of a Usability Metrics for Evaluation of Medical Equipment, Thomas Looke, Michelle Dolske, and Julie Pepe, Florida Hospital

• A Rosetta Stone for Standards: Matching Up the Requirements of IEC, FDA, and Other Standards for Medical Devices, Robert Stephens, Medtronic

• “Easy to Use” – The Worst Requirement…Ever, Joe Cesa, Halyard Health Inc.

Patient Safety Research and Initiatives Track
PSRI4 – Who Is Drinking Our Kool-Aid? Clinician Perspectives of Their Human Factors Practitioner
Location: Grand Ballroom B
Chair: Adjhaporn (Nana) Khunlertkit, Johns Hopkins U.
Panelists: A. Joy Rivera, Children’s Hospital of Wisconsin; Shaningq Yin, KK Women’s and Children’s Hospital; Laurie Wolf, Barnes-Jewish Hospital; Dean Karavite, Children’s Hospital of Philadelphia; Catherine Dulude, Children’s Hospital of Eastern Ontario; Susan Harkness Regli, U. of Pennsylvania Health System

REFRESHMENT BREAK
10:00–10:30 a.m.
Location: Grand Ballroom Foyer

SESSIONS
10:30 a.m.–12:00 p.m.

Clinical and Consumer Health-Care IT Track
CCIT5 – Human Factors in the Hospital Setting
Location: Grand Chenier
Chair: Kaden Rushford, athenahealth

• Experience of a Human Factors–Medical Collaboration: The Development, Evaluation, and Implementation of an Application to Support In-Hospital Resuscitation Teams, Tobias Grundgeiger, Julius-Maximilians Universität; Thomas Wurmb and Oliver Happel, U. Hospital Würzburg

• Bringing Our Toys to Your Sandbox: Developing Database-Driven EMR Indifferent Sepsis Alerts, Kristen Miller, Muge Capan, Danielle Mosby, Tim Shiu, and Eric Jackson, Christiana Care Health System; F. Jacob Seagull, U. of Michigan Medical School; Ken Catchpole, Medical U. of South Carolina; J. Sanford Schwartz, U. of Pennsylvania; Ryan Arnold, Christiana Care Health System
Hospital Environments Track
HE5 – Conscious Creation: Not by Accident, But by Design
Location: Grand Couteau
Lecture Session
Chair: Lora Cavuoto, U. at Buffalo, SUNY
- Hospital Patient Room Design: Where Should the Bathroom Be Located? Steven Lavender, Radin Zaid Radin Umar, Carolyn Sommerich, Elizabeth Sanders, Kevin Evans, Jing Li, Alex Pires, and Emily Patterson, Ohio State U.
- Identifying Unmet Patient Expectations via Critical Review of Five Simulated Hospital Rooms, Emily Patterson, Elizabeth Sanders, Carolyn Sommerich, Steve Lavender, Jing Li, and Kevin Evans, Ohio State U.
- Advancing Theory in HC Facility Design: Bridging EBD and HF/E, Ellen Taylor, Center for Health Design; Sue Hignett, Loughborough U.

Medical and Drug-Delivery Devices Track
MDD5 – Applied Usability Engineering Methods
Location: Grand Ballroom A
Lecture Session
Chair: Joe Cesa, Halyard Health
Cochair: Amanda Hall, Physio-Control
- New Measurement Tools For Improving Human Factors Work, Stephen Wilcox, Design Science
- Multicenter Assessment and Future of Single-Site Surgery, Bernadette McCrory, U. of Nebraska-Lincoln; M. Susan Hallbeck and Bethany Lowndes, Mayo Clinic; Andrew Christiansen and Chad LaGrange, U. of Nebraska Medical Center

Patient Safety Research and Initiatives Track
PSR15 – Handoffs
Location: Grand Ballroom B
Lecture Session
Chair: Chair: Elizabeth H. Lazzara, Embry-Riddle Aeronautical U.
Cochair: Kathryn Tippey, Vanderbilt U. Medical Center
- Multidisciplinary Handover Study of Common and Unique Content in General Internal Medicine, Surgery, and the ED: Preliminary Results, Kathy Momtahan, Ottawa Hospital Research Inst.; Catherine Burns, U. of Waterloo; Jacinthe Lampron, James Chan, Edmund Kwok, Allen Huang, and Peggy Guilbeault, Ottawa Hospital; Kathleen Day and Kate Scowcroft, U. of Ottawa; Ivanette Hargreaves, Ottawa Hospital; Shannon Leduc, Ottawa Paramedic Services; Jordan Andersen, Ottawa Hospital
- Handoff Standardization: Understanding Heterogeneity, Kristen Welsh, Victoria Lew, Amanda Tan, Agnes Fagerlund, Joseph Keebler, and Elizabeth H. Lazzara, Embry-Riddle Aeronautical U.
- Evaluating the Impact of Gender on Resident Handoff Communication, Kevin Jacob, Shirley Burton, and Joanna Abraham, U. of Illinois at Chicago

LUNCH
12:00 – 1:30 p.m.
(Complimentary for registered attendees)
Location: Grand Ballroom C

SESSIONS
1:30 – 3:00 p.m.
Clinical and Consumer Health-Care IT Track
CCIT6 – More Proven User-Centered Design Methods
Location: Grand Chenier
Lecture Session
Chair: Michelle Rogers, Drexel U.
- Generative Design Research: Using Metaphor to Capture Complexity, Claire Tatro and Jack Fleming, athenahealth
- Improvements in Clinical Practice and Efficiency Through Electronic Patient Bedside Observations, Alexandra Lang, U. of Nottingham; Mark Simmonds, Nottingham U. Hospitals NHS Trust; James Pinchin and Sarah Sharples, U. of Nottingham; Sue Clarke and Lorrainye Dunn, Nottingham U. Hospitals NHS Trust
- Engineering Representations to Support Evidence-Based Clinical Practice, John Flach, Wright State U.; Peter Reynolds, Wright State School of Medicine; Carolin Cao and Tiffany Saffell, Wright State U.

Hospital Environments Track
HE6 – Safety First: Ensuring Patient Safety in the Health-Care Environment
Location: Grand Couteau
Lecture Session
Chair: Bernadette McCrory, Nebraska National Guard
- When the Patient Moves Down in Bed, Caregiver Moves Them Back Up in Bed: The Repositioning Story, Kermit Davis and Susan Kotowski, U. of Cincinnati

• Defibrillator Design and Usability May Be Impeding Timely Defibrillation, Marc Reeson, Kwadwo Kyeremanteng, and Gianni D’Egidio, U. of Ottawa

Medical and Drug-Delivery Devices Track

MDD6 – Ethical Challenges With Usability Testing
Location: Grand Ballroom A
Panel and Lecture Session
Panel Chair: Rebecca Butler, National Center for Human Factors in Healthcare - MedStar Health
Lecture Chair: Laurie Reed, Farm Design, Inc.
Lecture Cochair: Eric Shaver, Human Factors MD

Lecture: Recruiting Patients With Rare Diseases and Their Caregivers, Beth Loring, Loring Human Factors, LLC; Jacquelyn Wan, Radius Innovation & Development

Patient Safety Research and Initiatives Track

PSRI6 – Better Together: Safety Through Teamwork
Location: Grand Ballroom B
Lecture Session
Chair: Shirley C. Sonesh, Tulane U.
Cochair: Akhila Iyer, National Center for Human Factors in Healthcare - MedStar Health

“Hot” Debriefing After Resuscitations in a Pediatric Cardiac Intensive Care Unit, Lillian Su, Ashleigh Harlow, Darren Klugman, and Melissa Jones, Children’s National Health System; Michael-Alice Moga, Toronto SickKids Children’s Hospital; Mary Waller, Schulich School of Business

Team Training in Health Care: An Examination of Effectiveness and Future Research, Ashley Hughes, Michael E. DeBakey VA Medical Center; Megan Gregory, Michael E. DeBakey VA Medical Center and Baylor College of Medicine; Shannon Marlow, Rice U.

Educating Interprofessional Trainees to Provide Safe and Effective Team-Based Care: Perspectives on Curriculum Development and Implementation, Megan Gregory, Jennifer Bryan, and Audrey Mendez, Michael E. DeBakey VA Medical Center and Baylor College of Medicine; Jessica Uriarte, Houston Methodist Hospital System; LeChauncy Woodard, Michael E. DeBakey VA Medical Center & Baylor College of Medicine

REFRESHMENT BREAK
3:00–3:30 p.m.
Location: Grand Ballroom Foyer

SESSIONS
3:30–4:30 p.m.

Clinical and Consumer Health-Care IT Track

CCIT7 – The Opportunity Project: Catalyzing User-Centered Health-Care Solutions Through Federal Data and Collaborative App Development
Location: Grand Chenier
Panel Session
Chair: Drew Zachary, U.S. Department of Commerce
Panelists: Olivier Kamanda, General Services Administration; David Maron, U.S. Department of Veterans Affairs

Hospital Environments Track

HE7 – Designing Health-Care Systems With Human Factors Science
Location: Grand Couteau
Panel Session
Chair: Danielle Mosby, Christiana Care Health System
Panelists: Moshe Feldman, VCU Health; Jessica Ray, Yale New Haven Health

Medical and Drug-Delivery Devices Track

MDD7 – Health-Care Facility Access Challenges for User Research
Location: Grand Ballroom A
Panel Session
Chair: Sean Hagen, BlackHagen Design
Cochair: Sami Durrani, Fresenius Health Care
Panelists: Beth Loring, Loring Human Factors, LLC; Mary Beth Privitera, HS Design/U. of Cincinnati; Susan Feldman and Ryan McDowell, Children’s Mercy Kansas City; Stephen Wilcox, Design Science; Keith Karn, Human Factors in Context LLC

Patient Safety Research and Initiatives Track

PSRI7 – Errors/Identification
Location: Grand Ballroom B
Lecture Session
Chair: Elizabeth Papautsky, U. of Illinois at Chicago
Cochair: Adjhaporn (Nana) Khunlertkit, Johns Hopkins U.
• Identifying Health Information Technology-Related Patient Safety Events, Katie Adams, Allan Fong, and Raj Ratwani, National Center for Human Factors in Healthcare - MedStar Health

• An Extended Version of the Rasmussen’s Dynamic Safety Model for Measuring Multitasking Behaviors During Medical Emergency, Thierry Morineau, Université Bretagne Sud; John Flach, Wright State U.; Marion Le Courtois, Université Rennes II; Pascal Chapelain, Centre Hospitalier Bretagne Sud

**POSTER RECEPTION**
4:30–6:00 p.m.
Location: Grand Ballroom E

Clinical and Consumer Health-Care IT Track
CCIT-POS2 – Clinical and Consumer Health-Care IT Posters Session 2
1. A Gesture Is Worth a Thousand Touches: Mapping Gestural Inputs to Traditional Touchscreen Interface Designs, Katherina Jurewicz and David Neyens, Clemson U.
2. Applying User-Interface Design Heuristics on Computerized Clinical Decision Support Systems, Yaman Noaieeh, Kristen Miller, Muge Capan, Dani Mosby, and Ryan Arnold, Christiana Care Health System
4. Better Together? Examining the Usability of the EMR Using the Desktop and Native Mobile Application, Tiffany Leverenz, Wichita State U.; Sarah Fouquet, Children’s Mercy Kansas City; Barbara Chaparro, Wichita State U.; Raymond Chan, Brandon Kennedy, and Laura Fitzmaurice, Children’s Mercy Kansas City
7. Introducing an Electronic Whiteboard to Monitor Patients in Labor and Delivery, Barbara Chaparro, Wichita State U.; David Grainger, KU School of Medicine; Carmen Resco and Emily Grainger, Wichita State U.
8. Learn the NCI Grants Process and Obtain Funding to Support Your Teams in Cancer Care Research, Veronica Chollette and Sallie Weaver, National Cancer Inst.
12. Subjective, But Not Objective, Workload Associated With Computerized Patient Alerts Is Associated With Burnout in Primary Care Providers, Megan Gregory, Elise Russo, and Hardeep Singh, Michael E. DeBakey VA Medical Center
13. The Value of Smart Home Laboratories to Support Older Adults’ Home Health-Care Needs, Maurita Harris and Wendy Rogers, U. of Illinois at Urbana-Champaign

Hospital Environments Track
HE-POS2 – Hospital Environments Posters Session 2
1. Application of Participatory Ergonomics in Perioperative Handover Redesign, Philip Greilich, Isaac Lynch, Oren Guttmann, Aditee Anbardekar, Trent Bryson, and Gary Reed, U. of Texas Southwestern Medical Center; Joseph Keebler, Embry-Riddle Aerialonautical U.

3. **Evaluating the Impact of Emergency Department Facility Design on Health-Care Workers’ Perception of Safety**, Mary Hobbs and David Neyens, Clemson U.; Christine Carr, Medical U. of South Carolina.

4. **Exploration of Operational Data Streams as a Source of Actionable Insight**, Dana Womack, Oregon Health & Science U.

5. **Medical Student Perceptions of Current and Potential Feedback Methods in Obstetrics and Gynecology: Is Gamification Suitable?** Tiffany Leverenz, Wichita State U.; Angela Strang and Jennifer Duong, U. of Kansas School of Medicine-Wichita; Evan Palmer, San Jose State U.; David Grainger, U. of Kansas School of Medicine-Wichita.


8. **The Patient-Centered In-Bed Environment: A Participatory Design Approach**, Elizabeth Sanders, Steve Lavender, Carolyn Sommerich, Emily Patterson, Kevin Evans, and Jing Li, Ohio State U.

**Medical and Drug-Delivery Devices Track**

MDD-POS2 – Medical and Drug-Delivery Devices Posters Session 2

1. **A Controlled Clinical Trial Testing the Effectiveness of a Mindfulness Training Video Game**, Paul Barclay, Nicholas James, and Clint Bowers, U. of Central Florida.

2. **A Research Consortium for Human Factors in Medical Devices and Combination Products**, Frank Drews, U. of Utah.

3. **Can Health Care Learn from the Other Industries Like Aerospace and Automotive?** Russell Branaghan, Research Collective; Jen Donahue, Beckman Coulter; Dean Barker, Optum Health; David Mitropoulos-Rundus, Hyundai Motor Company; Bryant Foster, Research Collective.

4. **In Situ Infusion Pump Usability Assessment: Do Active User Surveys Provide Future Design Insights?** Mary Gordon and Krisanne Graves, Texas Children’s Hospital; Courtney Titus, Baylor College of Medicine; Curt Braun, Benchmark Research & Safety.

5. **Incorporating Diverse Patient Preferences Into a Medical Device Offering**, Sarah Baer and Megan Lan, BD Medical - Pharmaceutical Systems.

6. **Medical Device Design: Applying a Human-Centered Design Methodology**, Gina Taylor Matthew Bowman, U. of Illinois at Urbana-Champaign.


12. **The Blurring of the Line Between Medical and Consumer Products**, Russell Branaghan and Bryant Foster, Research Collective; Jessica Crosby, SynCardia; Mark Palmer, Lex tant.


**Patient Safety Research and Initiatives Track**

PSRI-POS2 – Patient Safety Research and Initiatives Posters Session 2

1. **A Descriptive Model of the Current PTSD Care System: Identifying Opportunities for Improvement**, Jukrin Moon, Alec Smith, Farzan Sasangohar, Justin Benzer, and Hye-Chung Kum, Texas A&M U.

2. **Appropriate Communication Theories and Implications for Health Care and Handoffs**, Kristen Welsh, Amanda Tan, Joseph Keebler, Elizabeth H. Lazzara, Victoria Lew, and Agnes Fagerlund, Embry-Riddle Aeronautical U.


6. Importance of Psychological Safety in Transitions of Care, Agnes Fagerlund, Joseph Keebler, Elizabeth H. Lazazzara, Kristen Welsh, and Victoria Lew, Embry-Riddle Aeronautical U.

7. Information Need of Physicians in Pediatric Trauma, Bat-Zion Hose and Pascale Carayon, U. of Wisconsin-Madison; Peter Hoonakker, Center for Quality and Productivity; Abigail Wooldridge, U. of Wisconsin-Madison; Joshua Ross, Jonathan Kohler, Tom Brazelton, Ben Eithun, Michelle Kelly, Shannon Dean, and Deborah Rusy, UW School of Medicine and Public Health; Ayse Gurses, Armstrong Inst. for Patient Safety and Quality at Johns Hopkins U.


10. Parallel Paths to Patient Safety: Complementary Education for Clinical Faculty and Medical Students, F. Jacob Seagull, U. of Michigan

11. Primary Care Clinician Sensemaking for Managing Patients With Chronic Pain, Shilo Anders, Vanderbilt U. Medical Center; Laura Militello, Applied Decision Science; Sarah M. Downs, Elizabeth C. Danielson, and Burke W. Mamlin, Indiana U.; Robert L. Cook, U. of Florida Health; Robert W. Hurley, Medical College of Wisconsin; Christopher A. Harle, Indiana U.


13. Teaching a Human Factors Graduate Course to Health-Care Professionals Specializing in Health Quality, Risk, and Safety, Avi Parush, Israel Inst. of Technology; Debi Parush, Usability, Publications & Training; Roy Ilan, Queen’s U. and Kingston General Hospital

14. Team Cognition as a Means to Improve Care Delivery in Critically Ill Patients With Cancer After Hematopoietic Cell Transplantation, Sandra Hinski and Nathan McNeese, Arizona State U.; Nandita Khera, Sara Wordingham, Noel Arring, Sharon Nyquist, and Amy Gentry, Mayo Clinic Hospital; Brian Tomlinson, Cancer Care; Nancy Cooke, Arizona State U.; Ayan Sen, Mayo Clinic Hospital

15. Testing Portable Medical Device Instructions: Comparing Experts and Nonexperts, David Borkenhagen, U. of Calgary; Greg Hallihan, W21C; Jan Davies, U. of Calgary

16. Toward More Resilient Performance of Emergency Department, Changwon Son and Farzan Sasangohar, Texas A&M U.

17. Understanding Team Complexity in Pediatric Trauma Care, Abigail Wooldridge, Pascale Carayon, Peter Hoonakker, and Bat-Zion Hose, U. of Wisconsin-Madison; Joshua Ross, Jonathan Kohler, Tom Brazelton, Benjamin Eithun, Michelle Kelly, Shannon Dean, and Deborah Rusy, U. of Wisconsin School of Medicine and Public Health; Ayse Gurses, Johns Hopkins U. School of Medicine

18. Understanding the Types and Effects of Clinical Interruptions as Reported in a Multihospital Patient Safety Event Database, Joseph Puthumana, Kathryn Kellogg, Allan Fong, and Raj Ratwani, National Center for Human Factors in Healthcare - MedStar Health

19. Utilizing Heart Rate Variability as an Indicator of Post-Traumatic Stress Disorder (PTSD), Carolina Rodriguez Paras, Farzan Sasangohar, Justin Benzer, and Hye-Chung Kum, Texas A&M U.
**WEDNESDAY, MARCH 8**

**REGISTRATION SERVICES**
8:00 a.m.–2:00 p.m.
Location: Grand Registration Desk

**REFRESHMENT BREAK**
8:00–8:30 a.m.
Location: Grand Ballroom Foyer

**SESSIONS**
8:30–10:00 a.m.

**Clinical and Consumer Health-Care IT Track**

**CCIT8 – Design for Aging**
Location: Grand Chenier
Lecture and Panel Session
Chair: Michelle Rogers, Drexel U.
- **Lecture:** Development of an Interface Checklist for Dementia Agitation Reporting by Caregivers, Harshitha Meda and Aaron Rollinson, North Carolina A&T State U.; Ridwan Alam, Neeraj Gandhi, and Benjamin Ghaemmaghami, U. of Virginia; Martha S. Anderson, Carilion Clinic Center for Healthy Aging; Azziza Bankole, Virginia Tech Carilion School of Medicine; Temple Newbold, Carilion Clinic Center for Healthy Aging; John Lach, U. of Virginia; Tonya Smith-Jackson, North Carolina A&T State U.
- **Panel:** Design for Older Adult Consumers of Health IT: Best Practice Guidance from CREATE, Wendy Rogers, U. of Illinois at Urbana-Champaign; Sara Czaja, U. of Miami; Neil Charness and Walter Boot, Florida State U.

**Hospital Environments Track**

**HE8 – Clustering and Prioritizing Patient Safety Issues During EHR Implementation and Upgrades in Hospital Settings**
Location: Grand Couteau
Debate Session
Chair: Kermit Davis, U. of Cincinnati
Debaters: Shilo Anders, Vanderbilt U. Medical Center; Susan Moffatt-Bruce and Emily Patterson, Ohio State U.

**Medical and Drug-Delivery Devices Track**

**MDD8 – Bridging the Industry/Regulatory HF/E Gap: Honoring Ron Kaye’s FDA Leadership**
Location: Grand Ballroom A
Panel Session
Chair: Robert A. North, Human Centered Strategies
Cochair: Adam Schames
Panelists: Rollin J. (Terry) Fairbanks, National Center for Human Factors in Healthcare - MedStar Health

**Patient Safety Research and Initiatives Track**

**PSRI8 – Simulation**
Location: Grand Ballroom B
Lecture Session
Chair: John Rice, Retired
Cochair: Lillian Su, Children’s National Health System
- **Can Simulation Improve EMR Implementation? Application to Medication Reconciliation**, Adjhaporn (Nana) Khunlertkit and Allen Chen, Johns Hopkins Medicine
- **Safety II, Simulation, and the Virtuous Spiral**, Mary Patterson, Children’s National Medical Center; Ellen Deutsch, Pennsylvania Patient Safety Authority/ECRI Inst. and Children’s Hospital of Philadelphia
- **The Cognitive-Sociotechnical Framework for Usability Evaluation: A Case Study for Improving Patient-Controlled Analgesia Order Sets**, Kathleen Adams, Blake Lesselroth, and Victoria Church, Portland VA Health Care System

**REFRESHMENT BREAK**
10:00–10:30 a.m.
Location: Grand Ballroom Foyer

**SESSIONS**
10:30 a.m.–12:00 p.m.

**Clinical and Consumer Health-Care IT Track**

**CCIT9 – Supporting System Use**
Location: Grand Chenier
Lecture Session
Chair: Kaden Rushford, athenahealth
- **A User-Centered Evaluation of the Yukon Telehealth System – Promising Telehealth Opportunities**, Plinio Morita, U. of Waterloo; Dallas Smith and Matt Jacques, Yukon Government; Emily Seto, U. of Toronto
- **Developing Persuasive Health Messages for a Behavior-Change-Support System That Promotes Physical Activity**, Leila Sadat Rezai and Jessie Chin, U. of Waterloo; Rebecca Bassett-Gunter, York U.; Catherine Burns, U. of Waterloo
Hospital Environments Track
HE9 – Changing Focus: Understanding and Improving the Delivery of Care
Location: Grand Couteau

Lecture Session
Chair: Ellen S. Deutsch, Pennsylvania Patient Safety Authority/ECRI Inst. and Children’s Hospital of Philadelphia

- Physician Documentation in the Pediatric Emergency Department: A Sociotechnical Approach, Sarah Fouquet, Children’s Mercy Kansas City; Evan Palmer, San Jose State U.; Laura Fitzmaurice, Children’s Mercy Kansas City
- Environment Design and Doffing Safety: On the Importance of an Iterative Design Approach and the Need for Environment Design Principles, Tracey Herlihey, Stefano Gelmi, and Joseph Cafazzo, University Health Network; Trevor Hall, Sunnybrook Health Sciences Centre

Medical and Drug-Delivery Devices Track
MDD9 – Medical Device Human Factors: FDA CDRH Panel
Location: Grand Ballroom A
Panel Session
Chair: Anthony D. Andre, Interface Analysis Assoc./San Jose State U.
Cochair: Sean Hagen, BlackHagen Design
Panelists: Shannon Hoste, Xin Feng, and Hanniebey Wiyor, FDA Human Factors Premarket Evaluation Team

Patient Safety Research and Initiatives Track
PSR19 – Teaching HF/E to Future Health-Care Professionals: Opportunities for Integrating Human Factors, Quality, and Safety Into Medical Education
Location: Grand Ballroom B
Panel Session
Chair: Beth Blickensderfer, Embry-Riddle Aeronautical U.
Panelists: Raymond Chan, U. of Missouri-Kansas City; Sarah Henrickson Parker, Virginia Tech Varilion Research Inst.; Emily Patterson, Ohio State U.; Shawna Perry, Virginia Commonwealth U. School of Medicine; Linsey Steege, U. of Wisconsin-Madison

POST-SYMPOSIUM WORKSHOPS
(separate registration required)
1:30–5:30 p.m.

Workshop 1: Adopting the Human Factors Perspective in Handoff Research, Lee Ann Riesenberg, U. of Alabama at Birmingham; Meghan Lane-Fall, U. of Pennsylvania
Location: Grand Chenier

Workshop 2: Root Cause Analysis: A Structured Approach to Diagnosing the Cause of Medical Device Use Errors, Michael Wiklund, Andrea Dwyer, and Erin Davis, UL-Wiklund
Location: Oak Alley

Workshop 3: Thinking Big: Creating Tomorrow’s Health Care Through Human Factors–Informed Design, Joseph Cafazzo, Healthcare Human Factors, UHN, Centre for Global eHealth Innovation; Mike Lovas, Healthcare Human Factors
Location: Grand Couteau

REFRESHMENT BREAK
3:30–3:45 p.m.
Locations: Grand Ballroom Foyer and Oak Alley
For Workshop Attendees Only

Wednesday, March 8
If you are an employer seeking full- or part-time staff or interns with expertise in human factors/ergonomics experience, HFES offers the leading online Career Center devoted exclusively to HF/E professionals around the world.

To recruit top HF/E professionals, visit our Web site at www.hfes.org/Web/CareerCenter/Career.aspx and post a job, search the résumés, or do both. Candidates searching the database can send their résumés directly to your desktop.

This service is for HFES members only! Post your résumé at www.hfes.org/Web/CareerCenter/Career.aspx and search our database of available jobs. If you see a job posting that interests you, you can e-mail your résumé directly to the employer. If you prefer to remain anonymous, the “Confidential” selection protects your identity until you choose to become known to the employer.

Each year, HFES hosts an On-Site Career Center at the Annual Meeting, where employers and candidates can schedule interviews, use the online Career Center, and find out about job opportunities and the pool of available job seekers. In order to reserve a booth and/or table, employers must have a current job posting or be registered to search résumés in the Online Career Center during the Annual Meeting.
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Table of Contents
1. What Is Usability Assessment?
2. Why Assess Usability?
3. Prepare to Perform the Usability Evaluation
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7. Real-Life Example 1: Corporate Web Portal
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