

62nd Human Factors and Ergonomics Society Annual Meeting (HFES 2018)

Philadelphia, Pennsylvania, USA
1-5 October 2018

Volume 1 of 3

ISBN: 978-1-5108-8953-8

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Published by Sage Publications USA

Copyright© (2018) by Human Factors and Ergonomics Society (HFES)
All rights reserved.

ISBN (Print) 978-1-5108-8953-8

Printed by Curran Associates, Inc. (2019)

For permission requests, please contact sagepub.com/journals-permissions

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

VOLUME 1

1001 - Utilizing a Remote LED Stimulus to Concurrently Measure Cognitive and Visual Task Demand	1
<i>Conner J. Motzkus, Douglas J. Getty, Andrea Campos, Joel M. Cooper, David L. Strayer</i>	
1002 - Performance and Workload Trends: The Effects of Repeated Exposure to “High” Demand Tasks	6
<i>Camille L. Wheatley, Jess Esplin, Sydney M. Loveless, Joel M. Cooper, Francesco Biondi, David L. Strayer</i>	
1003 - Behavioral and Neural Correlates of Hysteresis Effects during Multitasking	11
<i>Nayoung Kim, Wonjoon Kim, Myung Hwan Yun, Chang S. Nam</i>	
1004 - Speed Considerations Can Be of Little Concern When Outsourcing Thought to External Devices	14
<i>Patrick P. Weis, Eva Wiese</i>	
1005 - The Effect of Whole-Body Haptic Feedback on Driver’s Perception in Negotiating a Curve	19
<i>Erfan Pakdamanian, Lu Feng, Inki Kim</i>	
1006 - Applying Cognitive Engineering Principles to Allocation of Roles and Responsibilities for a Future Air Traffic Management Concept	24
<i>Alicia Fernandes, Timothy Bagnall, Kenneth Leiden, Stephen Atkins, Mark Evans, Alan Bell, Todd Kilbourne, James Kirk, Michael R. C. Jackson</i>	
1007 - Toward Better Understanding of Function Allocation Requirements for Planetary Eva and Habitat Tasks	29
<i>Jordan R. Hill, Barrett S. Caldwell</i>	
1008 - Schelling’s Theory of Contracts and Rules: Applications for Procedure Design and Safety Analysis	34
<i>Asaf Degani</i>	
1009 - Activity Theory as a Framework for Integrating Uas Into the Nas: A Field Study of Crew Member Activity During Uas Operations Near a Non-Towered Airport	39
<i>Igor Dolgov, Edin Sabic, Bryan L. White</i>	
1010 - A Deeper Look at the NASA TLX and Where It Falls Short	44
<i>Ryan D. McKendrick, Erin Cherry</i>	
1011 - Pilots’ Estimation of Altitude of a Small Unmanned Aircraft System (sUAS)	49
<i>Tracy Lennertz, Andrea L. Sparko, Kim Cardosi, Alan Yost, Andrew Kendra, Jason Lu, Tom Sheridan</i>	
1012 - Reconstructing Simulator Control Inputs: A Machine Learning Approach	54
<i>Eamon Caddigan</i>	
1013 - Pilot Performance Using Head-up and Head-down Synthetic-Vision Displays for SA CAT I Approaches	57
<i>Dennis B. Beringer, David A. Domino, Jill Kamienski</i>	
1014 - Examining the Compellingness of electronic Low Visibility Taxi Charts	62
<i>Michelle Yeh, Joseph Jaworski, Suzanne Thomas, Andrew Kendra, Danielle Hiltunen</i>	
1015 - Correlating Helmet System Mass Properties with Pain Levels towards Helicopter Aircrew Neck-trouble Mitigating Solutions	67
<i>Philip S. E. Farrell, Elaine Maceda, Ahmed Niri</i>	
1016 - The Operational Issue of an Airliner’s Reduced-Crew Caused by Data-link Break-up to Remote Support	71
<i>Daniela Schmid, Bernd Korn</i>	
1017 - Decision Support for Tactical Rerouting of Airborne Flights to Improve the Utilization of Airspace Capacity	76
<i>Philip J. Smith, Mark Evans, Amy Spencer, Aditya Saraf, Mark Klopfenstein</i>	
1018 - Information Content Requirements for Remote Pilot Handover of Control of Unmanned Aircraft Systems in the National Airspace	81
<i>Carl Pankok, Jr., Ellen J. Bass</i>	
1019 - Supervising High Degree Automation in Simulated Air Traffic Control	86
<i>Vanessa Bowden, Luke Ren, Shayne Loft</i>	
1020 - The peak-end effects in controllers’ mental workload evaluation	87
<i>Han Qiao, Yazhe Li, Jingyu Zhang, E Xiaotian, Xiangying Zou, You Jiang, Lin Xiong, Xianghong Sun</i>	
1021 - Public Safety Communication User Needs: Voices of First Responders	92
<i>Shaneé Dawkins, Kristen Greene, Michelle Steves, Mary Theofanos, Yee-Yin Choong, Susanne Furman, Sandra Spickard Prettyman</i>	

1022 - Social interactions in traffic: The effect of external factors	97
<i>Tanja Stoll, Nadine-Rebecca Strelau, Martin Baumann</i>	
1023 - A Systematic Review of Communication in Distributed Crews in High-Risk Environments	102
<i>Justine Rockwood, Dan Nathan-Roberts</i>	
1024 - Sharpening the Tool of Language: Examining Anchors and AMBIGUITIES	107
<i>William G. Volante, Michael Garcia, Peter A. Hancock</i>	
1025 - Multimodal Mobile Technology to Aid in Remote Guidance from Subject Matter Expert	112
<i>Victor Finomore, Christopher McClernon, Andrea Calvo, Lauren Brooks</i>	
1026 - Making Sense of Team Information	114
<i>Ronald Stevens, Trysha Galloway, Ann Willemson-Dunlap, Jamie Gorman, Donald Halpin</i>	
1027 - Connecting the Big Five Taxonomies: Understanding how Individual Traits Contribute to Team Adaptability under Workload Transitions	119
<i>Shannon P. Devlin, Jake R. Flynn, Sara L. Riggs</i>	
1028 - Dyadic Team Interaction and Shared Cognition to Inform Human-Robot Teaming	124
<i>Mustafa Demir, Nathan J. McNeese, Nancy J. Cooke</i>	
1029 - Time Pressure and Teams: Contextual Factors Influencing Task Experience when Using a Cognitive Aid	125
<i>W. Braxton Hicks, Mak Pryor, John Sprufera, Amy Greene, Vicky Byrne, Anne Collins McLaughlin</i>	
1030 - Attack, Damage and Carry: Role Familiarity and Team Performance in League of Legends	130
<i>Joshua A. Eaton, David J. Mendonça, Matthew-Donald D. Sangster</i>	
1031 - Machine Learning and Human Factors: Status, Applications, and Future Directions	135
<i>Linda Boyle, Nathan Lau, Lex Fridman, Brett J. Borghetti, John D. Lee, Laura Barnes, Michael Hildebrandt</i>	
1032 - Human Factors in Cybersecurity – Perspectives from Industries	139
<i>Nathan Lau, Robert Pastel, Melissa R Chapman, Jennifer Minarik, Jonathan Petit, Dave Hale</i>	
1033 - Automation Reliability and Decision Strategy: A Sequential Decision Making Model for Automation Interaction	144
<i>Aditya Acharya, Andrew Howes, Chris Baber, Tom Marshall</i>	
1034 - Team Situation Awareness in Human-Autonomy Teaming: A Systems Level Approach	149
<i>David A. Grimm, Mustafa Demir, Jamie C. Gorman, Nancy J. Cooke</i>	
1035 - Beyond Levels of Automation: Developing More Detailed Guidance for Human Automation Interaction Design	150
<i>Emilie Roth, Beth Depass, Jonathan Harter, Ronald Scott, Jeffrey Wampler</i>	
1036 - Comparison of Adaptive, Adaptable, and Hybrid Automation for Surveillance Task Completion in a Multi-Task Environment	155
<i>Heath Ruff, Gloria Calhoun, Elizabeth Frost, Kyle Behymer, Jessica Bartik</i>	
1037 - How We Talk with Robots: Eliciting Minimally-Constrained Speech to Build Natural Language Interfaces and Capabilities	160
<i>Kimberly A. Pollard, Stephanie M. Lukin, Matthew Marge, Ashley Fouts, Susan G. Hill</i>	
1038 - Trust dynamics in sequential decision making	165
<i>Changhoon Kim, Mengyuan Zhang, Chongjie Zhang², X. Jessie Yang</i>	
1039 - Applying Visualization and Collective Intelligence for Rapid Group Decision Making	167
<i>Stephen Dorton, Chris M. Smith, Jason B. Upham</i>	
1040 - Conveying Automation Reliability and Automation Error Type An Empirical Study in the Cyber Domain	172
<i>Jing Chen, Scott Mishler, Bin Hu</i>	
1041 - Evaluating effects of automation reliability and reliability information on trust, dependence and dual-task performance	174
<i>Na Du, Qiaoning Zhang, X. Jessie Yang</i>	
1042 - Eye tracking: a promising method for inferring trust in real time	175
<i>Yidu Lu, Nadine Sarter</i>	
1043 - Designing Data & Dashboard Visualizations for Future UAV Systems	177
<i>Jeffrey T. Hansberger, Sarah Meacham, Victoria Blakely</i>	
1043 - Managing variability: a cognitive ethnography of the work of airline dispatchers	182
<i>Pamela Munro, Richard Mogford</i>	
1045 - Improved Monitoring Performance of Financial Trading Algorithms Using a Graphical Display	187
<i>Yeti Li, Xian Wang, Catherine M. Burns</i>	
1046 - Algorithmic Opacity: Making Algorithmic Processes Transparent through Abstraction Hierarchy	192
<i>Pragya Paudyal, B.L. William Wong</i>	
1047 - Explaining Explanation For “Explainable Ai”	197
<i>Robert R. Hoffman, Gary Klein, Shane T. Mueller</i>	

1048 - Automation reliability and trust: A Bayesian inference approach	202
<i>Chenlan Wang, Chongjie Zhang, X. Jessie Yang</i>	
1049 - End-users' perspectives on safety risks in different high-hazard industries	207
<i>Christopher M. Lilburne, Dale S. Temby, Audrey Leong, Maureen E. Hassall</i>	
1050 - Intuitive Insights For Course Of Action Development	212
<i>Aren Hunter, Tania Randall, Heather Colbert</i>	
1051 - Evaluating decision making in a multi-objective route planning-task	217
<i>Joseph Coyne, Cyrus Foroughi, Noelle Brown, Ciara Sibley</i>	
1052 - Determinants of Association and Dissociation between Subjective and Objective Measures of Workload	222
<i>Ofir Yakobi</i>	
1053 - The Effects of Cue Utilization and Target-Related Information on Target Detection during a Simulated Drone Search and Rescue Task	227
<i>Shaheen Shekh, Jaime C. Auton, Mark W. Wiggins</i>	
1054 - Attention Does Not Improve Impaired Understanding Of Variability In Spatial Prediction	232
<i>Nathan Herdener, Christopher D. Wickens, Benjamin A. Clegg, C. A. P. Smith</i>	
1055 - How Does Physical Demand Affect Cognitive Performance? Interference Between Outdoor Running And Narrative Memory	237
<i>Samantha L. Epling, Graham K. Edgar, Paul N. Russell, William S. Helton</i>	
1056 - Cognitive and Affective Eye Tracking Metrics for Detecting Insider Threat: A Study of Simulated Espionage	242
<i>Gerald Matthews, Ryan Wohleber, Jinchao Lin, Lauren Reinerman-Jones, Valarie Yerdon, Nathanael Pope</i>	
1057 - Trends In Infant Sleep: What Do The Data Show? What Are Caregivers' Behaviors?	247
<i>Carol Pollack-Nelson, Suad Wanna Nakamura, Hope Nesteruk, Rana Balci-Sinha, Celestine Kish</i>	
1058 - An examination of icons, signal words, color, and messages in warnings for children on the Internet	251
<i>Helen Zaikina-Montgomery, N. Clayton Silver</i>	
1059 - Who Would Put Their Child Alone In An Autonomous Vehicle? Preliminary Look At Gender Differences	256
<i>Somer Hand, Yi-Ching Lee</i>	
1060 - Evaluating Children's Interaction with Touchscreens From 0 to 8 Years Old	260
<i>Sommayah Soliman, Dan Nathan-Roberts</i>	
1061 - Fitting Motivation to Fitts' Law : Effect of a Penalty Contingency on Controlled Movement	265
<i>Douglas J. Gillan, Randolph G. Bias</i>	
1062 - When actions speak louder than words: Using changes in operator behavior and system efficiency measures to detect the presence of a cyber attack	270
<i>Kelly Satterfield, Vincent F. Mancuso, Adam Strang, Eric Greenlee, Brent Miller, Gregory J. Funke</i>	
1063 - "Oh, Look, A Butterfly!" A Framework For Distracting Attackers To Improve Cyber Defense	272
<i>Robert Gutzwiller, Kimberly Ferguson-Walter, Sunny Fugate, Andrew Rogers</i>	
1064 - New Approaches to Collecting Family Health History – A Preliminary Study Investigating the Efficacy of Conversational Systems to Collect Family Health History	277
<i>Amal Ponathil, Necmettin Firat Ozkan, Jeffrey Bertrand, Brandon Welch, Kapil Chalil Madathil</i>	
1065 - The Dark Side Of The Net: Event Analysis Of Systemic Teamwork (East) Applied To Illicit Trading On A Darknet Market	282
<i>Ben R. Lane, David Lacey, Neville A. Stanton, Anita Matthews, Paul M. Salmon</i>	
1066 - Analysis of Human-Swarm Visualizations	287
<i>Karina A. Roundtree, Matthew D. Manning, Julie A. Adams</i>	
1067 - Developing an Optimized UI for Traffic Incident Managers	292
<i>Andrina Helgerson, Jamiahus Walton, Celia Loya, Christopher Kawell, Katherine Atwell, Quinn Monaghan, Lakshay Ahuja, Hesham Hassan, Stephen B. Gilbert, Anuj Sharma</i>	
1068 - Using Gesture, Gaze, and Combination Input Schemes as Alternatives to the Computer Mouse	297
<i>Dominic Canare, Barbara Chaparro, Alex Chaparro</i>	
1069 - Safety Priming and Subsequent App Selection Behaviors	302
<i>Isis Chong, Huangyi Ge, Robert W. Proctor, Ninghui Li</i>	
1071 - ReClass: An Application of Deep Learning for Real-time Reading Detection Using an Eye Tracking Device	307
<i>Hoa T. Nguyen, Jens-Patrick Langstrand, Michael Hildebrandt</i>	
1072 - Synopticon: Sensor Fusion for Real-Time Gaze Detection and Analysis	311
<i>Jens-Patrick Langstrand, Hoa T. Nguyen, Michael Hildebrandt</i>	
1073 - Interfacing the Modifiable Multitasking Environment with ACT-R for Computational Cognitive Modeling of Complex Tasks	316
<i>Leslie M. Blaha, Leif Carlsen, Tim Halverson, Brad Reynolds</i>	

1074 - Demonstration of the “Work Models that Compute” Simulation Framework for Objective Function Allocation	321
<i>Martijn IJtsma, Lanssie M. Ma, Karen M. Feigh, Amy R. Pritchett</i>	
1075 - Human Systems Integration Risk Management Tool	325
<i>William Kosnik, Patrick O’Neill, Zachary Zimmerlin</i>	
1076 - Putting the Applied in Applied Psychology: Experiential Learning Projects in the HFE Classroom	330
<i>Heather C. Lum, Gabriella M. Hancock, Grace E. Waldfogle, Federico Scholcover, Nicholas Kelling</i>	
1077 - Effects of Priming on Online Discussion Behavior	335
<i>Hung-Tao Chen, Benjamin D. Horne</i>	
1078 - Analyzing Novel Interactions in Science Fiction Movies in Human Factors and HCI Courses	336
<i>Myounghoon Jeon</i>	
1079 - Deep Reasoning for Enhancing Etextbooks (DREE): Using Deep-Level Questions for Guiding Learning	341
<i>Scotty D. Craig, Shasha Zhang, Deborah Prewitt</i>	
1080 - Embracing The Grind: Why We Chose Higher Education Administration; Maybe You Should Too	346
<i>Tonya Smith-Jackson, Ann Bisantz, Christopher B. Mayhorn, Brian M. Kleiner, Kari Babski-Reeves, Maranda McBride</i>	
1081 - A Conceptual Qualitative Framework for Assessing Human Systems Engineering Education Outcomes and Opportunities	349
<i>Rod D. Roscoe, Chelsea K. Johnson, Micah Lande, Scotty D. Craig, Rob Gray</i>	
1082 - Usability Analysis of Freeform Marking on Engineering Problem Solving	354
<i>Bahar Memarian, Susan McCahan</i>	
1083 - Considering the Future of Land Grant Ergonomics Education	359
<i>Barrett S. Caldwell</i>	
1084 - Cross-training in Design and Human Factors.....	364
<i>Esa Rantanen, Stan Rickel, Alisa Rantanen, Michael Lau</i>	
1085 - Effects of a dynamic foot movement device on cognitive performance in short-duration computer-based tasks	369
<i>Gourab Kar, Yilu Sun, Elif Celikors, Paulina Villacreces, Elena Misailedes, Marty Schatz, Jeyon Kim, Yuan Ling, Zi Shi, Yitong Gao, Joey Sun, Jiaming Zhang, Alan Hedge</i>	
1086 - Greenery versus Aquatic: Cognitive Restoration of Different Components of Nature for Improvement in Environmental Design.....	373
<i>Theresa Nguyen, Brittany Neilson, Martina I. Klein</i>	
1087 - Effects of Electrochromic Glass on Computer Vision Syndrome	378
<i>Alan Hedge, Danny Nou</i>	
1088 - Optimal Configuration of a Genetic Algorithm for Command Space Layout Analysis	383
<i>Wenbi Wang</i>	
1089 - Preliminary Study of Obstacle Clearance and Compensatory Movements in Individuals with High Body Mass Index	388
<i>Sol Lim, Yue Luo, Sheila Ebert, Monica L. H. Jones, Oliver Varban, Clive D’Souza</i>	
1090 - Designing a Global Learning Environment.....	393
<i>Nancy J. Stone, Come Mara Bazley, Michelle M. Robertson, Nancy LJ Larson, Elizabeth L. Blickensderfer, Ronald Laurids Boring</i>	
1091 - Forensic Case Study: When labeling leads to wrongful incarceration.....	398
<i>Alison G. Vredenburgh, Ilene B. Zackowitz</i>	
1092 - The Ubiquitous Orange Traffic Cone: An Observational Study	403
<i>Robert E. Morrison</i>	
1093 - Prevalence of the Use of Mobile Instant Messaging Applications: The Need to Assess Their Usage in Human Factors Investigations.....	406
<i>Rosemarie Figueroa Jacinto, Steve Arndt</i>	
1094 - Consumer perception of portable ladder hazards and warnings	411
<i>Kenneth Nemire</i>	
1095 - Why We Withdrew from Our First Forensics Case	416
<i>Michael J. Vredenburgh, Meriel L. Bench</i>	
1096 - Understanding and Evaluating Eyewitness Recall of Events.....	421
<i>Jeffrey A. Martin, Joseph Cohen, Angela Stokes</i>	
1097 - Study of Employee Slip/Trip/Fall Hazards at a Midwestern Urban Hospital Campus	426
<i>Brian C. Grieser</i>	
1098 - Stairway Uniformity Measurement: What Lateral Location Should Be Measured?	430
<i>Roger C. Jensen</i>	

1099 - Slip Resistance Assessment of Common Shoe Sole Materials on Selected Floor Surfaces	435
<i>Brian C. Grieser, Jared Frantz</i>	
1100 - Amusement Park Guest Injured on a Water Ride: A human factors and biomechanics evaluation	440
<i>Michael J. Vredenburg, Meriel L. Bench, Ilene B. Zackowitz, Kevin Runge, Alison G. Vredenburg</i>	
1101 - Forensic Human Factors 101: Interactive Transportation and Product Liability Case Studies	445
<i>Stephanie A. Whetsel Borzendowski, Leah S. Hartman</i>	
1102 - Human Factors and Ergonomics in Diversity, Inclusion and Social Justice Research	447
<i>Abigail R. Wooldridge, Theresa Nguyen, Rupa Valdez, Enid Montague, Mattie N. Milner, Michael C. Dorneich, Rod Roscoe</i>	
1103 - Elaborating the Human Aspect of the NIST Framework for Cyber-Physical Systems	450
<i>Martin Burns, Joe Manganello, David Wollman, Ronald Laurids Boring, Stephen Gilbert, Edward Griffor, Yi-Ching Lee, Dan Nathan-Roberts, Tonya Smith-Jackson</i>	
1104 - Navigating the Advent of Human-Machine Teaming	455
<i>J. Christopher Brill, M. L. Cummings, A.W. Evans III, Peter A. Hancock, Joseph B. Lyons, Kevin Oden</i>	
1105 - Real World Strategies to Achieve Human Factors Integration	460
<i>Liza Josias, Jason Demagalski, Sarah-Louise Donovan, A. Joy Rivera, James C. Won</i>	
1106 - Town Hall on Patient-Centered Human Factors and Ergonomics	465
<i>Richard J. Holden, Rupa S. Valdez</i>	
1107 - Investigating Intraoperative and Intraprofessional Handoffs in Anesthesia	469
<i>Katherina Jurewicz, Myrte de Alfred, David M. Neyens, Ken Catchpole, Anjali Joseph, Scott T. Reeves</i>	
1108 - A Pilot Study Characterising Interruptions Experienced By Emergency Medicine Residents	474
<i>Katherine L. Forsyth, Hunter J. Hawthorne, Nibras El-Sherif, Skylar M. Pagel, Renaldo C. Blocker</i>	
1109 - Investigating Nursing Task Interruptions in Intensive Care Units: A Scoping Literature Review	478
<i>Mahnoosh Sadeghi, Farzan Sasangohar</i>	
1110 - Minimizing the impact of interruptions in a pediatric retail pharmacy	480
<i>Curtis M. Craig, Brady Patzer, Nichole L. Morris</i>	
1070 - Methodology for co-creating provider-centered interventions for mitigating interruptions in the emergency department	485
<i>Renaldo C. Blocker, Katherine L. Forsyth, Hunter J. Hawthorne</i>	
1112 - Transitioning from one Electronic Health Record (EHR) to Another: A Narrative Literature Review	489
<i>Jason J. Saleem, Jennifer Herout</i>	
1113 - The Role of Ehrs in Rapid Response Call Outs: A Case Study	494
<i>Anne Miller, Paul Hudson, Malcolm Green</i>	
1114 - A Framework for Integrating Safety in Usability Engineering for Electronic Health Records	499
<i>Rebecca Green, Rachael Brandt, Anne Miller</i>	
1115 - Usability Evaluation of Alzheimer’s mHealth Applications for Caregivers	503
<i>Janetta Brown, Hyung Nam Kim</i>	
1116 - Home Telemonitoring Platforms for Adults with Diabetes Mellitus: A Narrative Review of Literature	508
<i>Julie Hammett, Farzan Sasangohar, Mark Lawley</i>	
1117 - EHR to EHR Transitions: Establishing and Growing a Knowledge Base	513
<i>Jennifer Herout, Jason J. Saleem, Matthew Weinger, Robert W. Grundmeier, Emily S. Patterson, Shilo Anders, A. Zachary Hettinger</i>	
1118 - Field Investigation of Ambulatory Clinic Exam Room Design with respect to Computing Devices: A Pilot Study	518
<i>Jason J. Saleem, Dustin T. Weiler, Tyler Satterly, Maury A. Nussbaum, Neale R. Chumbler, Gary M. Fischer, Shakaib U. Rehman</i>	
1119 - A Formal Analysis of Masking Between Reserved Alarm Sounds of the IEC 60601-1-8 International Medical Alarm Standard	523
<i>Matthew L. Bolton, Judy Edworthy, Andrew D. Boyd</i>	
1120 - Virtual Reality Exergames for People Living with Dementia Based on Exercise Therapy Best Practices	528
<i>Mahzar Eisapour, Shi Cao, Laura Domenicucci, Jennifer Boger</i>	
1121 - An Empirical Study Investigating the Effectiveness of Integrating Anecdotal Patient Experiences into Healthcare Public Reports	533
<i>Sruthy Agnisarman, Amal Ponathil, Snehal Lopes, Kapil Chalil Madathil</i>	
1122 - Evaluating the Use of Patient-Reported Non-Routine Events in Pediatric and Radiation Oncology: A Pilot Study	538
<i>Kathryn G. Tippey, Jason M. Slagle, Ryan K. Cleary, Debra L. Friedman, Lisa A. Kachnic, Matthew S. Shotwell, Jie Xu, Sarah Moroz, Shilo Anders, Matthew B. Weinger</i>	

1123 - Implementing a Program to Share User Experience Data for Medical Devices	543
<i>Jonathan Gaev, Patrice D Tremoulet</i>	
1124 - Veteran-centered Design of a Post-Traumatic Stress Disorder (PTSD) Tool: Qualitative Analysis of Interviews with Veterans	548
<i>Jukrin Moon, Jason P. C. Williams, Farzan Sasangohar, Kunal Khanade, Carolina Rodriguez-Paras</i>	
1125 - Implications of Trust on Patient Generated Health Data	550
<i>Elizabeth Lerner Papautsky, April Rose Panganiban</i>	
1126 - Improving Care Transitions in Healthcare: A Human Factors/Ergonomics (HFE) Approach	551
<i>Patrick Waterson, Abigail Wooldridge, Abigail Wooldridge, Mary Sesto, Ayse Gurses, Richard Holden, Nicole Werner, Mike Fray, Eva-Maria Carman, Patrick Waterson</i>	
1127 - Developing Distributed Expertise Coordination Models of Diabetes Care Teams	556
<i>Michelle A. Jahn, Barrett S. Caldwell</i>	
1128 - Towards an Understanding of Informal Care Networks of Persons with Dementia: Perceptions of Primary Caregivers	561
<i>Siddarth Ponnala, Dustin T. Weiler, Andrea Gilmore-Bykovskiy, Laura Block, Amy J. Kind, Nicole E. Werner</i>	
1129 - Distributed Situation Awareness in Patient Flow Management: An Admission Case Study	563
<i>Abdulrahman A. Alhaider, Nathan Lau, Paul B. Davenport, Melanie K. Morris, Christopher Tuck</i>	
1130 - Naturalistic Decision Making by Older Adults with Chronic Heart Failure: An Exploratory Study Using the Critical Incident Technique	568
<i>Carly N. Daley, Davide Bolchini, Anagha Varrier, Kartik Rao, Pushkar Joshi, Jessica Blackburn, Tammy Toscos, Michael J. Mirro, Shauna Wagner, Elizabeth Martin, Amy Miller, Richard J. Holden</i>	
1131 - Perceived Workload and an Automated Workload Alert System: A Comparison in the Emergency Department	573
<i>Katherine L. Forsyth, Hunter J. Hawthorne, Wesley D. Cammon, Anna R. Linden, Renaldo C. Blocker</i>	
1132 - Spreading the Word: Improving Outcomes with Human Factors Engineering (When Common Sense Is Not Enough)	578
<i>Michael F. Rayo, Michael F. Rayo, Rollin J. (Terry) Fairbanks, Sarah Henrickson Parker, Laurie Wolf, Rosemary Kennedy</i>	
1133 - Can Surgical Performance for Varying Experience be Measured from Hand Motions?	583
<i>David P. Azari, Brady L. Miller, Brian V. Le, Jacob A. Greenberg, Caprice C. Greenberg, Carla M. Pugh, Yu Hen Hu, Robert G. Radwin</i>	
1134 - Do Objective Measures of Communication Predict Clinical Performance? – Application in Acute Care Trauma Simulation	588
<i>Yuhao Peng, Nicholas E. Anton, Jackie Cha, Tomoko Mizota, Julie M Hennings, Ryan Stambro, Megan A. Rendina, Katie Stanton, Dimitrios Stefanidis, Denny Yu</i>	
1135 - Effects of Automated Versus Manual Record Keeping on Anesthesiologists’ Performance: a Simulation Study	593
<i>Man-kei Tse, Tsz-hin Chiu, Chuen-ho Cheung, Chun-pong Cheng, Ka-man Lam, Chung-wai Lau, Simon Y. W. Li</i>	
1136 - Can Crowdworkers be used to Rate the Quality of Ultrasound Images	595
<i>Amanda Ashdown, Mark W. Scerbo, Barry J. Knapp, Felicia Toreno, Craig Goodmurphy, Don Byars</i>	
1137 - Gathering Information in Healthcare Settings: A Tool to Facilitate On-Site Work	600
<i>Jennifer Herout, Jolie Dobre, William Plew, Jason J. Saleem</i>	
1138 - Moderating Styles: Understanding Diverse Techniques for Investigating the Root Cause of Use Events	605
<i>Kathryn G. Tippey, Larry S. McGrath, Mary Yovanoff, Peter Sneeringer</i>	
1139 - Using Scenarios Throughout The User-Centered Design Process in Healthcare	610
<i>Carrie Reale, Ross Speir, Kurt Ruark, Jennifer Herout, Jason Slagle, Matthew B. Weinger, Shilo Anders</i>	
1140 - Signaling Sepsis Scenario Development & Validation	615
<i>Danielle L.M. Weldon, Rebecca Kowalski, Laura Schubel, Brett Schuchardt, Ryan Arnold, Muge Capan, Joseph Blumenthal, Ella Franklin, Ken Catchpole, F. Jacob Seagull, J. Sanford Schwartz, Kristen Miller</i>	
1141 - Exploring Challenges of Monitoring Technology and Self-Injurious Behavior in Autism Spectrum Disorder	620
<i>Kristine Cantin-Garside, Rupa S. Valdez, Maury A. Nussbaum, Susan White, Sunwook Kim, Chung Do Kim, Diogo M. G. Fortes</i>	
1142 - The “up-side” and “down-side” of tactile parameters: An evaluation of increases and decreases in tactile cue magnitude to support anesthesia monitoring	622
<i>Kylie M. Gomes, Scott T. Reeves, Sara L. Riggs</i>	
1143 - Exploration of Relationships among Individual and Organizational Characteristics, Nurse Leader Fatigue, and Turnover Intention	627
<i>Sarah Brzozowski, Jessica G. Rainbow, Barbara Pinekenstein, Élise Arsenaault Knudsen, Linsey Steege</i>	
1144 - Investigating the Food and Drug Administration (FDA) Biotherapeutics Review and Approval Process: A Scoping Review	632
<i>Samuel A. Bonet, Farzan Sasangohar, Mark Lawley</i>	

1145 - Battlefield trauma care	634
<i>Peter Berggren, Filip Svensson, Maria Lampi, Erik Prytz</i>	
1146 - Teaming with Technology at the TSA: Practical Methods for Enhancing Human Performance with Automation in Operational Environments	639
<i>Kristopher Korbela, Jeffrey Dressel, David Band, Jennifer Blanchard</i>	
1147 - A Formal Methods Approach for Predicting How Users will Utilize System Features	641
<i>Meng Li, Sara Behdad, Matthew L. Bolton</i>	
1148 - CURATe Measures for Human-Integrated Systems: A Model Checking Approach	646
<i>Andrew J. Abbate, Ellen J. Bass</i>	
1149 - Task Switching in Rock Climbing: Validation of a Computational Model for Different Skill Levels	651
<i>Christopher D. Wickens, Anne Collins McLaughlin, John Keller, Jie Tan</i>	

VOLUME 2

1150 - Teaming with Technology at the TSA: An Examination of Trust in Automation's Influence on Human Performance in Operational Environments	656
<i>Kristopher Korbela, Jeffrey Dressel, Donald Tweedie, Whitney Wilson, Simone Erchov, Brian Hilburn</i>	
1476 - Dual-Task Redundant-Target Processing: The Case of the Limited Capacity Parallel Model	661
<i>Stephanie A. Morey, Nicole A. Thomas, Jason S. McCarley</i>	
1151 - Agreement between the 3-minute Psychomotor Vigilance Task (PVT) Embedded in a Wrist-worn Device and the Laptop-based PVT	666
<i>Panagiotis Matsangas, Nita Lewis Shattuck</i>	
1152 - Modeling the Effects of Time pressure and Feedback on Eye movements and Learning Performance	671
<i>Ji-Eun Kim, David A. Nembhard</i>	
1153 - Energy Use and Weatherization Practices: Applications for Agent-Based Modeling to Support Vulnerable Populations	676
<i>Jacklin Stonewall, Wanyu Huang, Michael Dorneich, Caroline Krejci, Linda Shen, Ulrike Passe</i>	
1154 - Estimation of Instantaneous Hand Joint Centers of Rotation Using 3D Reconstructed Hand Skeleton Motion from CT Scans	681
<i>Xiaopeng Yang, Zhichan Lim, Hayoung Jung, Wonsup Lee, Heecheon You</i>	
1155 - Developing and Evaluating an Augmented Reality Interface to Assist the Joint Tactical Air Controller by Applying Human Performance Models	686
<i>Chris Wickens, Gaia Dempsey, Andrew Pringle, Lucas Kazansky, Stefanie Hutka</i>	
1156 - Preliminary Analysis and Simulation of Railroad Dispatcher Workload	691
<i>Lixiao Huang, M. L. Cummings, Victoria C. Nneji</i>	
1157 - How does relaxing posture influence take-over performance in an automated vehicle?	696
<i>Yucheng Yang, Matthias Gerlicher, Klaus Bengler</i>	
1158 - Modeling the Effects of Warning Lead Time, Warning Reliability and Warning Style on Human Performance Under Connected Vehicle Settings	701
<i>Yiqi Zhang, Changxu Wu</i>	
1159 - UX in Practice: Applying a Heuristic Evaluation Technique to Real World Challenges	702
<i>France Jackson, Lara Cheng</i>	
1160 - Trust and Approachability Mediate Social Decision Making in Human-Robot Interaction	704
<i>Stephanie Tulk, Eva Wiese</i>	
1161 - The Knowledge, Skills, and Abilities Used by Penetration Testers: Results of Interviews with Cybersecurity Professionals in Vulnerability Assessment and Management	709
<i>Miriam E. Armstrong, Keith S. Jones, Akbar Siami Namin, David C. Newton</i>	
1162 - Have a Heart: Predictability of Trust in an Autonomous Agent Teammate through Team-Level Measures of Heart Rate Synchrony and Arousal	714
<i>Michael T. Tolston, Gregory J. Funke, Gene M. Alarcon, Brent Miller, Margaret A. Bowers, Christina Gruenwald, August Capiola</i>	
1163 - An Analysis of Video Games Using the Dimensions of Human-Agent Interaction	716
<i>Güliz Tokadlı?, Kaitlyn Ouverson, Chase Meusel, Austin Garcia, Stephen B. Gilbert, Michael C. Dorneich</i>	
1164 - Cue Utilization, Perceptions, and Experience in the Interpretation of Weather Radar Returns	721
<i>Mark W. Wiggins, Monique Crane, Thomas Loveday</i>	
1165 - Cue Utilization Predicts Resource Allocation during Rail Control Simulations: A NIRS Study	726
<i>Daniel Sturman, Mark W. Wiggins, Jaime C. Auton, Shayne Loft</i>	

1166 - Sex Differences in Lexical Vigilance Performance	731
<i>Alexis R. Neigel, Daryn A. Dever, Victoria L. Claypoole, Nicholas W. Fraulini, Gabriella M. Hancock, James L. Szalma</i>	
1167 - The effect of video game experience and the ability to handle workload and workload transitions	736
<i>Shannon P. Devlin, Sara L. Riggs</i>	
1168 - Low Cost Eye Tracking: Ready for Individual Differences Research?	741
<i>Ciara Sibley, Cyrus Foroughi, Noelle Brown, Joseph T. Coyne</i>	
1169 - Busting the Myth of the Non-Social Gamer: Comparing Friendship Quality Between Gamers and Non-Gamers	746
<i>Tianxin Zhang, Christina M. Frederick</i>	
1170 - Preliminary Evaluation of a Brief Team Cohesion Manikin Scale	747
<i>Justin W. Bonny</i>	
1171 - Sex Differences in the Stress and Workload of Lexical Vigilance	752
<i>Alexis R. Neigel, Victoria L. Claypoole, Daryn A. Dever, Nicholas W. Fraulini, Gabriella M. Hancock, James L. Szalma</i>	
1172 - Calibrating Uncertainty: Commonalities in the Estimation of Numeric Variability Versus Spatial Prediction	757
<i>Kimberly S. Spahr, Christopher D. Wickens, Benjamin A. Clegg, C. A. P. Smith, Adam S. Williams</i>	
1173 - Predicting Task-Induced State Changes in a Multitasking Environment from Personality Factors	762
<i>G. Teo, L. Reinerman-Jones, G. Matthews</i>	
1174 - Enhancing Worker Capability Through HFE: Evidence Management Can Understand	767
<i>Cristina G. Banks, Michelle M. Robertson, Deborah L. Gebhardt, David Rempel, Kathleen L. Mosier, Nancy Larson, Blake McGowan</i>	
1175 - Improving Work and Rest Patterns of Military Personnel in Operational Settings with Frequent Unplanned Events	772
<i>Nita Lewis Shattuck, Panagiotis Matsangas, Arlene Saitzyk</i>	
1176 - Assessing a Retention Policy for Air Traffic Controllers	777
<i>Linda G. Pierce, Elaine M. Pfeleiderer</i>	
1177 - First Impressions, Team Satisfaction and Work-Related Flow: A Multilevel Analysis	782
<i>Sarah Berger, Jeffery Hanrahan, Andrea Bizarro, Robert Henning</i>	
1178 - An Episode as a Trace of Resilient Performance in Large-Scale Incident Management Systems	787
<i>Changwon Son, Farzan Sasangohar, S Camille Peres, Sam Mannan</i>	
1179 - Using Simulation Modeling Methods to Study Teams Doing Taskwork	788
<i>Megan Nyre-Yu, Barrett S. Caldwell</i>	
1180 - Work Domain Analysis of a Regulatory System to Support System Redesign	793
<i>Tony Carden, Natassia Goode, Paul Salmon</i>	
1181 - Inertial Sensor-based Measurement of Thoracic-Pelvic Coordination Predicts Hand-Load Levels in Two-handed Anterior Carry	798
<i>Sol Lim, Clive D'Souza</i>	
1182 - Detection of Occupational Physical Activities Using a Smart Textile System	800
<i>Mohammad Iman Mokhlespour Esfahani, Maury A. Nussbaum</i>	
1183 - Enhancing Proactive Evaluation of Shoulder Fatigue in Digital Human Models	802
<i>Nicholas J. La Delfa, Clark R. Dickerson</i>	
1184 - Evaluation of an adjustable support shoulder exoskeleton on static and dynamic overhead tasks	804
<i>Logan Van Engelhoven, Nathan Poon, Homayoon Kazerooni, Alan Barr, David Rempel, Carisa Harris-Adamson</i>	
1185 - The evaluation of absolute position drift of inertial-based motion capture systems	809
<i>Adrian de Gouw, Xiaoxu Ji, Joel Cort</i>	
1186 - Prolonged high force high repetition pulling induces trabecular bone loss and microcracks, while low force high repetition pulling induces bone anabolism	813
<i>Mary F Barbe, Vicky S Massicotte, Soroush Assari, Nagat Frara, Michele Y Harris, Mamta Amin, Tamara King, Geneva E Cruz, Steve N Popoff</i>	
1187 - Use of Varied Definitions of Repetition with the Distal Upper Extremity Tool (DUET)	818
<i>Sean Gallagher, Mark Schall Jr., Rich Seseek, Rong Huangfu</i>	
1188 - Modeling Hand Trajectories during Sequential Reach Movements in a Pulley Threading Task	823
<i>Justin M. Haney, Tianke Wang, Clive D'Souza, Monica L. H. Jones, Matthew P. Reed</i>	
1189 - The Influence of Load Handling Height on Shoulder Biomechanics during Sudden Loading	828
<i>Hossein Motabar, Saman Madinei, Xiaopeng Ning</i>	
1190 - Investigating the Effect of Task Parameters on Force Exertion Rating of One-Handed Pulling Tasks	833
<i>Monica L. H. Jones, Sheila M. Ebert, Matthew P. Reed</i>	

1191 - Assessment Methods Used by Certified Ergonomics Professionals	838
<i>Brian Lowe, Patrick Dempsey, Evan Jones</i>	
1192 - An Optimization Framework for Job Rotation to Better Assess the Impact on Overall Risk	843
<i>Alexander Vinel, Amir Mehdizadeh, Mark C. Schall Jr., Sean Gallagher, Richard F. Seseck</i>	
1193 - Are Worker Perceptions of Task Ease and Performance Associated with Within-subject Motor Variation during Repetitive Work?	848
<i>Mahmoud Metwali, Nathan B. Fethke</i>	
1194 - Can We Simplify Complexity Measurement? A Primer Towards Usable Framework For Industry Implementation	853
<i>Pranav Kannan, Noor Quddus, S. Camille Peres, M. Sam Mannan</i>	
1195 - A Normative Database of Neck Muscular Strength and Endurance Capacity	858
<i>Suman K Chowdhury, Yu Zhou, Curran P. Reddy, Ryan M. Byrne, Xudong Zhang</i>	
1196 - Whole-Body Vibration Exposures Among Solid Waste Collecting Truck Operators	860
<i>Hyoung-gon (Frank) Ryou, Peter W Johnson</i>	
1197 - Effect of Stair Tread Markings on Foot Placement During Stair Descent	865
<i>Angela DiDomenico, Tamara L. Cohen, Timothy Joganich</i>	
1198 - A Human-Centered Approach to Hazard Evaluation Checklists for the Risk of Back Pain in Manual Handling Tasks	870
<i>Ceyda Diindar</i>	
1199 - Developing An Intraorganizational Human Factors Design Guideline	875
<i>Jeremy Leal, Wan Yan (Wendy) Ho</i>	
1200 - Human Factors Consulting: The Ins & Outs, Ups & Downs, Pros & Cons	878
<i>Sheree Gibson, Richard Kelly, SD Miller, Tom Albin</i>	
1201 - Lumbar Muscle Fatigue Analysis Using Sorensen Test with Different Upper Body Offload Conditions	879
<i>Rong Huangfu, Sean Gallagher, Phillip Whitley, Richard Seseck, Mark Schall, Gerard Davis</i>	
1202 - Evaluating the Linear Integration Method of Estimating Cumulative Loading Using an Eccentric Exercise	882
<i>Rong Huangfu, Sean Gallagher, Richard Seseck, Mark Schall, Gerard Davis</i>	
1203 - The State of Fatigue Assessment and Management in Offshore Oil and Gas Industry: A Systematic Review	886
<i>Pranav Kannan, M. Sam Mannan, R.M Mehta</i>	
1204 - New Pistol Grip Control for an Electric Utility Aerial Bucket Reduces Risk of Forearm Muscle Fatigue	888
<i>Richard W. Marklin Jr., Jonathon E. Slightam, Mark L. Nagurka, Casey D. Garces, Lovely Krishen, Eric H. Bauman</i>	
1205 - Heart Rate and Perceived Exertion Among Young Adult Obese Males During One-Handed Carrying	893
<i>Mohamed Badawy, Mark C. Schall Jr., Sean Gallagher, Richard F. Seseck, Gerard A. Davis</i>	
1206 - Fatigue indicators of 12-hour day and night shifts in simulated offshore well control scenarios	897
<i>Ashley E. Shortz, W. Sloane Hoyle, S. Camille Peres, Ranjana K. Mehta</i>	
1475 - Effects of lumbar tissue viscoelastic changes on lumbar-pelvic motion pattern	900
<i>B. Hu</i>	
1208 - Effect of Load Weight and Starting Height on the Variability of Trunk Kinematics	905
<i>Hamid Norasi, Jordyn Koenig, Gary Mirka</i>	
1209 - Effect of Time on the Variability of Lifting Kinematics in a Repetitive Lifting Task	910
<i>Emmanuel Tetteh, Gary Mirka</i>	
1210 - Lumbar Range of Motion and Flexion Relaxation Phenomenon Onset During Static Trunk Bending Postures	915
<i>Faisal M Alessa, Xiaopeng Ning</i>	
1211 - Distributions of Job Physical Exposure Data in a Pooled Study of Low Back Pain Prospective Cohorts	920
<i>Ruoliang Tang, Ming-Lun Lu, Andrew S. Merryweather, Matthew S. Thiese, Kurt T. Hegmann, Sue A. Ferguson, William S. Marras, Jay M. Kapellusch</i>	
1212 - Effects of Lumbar Facet Nerve Block on Standing Balance among Lower Back Pain Patients	925
<i>Mohammad Zolghadr, Boyi Hu, Richard Vaglienti, Xiaopeng Ning</i>	
1213 - Changes in MRI Parameters of Porcine Intervertebral Discs under Compressive Loading	929
<i>Jie Zhou, Jeffery Walton, Fadi Fathallah</i>	
1214 - Evaluation of Different Patient Transfer Devices in Reducing Biomechanical Exposures among Professional Caregivers	933
<i>Jaejin Hwang, Veera Aneesh Kuppam, Subhramanya Suryanarayana Raju Chodraju, Jie Chen, Jeong Ho Kim</i>	

1215 - The Relation Between the Paramedic’s Bags Location During Out-of-Hospital Resuscitation on Their Effort and Performance	938
<i>Yaar Harari, Raziel Riemer, Eli Jaffe, Oren Wacht, Yuval Bitan</i>	
1216 - Ergonomics in Veterinary Surgery - Risk Assessment with Intraoperative Motion Tracking	940
<i>Hamed Asadi, Samantha M. Browne, Micha C. Simons, Gert J. Breur, Denny Yu</i>	
1217 - Furthering Recognition of Lift, Slip, And Trip Hazards in Home Healthcare Environments: Opportunities for Virtual Simulation Training	945
<i>Steven A. Lavender, Carolyn M. Sommerich, Barbara Polivka, Amy Darragh, Celia Wills, Don Stredney</i>	
1218 - Effects of Chair Support on Biomechanical Exposures on the Neck During Mobile Phone Use	948
<i>Jaejin Hwang, Kartheek Reddy Syamala, Ravi Charan Ailneni, Jeong Ho Kim</i>	
1219 - Head Rotation and Muscle Activity When Conducting Document Editing Tasks with a Head-Mounted Display	952
<i>Eunjee Kim, Gwanseob Shin</i>	
1220 - Head tilt angle when using smartphone while walking	956
<i>Hyeseon Han, Soonyoung Gwon, Misol Kim, Gwanseob Shin</i>	
1221 - How Do Computer Vision Upper Extremity Exposure Measures Compare Against Manual Measures?	960
<i>OGuz Akkas, Yu Hen Hu, Cheng-Hsien Lee, Stephen Bao, Carisa Harris-Adamson, Jia-Hua Lin, Alysha Meyers, David Rempel, Robert G. Radwin</i>	
1222 - Differences in trapezius muscle activation patterns in office workers with and without chronic neck-shoulder pain, as quantified through exposure variation analysis	962
<i>Denean Kelson, Divya Srinivasan, Svend Erik Mathiassen</i>	
1223 - Upper Extremity Biomechanics and Gender: The Effects of Modern Computing Technologies	967
<i>Sarah M. Coppola, Jack.T Dennerlein</i>	
1224 - Quantifying the Biomechanical Costs Used to Make Behavioural Decisions When Choosing Between Action Plans	972
<i>Jessica Cappelletto, James L. Lyons</i>	
1225 - Shoulder Muscle Activity During Off-Axis Pushing and Pulling Tasks	974
<i>Alison C. McDonald, Carmen Tsang, Kimberly A. Meszaros, Clark R. Dickerson</i>	
1226 - A Field Study on College Marching Band Players’ Workload	976
<i>Robyn Wells, Xinhui Zhu</i>	
1111 - 2018 Product Design Technical Group Stanley Caplan User-Centered Product Design Award	981
<i>Adam Shames, Kathleen Kremer</i>	
1227 - How Packaging Characteristics Change the Perception of Product Net Weight	983
<i>Zhonglun Wang, Richard T. Stone, Ahmad Mumani, Thomas Schnieders</i>	
1228 - These Labels are Nuts: Challenges to Safe Product Identification for Nut-Allergic Consumers	987
<i>Lauren Parikkhal, Hillary Abraham, Alea Mehler, Thomas McWilliams, Jonathan Dobres, Nadine Chahine, Bryan Reimer</i>	
1229 - Development and usability of a novel holographic 3-dimensional user interface using hand-gesture control for a future vehicle application by older adults	992
<i>Breno Schwambach, Johnell Brooks, Paul Venhovens, Robert Knizek, Lauren Mims, Casey Jenkins, Shayne McConomy, Yang Yang, Jochen Karg, Julian Weber, Joerg Schulte</i>	
1230 - Looking Beyond the Gesture: Vocabulary Acceptability Criteria for Gesture Elicitation Studies	997
<i>Glebys Gonzalez, Naveen Madapana, Rahul Taneja, Lingsong Zhang, Richard Rodgers, Juan P. Wachs</i>	
1231 - “Could you please repeat that?” Speech design best practices for minimizing errors	1002
<i>Alyssa S. Hess, Jenny Zellman</i>	
1232 - Dimensions of Holistic Automotive Seat Comfort Experience: A Card Sorting Approach	1007
<i>Tu?ra Erol</i>	
1233 - Ergonomic Design Strategy for Crutches of a Lower-limb Exoskeleton for Paraplegic Individuals: An Experimental Study	1012
<i>Jimin Han, Dong Jin Hyun, Kyungmo Jung, Kye Yoon Kim, Seokyoung Youn</i>	
1234 - Determining ergonomic forms for rollable display devices	1017
<i>Songil Lee, Donghee Choi, Hyeeyun Choi, Kitae Hwang, Seonghyeok Park, Minjoong Kim, Jihhyeon Yi, Si Jung Kim, Gyouhyung Kyung*</i>	
1235 - Upper extremity muscle activity during household floor vacuuming with upright cleaners	1018
<i>Haerim Bak, Clive D’Souza, Gwanseob Shin</i>	
1236 - Development of an Ergonomic Method for Determination of Smartphone Hard Key Locations	1022
<i>Younggeun Choi, Hayoung Jung, Jangwoon Park, Heecheon You</i>	
1237 - The Wearer, the Device, and Its Use: Advances in Understanding the Social Acceptability of Wearables	1027
<i>Norene Kelly, Stephen B. Gilbert</i>	
1238 - Older Adult Preferences for Robot Care Providers	1032
<i>Rachel E. Stuck, Emily M. McDonald, Wendy A. Rogers</i>	

1239 - Understanding User Requirements for the Design of a Home-Based Stroke Rehabilitation System	1037
<i>Lora A. Cavuoto, Heamchand Subryan, Matthew Stafford, Zhuolin Yang, Sutanuka Bhattacharjya, Wenyao Xu, Jeanne Langan</i>	
1240 - Mini Breaks, Many Benefits: Development and Pilot Testing of an Intraoperative Microbreak Stretch Web-Application for Surgeons	1042
<i>Esraa S. Abdelall, Bethany R. Lowndes, Amro M. Abdelrahman, Hunter J. Hawthorne, M. Susan Hallbeck</i>	
1241 - Surgeons' Perspectives on User-Designed Prototypes of Microsurgery Armrests	1047
<i>Amro M. Abdelrahman, Bethany R. Lowndes, Anita T. Mohan, Shelley S. Noland, Dawn M. Finnie, Valerie Lemaine, M. Susan Hallbeck</i>	
1242 - Non-invasive Wearable System for Hypoglycemia Detection: A Proof of Concept User-Centered Design Process	1052
<i>Yibo Zhu, Karim Zahed, Ranjana K. Mehta, Farzan Sasangohar, Madhav Erraguntla, Mark Lawley, Hasan Tahir Abbas, Khaled Qaraqe</i>	
1243 - Operator Workload Reduced in Unmanned Aerial Vehicles: Making Command and Control (C2) Maps More Useful	1057
<i>Yuval Zak, Tal Oron-Gilad, Yisrael Parmet</i>	
1244 - Error Analysis for Localization of Multisensory Cues for Countering Spatial Disorientation	1062
<i>J. Christopher Brill, Anthony Gibson, Ben D. Lawson, Angus H. Rupert</i>	
1245 - Trend Analysis of Unmanned Aerial Vehicles (UAVs) Research Published in the HFES Proceedings	1067
<i>Salim A. Mouloua, James Ferraro, Mustapha Mouloua, P.A. Hancock</i>	
1246 - Modeling Personas for Older Adults with Heart Failure	1072
<i>Richard J. Holden, Pushkar Joshi, Kartik Rao, Anagha Varrier, Carly N. Daley, Davide Bolchini, Jessica Blackburn, Tammy Toscos, Shauna Wagner, Elizabeth Martin, Amy Miller, Michael J. Mirro</i>	
1247 - User Insights for Design of an Antihypertensive Medication Management Application	1077
<i>Kenneth A. Blocker, Kathleen C. Insel, Jeannie K. Lee, Qiong Nie, Abidemi Ajuwon, Wendy A. Rogers</i>	
1248 - Is Neuroergonomic Monitoring Non-Intrusive? An Examination of Transcranial Doppler Sonography	1082
<i>Eric T. Greenlee, Tiffany G. Lui, Emily L. Maw</i>	
1249 - Socially Interactive Robots Can Teach Young Students Language Skills; a Systematic Review	1083
<i>Marika Hein, Dan Nathan-Roberts</i>	
1250 - Experience Alters Perceptions of Educational Technology Acceptance among Adolescents	1088
<i>Ellie Arndt, Douglas Peterson</i>	
1251 - Conceptualization and Measurement of Individual Situation Awareness (SA) in Expert Populations across Operational Domains: a systematic review of the literature with a practical purpose on our minds	1093
<i>Luís Meireles, Luís Alves, José Cruz</i>	
1252 - Attitudes Toward Risk and Effort Tradeoffs in Human-Robot Heterogeneous Team Operations	1098
<i>B. S. Perelman, A. W. Evans III, K. E. Schaefer, S. G. Hill</i>	
1253 - Stereotypical of Us to Stereotype Them: The Effect of System-Wide Trust on Heterogeneous Populations of Unmanned Autonomous Vehicles	1103
<i>Molly Kluck, Spencer C. Kohn, James C. Walliser, Ewart J. de Visser, Tyler H. Shaw</i>	
1254 - Trust Repair Strategies with Self-Driving Vehicles: An Exploratory Study	1108
<i>Spencer C. Kohn, Daniel Quinn, Richard Pak, Ewart J. de Visser, Tyler H. Shaw</i>	
1255 - Priority or Parity? Scanning Strategies and Detection Performance of Novice Operators in Urban Surveillance	1113
<i>Helen M. Hodgetts, Cindy Chamberland, Jean-Denis Latulippe-Thériault, François Vachon, Sébastien Tremblay</i>	
1256 - Developing Theory and Methods to Understand and Improve Collaboration in Open Source Software Development on GitHub	1118
<i>Olivia B. Newton, Stephen M. Fiore, Jihye Song</i>	
1257 - Acquiescence Bias in Aided Visual Search	1123
<i>Igor Dolgov, Jeremy D. Schwark</i>	
1258 - Effects of Social Cues on Social Signals in Human-Robot Interaction During a Hallway Navigation Task	1128
<i>Samantha F. Warta, Olivia B. Newton, Jihye Song, Andrew Best, Stephen M. Fiore</i>	
1259 - Central and Peripheral Cues to Difficulty in a Dynamic Task	1133
<i>Lisa Vangsness, Michael E. Young</i>	
1260 - Design to Improve Player On-Boarding and Decision-Making Processes in Video Games: A Systematic Review	1135
<i>Ian Endresen, Dan Nathan-Roberts</i>	

1261 - Effects of Automation Type on Human Performance in Proofreading Tasks	1140
<i>Heejin Jeong, Jangwoon Park, Jaehyun Park, Byung Cheol Lee</i>	
1262 - 2FA Might Be Secure, But It's Not Usable: A Summative Usability Assessment of Google's Two-factor Authentication (2FA) Methods	1141
<i>Claudia Ziegler Acenyan, Philip Kortum, Jeffrey Xiong, Dan S. Wallach</i>	
1263 - A Comparison of Near-Field Gesture, Touch, and Mouse Input	1146
<i>Dennis Harris, Trevor McIntyre, Keith Jones</i>	
1264 - The Effects Of Anxiety And Seductive Details On Cognitive Load And Learning	1151
<i>Ecem Olcum, Valerie K. Sims</i>	
1265 - Outcomes from a research experience for undergraduates (REU) program focused on behavioral research with real-world implications	1156
<i>Patricia R. DeLucia, Jeong-Hee Kim, Ngan Nguyen, Eugene W. Wang, James Yang</i>	
1266 - Real-Time Cognitive-State Neuroimaging in Applied Education	1157
<i>Jarnet Han Wazny, Dan Nathan-Roberts</i>	
1267 - The Effect of Interruptions on Novices Learning a Challenging Surgical Skill	1162
<i>Brandon A. Fluegel, Sarah A. Powers, Mark W. Scerbo</i>	
1268 - Problem Solving with Color: Color's Effect on Affect and Problem Solving with Subgoal Labels	1166
<i>Pilar Ramos-Nuñez, Laura Schaeffer, Richard Catrambone</i>	
1269 - Environmental Design, Personality, and Online Learning	1171
<i>Nancy J. Stone</i>	
1270 - Driverless Ambulances: A Possibility, but Will Patients Ride?	1176
<i>Scott R. Winter, Joseph R. Keebler, Stephen Rice, Rian Mehta, Bradley S. Baugh</i>	
1271 - Intelligent Bed Sheet Detects Respiratory Patterns	1177
<i>Laura Nicholson, Olivia Lin, Edward Shim</i>	
1272 - Integrating the SEEV Model with Performance Improvement Methods to Increase Hand Hygiene in the Operating Room	1182
<i>Zach Kaznica, Orysia Bezpalko, Grayson Privette, Kimberly Wilson, James Won</i>	
1273 - Design Considerations in Wearable Technology for Patients with Bipolar Disorder	1187
<i>Tiffany Tran, Dan Nathan-Roberts</i>	
1274 - The Impact of Distance Between Displays on Visual Scanning in the Laparoscopic Training Environment: The Role of Effort	1192
<i>Martina I. Klein, Patricia R. DeLucia, Brittany N. Neilson</i>	
1275 - Intelligent and Human-Centered Clinical Checklists: A Voice Interface for Virtualized Clinical Paths	1197
<i>Lorenzo Barberis, Nathan J. McNeese</i>	
1276 - Stable Teamwork Marriages in Healthcare: Applying Machine Learning to Surgeon-Nurse-Patient Matching	1202
<i>Lorenzo Barberis Canonico, Nathan J. McNeese, Marissa L. Shuffler</i>	
1277 - Oncology Related Patient Safety Events	1207
<i>Rachel M. Wynn, Allan Fong, Danielle L.M. Weldon, Raj M. Ratwani, Kristen Miller</i>	
1278 - Investigating the Efficacy of Using Hand Tremors for Early Detection of Hypoglycemic Events: A Scoping Literature Review	1211
<i>Karim Zahed, Farzan Sasangohar, Ranjana Mehta, Madhav Erraguntla, Mark Lawley, Khalid Qaraqe</i>	
1279 - Exploring the Effects of Extraversion on Social Facilitation and Vigilance Task Performance	1216
<i>Victoria L. Claypoole, Grace E. Waldfogle, Alexis R. Neigel, James L. Szalma</i>	
1280 - Pokémon Go as a Tool to Study the Social and Cognitive Factors that Impact Spatial Navigation	1221
<i>Dawn G. Blasko, Heather C. Lum, Mason McGuire, Tiffany Eichler, Kameron Landers, Kara Davis</i>	
1281 - Aspirations and Motivations for Facebook Use Through Sem Modeling	1226
<i>Nicolas Uszak, James Szalma</i>	
1282 - The MSSQ-S Had a Stronger Correlation to Actual Motion Sickness Symptoms than the MSHQ	1228
<i>Michael L. Wilson, Amelia J. Kinsela</i>	
1283 - Effects of Automation Reliability and Trust on System Monitoring Performance in Simulated Flight Tasks	1232
<i>James Ferraro, Logan Clark, Naomi Christy, Mustapha Mouloua</i>	
1284 - The Effects of Handedness and Dominance on Motor Task Performance	1237
<i>Salim A. Mouloua, Mustapha Mouloua, Daniel S. McConnell, P. A. Hancock</i>	
1285 - Toward Cyber Workforce Development: An Exploratory Survey of Information Security Professionals	1242
<i>David Schuster, Steven Wu</i>	

1286 - Elicitation by Critiquing: Applications to Computer Network Defense	1247
<i>Alexander Scott, Ian Cooke, Katarzyna Sliwinska, Novia Wong, David Schuster</i>	
1287 - Machine Learning as Grounded Theory: Human-Centered Interfaces for Social Network Research through Artificial Intelligence	1252
<i>Lorenzo Barberis Canonico, Nathan J. McNeese, Chris Duncan</i>	
1289 - Torso Segment Parameter Prediction in Working Adults	1257
<i>Zachary Merrill, Subashan Perera, Rakié Cham</i>	
1290 - Predicting Stress among Pedestrian Traffic Workers Using Physiological and Situational Measures	1262
<i>Alexandre Marois, Daniel Lafond, Jean-François Gagnon, François Vachon, Marie-Soleil Cloutier</i>	
1291 - Does the Vigilance Decrement Occur for Elementary Features?	1267
<i>Patricia R. DeLucia, Eric T. Greenlee, Joel S. Warm</i>	
1292 - Human Performance in Interpreting Robot-Generated 2d and 3d Maps	1272
<i>A. N. Fooks, J. M. Gregory, A. W. Evans III, D. G. Baran, B. S. Perelman</i>	
1293 - Dual-task Interference: Swimming and Verbal Free Recall	1277
<i>Andrew J. Stets, William S. Helton</i>	
1294 - The effects of natural scene statistics on text readability in additive displays	1281
<i>Daryn R. Blanc-Goldhammer, Kevin J. MacKenzie</i>	
1295 - The Effects of Color Vision Deficiencies on Medical Professionals and Proposed Countermeasures	1286
<i>Gregory Costedoat, Evan McHughes Palmer</i>	
1296 - Optimizing Waveform Descriptors and Pupillometry of the Pupillary Light Reflex Using Data Acquired from Video-Based Eye Trackers	1291
<i>Terence L. Tyson, Patrick F. Cravalho</i>	
1297 - Trends in HRC and their Effects on Human Operators' Sense of Presence in Manufacturing Settings	1296
<i>Himeka Hagiwara</i>	
1298 - A Preliminary Assessment of the Robustness of Signal Detection Theory Estimates Using Monte Carlo Simulations for Human Factors Professionals	1301
<i>Brittany Neilson, Dmitrii Paniukov, Martina I. Klein</i>	
1299 - Presenting objective visual performance feedback over multiple sets of resistance exercise improves motivation, competitiveness, and performance	1306
<i>Kyle M. Wilson, Neil R. de Joux, James R. Head, William S. Helton, Jasmine S. Dang, Jonathon J. S. Weakley</i>	
1300 - Visuomotor Coupling during Two-Handed Tasks: An Investigation of Bimanual and Intermanual Coordination	1311
<i>Michael J. Crites, Jamie C. Gorman</i>	
1301 - Improving the U.S. Adult Immunization Schedule by Applying Usability Principles	1316
<i>Dar-Wei Chen, Laura M. Schaeffer, Kimberly Preusse, Thomas M. Gable, Carolyn Hartzell, Sean McGlynn, Angela Yoo, Christina Gipson, David Kim</i>	
1302 - Thinking “Out-of-the-Box” with Board Games	1321
<i>Matthew B. Pierce, William J. Shelstad, Emily Rickel, Barbara S. Chaparro</i>	
1303 - Mobile Phone Fingerprinting: A Picture is Worth a Thousand Words	1326
<i>Susanne M. Furman, Mary Theofanos, John Libert, John Grantham, Brian Stanton</i>	
1304 - Ranking Importance of Exoskeleton Design Aspects	1331
<i>Thomas M. Schnieders, T. Richard</i>	
1305 - Personal Mobility Device and User Experience: A State-of-the-art Literature Review	1336
<i>Gee Won Shin, Kyung-Jun Lee, Donggun Park, Joong Hee Lee, Myung Hwan Yun</i>	
1306 - Ergonomic Analysis of Modern Day Kitchen Knives	1338
<i>Richard T. Stone, Olivia Janusz, Thomas Schnieders</i>	
1307 - The Effect of Aesthetic Principles and a Functional Prime on Participant Ratings of Visual Appeal	1343
<i>Travis M. Kent, C. Melody Carswell, Jamey Popham</i>	
1308 - Design of a Wearable Stress Monitoring Tool for Intensive Care Unit Nursing: Functional Information Requirements Analysis	1348
<i>Mahnoosh Sadeghi, Kunal Khanade, Farzan Sasangohar, Steven C. Sutherland</i>	
1309 - Perceived Effectiveness of Potential Music Piracy Warnings	1353
<i>Joanne R. Ullman, N. Clayton Silver</i>	
1310 - Influence of Natural Wear Progression on Shoe Floor Traction – A Pilot Study	1358
<i>Sarah. L. Hemler, Mark S. Redfern, Joel M. Haight, Kurt E. Beschoner</i>	
1311 - Vastus and Patellar Protection with Range of motion Pad – Advanced Personal Protective Equipment for the Lower Body	1363
<i>Richard T. Stone, Brandon Moeller, Thomas Schnieders, Ahmad Mumani</i>	

1312 - Warnings for Hurricane Irma: Trust of Warning Type and Perceptions of Self-Efficacy and Susceptibility	1368
<i>Jason A. Parker, Daphne E. Whitmer, Valerie K. Sims</i>	
1313 - A Usability and Safety Study of Bone-Conduction Headphones During Driving while Listening to Audiobooks	1373
<i>Jasmine Granados, Matthew Hopper, Jibo He</i>	
1314 - Which Factors Predict Consumer Willingness to Ride in Driverless Vehicles?	1378
<i>Emily C. Anania, Rian Mehta, Daniel Marte, Stephen Rice, Scott R. Winter</i>	

VOLUME 3

1315 - Survey and Modeling Approach to Predicting Driver Turnover in Long-Haul Trucking	1383
<i>Johnathan McKenzie, Karim Zahed, Jeffery Warner, Halit Uster, Thomas Ferris</i>	
1316 - Does Perceived Harm Underlie Effects of Vehicle Size on Overtaking Judgments during Driving?	1384
<i>Samuel J. Levulis, Patricia R. DeLucia, James Yang, Vivian Nelson</i>	
1317 - Ergonomic Evaluation of a Driverless Pod Design	1389
<i>Joscha Wasser, Cyriel Diels, Anthony Baxendale, Michael Tovey</i>	
1318 - Examining the Effect of Social Influence on Young Drivers' Behavior	1394
<i>Fangda Zhang, Shashank Mehrotra, Shannon C. Roberts</i>	
1319 - Understanding Attitudes Towards Self-Driving Vehicles: Quantitative Analysis of Qualitative Data	1399
<i>John D. Lee, Kristin Kolodge</i>	
1320 - Effects of Searching for Street Parking on Driver Behaviour and Physiology: Results From an On-Road Instrumented Vehicle Study	1404
<i>Canmanie Teresa Ponnambalam, Ryan Cheng, Birsen Donmez</i>	
1321 - Extraneous Factors in Usability Testing: Evidence of Decision Fatigue During Sequential Usability Judgments	1409
<i>Ian Robertson, Philip Kortum</i>	
1322 - Psychometric Evaluation of the USE (Usefulness, Satisfaction, and Ease of use) Questionnaire for Reliability and Validity	1414
<i>Meiyuzi Gao, Philip Kortum, Frederick Oswald</i>	
1323 - The Sensitivity and Role of Equipment Bulk on a Military Mission Oriented Obstacle Course	1419
<i>K. Blake Mitchell, Stephanie A.T. Brown, Jose Villa, Todd N. Garlie</i>	
1324 - Impact of Physical Fatigue State on Military Mission Oriented Obstacle Course Timing Performance	1424
<i>K. Blake Mitchell, Linda DeSimone, Stephanie A.T. Brown</i>	
1325 - Measuring Satisfaction With Standard Survey Instruments and Single-Button Responses on Kiosks	1429
<i>Laura R. Rabbitt, Jacob A. Hasselgren, Cynthia Cook, Yevgeniy B. Sirotnin</i>	
1326 - Training for Generalization: The Role of Integrated Skills and Knowledge in Technology Domains	1434
<i>Dorrit Billman, Richard Catrambone, Jolene Feldman, Zachary Caddick, Sky Eurich, Jonathan Leventhal, Rob Martin, Kasia Sliwinska</i>	
1327 - Developing Training Research to Improve Cyber Defense of Industrial Control Systems	1439
<i>Matthew Canham, Stephen M. Fiore, Bruce D. Caulkins</i>	
1328 - Stance and Transition Movement Effects on Marksmanship Performance of Expert Shooters During a Simulated Multiple Target Engagement Task	1444
<i>Stephanie A. T. Brown, Jose D. Villa, Clifford L. Hancock, Leif Hasselquist</i>	
1329 - Examining the Impact of Training and Feedback on Visualization-Supported Decision Making under Uncertainty	1449
<i>Jihye Song, Olivia B. Newton, Stephen M. Fiore, Jonathan Coad, Jared Clark, Corey Pittman, Joseph J. LaViola Jr.</i>	
1330 - The Impact of Scientific Management Principles on Food Hub	1454
<i>Richard T. Stone, Colten Fales, Dean Jose, Thomas Schweiger, Caroline Krejci, Zhonglun Wang, Drew Schweiger, Christopher Hernandez</i>	
1331 - The Paradox of Preference vs. Performance: Towards a Unified View of Simulation Experience	1459
<i>Katelynn A. Kapalo, Kevin P. Pfeil, Pamela Wisniewski, Joseph J. LaViola Jr.</i>	
1332 - "Sizing Up" Emerging Technology for Firefighting: Augmented Reality for Incident Assessment	1464
<i>Katelynn A. Kapalo, Patricia Bockelman, Joseph J. LaViola Jr.</i>	

1333 - Social Skill Focuses of Virtual Reality Systems for Individuals Diagnosed with Autism Spectrum Disorder; A Systematic Review	1469
<i>Elaine Thai, Dan Nathan-Roberts</i>	
1334 - How Immersion, Presence, Emotion, & Workload Differ in Virtual Reality and Traditional Game Mediums	1474
<i>Heather C. Lum, Richard Greatbatch, Grace Waldfogle, Jacob Benedict</i>	
1335 - Development of a Signal Detection-Based Task for Research on Distributed Human-Robot Teaming within Immersive Virtual Reality	1479
<i>Gabrielle Vasquez, Rhyse Bendell, Andrew Talone, Florian Jentsch</i>	
1336 - Evaluation and Benefits of Head-Mounted Display Systems for HRI Research	1484
<i>Rhyse Bendell, Gabrielle Vasquez, Andrew B. Talone, Florian Jentsch</i>	
1337 - Customizing Avatars and the Impact on One's In-Person Life and Communications	1489
<i>Valerie J.B. Rice, Paul J. Schroeder, Gary L. Boykin</i>	
1338 - Scoping Review of Virtual Environments for Assessing Episodic Memory	1494
<i>Paul A. Barclay, Jason Parker, Valerie Sims</i>	
1339 - Analysis of Eddy Current: What Can Be Done to Reduce the Number of False Positives and False Negatives Made by Human Operators in Nondestructive Testing?	1499
<i>Yasmin Arbab, Dan Nathan-Roberts</i>	
1340 - Effectiveness of Pictogram Instructions for Donning Smoke Hoods	1504
<i>Yousif Abulhassan, Dania Bani Hani, Gerard A. Davis</i>	
1341 - Perceptual Judgments of the Efficacy of Visibility AIDS (Extended Abstract)	1508
<i>Ellen C. Szubski, Drea K. Fekety, Darlene E. Edewaard, Richard A. Tyrrell</i>	
1342 - Effect of Vehicle Control Format on Driver Performance and Attention Allocation under Adaptive Cruise Control	1510
<i>Yulin Deng, David Kaber</i>	
1343 - Utility of Visual and Auditory Warning Alerting for Traffic Avoidance during UAS Operations	1515
<i>Kevin J. Monk, Lisa Fern, R. Conrad Rorie, Zachary Roberts</i>	
1344 - When visual search target is rare: overweighting or under weighting the probability?	1520
<i>Hanshu Zhang, Joseph W. Houpt</i>	
1345 - Timing and Physiological Arousal: Implications for Human Performance	1525
<i>Federico Scholcover, Stephen J. Cauffman, Douglas J. Gillan</i>	
1346 - Inattentional Insensitivity as a Predictor of On-Task Performance and Performance in a Subsequent Task	1530
<i>Andrew R. Dattel, Simona Teodorovic, Saralee Pruksaritanon, John Brooks, Andrey K. Babin, Ziyi Dong, Priyanka Shetty</i>	
1347 - In the Tactile Discrimination of Compliance, Perceptual Cues in Addition to Contact Area Are Required	1535
<i>Chang Xu, Yuxiang Wang, Steven C. Hauser, Gregory J. Gerling</i>	
1348 - Assessment Function Analysis of Human-Automation Team Performance: A reanalysis of data from Yamani and McCarley (2018)	1540
<i>Cara M. Zinn, Yusuke Yamani, Joseph W. Houpt, Sidney Scott-Sharoni</i>	
1349 - The Effects of Masking on the Detection of Alarms in Close Temporal Proximity	1545
<i>Yuzhi Wan, Nadine Sarter</i>	
1350 - Augmenting Fine Motor Skill Training with Haptic Error Amplification	1547
<i>Michael Clamann, David B. Kaber</i>	
1351 - The Effect of 5 Mechanical Gaming Keyboard Key Switch Profiles on Typing and Gaming Muscle Activity, Performance and Preferences	1552
<i>Charles Miller, Alan Barr, Raziel Riemer, Carisa Harris</i>	
1352 - Noticing Extroversion Effects Attention: How Robot and Participant Personality Affect Gaze Cueing	1557
<i>Ali Momen, Eva Wiese</i>	
1353 - Toward Strategic Training on Reading the Mind in the Eyes	1562
<i>Kaitlyn M. Ouverson, Jacklin Stonewall, Stephen B. Gilbert, Michael C. Dorneich</i>	
1354 - Creating Amazing Leaders	1567
<i>Haydee M. Cuevas, Kadie J. Mullins, Baron C. Summers, Gabriella M. Hancock</i>	
1355 - Women's Leadership in HF/E: Past, Present and Future	1572
<i>Gabriella M. Hancock, Kimberly Stowers, Ellen J. Bass, Nancy Cooke, Haydee M. Cuevas, Valerie Gawron, Nancy Larson</i>	
1356 - Mentors, Mentees, and Building a Board of Directors: The Big Questions in Personal and Career Development through Mentorship	1575
<i>Kadie Hayward Mullins, Haydee M. Cuevas</i>	

1357 - Detecting Pedestrian Situation Awareness in Real-Time: Algorithm Development Using Heart Rate Variability and Phone Position	1579
<i>Yourui Tong, Bochen Jia, Yi Wang, Si Yang</i>	
1358 - Effects of Cognitive Load and Anticipation on Driver Responses to a Critical Traffic Event	1584
<i>Johan Engström, Mikael Ljung Aust, Matias Viström</i>	
1359 - Learning to Use In-Vehicle Technologies: Consumer Preferences and Effects on Understanding	1589
<i>Hillary Abraham, Bryan Reimer, Bruce Mehler</i>	
1360 - Why women do not use the helmet when riding a bicycle	1594
<i>Pedro Valero-Mora, David Shinar, Ruben Ledesma, Narelle Haworth</i>	
1361 - Error Probabilities and Relationships in Assembly and Maintenance of Aircraft Engines	1599
<i>Brandon D. Richards</i>	
1362 - Assessing Procedure Adherence Under Training Conditions in High Risk Industrial Operations	1604
<i>Timothy J Neville, S. Camille Peres, Nilesh Ade, Changwon Son, Pranav Bagaria, Noor Quddus, M. Sam Mannan</i>	
1363 - Transitioning Nuclear Power Plant Main Control Room From Paper Based Procedures to Computer Based Procedures	1605
<i>Roger Lew, Ronald L. Boring, Thomas A. Ulrich</i>	
1364 - Effects of Time Pressure and Experience Level on Worker Perceived Workload: Implications for Procedural Designs in High-Risk Industrial Tasks	1610
<i>Ranjana Mehta, Sarah Thomas</i>	
1365 - The Impact of Hazard Statement Design Characteristics in Procedures on Compliance	1616
<i>Joseph Hendricks, S. Camille Peres, Timothy Neville</i>	
1366 - Combining Safety Climate and Behavior-Based Safety to Achieve Compliance: A Sociotechnical Systems Model	1619
<i>Jaqueline Pereira Da Silva</i>	
1367 - Characterizing the Required Friction during Ladder Climbing	1624
<i>Ellen Martin, Erika Pliner, Kurt Beschoner</i>	
1368 - Development of Industry-Specific Physical Job Evaluation Tool	1629
<i>Ninica Howard, Stephen Bao, Jia-Hua Lin</i>	
1369 - Sensibuildity: The Design of a Communication System to Identify and Prevent Work-Related Injuries in the Construction Industry	1631
<i>Mohammad Alsager Alzayed, Eduardo Castro e Costa, Pratik Agarwal, Sai Kakarlamudi, Sven G. Bilén, Scarlett Miller</i>	
1370 - Allocation of Blame After A Safety Incident	1636
<i>Michael J. Kalsher, William G. Obenauer</i>	
1371 - Characteristics that Influence Perceived Intelligence in AI Design	1637
<i>Samantha Krening, Karen M. Feigh</i>	
1372 - Development and Evaluation of a Computational Human Performance Model of In-vehicle Manual and Speech Interactions	1642
<i>Heejin Jeong, Yili Liu</i>	
1373 - Human-Agent Interactions: Does Accountability Matter in Interactive Control Automation?	1643
<i>Pouria Salehi, Erin K. Chiou, Adam Wilkins</i>	
1374 - Prioritizing Design Goals for a Medical Simulator Using Pairwise Comparisons	1648
<i>Steve Dorton, Ian Frommer, Margaret Bailey, Teresita Sotomayor</i>	
1375 - Decluttering Geographic Data View Displays	1653
<i>Esa M. Rantanen, Limor Hochberg, Mingyang Di, Diego Klabjan</i>	
1376 - Findings From an Operator-In-The-Loop Study on System Overview Displays in a Modernized Nuclear Power Plant	1658
<i>Ronald L. Boring, Thomas A. Ulrich, Roger Lew</i>	
1377 - The Effect of a Powered Lower-Body Exoskeleton on Physical and Cognitive Warfighter Performance	1663
<i>Blake Bequette, Adam Norton, Eric Jones, Leia Stirling</i>	
1378 - The Effect of the Degree of Static Automation in Simulated Submarine Track Management	1668
<i>Monica Tatasciore, Vanessa K. Bowden, Troy A.W. Visser, Stephanie Chen, Shayne Loft</i>	
1379 - A New Approach for a Real-Time Non-Invasive Fatigue Assessment System for Automated Driving	1669
<i>Anna Feldhütter, Alexander Feierle, Luis Kalb, Klaus Bengler</i>	
1380 - Qualitative or Quantitative Data for Nuclear Control Room Usability Studies? A Pragmatic Approach to Data Collection and Presentation	1674
<i>Thomas A. Ulrich, Ronald L. Boring, Roger Lew</i>	
1381 - Towards a Theoretical Model of Aggregate Fatigue in Nursing	1679
<i>James Flores, Farzan Sasangohar</i>	

1382 - Effects of Workload and Auditory Interruptions on Emergency Dispatching Performance	1684
<i>Dina A. Kanaan, Nadine M. Moacdieh</i>	
1384 - Informational Needs of Urinary Incontinent Patients on Online Peer Support Groups-A Pilot Study	1689
<i>Emma Scharett, Shraddhaa Narasimha, Kapil Chalil Madathil, Mackenzie Klein Wilson, Nicole Davis, Cheryl Dye</i>	
1383 - How Should I Choose My Dentist? A Preliminary Study Investigating the Effectiveness of Decision Aids on Healthcare Online Review Portals	1694
<i>Amro Khasawneh, Amal Ponathil, Necmettin Firat Ozkan, Kapil Chalil Madathil</i>	
1385 - An Investigation of the Usability Issues of a Family Health History Compiling Application	1699
<i>Amal Ponathil, Necmettin Firat Ozkan, Jeffrey Bertrand, Brandon Welch, Kapil Chalil Madathil</i>	
1386 - Stress Detection Techniques in Different Work Domains	1704
<i>Carolina Rodriguez-Paras, Kunal Khanade, Farzan Sasangohar</i>	
1387 - Assessing Dynamic Value for Safety Gear During a Rock Climbing Task	1707
<i>Emily Wright, Elizabeth C. Pinyan, Christopher D. Wickens, John Keller, Anne C. McLaughlin</i>	
1388 - A Recognition Primed Decision Model for Public Consumption of Government Data	1712
<i>Drew A. Zachary</i>	
1389 - Quantifying the Effects of Multi-Tasking on Processing Efficiency	1717
<i>Elizabeth L. Fox, Joseph W. Houpt</i>	
1390 - Investigating Architectural and Space Design Considerations for Post-Traumatic Stress Disorder (PTSD) Patients	1722
<i>Kunal Khanade, Carolina Rodriguez-Paras, Farzan Sasangohar, Sarah Lawley</i>	
1391 - Heart Rate Assessment for Posttraumatic Stress Disorder Symptoms among Military Veterans: A Narrative Literature Review	1727
<i>Kunal Khanade, Farzan Sasangohar</i>	
1392 - A Semi-Naturalistic Grocery List Recall Task as a Working Memory Distractor	1729
<i>Jennifer F. Louie, Mustapha Mouloua</i>	
1393 - Optimizing Cognitive Performance during Vigilance through Flow Enhancement	1734
<i>Maartje Hidalgo, Jessica Cruit, Valarie A. Yerdon, P.A. Hancock</i>	
1394 - Developing Video or Multimedia Instructions for Older Adults	1739
<i>Makenzie Pryor, Anne Collins McLaughlin</i>	
1207 - Affordance Perception by Users of Assistive Walking Devices	1744
<i>Kathryn M. Lucaites, Christopher C. Pagano</i>	
1395 - Effects of Simulated Masonry Work on Physical and Cognitive Performance: A Pilot Study	1749
<i>Qian Zhang, Vivekanandhan Thangavelu, Rocco Corbisiero, Ignacio Galiana Ruiz de Adana, Nils Napp, Lora Cavuoto</i>	
1396 - Bayesian Network for Assessing Performance in Complex Navigation - A Conceptual Model	1751
<i>Ernstsen, Musharraf, Mallam, Nazir, Veitch</i>	
1397 - Trust Strategies in Consumer Multiple-Component Systems	1756
<i>Jeremy Lopez, Richard Pak</i>	
1398 - Trust in Branded Autonomous Vehicles & Performance Expectations: A Theoretical Framework	1761
<i>Natalie Celmer, Russell Branaghan, Erin Chiou</i>	
1399 - Relatedness in gaming: How in-game touch influences player connection	1766
<i>Victoria Lew, Joshua Smith, Nicholas Reuss, Xiyu Zhang, Jacob Gulliuzo, Christina Frederick</i>	
1400 - Revisiting Trust in Machines: Examining Human-Machine Trust Using a Reprogrammed Pasteurizer Task	1767
<i>Jieun Lee, Yusuke Yamani, Makoto Itoh</i>	
1401 - Challenges Contributing to the General Aviation Weather Problem & Decision Support Systems Technology Recommendations	1771
<i>Jayde King, Yolanda Ortiz, Beth Blickensderfer, Emalee Christy</i>	
1402 - A Qualitative Study Investigating the Sensemaking Process of Engineers Performing Windstorm Risk Surveys	1776
<i>Sruthy Agnisarman, Amro Khasawneh, Amal Ponathil, Snowil Lopes, Kapil Chalil Madathil</i>	
1403 - Time Flies: Investigating Duration Judgments in Virtual Reality	1777
<i>William G. Volante, Jessica Cruit, James Tice, William Shugars, Peter A. Hancock</i>	
1404 - Investigating Age-Related Differences in Spatial Presence in Virtual Reality	1782
<i>Sean A. McGlynn, Ranjani M. Sundaresan, Wendy A. Rogers</i>	
1405 - Learning configural spatial knowledge from navigating in unstructured and unfamiliar virtual environments	1787
<i>Robert B. May, Herbert A. Colle</i>	

1406 - How to Improve General Aviation Weather Training: Challenges and Recommendations for Designing Computer-Based Simulation Weather Training Scenarios	1792
<i>Quirijn Berendschot, Yolanda Ortiz, Beth Blickensderfer, Richard Simonson, Nicholas DeFilippis</i>	
1407 - A Preliminary Study to Investigate the Sensemaking Process of UAV Reports by Operators after Periods of Disconnect for Threat Assessment	1796
<i>Hunter Rogers, Maher Al Ghalayini, Kapil Chalil Madathil</i>	
1408 - Modeling Team Cognition in Emergency Response via Naturalistic Observation of Team Interactions	1801
<i>Jukrin Moon, Farzan Sasangohar, S. Camille Peres, Timothy J. Neville, Changwon Son</i>	
1409 - Graphical Instructions for Procedures Involving Material Flow	1803
<i>Zachary H. Pugh, Douglas J. Gillan</i>	
1410 - A Mobile Application for Collecting Task Time Data for Value Stream Mapping of the Final 50 Feet of Urban Goods Delivery Processes	1808
<i>Haena Kim, Ling Ng Boyle, Anne Goodchild</i>	
1411 - Bayesian Model of Operator Challenges in Maritime Pilotage	1813
<i>Ernstsen, Musharraf, Nazir</i>	
1412 - The National Academies Board on Human System Integration Panel: Integrating Social and Behavioral Sciences Within the Weather Enterprise.....	1818
<i>Toby Warden, Ellen J. Bass, Michael J. Kalsher, Chen Ling, Marita O'Brien</i>	
1413 - Characterizing Driver Trust in Vehicle Control Algorithm Parameters.....	1821
<i>Joshua Domeyer, Vindhya Venkatraman, Morgan Price, John D Lee</i>	
1414 - Comparison of Visual Sampling Patterns Under Simulated L2 and L0 Systems.....	1826
<i>Nathan Hatfield, Yusuke Yamani, Dakota B. Palmer, Nicole D. Karpinsky, William J. Horrey, Siby Samuel</i>	
1415 - Effects of Warning Characteristics on Driver Performance in Connected Vehicle Systems with Missing Warnings	1827
<i>Yiqi Zhang, Changxu Wu, Chunming Qiao, Yunfei Hou</i>	
1416 - Peripheral Monitoring of Traffic in Conditionally Automated Driving	1828
<i>Jonas Radlmayr, Karin Brüch, Kathrin Schmidt, Christine Solbeck, Tristan Wehner</i>	
1417 - Does automated driving affect time-to-collision judgments?	1833
<i>Natalie R. Lodinger, Patricia R. DeLucia</i>	
1418 - Development and Usability Testing of a Novel Parking Assist System that Aids Other Drivers While Parking	1834
<i>Lauren Mims, Johnell Brooks, Mitch Beckman, Breno Schwambach, Robert Knizek, Dheemanth Uppalapati, Casey Jenkins, Paul Venhovens, Ken Melnick, Jochen Karg, Julian Weber, Joerg Schulte</i>	
1419 - Ground Vehicle Driving Aids: Assessing Driver Workload and Performance in Degraded Visual Environments	1838
<i>Kayla L. Riegner, Jennifer Ammori, Brian E. O'Hearn, Kelly S. Steelman</i>	
1420 - Evaluation of a Motion Seat System for Reduction of a Driver's Passive Task-Related (TR) Fatigue.....	1843
<i>Seunghoon Lee, Minjae Kim, Sunwoo Choi, Heecheon You</i>	
1421 - Comparisons of Whole Body Vibration, Muscle Activity and Non-driving Task Performance between Different Seat Suspensions in an Autonomous Passenger Car Application.....	1848
<i>Kiana Kia, Peter W Johnson, Jeong Ho Kim</i>	
1422 - Understanding Why Railroad Yard Crews Run Through Misaligned Switches Through the Lens of Sociotechnical Systems.....	1853
<i>Emilie M. Roth, Jordan Multer, Megan France, Hadar Safar, Rachel Grice</i>	
1423 - Understanding Drivers' Steering Behavior: Chain And One-Time Corrections	1858
<i>Azadeh DinparastDjadid, John D. Lee, Chris Schwarz, Timothy L. Brown, Pujitha Gunaratne</i>	
1424 - Looking at Mind Wandering During Driving Through the Windows of PCA and t-SNE	1863
<i>Areen Alsaid, John D. Lee, Daniel M. Roberts, Daniela Barrigan, Carryl L. Baldwin</i>	
1425 - Influence of Taillight Brightness on the Ability to Recognize Closing Speed, Closing Distance, and Closing vs. Separating.....	1868
<i>Swaroop Dinakar, Jeffrey W. Muttart, Teena Garrison, Suntasy Gernhard, Jim Marr</i>	
1426 - Use Cases for Assessing, Testing, and Validating the Human Machine Interface of Automated Driving Systems	1873
<i>Frederik Naujoks, Sebastian Hergeth, Katharina Wiedemann, Nadja Schömig, Andreas Keinath</i>	
1427 - 80 MPH and out-of-the-loop: Effects of real-world semi-automated driving on driver workload and arousal.....	1878
<i>Francesco N. Biondi, Monika Lohani, Rachel Hopman, Sydney Mills, Joel M. Cooper, David L. Strayer</i>	
1428 - The Sooner the Better: Drivers' Reactions to Two-Step Take-Over Requests in Highly Automated Driving	1883
<i>Sandra Epple, Fabienne Roche, Stefan Brandenburg</i>	

1429 - Consumer perceptions, understanding, and expectations of Advanced Driver Assistance Systems (ADAS) and vehicle automation	1888
<i>Christian Hoyos, Benjamin D. Lester, Caroline Crump, David M. Cades, Douglas Young</i>	
1430 - Drivers' Perceptions of Functionality Implied by Terms Used to Describe Automation in Vehicles	1893
<i>Michael A. Nees</i>	
1431 - Impact of Cognitive Distractions on Drivers' Anticipation Behavior in Vehicle-bicycle Conflict Situations	1898
<i>Yalda Ebadi, Ganesh Pai Mangalore, Siby Samuel</i>	
1432 - Effect of Driver Age and Distance Guide Sign Format on Driver Attention Allocation and Performance	1903
<i>Maryam Zahabi, Patricia Machado, Mei Lau, Yulin Deng, Carl Pankok, Joseph Hummer, William Rasdorf, David Kaber</i>	
1433 - Texting While Walking Induces Gait Pattern Alterations in Healthy Older Adults	1908
<i>Massimiliano Pau, Micaela Porta, Giuseppina Pilloni, Federica Corona, Maria Chiara Fastame, Paul Kenneth Hitchcott, Maria Pietronilla Penna</i>	
1434 - Calibration in Older and Middle-aged Drivers: Relationship between Subjective and Objective Glance Performance at Complex Intersections	1913
<i>James Unverricht, Yusuke Yamani, William J. Horrey</i>	
1435 - The Influence of Sign Variations on Drivers' Comprehension	1918
<i>Tamar Ben-Bassat, David Shinar</i>	
1436 - Quantifying Distraction Potential of Augmented Reality Head-Up Displays for Vehicle Drivers	1923
<i>Hyungil Kim, Joseph L. Gabbard</i>	
1437 - Driver Responses to Augmented Reality Warnings and Alternatives at Urban Signalized Intersections	1924
<i>Ke Liu, Paul Green</i>	
1438 - The Relationship Between Rhythm Variation and Distance Perception in Auditory In-Vehicle Interfaces	1929
<i>Manuela Quaresma, Isabela Motta, Manuella Araújo, Rafael Cirino Gonçalves</i>	
1439 - Effect of Response Method on Driver Responses to Auditory Warnings in Simulated Semi-autonomous Driving	1934
<i>Scott Mishler, Jing Chen</i>	
1440 - Examining Speech-Based Auditory Alerts for Intersection Collision Warning Systems using a Driving Simulator	1939
<i>West M. O'Brien, Xingwei Wu, Linda Ng Boyle</i>	
1441 - Analysis of Gaze Behavior to Measure Cognitive Distraction in Real-World Driving	1944
<i>Shiyan Yang, Jonny Kuo, Michael G. Lenné</i>	
1442 - Evaluation and Validation of Distraction Detection Algorithms on Multiple Data Sources	1949
<i>Shashank Kumar Mehrotra, Fangda Zhang, Shannon C. Roberts</i>	
1443 - Glances That Matter: Applying Quantile Regression to Assess Driver Distraction from Off-Road Glances	1954
<i>Shu-Yuan Liu, John D. Lee, Ja Young Lee, Vindhya Venkatraman</i>	
1444 - The Effects of Distraction on Anticipatory Driving	1960
<i>Dengbo He, Birsen Donmez</i>	
1445 - Short and Long-term Transfer of Training in a Tablet-based Teen Driver Hazard Perception Training Program	1965
<i>Nima Ahmadi, Aftefeh Katrahmani, Matthew R. Romoser</i>	
1446 - The Effect of Cognitive-Based Training on Young Drivers' Speed Management Behavior: An On-Road Study	1970
<i>Oleksandra Molloy, Brett Molesworth, Ann Williamson</i>	
1447 - Can Stroboscopic Training Improve Time-to-Collision Judgments of Laterally Moving Objects?	1975
<i>Adam M. Braly, Patricia R. DeLucia</i>	
1448 - Feedback Design Considerations for Intelligent Team Tutoring Systems	1977
<i>Jamiahus Walton, Alec Ostrander, Kaitlyn Ouwerson, Stephen B. Gilbert, Michael Dorneich, Eliot Winer, Anne Sinatra</i>	
1449 - Use of Mouse-tracking Method to Measure Cognitive Load	1982
<i>Hansol Rheem, Vipin Verma, D. Vaughn Becker</i>	
1450 - Effects of Image Segmentation and Target Number on Visual Search: An Eye-Tracking Study	1987
<i>Kaifeng Liu, Calvin Ka-lun Or</i>	
1451 - Lextant Usability Impact Score: A New, Objective Approach to Indexing Usability Issues	1992
<i>Gina Torelli, Alexandria Rossi Alvarez, Shasank Nagavarapu, Arisa Pruttianan, Richard del Rio, Bobby Nguyen</i>	

1452 - Investigating Attorney Trust in Machine-enabled Legal Research: A Mixed Methods Approach	1997
<i>Katherine M Lowry, Elaine Kamp, Corey K Fallon, Riley McGhee</i>	
1453 - Evaluation of Graphical Weather Product Interpretation: Implications for Overlaying Weather Product Design	2003
<i>Nicholas DeFilippis, Jayde King, Thomas Guinn, Yolanda Ortiz, Quirijn Berendschot, Amber Cole, Beth Blickensderfer</i>	
1454 - Exploring the Potential of Full Body and Hand Gesture Teleoperation of Robots Inside Heterogeneous Human-Robot Teams	2008
<i>Seng Lee Koh, Kevin Pfeil, Joseph J. LaViola Jr.</i>	
1455 - Biomechanical Testing of an Upper-Extremity Occupational Exoskeleton - Preliminary Report on Methodologies and Pilot Data	2013
<i>Simon Kudernatsch, Donald R. Peterson</i>	
1456 - Development of a Measure of Physical Discomfort for Combat Helmets Worn by Dismounted Soldiers	2018
<i>Sheena E. Davis, Steve F. Milanese, Alistair Furnell, Karen A. Grimmer</i>	
1457 - Get Comfortable Being Uncomfortable: Variability in the Assessment of Perceived Comfort During Clothing and Individual Equipment Evaluations	2023
<i>Stephanie A. T. Brown, Linda DeSimone, Todd N. Garlie, K. Blake Mitchell</i>	
1458 - Dismounted Utility Considerations for Designing Human Factors and Ergonomics Evaluations of Soldier Clothing and Equipment	2028
<i>Sheena E. Davis, Steve F. Milanese, Alistair Furnell, Karen A. Grimmer</i>	
1459 - Artificial Swarm Intelligence Technology Enables Better Subjective Rating Judgment in Pilots Compared to Traditional Data Collection Methods	2033
<i>Kendra Befort, David Baltaxe, Camila Proffitt, David Durbin</i>	
1460 - Using the SUS: Lessons Learned & Forward Looking Research	2037
<i>Rebecca A. Grier, Katie Allanson, Aaron Bangor, Philip Kortum, Claudia Ziegler Acemyan, Frederick L. Oswald</i>	
1461 - Discussion Panel: Motion Sickness in Virtual Environments	2043
<i>Eric Muth, Behrang Keshavarz, L. James Smart Jr., Richard So, Sarah Beadle</i>	
1462 - Human Factors and Video Game Research: A Discussion Panel	2047
<i>Cyrus K. Foroughi, Mike Ambinder, Adam Armijo, James Kozachuk, Hyun Woo</i>	
1463 - Me and My VE, Part 5: Applications in Human Factors Research and Practice	2051
<i>Randall Spain, Benjamin Goldberg, Jeffrey Hansberger, Tami Griffith, Jeremy Flynn, Christopher Garneau, Paul Shorter, Anne Sinatra, Phillip Key, Tor Finseth</i>	
1464 - The Reality of Virtual Reality: A Comparison of Pedestrian Behavior in Real and Virtual Environments	2056
<i>Rajaram Bhagavathula, Brian Williams, Justin Owens, Ronald Gibbons</i>	
1465 - Pedestrians receptivity in autonomous vehicles: Exploring a video-based assessment	2061
<i>Shuchisnigdha Deb, Christopher R. Hudson, Daniel W. Carruth, Darren Frey</i>	
1466 - Stress Inducing Demands in Virtual Environments	2066
<i>Tor Finseth, Neil Barnett, Elizabeth A. Shirtcliff, Michael C. Dorneich, Nir Keren</i>	
1467 - Exploring Stress Resilient Feedback Modalities: Investigation of Physiological and Perceptual Load	2071
<i>Whitney P. Mantooth, Rohith Karthikeyan, Seok Chang Ryu, Ranjana K. Mehta</i>	
1468 - Exploring Higher Agency Roles for Learning with Educational Technology and Multimedia	2074
<i>Rod D. Roscoe, Kyrsten Novak, Amanda King, Melissa M. Patchan</i>	
1469 - Effect of levels of immersion on performance and presence in virtual occupational tasks	2079
<i>Tyler Rose, CS Nam, Karen B. Chen*</i>	
1470 - WeRSort: Preliminary Results from a New Method of Remote Collaboration Facilitated by Fully Immersive Virtual Reality	2084
<i>Shraddha Narasimha, Emma Scharett, Kapil Chalil Madathil, Jeffrey Bertrand</i>	
1471 - Automated Writing Instruction and Feedback: Instructional Mode, Attitudes, and Revising	2089
<i>Rod D. Roscoe, Laura K. Allen, Adam C. Johnson, Danielle S. McNamara</i>	
1472 - Network Anomaly Analysis using the Microsoft HoloLens	2094
<i>Steve Beitzel, Josiah Dykstra, Paul Toliver, Jason Youzwak</i>	
1473 - Recategorization of Video Game Genres	2099
<i>Shawn M. Doherty, Joseph R. Keebler, Shayn S. Davidson, Evan M. Palmer, Christina M. Frederick</i>	
1474 - Effects of Prolonged Use of Mixed Reality Systems in Occupational Settings Discussion Panel	2104
<i>Gregory A. Garrett, Christopher R. Reid, Michael Jenkins, Thomas Talbot, Shawn Doherty</i>	
Author Index	