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Frank A. Drews

Curriculum Vitae

University of Utah
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Education

- 1999 Ph.D. (Dr. phil.). Cognitive Psychology Program, Technical University of Berlin, Germany. Advisor: H. Jungermann.
- 1993 Diploma (M.S.) in Psychology (Diplom-Psychologe, „sehr gut“ [summa cum laude]), Technical University of Berlin, Germany.
- 1990 Vordiploma (B.S.) in Psychology and Philosophy („sehr gut“ [summa cum laude]), Technical University of Berlin, Germany.

Positions

- 2014 - present Professor Cognitive Psychology, University of Utah.
Adjunct Professor, Department of Anesthesiology, University of Utah.
Adjunct Professor, Educational Psychology, University of Utah
Adjunct Associate Professor, Department of Biomedical Informatics, University of Utah
Adjunct Professor, Department of Internal Medicine, University of Utah
Adjunct Professor, Department of Mining Engineering, University of Utah (since 2018)
- 2014 – 2017 Adjunct Associate Professor, Department of Anesthesiology, University of Utah.
Adjunct Associate Professor, Department of Biomedical Informatics, University of Utah

- 2005 - 2017 Director of the Human Factors Certificate Program at the Department of Psychology, University of Utah
- 2009 – 2015 Director of the VA Center for Human Factors in Patient Safety
- 2008 – 2014 Associate Professor Cognitive Psychology, University of Utah.
Adjunct Assistant Professor, Department of Anesthesiology, University of Utah.
Adjunct Associate Professor, Educational Psychology, University of Utah
Adjunct Assistant Professor, Department of Biomedical Informatics, University of Utah
Adjunct Assistant Professor, Department of Internal Medicine, University of Utah
Director of the Human Factors Certificate Program at the Department of Psychology, University of Utah
- 2008 – present Research Health Science Specialist, VA Salt Lake City.
- 2002 -2008 Assistant Professor Cognitive Psychology, University of Utah
Adjunct Assistant Professor, Department of Anesthesiology, University of Utah.
Adjunct Assistant Professor, Educational Psychology, University of Utah
Adjunct Assistant Professor, Department of Biomedical Informatics, University of Utah
Founding Director of the Human Factors Certificate Program at the Department of Psychology, University of Utah
- 2000 – 2002 Post-doctoral: Perception and Performance Laboratory, University of Utah
Interdisciplinary Research Project: Visualization in Anesthesiology, University of Utah.
- 1995 – 2000 Lecturer. Cognitive Psychology Program, Technical University of Berlin, Germany.
- 1995 – 1999 Pre-doctoral Research Fellow. Cognitive Psychology Program, Technical University of Berlin, Germany.
- 1993 – 1995 Research Fellow. University of Rostock, Germany. Assisted in data collection and analysis for a large longitudinal study of high-risk and low-risk infants (based on birth-related complications).
- 1994 - 1995 Lecturer. Department of Educational Sciences, Technical University of Berlin, Germany
- 1993 - 1994 Lecturer. College for Speech Therapy, Berlin, Germany.

Stipends and Fellowships

- 1993 Research Fellowship. A two-year full fellowship of the German Research Council (DFG) for graduate study in Cognitive Psychology at the University of Saarbrücken, Germany (declined to accept another position).
- 1991 - 1993. Master's fellowship. A three-year full fellowship from the German Ministry of Science and Technology (BMFT) supporting master's level research.
- 1990 Friedrich-Ebert Stiftung, Stipend. A three-year full fellowship from a government foundation supporting masters research (declined early to accept another fellowship).
- 1988 3-month undergraduate research internship stipend. Max Planck Society, Max Planck Institute for Psycholinguistics, Nijmegen, Netherlands.

Awards and Honors

- 2019 Nomination for the APA Div 21 Franklin V. Taylor Award for Outstanding Contributions in the Field of Applied Experimental / Engineering Psychology.
- 2018 Best paper award (1st Place) at the American Medical Informatics Society (AMIA) annual meeting (Co-author)
- 2018 SHEA Top Poster Abstract Award, SHEA annual conference, Portland, OR.
- 2017 First Prize for Research Day Poster at the University of Utah in collaboration with Tessa Sommer.
- 2016 Beacons of Excellence Award, University of Utah.
- 2016 First Prize for Research Day Poster at the University of Utah in collaboration with Kelly Funkhouser.
- 2016 Third Prize for Research Day Poster at the University of Utah in collaboration with Tessa Sommer.
- 2014 Best Paper of the Year Award: Ergonomics in Design.
- 2014 Presidential Citation American Psychological Association, Division 21 for outstanding service.

- 2014 Nomination for the College of Social and Behavioral Science Superior Senior Research Award.
- 2013 Poster award (3rd Place) at the American Medical Informatics Society (AMIA) annual meeting
- 2013 Elected Fellow to American Psychological Association, Div 21.
- 2013 Third Prize for Research Day Poster at the University of Utah in collaboration with Tristan McIntosh.
- 2012 Distinguished Paper Award of the American Medical Informatics Association in collaboration with Charlene Weir et al.
- 2012 First Prize for Research Day Poster at the University of Utah in collaboration with David Gerritsen.
- 2011 Stanley Caplan User Centered Product Design Award. Human Factors and Ergonomics Society. Honorable Mention.
- 2011 First Prize for Research Day Poster at the University of Utah in collaboration with David Gerritsen.
- 2010 Visiting Professor, Department of Anesthesiology, Vanderbilt University.
- 2009 Earl A. Alluisi Award for Early Career Achievement, American Psychological Association, Division 21.
- 2008 College of Social and Behavioral Science Superior Research Award.
- 2008 First Prize for poster presentation Public Health Informatics Cohort Training Program.
- 2008 Visiting Professor at Chulalongkorn University, Bangkok, Thailand.
- 2007 Finalist for the College of Social and Behavioral Science Superior Research Award.
- 2007 Visiting Professor at Chulalongkorn University, Bangkok, Thailand.
- 2006 Outstanding Psychology Professor Award for the 2005-2006 school year. Awarded by Psi Chi at the University of Utah.
- 2006 Finalist for the College of Social and Behavioral Science Superior Research Award.

- 2006 Nomination for the University of Utah Early Career Teaching Award.
- 2005 *Discover Magazine's* 100 Top Science Stories of 2005.
- 2005 Nomination for the University of Utah Early Career Teaching Award.
- 2005 Second Place award for the best educational approach at the International Meeting on Medical Simulation, Miami, FL.
- 2003 *Discover Magazine's* 100 Top Science Stories of 2003.
- 2003 First Place award for the best research at the annual meeting of the Society for Technology in Anesthesia. San Diego, CA.
- 2001 First Place award for the best new technology at the annual meeting of the American Society of Anesthesiologists. New Orleans, LA.
- 2001 Society for Technology in Anesthesia Award for Technology Innovation.
- 1999 Jane Beatty Memorial Award. American Society for Judgment and Decision Making.

Grants (funded)

- 2019 CDC NIOSH. 2019-Q-69532. Machine learning models that blend subjective and objective data to improve understanding and management of operator fatigue. \$ 340,881. CO-PI 2018-2020.
- 2018 HFmedic. Human Factors in medical devices consortium. Abbvie. \$150,000 (2019-2021). PI. This grant focuses on the development and assessment of new techniques to measure usability of medical devices. This grant provided by Abbvie is part of a larger effort to develop a consortium on Human Factors in Medical Devices (see www.HFMedic.org). This consortium is modeled after the NSF IUCRC model and will bring industry partners and academic institutions together to perform cutting edge, Human Factors medical device research. We are currently in the process of recruiting additional industry members for this consortium. A grant submitted to NSF in 2018 was reviewed, and received a recommendation to pursue this work. I serve as the director of the HFmedic Consortium.
- 2018 Rio Tinto Kennecott. Fatigue in haulage drivers. \$85,000. (2018-2019) PI. As part of this grant we are assessing current technology and management strategies related to haulage truck operator fatigue in mining operations. This work uses focus groups and surveys to assess fatigue management practices of operators. A second phase of this project (proposal is under development) will focus on new technologies to provide real-time / modeled feedback of fatigue levels to operators, and evaluate this technology in the field.
- 2017 Peloton Inc. Assessing Human Performance during Platooning. \$220,000. (2017-2019). PI. This work focuses on the assessment of the impact of long-time platooning on truck driver fitness to operate large vehicles. In this two-phase study, the initial work focused on truck driver performance during platooning in a high fidelity simulator, where the second phase of this work assesses performance of operators in an on-road study.
- 2015 Strategies to Prevent Infection and Reduce Inter-individual Transmission” (SPIRIT). \$820,000. Center for Disease Control (2015-2018). Co-PI.
- 2014 VA Office of Information Technology. Design of Icons for use in health care. \$95,000. VA Salt Lake City Health Care System, Salt Lake City, UT. (2014-2015). PI.
- 2014 NASA. Assessing Performance in Nonlinear Management Systems. NNX11AR71A. \$243,000 (2014-2015). Co-PI.
- 2014 VA Office of Information Technology. Form factor evaluation. \$115,000. VA Salt Lake City Health Care System, Salt Lake City, UT. (2014-2015). PI.
- 2013 VA National Patient Safety Center. VA Center for Human Factors in Patient Safety.

- \$355,000; VA Salt Lake City Health Care System, Salt Lake City, UT. (2014-2015). PI.
- 2012 VA National Patient Safety Center. VA Center for Human Factors in Patient Safety. \$659,000; VA Salt Lake City Health Care System, Salt Lake City, UT. (2012-2014) PI.
- 2012 Masimo Corporation, California. Evaluation of the usability of a medical device. \$15,500. (2012-2013). PI.
- 2012 Centers for Medicare and Medicaid Innovation \$540,000. (2012-2014) Sub-PI.
- 2011 University of Utah Medical Group. Quality Improvement for Central Line Maintenance: Redesigning Equipment to Increase Adherence to Best Practices. \$18,382. (2011-2012) Co-PI.
- 2011 VA National Patient Safety Center. VA Center for Human Factors in Patient Safety. \$375,000; VA Salt Lake City Health Care System, Salt Lake City, UT. (2011-2012). PI.
- 2011 NSF. Trigger points in wildfire decision making. \$449,000.00 (2011-2013). Co-PI.
- 2010 VA Engineering Resource Center Omaha. Development of a Human Factors Short Course for Health Care Providers. \$99,250. (2010-2011). PI
- 2010 Masimo Corporation, California. Evaluation of the usability of a medical device. \$21,500. (2010-2011). PI.
- 2009 VA National Patient Safety Center. VA Center for Human Factors in Patient Safety. \$725,000; VA Salt Lake City Health Care System, Salt Lake City, UT. (2009-2011) PI.
- 2009 National Patient Safety Foundation. Identifying the Cognitive Dimensions of 'Failure to Rescue. \$100,000 (2009-2011). Co-PI.
- 2007 AHRQ VA Integrated Medication Manager. \$594,582; VA Salt Lake City Health Care System, Salt Lake City, Utah. Co-Investigator (2007-2009).
- 2007 VA HSR&D Implementation of real-time ADE surveillance and decision support. \$540,000; VA Salt Lake City Health Care System, Salt Lake City, Utah. Co-Investigator. (2007-2010).
- 2007 National Science Foundation: Decision making in wildfire protective-action recommendations. \$295,000.00 (2007-2010). Co-PI.
- 2006 Center for Disease Control. Decision Support for Infectious Disease Epidemiology

- (DSIDE). (\$4,495,892.00, 2006-2009). Co-Investigator. PI: Matthew Samore.
- 2006 University of Utah Funding Incentive Seed Grant (\$25,000, 2006-2007). PI
- 2005 Datascope Inc. Development of a graphical display for the ICU (\$78,000.00, 2005-2008). PI.
- 2003 National Aeronautics and Space Agency (NASA). Graphic displays to facilitate rapid discovery, diagnosis and treatment of medical emergencies (Phase 2). 2003-2005 (\$500,000.00). PI
- 2003 Intelligence Community Advanced Research and Development Agency (IC-ARDA). Intuitive visual representation of network events to improve decision making. 2003-2004, (\$799.889). CO-PI. PI: Stefano Foresti
- 2003 Teaching Grant University of Utah. (\$1200.00).
- 2002 Utah Department of Transportation (UDOT). Development of a training program for winter maintenance crews. (\$195.000.00). CO-PI. PI: David Strayer.
- 2002 Federal Aviation Administration (FAA). Alcohol, Divider Attention, Performance, and Gene Expression (\$30,633). CO-PI. PI: David Strayer.
- 2001 National Aeronautics and Space Agency (NASA). Graphic displays to facilitate rapid discovery, diagnosis and treatment of medical emergencies (Phase 1). (\$100,000.00). PI.
- 1993 German Ministry of Science and Technology (BMFT). Rostock Longitudinal Study (German Marks 800,000.00). Assisted in writing the following grant: Drafted methods and analysis portions of the grant proposal. Portions of grant funded my post diploma (M.S.) work. PI: B. Meyer-Probst
- 1990 German Ministry of Science and Technology (BMFT). Visualization of Spoken Language (German Marks 1,200,000.00) Drafted sections concerning theories of memory and the deaf. Portions of grant funded my diploma thesis (M.S.) PI: K. Eyferth.

Grant proposal (in preparation)

- 2019 CDC NIOSH. Capacity Building and Mining Systems Design Research for the Mining Industry, Solicitation Number: 75D301-19-R-67888, Use of surveillance technology for hazard detection in semi-autonomous mining operations. Co-PI.

Grant proposal (under review)

2019 VA COIN. Promote safe and effective use of health information technology (HIT) to improve the safety and quality of care for Veterans. \$175,000. Co-I, 2019-2024

Selected Grant Activities (not funded)

2018 NSF. Holistic engineering. \$352,000. Co-PI. 2018-2021.

2018 Broad Agency Announcement CDC BAA FY2018-OADS-01. Socio-technical systems impact on dialysis practice. \$389,760. PI 2018-2019.

2018 AHRQ. Designing primary care exam rooms to support exam room computing and the patient-centered medical home. \$332,000.CO-PI 2019-2021.

2017 Park City School District. Human Factors Engineering in the Design of a New School. \$ 141,831. PI 2017-2018.

2015 NSF. Cyber Radar for the Power Grid. \$399,925. Co-PI 2015-2018

2014 National Interagency Fire Center (BLM). Wildland fire operations. \$274,538. PI 2014-2017

2014 NSF. New generation of cyber radar. \$386,081. Co-PI. 2014-2017.

2012 DHHS AHRQ. Simulation Training. \$1,049,468. PI. 2012-2015.

2011 DHHS AHRQ. Improving Patient Safety. \$839,343. PI. 2011-2014.

2010 DHHS AHRQ. Simulation Training. \$1,048,507. PI. 201-2014.

2006 NIH. Interruptions and preventable adverse events. \$360,141. PI 2006-2009.

2005 University of Utah. Seed grant. Interruptions and preventable adverse events. \$33,000. PI 2006.

2005 NSF. Development of a just-in-time training. \$299,997. PI 2005-2008

Publications (Journals)

1. Harrod, M., Weston, L. E., Gregory, L., Petersen, L., Mayer, J., Drews, F. A., & Krein, S. L. (2020). A qualitative study of factors affecting personal protective equipment use among health care personnel. *American Journal of Infection Control*.
2. Drews, F.A., Markewitz, B., and Samore, M. (2019). Interruptions and the delivery of care in the Intensive Care Unit. *Human Factors*. 61, 564-576.
3. Drews, F.A., Visnowky, L., Meyer, J (2019). Human Factors Engineering Contributions to Infection Prevention and Control. *Human Factors*. 61, 693-701.
4. Harrod, M., Petersen, L., Weston, L. E., Gregory, L., Mayer, J., Samore, M. H., ... & Krein, S. L. (2019). Understanding workflow and personal protective equipment challenges across different healthcare personnel roles. *Clinical Infectious Diseases*, 69, (S185-S191).
5. Drews, F. A., Mulvey, D., Stratford, K., Samore, M. H., & Mayer, J. (2019). Evaluation of a redesigned personal protective equipment gown. *Clinical Infectious Diseases*, 69, S199-S205.
6. Visnovsky, L. D., Zhang, Y., Leecaster, M. K., Safdar, N., Barko, L., Haroldsen, C., ... & Drews, F. A. (2019). Effectiveness of a multisite personal protective equipment (PPE)–free zone intervention in acute care. *Infection Control & Hospital Epidemiology*, 40(7), 761-766.
7. Rogers, W. P., Kahraman, M. M., Drews, F. A., Powell, K., Haight, J. M., Wang, Y., ... & Sobalkar, M. (2019). Automation in the Mining Industry: Review of Technology, Systems, Human Factors, and Political Risk. *Mining, Metallurgy & Exploration*, 1-25.
8. Legenza, L., Nickman, N. A., Drews, F. A., Rim, M., Tigh, J., Kelly, M. P., & Tyler, L. S. (2019). Assessment of perceived workload in academic health center community pharmacies before and after implementation of a central call center. *American Journal of Health-System Pharmacy*, 76(21), 1794-1805.
9. Mulvey, D., Mayer, J., Visnovsky, L., Samore, M., Drews, F.A. (2019). Healthcare Personnel Often Deviate from Personal Protective Equipment Use Guidelines. *American Journal of Infection Control*.
10. Nickman, N., Drews, F.A., Tyler, L.S., Kelly, M., Legenza, L., Tigh, J., Rim, M. (2019). NASA Task Load Index assessment of perceived workload in academic health center

community pharmacies before and after implementation of a central call center. *American Journal of Health-System Pharmacy*.

11. Nickman, N., Drews, F.A., Tyler, L.S., Kelly, M.P., Ragsdale, R.J., Rim., M (2019). Use of multiple methods to measure impact of a centralized call center on academic health system community pharmacies. *Am J Health-System Pharm.* 76, 353-359.
12. Visnovsky, Mulvey, D., Zhang, M., Leecster, M., Donskey, C.J., Krein, S., Drews, F.A., Samore, M.H. (2018). Effectiveness of the Health Care Personal Perceptions. *Open Forum Infectious Diseases*, 5, 1, S55.
13. Krein, S. L., Mayer, J., Harrod, M., Weston, L. E., Gregory, L., Petersen, L, & Drews, F. A. (2018). Identification and characterization of failures in infectious agent transmission precaution practices in hospitals: a qualitative study. *JAMA internal medicine.* , 178(8), 1016-1022.
14. Drews, F.A., Zadra, J.R., Gleed, J. (2018). Electronic health record on the go: Device form factor and Fitts' law, *International Journal of Medical Informatics* 111, 37-44.
15. Drews, F.A., Bagdash, J.Z., and Gleed, J.R. (2017). Improving central line maintenance to reduce central line associated blood-stream infections. *American Journal of Infection Control*, 45, 11, 1224-1230.
16. LD Croft, F Drews, D Berryrieser, C Haroldsen, MK Nevers, T Huber, ...(2017). Multi-Facility Assessment of Variation in Transmission-Based Precautions (TBP) Policies and Healthcare Personnel (HCP) Personal Protective Equipment (PPE) Use Behavior. *Open Forum Infectious Diseases* 4 (suppl_1), S170-S171
17. Leecaster, M. K., Weir, C. R., Drews, F. A., Hellewell, J. L., Bolton, D., Jones, M. M., & Nebeker, J. R. (2017). Translation of Contextual Control Model to chronic disease management: A paradigm to guide design of cognitive support systems. *Journal of Biomedical Informatics*, 71, 60-67.
18. Cova, T.J., Dennison, P.E., Drews, F.A., Siebeneck, L.K., and Lindell, M.K. (2017). Warning triggers in environmental hazards: Who should be warned to do what and when? *Risk Analysis*, 34, 601-611.
19. Croft, L. D., Drews, F., Berryrieser, D., Haroldsen, C., Nevers, M., Huber, T., ... & Jernigan, J. A. (2017, October). Multi-Facility Assessment of Variation in Transmission-Based Precautions (TBP) Policies and Healthcare Personnel (HCP) Personal Protective Equipment (PPE) Use Behavior. In *Open Forum Infectious Diseases* (Vol. 4, No. suppl_1, pp. S170-S171). US: Oxford University Press.

20. Kramer, H. S., & Drews, F. A. (2017). Checking the lists: a systematic review of electronic checklist use in health care. *Journal of biomedical informatics*, 71, 6-12.
21. Scuba, W., Tharp, M., Mowery, D., Tseytlin, E., Liu, Y., Drews, F. A., & Chapman, W. W. (2016). Knowledge Author: facilitating user-driven, domain content development to support clinical information extraction. *Journal of Biomedical Semantics*, 7(1), 42.
22. Cova, T. J., Dennison, P. E., Li, D., Drews, F. A., Siebeneck, L. K., & Lindell, M. K. (2016). Warning triggers in environmental hazards: who should be warned to do what and when? *Risk analysis*.
23. Drews, F.A., Siebeneck, L.K., Cova, T.J. (2015). Information search and decision making in computer-simulated wildfires. *Journal of Cognitive Engineering and Decision Making*, 9(3), 229-240.
24. Drews, F.A., and Musters, A., (2015). Individual Differences in Interrupted Task Performance: One Size Does Not Fit All. *International Journal of Human - Computer Studies*, 79, 97-105.
25. Nelson, RE., Angelovic, AW., Nelson, SD., Gleed, JR., Drews. FA. (2015). An Economic Analysis of Adherence Engineering to Improve Use of Best Practices During Central Line Maintenance Procedures. *Infection Control & Hospital Epidemiology*, 36, 550-556.
26. Drews, F.A., Musters, A., Siebeneck, L.K., Cova, T.J. (2014). Environmental factors that influence wildfire protective-action recommendations. *International Journal of Emergency Management*, 10, 2, 153-168.
27. Drews, F.A and Doig, A. (2014). Evaluation of a configural vital signs display for ICU nurses. *Human Factors*, 56(3), 596-580.
28. Drews, F.A. (2013). Human Factors in Critical Care Environments. *Reviews of Human Factors and Ergonomics*. 8, 103-148.
29. Drews, F.A. and Bakdash, J.Z. (2013). Simulation Training in Health Care. *Reviews of Human Factors and Ergonomics*, 8, 191-234.
30. Drews, F.A. (2013) Adherence Engineering. *Ergonomics in Design. The Quarterly of Human Factors Applications*, 21, 19-25.
31. Bergen, B, Madeiros-Ward, N.J., Wheeler, K., Drews, F.A., Strayer, D.L. (2012). The crosstalk hypothesis: Why language interferes with driving. *Journal of Experimental*

Psychology: General, 142, 119-130.

32. Drews, F.A., Wallace, J., Bernuzillo, J., Markewitz, B., and Samore, M. (2012). Protocol adherence in the Intensive Care Unit. Human Factors and Ergonomics in Manufacturing & Service Industries, 22, 21-31.
33. Bakdash, J.Z. and Drews, F. A (2012). Using Knowledge in the world to improve patient safety: Designing affordances in health care equipment to specify a sequential checklist. Human Factors and Ergonomics in Manufacturing & Service Industries, 22, 7-20.
34. Kramer, H.S., Snow, L., Samore, M.H., Drews, F.A. (2011). Protocol use in disease outbreak investigations: Applying a technical systems solution to a natural systems problem. Utah Health: An Annual Review, 16, 30-34.
35. Cova, T.J, Dennison, P., and Drews, F.A. (2011). Modeling evacuate versus shelter-in-place decisions in wildfire. Sustainability. 3(10), 1662-1687.
36. Doig, A., Drews, F.A., and Keefe, M., (2011). Informing the Design of Hemodynamic Monitoring Displays. Computers, Informatics, Nursing, 29(12):706-713.
37. Durso, F., & Drews, F.A. (2010). Healthcare, Aviation, and Ecosystems – A *socio-natural systems* perspective. Current Directions in Psychological Science, 19(2), 71-75.
38. Drews, F.A, Yazdani, H., Godfrey, C., Cooper, J.M. and Strayer, D.L. (2009). Text messaging during simulated driving. Human Factors: The Journal of the Human Factors and Ergonomics Society, 51, 762-770.
39. Cova, T.J., Drews, F.A, Siebeneck, L.K., & Musters, A. (2009). Protective actions in wildfires: evacuate or shelter-in-place? Natural Hazards Review 10(4), 151-162
40. Drews, F.A., Pasupathi, M., & Strayer, D.L. (2008). Passenger and cell-phone conversations in simulated driving. Journal of Experimental Psychology: Applied, 14, 4, 392-400.
41. Johnson, K., Syroid, N., Ogden, L., Strayer, D.L., Drews, F.A. (2008). Part Task and Variable Priority Training in First Year Anesthesia Resident Education: A Combined Didactic and Simulation-based Approach to Improve Management of Adverse Airway and Respiratory Events. Anesthesiology, 108, 5, 831-40.
42. Drews, F.A., Picciano, P., Agutter, J., Syroid, N., Westenskow, D.R. & Strayer, D.L. (2007). Development and evaluation of a just-in-time support system. Human Factors, 49, 543-551.

43. Strayer, D.L & Drews, F.A. (2007). Cell Phone Induced Driver Distraction. Current Directions in Psychological Science, 16, 128-131.
44. Vawdrey D.K., Gardner, R.M, Evans, R.S, Orme, J.F., Clemmer, T.P. Greenway, L., Drews F.A. (2007). Assessing Data Quality in Manual Entry of Ventilator Settings. Journal of the American Medical Informatics Association, 14, 295-303.
45. Weir, C.R., Hicken, B.L., Nebeker, J., Campo, R., Drews, F.A., and LaBar, B. (2007). Clinician's Information Management Strategies in a Provider Order Entry Primary Care Environment: A Cognitive Task Analysis. Journal of the American Medical Informatics Association, 14, 65-75.
46. Wachter, B., Johnson, K., Albert, R., Syroid, N., Drews, F., & Westenskow, D. (2006). The evaluation of a pulmonary display to detect adverse respiratory events using a high resolution human simulator. Journal of the American Medical Informatics Association, 13, 635-642.
47. Drews, F.A., Syroid, N., Agutter, J., Strayer, D.L., & Westenskow, D.R. (2006). Drug delivery as control task: Improving patient safety in anesthesia. Human Factors, 48, 85-94.
48. Strayer, D. L., & Crouch, D., and Drews, F. A. (2006). A Comparison of the Cell-Phone Driver and the Drunk Driver . Human Factors, 48, 381-391.
49. Drews, F.A., Westenskow. D.R. (2006). The right picture is worth a thousand numbers: Data displays in Anesthesia. Human Factors, 48, 59-71.
50. Bermudez, J., Agutter, J., Foresti, S., Westenskow, D., Syroid, N., Drews, F., Tashjian, E. (2005). Between art, science and technology: Data representation architecture. Leonardo, 38, 4.
51. Strayer, D. L., Drews, F. A., & Burns, S. (2004). The development and evaluation of a high-fidelity simulator training program for snowplow operators. UDOT. Technical Report.
52. Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003). Are we being driven to distraction? In: Center for Public Policy and Analysis Annual Newsletter.
53. Agutter, J., Drews, F. A., Syroid, N.D., Westenskow, D. R., Albert, R. W., Strayer, D. L., Bermudez, J. C., & Weinger, M. B. (2003). Evaluation of a graphical cardiovascular display in a high fidelity simulator. Anesthesia & Analgesia, 97, 1403-13.

54. Wachter, S.B., Agutter, J., Syroid, N., Drews, F., Westenskow, D., and Weinger, M. (2003). The employment of an iterative design process to develop a pulmonary graphical display. Journal of the American Medical Informatics Association, 10, 4, 363-372.
55. Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003). Cell phone induced failures of visual attention during simulated driving. Journal of Experimental Psychology: Applied, 9, 23-52.
56. Drews, F., Zhang, Y., Westenskow, D., Foresti, S., Agutter J., Bermudez, J., Blike, G., & Loeb, R. (2002). Effects of Integrated Graphical Displays on Situation Awareness in Anesthesiology. Cognition, Technology and Work. 4, 82-90.
57. Strayer, D. L., Drews, F. A., & Albert, R. W. (2002). Negative priming and stimulus repetition: A reply to Neill and Joordens (2002). Perception and Psychophysics, 64, 861-865.
58. Syroid, N., Agutter, J., Drews, F., Westenskow, D., Bermudez, J., Albert, R., Strayer, D., Prenzel, H., Loeb, R., & Weinger, M. (2002) Development and evaluation of a graphical anesthesia drug display. Anesthesiology, 96, 556-74.
59. Wachter, S.B., Syroid, N.D. Agutter, J., Drews, F.A., & Westenskow, D.R. (2002).The Development of a Pulmonary Metaphor. Anesthesiology, 96: A523
60. Wachter S.B., Agutter, J.A., Syroid, N.D., Drews, .F.A, and Westenskow, D.R. (2002). A New Metaphor to Display Critical Pulmonary Events during Anesthesia. J Am Med Inform Assoc,9, (6):S108-9.
61. Strayer, D.L., Drews, F.A., Albert, R., & Johnston, W. (2001). Does cell phone conversation impair driving performance? National Safety Council Newsletter.
62. Bermudez J , Agutter J , Westenskow D , Foresti S , Zhang Y , Gondeck-Becker D , Syroid N , Lilly B , Strayer D , Drews F. (2000). Data Representation Architecture: Visualization Design Methods, Theory and Technology Applied to Anesthesiology. Int J Des Comput, 6, 91-102.
63. Drews, F.A. (1999). When the Sum of the Parts is more than the Whole: Positive Non-additivity in Judgments of Subjective Probabilities. Technical University of Berlin, Germany.
64. Drews, F.A., & Eyferth, K. (1995). Die Wiedergabe von Gebärden und Wörtern durch Gehörlose [The recall of signs and words by deaf]. Sprache und Kognition, 14, 116-125.
65. Drews, F.A., Ruoß, M., & Eyferth, K. (1994). Informationsverarbeitung bei Gehörlosen

[Information processing by deaf]. In: G. Kegel, T. Arnhold, G. Schmid, & B. Tischer (Eds.), Sprechwissenschaft und Psycholinguistik 7 (pp. 37 - 66). Opladen: Westdeutscher Verlag.

66. Drews, F.A. (1993). Wiedergabe von Gebärden. [Recall of signs of German sign language]. Diploma Thesis.
67. Drews, F.A. (1988). Induktion von Versprechern [Induction of slips of the tongue]. Technical Report. Max Planck Institute for Psycholinguistics, Nijmegen, Netherlands.

Publications (Chapters)

1. Drews, F.A. (2020) Development and Evaluation of a Central Line Maintenance Kit using Adherence Engineering in: B. Burian (Ed.). The medical checklist. Oxford. University Press.
2. Bagdash, J.Z., Drews, F.A (2020). Human Factors/ Ergonomics: Patient Safety and Adherence in Health Care. Encyclopedia of Behavioral Medicine. 2nd updated Edition. Springer.
3. Drews, F.A and Zadra, J. (2016). Human Factors in the Intensive Care Unit. Imperial College Press.
4. Drews, F.A and Zadra, J. (2016). Human Factors in Anesthesia. Keith Ruskin (Ed.). Oxford. University Press.
5. Bagdash, J.Z., Drews, F.A (2013). Human Factors/ Ergonomics: Patient Safety and Adherence in Health Care. Encyclopedia of Behavioral Medicine. Springer.
6. Drews, F. A., Strayer, D. L., Uchino, B. N., & Smith, T. W. (2012). On the fast lane to road rage. In: Gale, A. G. (Ed.) Vision in Vehicles X. Loughborough University, UK.
7. Strayer, D. L., Drews, F. A., & Johnston, W. A. (2012). To see or not to see: Cellular communication causes inattention blindness behind the wheel. In Gale, A. G. (Ed.) Vision in Vehicles X. Loughborough University, UK
8. Drews, F.A. (2011). Human Error. In: P. Carayon (Ed.) Handbook of Human Factors and Ergonomics in Healthcare and Patient Safety. 2nd ed., pp 323-340. Lawrence Erlbaum Associates.
9. Drews, F.A. & Kramer, H. (2011). Human Computer Interaction Design in Health Care. In: P. Carayon (Ed.) Handbook of Human Factors and Ergonomics in Healthcare and Patient Safety. 2nd ed., pp 265-280. Lawrence Erlbaum Associates.
10. Drews, F.A. & Picciano, P., M. (2011). Just in time support to aide cardiopulmonary resuscitation. J. Harris (Ed.). Defibrillators / Book 2. Intech Publisher.
11. Strayer, D.L, Watson, J. & Drews, F.A.. (2011). Cognitive Distraction while Multi-tasking in the Automobile. Psychology of Learning and Motivation, Vol. 54, pp. 29–58. Burlington, VT: Academic Press.

12. Strayer, David L. Cooper, Joel M. and Drews, Frank A. (2010) Profiles in Cell-Phone Induced Driver Distraction, In: Fisher, D. L., Rizzo, M., Caird, J. K., & Lee, J. D. (Eds). *Handbook of Driving Simulation for Engineering, Medicine, and Psychology*. Boca Raton, FL: CRC Press.
13. Drews, F.A. (2008). Patient Monitors in Critical Care: Lessons for Improvement. In: *Advances in Patient Safety: From Research to Implementation*. Volume 5, AHRQ Publication Nos. 050021 (1-5). Agency for Healthcare Research and Quality, Rockville, MD.
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16. Strayer, D. L., & Drews, (2007). Attention. In F. Durso, R. Nickerson, S. Dumais, S. Lewandowsky and T. Perfect (Eds.), Handbook of Applied Cognition, Second Edition pp. 29-54). John Wiley & Sons, Ltd., West Sussex, UK
17. Strayer, D. L. & Drews, F.A. (2006). Multi-tasking in the Automobile. In: A. Kramer, D. Wiegmann, & A. Kirlik (Eds.), Applied Attention: From Theory to Practice. Oxford University Press: New York.
18. Picciano, P, & Drews, F.A. (2006). Just-in-time support (JITS). A framework to enhance human performance. In: W. Karwowski (Ed.), International Encyclopedia of Ergonomics and Human Factors. Taylor and Francis.
19. Drews, F.A., & Westenskow, D.R. (2006). Human-Computer Interaction in Healthcare. In: P. Carayon (Ed.) Handbook of Human Factors and Ergonomics in Healthcare and Patient Safety. Lawrence Erlbaum Associates.
20. Strayer, D. L., Drews, F. A., Crouch, D. J., & W.A. Johnston (2005). Why Do Cell Phone Conversations Interfere With Driving? In: W. R. Walker and D. Herrmann (Eds.) Cognitive Technology: Transforming Thought and Society. McFarland and Company Publishers: Mayfield.
21. Strayer, D. L., Drews, F. A., & Crouch, D. J. (2004). Comparing the cell-phone driver and the drunk driver. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) Driving

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23. Dolan, D. M., Rupp, D. A., Allen, J. R., Drews, F. A., & Strayer, D. L. (2003). Simulator training improves driver efficiency: Transfer from the simulator to the real world. To appear In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) Driving Assessment 2003: International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design.
24. Zhang, Y., Drews, F., Westenskow, D, Foresti, S., Agutter, J., & Bermudez, J. (2001). Improving Situation Awareness in Anesthesiology. In Don Harris (Ed.) Engineering Psychology and Ergonomics. Ashgate.
25. Drews, F.A., & Thonagel, U. (1996). Dichte und Struktur von Lebensereignissen bei jungen Rostocker und Mannheimer Erwachsenen [Density and structure of life events for young adults from Rostock and Mannheim]. In K.U. Ettrich & M. Fries (Eds.), Lebenslange Entwicklung in sich wandelnden Zeiten (pp. 376-386). Landau: Empirische Pädagogik.
26. Reis, O., Thonagel, U., Drews, F.A., & Meyer-Probst, B. (1996). Unterschiede zwischen mobilen und nichtmobilen jungen Ostdeutschen - Ergebnisse der Rostocker Längsschnittstudie [Differences between young east Germans who moved and those who did not - Results of the Rostock Longitudinal Study]. In K.U. Ettrich & M. Fries (Eds.), Lebenslange Entwicklung in sich wandelnden Zeiten (pp. 384-390). Landau: Empirische Pädagogik.

Other Publications

27. Drews, F.A. (2015). Human Error and Violations in Paragliding and Hang Gliding. US Hang Gliding and Paragliding Magazine. USHPA: Colorado Springs.
28. Drews, F.A. (2015). Human Error and Violations in Paragliding and Hang Gliding. Skysailor. Australian Hang Gliding and Paragliding Magazine. International Reprint.

Papers published in proceedings

1. Ragan, A., Sommer, T., Drews, F.A., (2017, September). A Comparison of Airline Safety Videos in Information Acquisition. Proceedings of the Human Factors and Ergonomics Society Annual Meeting 61, 1671-1673.
2. Dietz, A.S., M Bell, FA Drews, FT Durso, AP Gurses, P Pennathur (2017, September). Applying Human Factors Science to Prevent the Transmission of High Consequence Pathogens: Discoveries and the Road Ahead, Proceedings of the Human Factors and Ergonomics Society Annual Meeting 61, 635-637.
3. Brzowski, MB., Drews, F.A., (2017, September). Proceedings of the Human Factors and Ergonomics Society Annual Meeting 61, 567-569.
4. Funkhouser, K., & Drews, F. (2016, September). Reaction Times When Switching From Autonomous to Manual Driving Control A Pilot Investigation. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 60, No. 1, pp. 1854-1858). SAGE Publications.
5. Funkhouser, K., & Drews, F. (2016, September). Putting the Brakes on Autonomous Vehicle Control Responding to System Breakdowns. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 60, No. 1, pp. 1859-1863). SAGE Publications.
6. McCarty, M., Funkhouser, K., Zadra, J., & Drews, F. (2016, September). Effects of Auditory Working Memory Tasks while Switching between Autonomous and Manual Driving. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 60, No. 1, pp. 1741-1745). SAGE Publications.
7. Sommer, T. and Drews, F. (2015, October). *Theoretical Classifications and Criticisms of Hand Hygiene Interventions*. Talk presented at the Human Factors and Ergonomics Society 2015 International Annual Meeting, Los Angeles, CA.
8. Doig, A., Baraki, K., & Drews, F. (2013, June). Cognitive Factors Associated with Nurses' Successful Detection of Sepsis Versus Failure to Rescue. In *Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare* (Vol. 2, No. 1, pp. 131-134). SAGE Publications.
9. Guinan, A. L., Caswell, N. A., Drews, F. A., & Provancher, W. R. (2013). A video game controller with skin stretch haptic feedback. In: *Consumer Electronics (ICCE), 2013 IEEE International Conference on Consumer Electronics* (pp. 456-457). IEEE.

10. Weir, C., Drews, F., Leecaster, M., Barrus, R., and Nebeker, J. (2012). The orderly and effective visit: impact of the electronic health record on modes of cognitive control. AMIA, Annual Symposium Proceedings, 2012, 979-987.
11. Eatchel, K., Kramer, H., Drews, F. (2012). The effects of interruption context on task performance. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 56, 1218-2122.
12. Gerritsen, D., Gagnon, K., Steffanucci, J., Drews, F. (2012). I'd Like to Introduce You to My Desktop: Toward a Theory of Social Human-Computer Interaction. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 56, 2098-2102.
13. Kramer, H. S., & Drews, F. A. (2012). Does the shoe fit? Applying lessons learned in aviation to health care .Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 56, 936-940.
14. Gerritsen, D., Musters, A., Drews, F.A. (2011). A Bit of Decline: An Information Processing Approach to Complexity and Performance Loss. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, September 2011; vol. 55, 1: pp. 1995-1999.
15. Whitaker, C., Musters, A., Drews, F. (2011). The Effect of Incongruent Instruction/Execution Pairs on Working Memory. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, September 2011; vol. 55, 1: pp. 306-310
16. Purcell, J., Williams, L., Scott., Russ., A., Drews, F., Speir, R. (2011). Human Factors Engineering in the Department of Veterans Affairs: Operations and Research Initiatives Related to Healthcare Information Technology and Medical Devices. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, September 2011; vol. 55, 1: pp. 677-679.
17. Lazzara, E.H., Weaver, S.J., Raij, A., Metcalf, D., Drews, F.A., Dierks, M. (2011) Mobile Technology: The Wave of the Future to Improve Healthcare? Proceedings of the Human Factors and Ergonomics Society Annual Meeting, September 2011; vol. 55, 1: pp. 729-732.
18. Kramer, H.S., and Drews, F.A. (2011). Using Saliency to Guide Searches in Digital Displays. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, September 2011; vol. 55, 1: pp. 380-384.
19. Fenech, E., Drews, F.A., Bakdash, J. X. (2010). The Effects of Acoustic Turn-by-Turn Navigation on Wayfinding. Proceedings of the 54th Annual Meeting of the Factors and Ergonomics Society, San Francisco.

20. Livnat, Y., P. Gesteland, J. Benuzillo, W. Pettey, D. Bolton, F. Drews, H. Kramer, M. Samore, "*A Novel Workbench for Epidemic investigation and Analysis of Search Strategies in public health practice*", AMIA 2010 Annual Symposium, pp. 647-651, 2010
21. Nystrom, D., Musters, A., Drews, F.A. (2010) The Effect of Interruption Similarity in Planning Tasks. Proceedings of the 54th Annual Meeting of the Factors and Ergonomics Society, San Francisco.
22. Drews, F.A., & Fawcett, D., (2010). Why Health Care Is Not Like Aviation: Control of Natural and Technical Systems. Proceedings of the 54th Annual Meeting of the Factors and Ergonomics Society, San Francisco.
23. Kramer, H. & Drews, Frank A. (2009). Structuring the puzzle: Protocol Use in Disease Outbreak Investigations. Proceedings of the 53rd Annual Meeting of the Factors and Ergonomics Society, San Antonio, TX.
24. Pettey, W., J. Benuzillo, B. Walker, A. Parks, H. Kramer, P. Gesteland, M. Rubin, F. Drews, Y. Livnat, M. Samore, "*Using agent-based simulations of infectious disease spread to enhance public health decision support tools*" American Public Health Association 173th Annual Meeting (2009)
25. Drews, F.A. & Lorimer, P. (2008) Development of a Patient Monitor for Critical Care. Proceedings of the 52th Annual Meeting of the Human Factors and Ergonomics Society. New York, NY.
26. Drews, F.A. (2007) The frequency and impact of task interruptions in the ICU. Proceedings of the 51th Annual Meeting of the Human Factors and Ergonomics Society. Baltimore, MD.
27. Drews, F. A., Musters, A., Markham, B. & Samore, M. H. (2007). Error Producing Conditions in the Intensive Care Unit. In: Proceedings of the 51th Annual Meeting of the Human Factors and Ergonomics Society. Baltimore, MD.
28. Solomon, J, Drews, F.A. (2007). Digital Photo Kiosk Evaluation, In: Proceedings of the 51th Annual Meeting of the Human Factors and Ergonomics Society. Baltimore, MD.
29. Drews, F.A. (2006). The frequency and impact of task interruptions on patient safety in the ICU. In: Proceedings of the 16th World Congress on Ergonomics. Elsevier Publishers. Maastricht, NL.
30. Strayer, D.L., Martinez, M., Cooper, J., Drews, F.A. (2006) Brain Waves Suppressed by Cell Phone Conversations. In: Proceedings of the 50th Annual Meeting of the Human Factors and Ergonomics Society. San Francisco, CA.

31. Picciano, P.M. & Drews, F.A. (2006) Instant expertise for novice responders performing cardiopulmonary resuscitation (CPR). In: Proceedings of the 50th Annual Meeting of the Human Factors and Ergonomics Society. San Francisco, CA.
32. Drews, F.A., Johnson, K., Syroid, N., & Strayer, D. (2005). Human Factors meets anesthesia: Advanced training to improve airway management. In: Proceedings of the 49th Annual Meeting of the Human Factors and Ergonomics Society. Orlando, FL.
33. Drews, F.A., Pasupathi, M., & Strayer, D. L. (2004). Directing attention: A Comparison between cell-phone conversations and passenger conversations while driving. ITS Europe Hannover, 2004.
34. Bermudez J , Foresti S, Agutter J, Westenskow D, Syroid N, Drews F, Tashjian E (2004). Metodología Interdisciplinaria para Diseñar Nuevas Arquitecturas de Representación de Datos — Parte II. In: C. Scaletsky (ed.): Proceedings of the 2004 SIGraDi Conference, UNISINOS, Brazil.
35. Drews, F.A., Pasupathi, M., & Strayer, D. L. (2004). Passenger and cell-phone conversations in simulated driving. In: Proceedings of the 48nd Annual Meeting of the Human Factors and Ergonomics Society.
36. Drews, F.A., Wachter, B., Agutter, J., Syroid, N., & Westenskow, D.R. (2004). Design and evaluation of a graphical pulmonary display for anesthesia. In: Proceedings of the 48nd Annual Meeting of the Human Factors and Ergonomics Society.
37. Strayer, D.L., Cooper, J., & Drews, F.A.(2004).What do drivers fail to see when conversing on a cell phone? In: Proceedings of the 48nd Annual Meeting of the Human Factors and Ergonomics Society.
38. Bermudez, J., Foresti, S., Agutter, J., Westenskow, D., Syroid, N., Drews, F., Tashjian, E., Adams, V. (2004). Interdisciplinary Methodology Supporting the Design Research & Practice of New Data Representation Architectures. Proceedings of the EAAE/ARCC Research Conference, Dublin.
39. Albert, R., Syroid N., Zhang, Y., Agutter, J., Drews, F., Strayer, D., Hutchinson, G., Westenskow, D. (2003). Psychophysical Scaling of a Cardiovascular Information Display. IEEE Visualization. Seattle, WA pp. 35 – 42.
40. Bermudez, J., Foresti, S., Agutter, J., Westenskow, D., Syroid, N., Drews, F., Tashjian, E., Adams, V. (2003). Metodología Interdisciplinaria para Diseñar Nuevas Arquitecturas de Representación de Datos, in S.Carmena & R.Utges (eds.): Proceedings of the 7th. SIGraDi Conference, Universidad Nacional de Rosario, Argentina, pp.334-338

41. Strayer, D. L. & Drews, F. A. (2003). Effects of cell phone conversations on younger and older drivers. In: Proceedings of the 47nd Annual Meeting of the Human Factors and Ergonomics Society, pp 1860-1864.
42. Picciano, P., Drews, F., Syroid, N., Westenskow, D. (2003). Knowledge of Pharmacokinetics and the Anesthesia Control Loop. In: Proceedings of the 47nd Annual Meeting of the Human Factors and Ergonomics Society, pp.1433-1437.
43. Drews, F. A., Syroid, N. D., Agutter, J., Westenskow, D. R., & Strayer, D. L. (2003). Increasing intraoperative patient safety: Monitoring drug concentrations. In the Proceedings of the 47nd Annual Meeting of the Human Factors and Ergonomics Society, pp. 1438-1442.
44. Drews, F. A., Syroid, N. D., Agutter, J., Snell, D., Balikrishnan, S., Lingutla, S., Westenskow, D. R., & Strayer, D. L. (2003). Development and evaluation of just-in-time training to provide cardio-pulmonary resuscitation: Monitoring drug concentrations. In: Proceedings of the 47nd Annual Meeting of the Human Factors and Ergonomics Society, pp. 1507-1510.
45. Albert, R., Syroid, N., Zhang, Y., Agutter, J., Drews, F., Strayer, D. Hutchinson, G., & Westenskow, D. (2003). Psychophysiological scaling of a cardiovascular information display. In: Proceedings of the IEEE Symposium on Information Visualization.
46. Strayer, D. L., Drews, F. A., & Albert, R. A. (2001). Negative priming and perceptual facilitation. Proceedings of the 42nd Annual Meeting of the Psychonomics Society, 6, 113.
47. Albert, R.W., Drews, F.A., Syroid, N.D., Strayer, D.L., Agutter, J., Westenskow, D.R., Loeb, R.G., Weinger, M.B. (2001). Facilitation of anesthetic administration during simulated surgeries with a drug display. In Proceedings of the 41st Human Factors Meeting. Human Factors and Ergonomics Society, Santa Monica, CA.
48. Bermudez, J., Agutter, J., Westenskow, D.R., Zhang, Y., Foresti, S., Lilly, B., Gondeck-Becker, D., Strayer, D., & Drews, F.A. (2001) "La Arquitectura de la Representación de Datos. Métodos, Teoría y Tecnología de Diseño de la Visualización Aplicados a la Anestesiología" In Proceedings of SIGRADI 2001.
49. Drews, F.A., Agutter, J., Syroid, N.S., Albert, R.W., Westenskow, D.R., & Strayer, D.L. (2001). Evaluating a graphical cardiovascular display for anesthesia. In Proceedings of the 41st Human Factors Meeting. Human Factors and Ergonomics Society, Santa Monica, CA.

50. Drews, F.A., Agutter, J., Syroid, N.S., & Westenskow, D.R. (2001). The Role of Information Presentation in Decision-Making during Anesthesia. In Proceedings of HCI International 2001, Lawrence Earlbaum Associates.
51. Strayer, D.L., Drews, F.A., Albert, R.W., & Johnston, W.A. (2001) Cell Phone induced perceptual impairments during simulated driving. In Proceedings of the International Driving Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design.
52. Agutter, J., Syroid, N., Drews, F.A., Westenskow, D.R., Bermudez, J., and Strayer D.L., (2001) Graphic Data Display for Cardiovascular System Case Study. Proceedings of the IEEE Symposium on Information Visualization 2001 (INFOVIS'01).
53. Bermudez, J, Agutter, J., Westenskow, D., & Drews, F., (2000). Architecture and Data Representation: Modeling Physiologic Processes. In Proceedings of ARCC 2000. Paris, France.
54. Bermudez, J., Agutter, J., Westenskow, D., Foresti, S., Zhang Y., Gondeck-Becker, D., Syroid, N., Lilly, B., Strayer, D., & Drews, F. (2000). Data Representation Architecture. Visualization Design Methods, Theory and Technology Applied to Anesthesiology. In Proceedings of ACADIA'2000. Washington DC.

Invited Presentations

1. Drews, F.A. (2019). Interruptions in the Car and the ICU. Annual Winter Conference of the Association of Perioperative Registered Nurses. Salt Lake City.
2. Drews, F.A. (2019). Human Factors in Infection Prevention and Control. Invited Keynote SHEA Annual meeting.
3. Drews, F.A. (2019). Human Factors to improve Infection Prevention and Control. Invited Workshop SHEA Annual meeting.
4. Drews, F.A. (2019). Human Factors Contributions to Nursing. Annual Meeting of Anesthesia Nurses. Salt Lake City.
5. Drews, F.A. (2019). Engineering Psychology to Improve Patient Safety. Presentation at Georgia Tech.
6. Drews, F.A. (2017). Psychology and Mining Safety. Rio Tinto Annual Employee Training.
7. Drews, F.A. (2016). Adherence Engineering. SHEA Annual conference. Atlanta, GA.
8. Drews, F.A., (2016). Human Factors in Health Care. University Hospital Zurich, Switzerland.
9. Drews, F.A. et al. (2015). Design and evaluation of health care icons. HSR&D Conference, Baltimore.
10. Drews, F.A. (2015). Human Factors to improve patient safety. MCIC. Washington DC.
11. Drews, F.A. (2015). Resilience Engineering to create a High Reliability Organization. 2015 Patient Safety & Quality Symposium, St. Louis, MO.
12. Drews, F.A. (2015). Understanding and reducing violations. Key note address at the Conference on Human Factors – Challenges in Health Care and Aviation, Zurich, Suisse.
13. Drews, F.A. (2014). Are checklists the answer or just the first step? The role of research in healthcare improvement: Finding and fulfilling synergy. Salt Lake City, Utah.
14. Drews, F.A. (2013). Can we really multitask? Society for Education in Anesthesia Annual Meeting. Salt Lake City, UT.
15. Drews, F.A. (2012) Interruptions in the ICU: Hazards and other breakdowns. HSR&D.

Washington.

16. Drews, F.A. (2012). Adherence Engineering in Healthcare. How to avoid CLABSI. HSR&D, Washington.
17. Drews, F.A. (2012). Resilience Engineering: The why and how. Presentation at the First Human Factors in Health Care Meeting, Baltimore.
18. Drews, F.A. (2012). Improving Central Line Maintenance. Presentation to the National Nurse Safety Managers at the VA National Center for Patient Safety.
19. Drews, F.A. (2012). Adherence Engineering: How to improve a CVC maintenance kit? Presentation for the Intensive Care Unit at the University of Utah Hospital.
20. Drews, F.A. (2011). Understanding Human Error in Health Care. Presentation at the Hospital University Geneva, Geneva Switzerland, November.
21. Drews, F.A. (2011). Checklists and Interruptions: What is their impact in the Intensive Care Unit? Presentation to the Department of Infectious Diseases and Infection Control at the Hospital University Geneva, Geneva Switzerland, November.
22. Drews, F.A. (2011). Maintenance checklist: Aviation = Central line maintenance checklist: health care. Presentation at the International Congress on Patient Safety, Basel, November.
23. Drews, F.A. (2010). Monitoring airplanes and patients: One approach does not fit all. Grand Rounds at the Department of Anesthesiology. Vanderbilt University.
24. Drews, F.A. McGreevy, J. (2010). Human Factors in Surgery. Grand Rounds at the Department of Surgery, University of Utah.
25. Drews, F.A. (2010). Human Factors can improve human performance in health care. Presented at the Intermountain Healthcare Institute of Health Care Delivery Research Advanced Training Program. Salt Lake City, UT.
26. Drews, F.A., Wagner, J., & Woodbridge, P. (2010). To Err is Human, Human Factors is Divine: Making the Easy Way the Right Way. Presentation at the Annual VA Leadership Conference, Las Vegas, NV.
27. Drews, F. A. (2010). Improving patient safety through Human Factors. Midwest, Mountain West VERC Meeting in Indianapolis. Purdue University.
28. Drews, Frank (2010). Improved peri-operative design improved patient safety. 6th

Innovations in the surgical environment conference. Annapolis, MD.

29. Drews, F.A. (2010). Human Factors in Health Care. Presented at the Intermountain Healthcare Institute of Health Care Delivery Research Advanced Training Program. Salt Lake City, UT.
30. Drews, Frank A. (2009). Interruptions and hazards in the ICU. Is there a relationship? Presentation at the Human Factors and Ergonomics Meeting San Antonio, TX.
31. Drews, F.A. (2009) How to apply Human Factors to Health Care? Presented at the Intermountain Healthcare Institute of Health Care Delivery Research Advanced Training Program. Salt Lake City, UT.
32. Drews, F.A. (2009) The Human Factors of Display Design in Health Care. Presented at the Inaugural Symposium at Enschede, The Netherlands.
33. Drews, F.A. (2009) What can Health Care learn from Engineering Psychology? Award presentation at the Annual Convention of the American Psychological Association. Toronto, Canada.
34. Drews, F.A. (2009) Human Factors into Health Care. Presented at the Intermountain Healthcare Institute of Health Care Delivery Research Advanced Training Program. Salt Lake City, UT.
35. Drews, F.A. & Samore, M. (2009) Task interruptions in the ICU. Health Services R&D. Baltimore, MD
36. Drews, F.A.. (2009) Workshop on Human Error. Health Services R&D. Baltimore, MD
37. Drews, F.A. (2008) 10 years of research on driver distraction. National Safety Council, Washington, DC.
38. Drews, F.A. (2008). Complexity in Health Care. Health Care Systems Ergonomics and Patient Safety, Strasbourg, France.
39. Drews, F.A. (2008). Introducing Human Factors into Health Care 2. Presented at the Intermountain Healthcare Institute of Health Care Delivery Research Advanced Training Program. Salt Lake City, UT.
40. Drews, F.A. (2008). Human Interruptions in the ICU. Challenges for nurses. Presented at the Human Services Research and Development Conference 2008. Baltimore, MD.
41. Drews, F.A. (2007). Human Factors Contributions to Improvements in Health Care.

Presented at the Intermountain Healthcare Institute of Health Care Delivery Research Advanced Training Program. Salt Lake City, UT.

42. Drews, F. A. (2007). Cell phones and driving. Implications for risk management. Risk Manager Conference, Sacramento, CA.
43. Drews, F.A. (2007). Introducing Human Factors into Health Care. Presented at the Intermountain Healthcare Institute of Health Care Delivery Research Advanced Training Program. Salt Lake City, UT.
44. Drews, F. A. (2006). Cell phone use while driving. ORC Worldwide, Washington, DC.
45. Drews, F.A. & Strayer, D.L. (2006). Conversing on cell phones while driving. Annual Meeting of the Risk Insurance Society, Park City, UT.
46. Drews, F.A. (2006). Human Factors in Health Care. Presented at the Intermountain Healthcare Institute of Health Care Delivery Research Advanced Training Program. Salt Lake City, UT.
47. Drews, F.A. (2006). Invited Symposium sponsored by Division 21, APA. Research Spotlight---The University of Utah. New Orleans, LA.
48. Drews, F. A. (2006). Driver distraction. A case study. ORC Worldwide, Washington, DC.
49. Drews, F.A. (2006). Human Factors. ORC Worldwide, Orlando, Fl.
50. Drews, F.A. (2006). Human Error and Safety. Intermountain Life Flight Annual Safety Conference. Salt Lake City, UT.
51. Drews, F.A. & Strayer, D.L. (2005). Conversing on cell phones while driving. Safety Meeting of the Sandy Police Department, Salt Lake City, UT.
52. Drews, F.A. & Strayer, D.L. (2005). Driver Distraction. Annual Meeting of Risk Managers. Salt Lake City, UT.
53. Drews, F.A. (2004). Display design for anesthesiology. Department of Medical Informatics University of Utah.
54. Drews, F.A. (2003). Talking on cell-phones while driving. Department of Educational Psychology, University of Utah.
55. Drews, F.A. (1999). Problems of Support Theory: Processes in judging probabilities.

Invited Talk at the Max Planck Institute for Human Development, Berlin. Adaptive Behavior and Cognition Group. Director: G. Gigerenzer.

Conference Presentations

1. Funkhouser, K., & Drews, F. (2016, September). Reaction Times When Switching From Autonomous to Manual Driving Control A Pilot Investigation. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 60, No. 1, pp. 1854-1858). SAGE Publications.
2. Funkhouser, K., & Drews, F. (2016, September). Putting the Brakes on Autonomous Vehicle Control Responding to System Breakdowns. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*(Vol. 60, No. 1, pp. 1859-1863). SAGE Publications.
3. McCarty, M., Funkhouser, K., Zadra, J., & Drews, F. (2016, September). Effects of Auditory Working Memory Tasks while Switching between Autonomous and Manual Driving. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 60, No. 1, pp. 1741-1745). SAGE Publications.
4. Sommer, T. and Drews, F. (2015, October). *Theoretical Classifications and Criticisms of Hand Hygiene Interventions*. Talk presented at the Human Factors and Ergonomics Society 2015 International Annual Meeting, Los Angeles, CA.
5. Tyler LS, Nickman NA, Kelly MP. Drews, FA. Effect of a central call center on safety and workload assessment of ambulatory pharmacies in an academic medical center. ASHP Midyear Clinical Meeting; New Orleans, LA: 2015 December 9. [Management Case Study]
6. Bowden A, Mullin S, Tak C, Nickman NA, Tyler LS. Drews, FA. Agency for Healthcare Research and Quality Community Pharmacy Survey on Patient Safety Culture: The results are in, what to implement now? UHC Annual Pharmacy Meeting, New Orleans, LA: 2015 December 5. [Poster]
7. Caffiero N, Nickman N, Moorman K, King J, Jennings B. Drews, FA. Observations of pharmacist and technician phone-based interruptions before and after the implementation of a central call center in a university-based health system community pharmacy setting. APhA Annual Meeting, San Diego, CA: 2015 March 28. [Poster] Western States Pharmacy Resident Conference, Salt Lake City, UT: 2015 May. [Presentation]
8. Van Wagoner E, Moorman K, Nickman N, Tak C, Stevens V, Jennings B. Drews, FA. Assessing employee perception of patient safety culture within a university-based health system's community pharmacies using the AHRQ community pharmacy survey on patient safety culture. APhA Annual Meeting, San Diego, CA: 2015 March 28. [Poster] Western States Pharmacy Resident Conference, Salt Lake City, UT: 2015 May. [Presentation]

9. Marini E, Nickman NA, Kelly M, Tyler LS. Drews, FA. Impact of central call center on distribution of work activities in outpatient pharmacies. UHC Annual Pharmacy Meeting, Anaheim, CA: 2014 December 6. [Poster]Western States Pharmacy Resident Conference, Salt Lake City, UT: 2015 May. [Presentation]
10. Funkhouser, K. A., & Drews, F. Putting the Brakes on Autonomous Vehicle Control. Poster presented at 6th Annual Student Research Day; 2016 April 12; Salt Lake City, UT.
11. Funkhouser, K. A., & Drews, F. Putting the Brakes on Autonomous Vehicle Control: Considerations for Implementation. Poster presented at Automated Vehicle Symposium; 2016 July 28; San Francisco, CA.
12. Sommer, T. and Drews, F. (2016, April). *Painting a Paradigm for Hand Hygiene Adherence Theory*. Poster presented at Student Research Day, University of Utah, SLC. (3rd Place Award).
13. Drews, F.A., J Zadra, J Gleed, W Plew, J Heroult, N Wilck (2015) - Evaluation of Health Care Icons. Talk presented at the Human Factors and Ergonomics Society 2015 International Annual Meeting, Los Angeles, CA.
14. Pasupathi, M., Drews, F. A., Stefanucci, J., & Wainryb, C. (2013). Body-focused narration of sedentary activity reduces subsequent caloric intake. Poster presented at the Society for Personality and Social Psychology, New Orleans, LA, USA. January 17-20.
15. Drews, F.A. (2013). A comparison of methods to reduce central line associated blood stream infections. Fort Lauderdale, Fl.
16. Drews, F.A. (2012) Interruptions revisited: Do interruptions impact quality of care? Paper presented at the 2012 APA Annual Meeting in Orlando Fl.
17. Weir, C., Drews, F., Leecaster, M., Barrus, R., and Nebeker, J. (2012). The orderly and effective visit: impact of the electronic health record on modes of cognitive control. Paper presented at AMIA.
18. Drews, F.A. (2011). Human Factors to reduce medical error. Presentation at the 55th Annual Meeting of the Factors and Ergonomics Society, Las Vegas.
19. Drews, F.A. (2011). Design for Adherence. Presentation at the 55th Annual Meeting of the Factors and Ergonomics Society, Las Vegas.
20. Gerritsen, D., Musters, A., Drews, F.A. (2011). A Bit of Decline: An Information Processing Approach to Complexity and Performance Loss. Presentation at the 55th Annual Meeting of the Factors and Ergonomics Society, Las Vegas.

21. Whitaker, C., Musters, A., Drews, F. (2011). The Effect of Incongruent Instruction/Execution Pairs on Working Memory. Presentation at the 55th Annual Meeting of the Factors and Ergonomics Society, Las Vegas.
22. Purcell, J., Williams, L., Scott., Russ., A., Drews, F., Speir, R. (2011). Human Factors Engineering in the Department of Veterans Affairs: Operations and Research Initiatives Related to Healthcare Information Technology and Medical Devices. Presentation at the 55th Annual Meeting of the Factors and Ergonomics Society, Las Vegas.
23. Lazzara, E.H., Weaver, S.J., Rajj, A., Metcalf, D., Drews, F.A., Dierks, M. (2011) Mobile Technology: The Wave of the Future to Improve Healthcare? Presentation at the 55th Annual Meeting of the Factors and Ergonomics Society, Las Vegas.
24. Kramer, H.S., and Drews, F.A. (2011). Using Saliency to Guide Searches in Digital Displays. Presentation at the 55th Annual Meeting of the Factors and Ergonomics Society, Las Vegas.
25. Gerritsen, D., & Drews, F.A. (2011) A Bit of Decline in Tracking Performance: An Information Processing Approach. CSBS Research Poster presentation. Salt Lake City, UT
26. Gerritsen, D., & Drews, F.A. (2011) A Bit of Decline in Tracking Performance: An Information Processing Approach. Posters at the Hill. Salt Lake City, UT.
27. Fenech, E., Drews, F.A., Bakdash, J. X. (2010). The Effects of Acoustic Turn-by-Turn Navigation on Wayfinding. Presentation at the 54th Annual Meeting of the Factors and Ergonomics Society, San Francisco.
28. Nystrom, D., Musters, A., Drews, F.A. (2010) The Effect of Interruption Similarity in Planning Tasks. Presentation at the 54th Annual Meeting of the Factors and Ergonomics Society, San Francisco.
29. Drews, F.A., & Fawcett, D., (2010). Why Health Care Is Not Like Aviation: Control of Natural and Technical Systems. Presentation at the 54th Annual Meeting of the Factors and Ergonomics Society, San Francisco.
30. Drews, Frank, A. (2010). Adolescent decision making. Neurological bases for risk taking. Presentation at the Annual Meeting of the Society for Risk Assessment, Salt Lake City.
31. Weir, C., Drews, F., Leecaster, M., Mallin, B., Barrus, R., & Nebeker, J. (2010). Usage patterns of an electronic health record and modes of cognitive control. Poster session presented at AHRQ Annual Health IT Grantee and Contractor Meeting, Washington, DC.

32. Nebeker, J., Weir, C., Drews, F., Hellewell, J., Jones, M., & Underwood, A. (2010). Translating Contextual Control Model to use of health information technology. Poster session presented at AHRQ Annual Health IT Grantee and Contractor Meeting, Washington, DC.
33. Drews, F., Weir, C., Nebeker, J., Hollnagel, E., Mallin, B., & Barrus, R. (2010). A theoretical perspective to develop a medication management system. Poster session presented at AHRQ Annual Health IT Grantee and Contractor Meeting, Washington, DC.
34. Drews, Frank A. (2009) Decision making of wild land fire incident commanders. Presentation at the 43rd Annual Meeting of the Human Factors and Ergonomics Meeting San Antonio, TX.
35. Kramer, H. & Drews, Frank A. (2009). Structuring the puzzle: Protocol Use in Disease Outbreak Investigations. Presentation at the 43rd Annual Meeting of the Human Factors and Ergonomics Meeting San Antonio, TX.
36. Drews, F.A. (2009) Task interruptions in Health Care. Presentation at the 53rd Annual Meeting of the Human Factors and Ergonomics Society. San Antonio, TX.
37. Drews, F.A. (2009) Text messaging while simulated driving. Presentation at the 53rd Annual Meeting of the Human Factors and Ergonomics Society. San Antonio, TX.
38. Musters, A., Drews, F. A., & Otvos, S. (2009). *Interruptions: An Individual Differences Perspective*. Paper presented at the Human Factors and Ergonomics Society 53rd Annual Meeting, San Antonio, Texas.
39. Drews, F.A. (2009) Success stories of Human Factors. Presentation at the Annual Convention of the American Psychological Association. Toronto, Canada.
40. Weir, C., Nebeker, J., Drews, F.A., Kinney, A., and Pepper, G. (2009). Stereotypes and scripts: Identifying and understanding the barriers to effective collaboration for medication management. Poster presentation at the HCI International 2009 meeting. Las Vegas, NV.
41. Drews, F.A. & Lorimer, P. (2008) Development of a Patient Monitor for Critical Care. Presentation at the 52th Annual Meeting of the Human Factors and Ergonomics Society. New York, NY.
42. Drews, F., Markewitz, B, Benuzillo, JG, Wallace, CJ, Wuthrich, A, Samore, M. Tablet computer technology provides innovative measurement of ICU nursing work. CHEST 2008, Oct 25-30, Philadelphia.

43. Kramer, H.S., Snow, L.A., Samore, M., Drews, F.A. (2008, August). Decision-Making in Public Health. Presentation at the annual APA Convention, Boston, MA.
44. Snow LA, Kramer H, Drews F, Samore, M, Poster Contest (2008). Examining Front-Line Decision Making in State and Local Communicable Disease Control Programs- A qualitative analysis of semi-structured interviews, NLM/Robert Wood Johnson Foundation, Public Health Informatics Cohort Training Program, Washington, D.C., November 8, 2008.
45. Drews, F.A (2007). Are task interruptions a cause of human error in the Intensive Care Unit? Paper presented at the American Psychological Association Convention, San Francisco.
46. Drews, F.A. (2007) Task interruptions in the ICU. Proceedings of the 51th Annual Meeting of the Human Factors and Ergonomics Society. Baltimore, MD.
47. Drews, F. A., Musters, A., Markham, B. & Samore, M. H. (2007). Error Producing Conditions in the Intensive Care Unit. In: Proceedings of the 51th Annual Meeting of the Human Factors and Ergonomics Society. Baltimore, MD.
48. Solomon, J, Drews, F.A. (2007). Digital Photo Kiosk Evaluation, In: Proceedings of the 51th Annual Meeting of the Human Factors and Ergonomics Society. Baltimore, MD.
49. Drews, F.A. The frequency and impact of task interruptions on patient safety in the ICU (2006). In: Proceedings of the 16th World Congress on Ergonomics. Elsevier Publishers. Maastricht, NL
50. Drews, F.A., Johnson, K., Syroid, N., & Strayer, D. (2005). Human Factors meets anesthesia: Advanced training to improve airway management. Paper presented at 49th Annual Meeting of the Human Factors and Ergonomics Society. Orlando, FL.
51. Drews, F.A., Pasupathi, M., & Strayer, D. L. (2004). Passenger and cell-phone conversations in simulated driving. Paper presented at 48nd Annual Meeting of the Human Factors and Ergonomics Society.
52. Drews, F.A., Wachter, B., Agutter, J., Syroid, N., & Westenskow, D.R. (2004). Design and evaluation of a graphical pulmonary display for anesthesia. Paper presented at 48nd Annual Meeting of the Human Factors and Ergonomics Society.
53. Strayer, D.L., Cooper, J., & Drews, F.A.(2004).What do drivers fail to see when conversing on a cell phone? Paper presented at 48nd Annual Meeting of the Human Factors and Ergonomics Society.

54. Wachter, B., Syroid, N., Agutter, J., Drews, F.A., & Westenskow, D. (2004). Development of a Graphical Pulmonary Display. Annual Meeting of the Society of Technology in Anesthesia, Albuquerque/Santa Fe, NM.
55. Drews, F. A., Strayer, D. L., Uchino, B. N., & Smith, T. W. (2003, September). On the fast lane to road rage. Paper to be presented at Vision in Vehicles 10, Granada, Spain.
56. Drews, F. A. (2003, June). Data visualization in anesthesia. Annual Meeting of the Bioengineering Partnership NIH, Washington.
57. Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003, June). Distracted while driving. Invited presentation at the conference on Cognitive Technology: Transforming Throughout Society, Winston-Salem State University, June 14, 2003.
58. Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003, June). Inattention-blindness behind the wheel. Paper presented at the 3rd Annual Meeting of Vision Sciences Society, Sarasota, FL.
59. Strayer, D. L., & Drews, F. A. (2003, Mai). Simulation of cell-phone induced driver distraction. Paper presented at the Society for Automotive Engineering International Government/Industry Meeting, Washington, D.C.
60. Drews, F.A., Syroid, N., Agutter, J., Snell, D., Balikrishnan, S., Lingutla, S., Westenskow, D.R., Strayer, D.L. (2003, January) Validation of a just in time training using a high fidelity simulator. Annual Meeting of the Society of Technology in Anesthesia, San Diego CA.
61. Albert, R., Zhang, Y., Drews, F., Syroid, N., Agutter, J., Strayer, D., Westenskow D. (2003, January) Psychophysical scaling of a visual cardiovascular metaphor, Annual Meeting of the Society of Technology in Anesthesia, San Diego CA.
62. Drews, F.A., Syroid, N., Agutter, J., Snell, D., Balikrishnan, S., Lingutla, S., Westenskow, D.R., Strayer, D.L. (2003, January) . Evaluation of a computer-based treatment protocol for use on the international space station Annual Meeting of the Society of Technology in Anesthesia, San Diego CA.
63. Wachter, S.B., Syroid, N., Agutter, J., Drews, F.A., Westenskow D.R. (2003, January). A pulmonary metaphor for real-time patient monitoring. Annual Meeting of the Society of Technology in Anesthesia, San Diego CA.
64. Drews, F.A., Westenskow, D.R., Syroid, N., Strayer, D.L., Albert, R., Agutter, J., Bermudez, J. (2002, January). Seeing is believing? Utility ratings of monitoring technologies. Presentation at the annual Society of Technology in Anesthesia Meeting.

65. Agutter, J., Westenskow, D., Syroid, N., Drews, F., Strayer, D., Albert, R., Bermudez, J., Weinger, M. (2002, January). Evaluation of a Graphic Cardiovascular Display in a High Fidelity Simulation Environment Presentation at the annual Society of Technology in Anesthesia Meeting.
66. Syroid, N., Westenskow, D., Drews, F., Strayer, D., Albert, R., Agutter, J., Weinger, M., Loeb, R., Kern, S., Egan, T. (2002, January) Evaluation of a Graphical Display of Intravenous Drug Pharmacokinetics and Pharmacodynamics, Including Propofol-Opioid Synergism Presentation at the annual Society of Technology in Anesthesia Meeting.
67. Westenskow, D., Syroid, N., Drews, F., Mueller, A., Blike, G. (2002, January) Simulated Optovent Monitoring of Respiratory Rate during Sedation and Analgesia Presentation at the annual Society of Technology in Anesthesia Meeting.
68. Syroid, N.D., Westenskow, D.R., Drews, F.A., Agutter, J. and Weinger, M.B. (2002, October). Evaluation of a Graphical Display of Intravenous Drug Pharmacokinetics and Pharmacodynamics, Including Propofol-Opioid Synergism. American Society of Anesthesia Meeting.
69. Drews, F.A., Agutter, J., Syroid, N.S., Albert, R.W., Westenskow, D.R., & Strayer, D.L. (2001, October). Evaluating a graphical cardiovascular display for anesthesia. Paper presented at the 41st Human Factors Meeting. Minneapolis, MN.
70. Strayer, D. L., Drews, F. Albert, R. & Johnston, W. (2001). Does cell phone conversation impair driving performance? National Safety Council Official Newsletter of the Consortium for Injury and Disability Research (August/September issue) pp. 1-2.
71. Albert, R.W., Drews, F.A., Syroid, N.D., Strayer, D.L., Agutter, J., Westenskow, D.R., Loeb, R.G., Weinger, M.B. (2001, October). Facilitation of anesthetic administration during simulated surgeries with a drug display. Paper presented at the 41st Human Factors Meeting. Minneapolis, MN.
72. Westenskow, D.R., Syroid, N., Drews, F.A., Mueller, A., & Blike, G. (2001, October). Monitoring Respiratory Rate during Sedation and Analgesia. Paper presented at the annual meeting of the American Society of Anesthesiologists. New Orleans, LA.
73. Syroid, N.S.; Drews, F.A., Agutter, J., Albert, R.W., & Westenskow, D.R., (2001, October). Development and Evaluation of a Graphical Anesthesia Drug Display. Paper presented at the annual meeting of the American Society of Anesthesiologists. New Orleans, LA.
74. Agutter, J., Syroid, N.S., Drews, F.A., Westenskow, D.R., & Bermudez, J. (2001, October). Metaphor Graphic Display for Cardiovascular System. Paper presented at the

annual meeting of the American Society of Anesthesiologists. New Orleans, LA.

75. Drews, F.A., Agutter, J., Syroid, N.S., & Westenskow, D.R. (2001 September). The Role of Information Presentation in Decision-Making during Anesthesia. Paper presented at the annual meeting of the HCI International 2001, New Orleans, LA.
76. Strayer, D. L., Drews, F. A., Albert, R.W., & Johnston, W. A. (2001, August). Cell phone induced perceptual impairments during simulated driving. Paper presented at the International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design, Snowmass Village, CO.
77. Drews, F.A., Agutter, J., Syroid, N.S., & Westenskow, D.R. (2001, August). The Role of Information Presentation in Decision-Making during Anesthesia. Paper presented at the 10th International Conference on Human Computer Interaction. New Orleans, LA.
78. Drews, F.A. (2001, May). Improving Situation Awareness. Paper presented at the ACM SIGGRAPH / Eurographics Campfire on Perceptually-Adaptive Graphics. Snowbird, UT.
79. Wachter, S.B., Agutter, J., Syroid, N.D., Drews, F.A., & Westenskow, D.R (2001, March). A New Metaphor to Display Critical Pulmonary Events during Anesthesia. Poster presented at the Meeting of the American Medical Informatics Association Meeting.
80. Agutter, J., Syroid, N.D., Drews, F.A., Westenskow, D.R., Bermudez, J. C., & Strayer, D.L. (2001, January). Anesthesia monitor usability testing protocol. Paper presented at the Annual Meeting of the Society for Technology in Anesthesia. Santa Clara, CA.
81. Syroid N.D., Westenskow D.R., Agutter J., Bermudez J.C., Albert R., Drews F.A., Strayer D.L. (2001, January). Development and Evaluation of a Graphical Anesthesia Drug Display. Santa Clara, CA.
82. Kennedy, Q., Carstensen, L.L., Drews, F.A., & Pasupathi, M. (2000, October). Aging and Accuracy of Memory for Emotional Experience. Poster presented at the Gerontological Society of America, Washington, DC.
83. Drews, F.A. (2000, October). Improving Situation Awareness by use of an integrated graphic display. Talk presented at the 3rd International Conference of Engineering Psychology and Ergonomics, Edinburgh, Scotland.
84. Syroid, N.D., Westenskow, D.R., Agutter, J., Bermudez, J.C., Albert, R.W., Drews, F.A., & Strayer, D.L (2000, October). Development and Evaluation of a Graphical Anesthesia Drug Display. Poster presented at the American Society of Anesthesia, San Francisco.

85. Fischer, K. & Drews, F. (2000, January). The effect of advice on memory performance. Talk presented at the International Meeting on Risk Perception in New Technologies, Amsterdam. The Netherlands.
86. Drews, F.A. (1999, December). Context effects of judging frequencies. Invited Talk at the University of Heidelberg, Germany.
87. Drews, F.A. & Fischer, K. (1999, November). Giving advice versus knowing your options. Poster presented at the Annual Meeting of the Society of Judgment and Decision Making, Los Angeles, CA.
88. Drews, F.A. (1999, August). Strategies and accuracy of probability judgments. Talk presented at the 17th Conference on Subjective Probability, Utility, and Decision Making (SPUDM). Mannheim, Germany.
89. Drews, F.A. (1999, April). Sind inkonsistente Wahrscheinlichkeitsurteile adaptiv? [Are inconsistent judgments of subjective probabilities adaptive?] Talk presented at the 41th Meeting of the Society of German Experimental Psychology (TEAP), Leipzig, Germany.
90. Drews, F.A. (1998, September). Aufgabenschwierigkeit und subjektive Wahrscheinlichkeit [Task difficulty and judgments of subjective likelihood]. Poster presented at the annual meeting of the German Society for Psychology (DGP), Dresden, Germany.
91. Drews, F.A. (1998, May). Subjective Probability and Task Demand. Poster presented at the annual meetings of the American Psychological Society, Washington, DC.
92. Drews, F.A. (1997, August). Support for Support Theory? Poster presented at the Conference on Subjective Probability, Utility, and Decision Making (SPUDM). Leeds, England.
93. Drews, F.A. & Thonagel, U. (1995, September). Dichte und Struktur von Lebensereignissen bei jungen Rostocker und Mannheimer Erwachsenen [Density and structure of life events for young adults from Rostock and Mannheim]. Talk presented at the 12th meeting of Developmental Psychologists, Leipzig, Germany.
94. Reis, O., Thonagel, U., Drews, F.A., & Meyer-Probst, B. (1995, September). Gibt es Unterschiede zwischen mobilen und nichtmobilen jungen Ostdeutschen? Ergebnisse der Rostocker Längsschnittstudie [Are there differences between young east Germans who moved and those who did not? Results of the Rostock Longitudinal Study]. Talk presented at the 12th meeting of Developmental Psychologists, Leipzig, Germany.
95. Meyer-Probst, B., & Drews, F.A. (1994, April). Schulbewährung und spätere seelische

Gesundheit [Success in School and Psychological Health]. In G. Esser (Chair), Seelische Gesundheit und Schulerfolg, Talk presented at a Symposium conducted at the meeting of the Society of German Psychiatrists, Würzburg, Germany.

96. Drews, F.A. & Ruoff, M. (1992, April). Die Wiedergabe von Gebärden und schriftlich gebotenen Wörtern durch Gehörlose [The recall of signs and words by deaf]. Talk presented at the Annual Meeting of the Society of Experimental Psychology, Münster.

Patents

1. U.S. Patent No. 7,413,546,
2. U.S. Patent No. 10,846,956,
3. U.S. Patent No. 11,843,524,
4. U.S. Patent No. 7,654,966,
5. U.S. Patent No. 7,693,697,
6. U.S. Patent No. 7,774,060.

Professional Memberships

Human Factors and Ergonomics Society (HFES)
American Psychological Association (APA)
European Association for Decision Making (EADM).
Society of Judgment and Decision Making (SJDM).

Service

Founding Director HFmedic Human Factors Medical Device Consortium 2017-present
Chair Fellow Committee APA Div 21 2017 - present
Consulting Editor, Human Factors (2014-present)
Consulting Editor, Journal of Safety Research (2012-present)
Consulting Editor, Journal of Experimental Psychology: Applied (2016-present)
Fellow Committee APA Div 21 2015-2017
Awards Committee APA Div21, 2015
Immediate Past-President APA Division 21, 2014-2015
President APA Division 21 2013-2014
President-elect Division 21 APA 2012-2013
Consulting Editor, Journal of Experimental Psychology: Applied (2010-2012)
Member-at-large for APA Div 21 (2009-2012)
Program Chair for APA Div. 21, Annual meeting 2008 in Boston, MA

Review activities

Ad-hoc reviewer for

- Applied Cognitive Psychology
- Applied Ergonomics
- Analgesia and Anesthesia
- Current Directions in Psychological Science
- British Medical Journal of Patient Safety
- Human Factors
- IEEE Transactions on Intelligent Transportation Systems
- Journal of Applied Social Psychology
- Journal of Experimental Psychology: General
- Journal of Experimental Psychology: Applied
- Journal of Safety Research
- Psychological Science
- Transportation Research Part F: Traffic Psychology and Behavior

Reviewer for the Suisse National Science Foundation (2013, 2016)

Reviewer for French National Science Foundation (2012)

Reviewer for AHRQ Study section for HIT education program (2010)

Reviewer for NIH study section on Behavioral Medicine Interventions and Outcomes (2008, 2009)

Committee work – University of Utah

VPR Limited Submission Committee (2018-present)

Student Behavior Committee (2017-present)

CSBS Research Advisory Committee (2016-present)

Member: Safety and Accident Review Committee USHPA (2014 – 2016)

Member: Institutional Review Board at the University of Utah, Panel 2 (2010 - 2017).
Member: Graduate Committee at the Department of Psychology (2009-2015)
Chair of the Technology Committee at the Department of Psychology (2009-2013)
Member of the Graduate Council Review for School of Computing University of Utah (2009)
Chair of Search for Applied Cognitive Psychology Position at the Department of Psychology University of Utah (2008)
Development of a Human Factors / Engineering Psychology Certificate – Director of the certificate program (2004 – 2017)
Member: Graduate Committee at the Department of Psychology (2007-2008)
Chair: Human Subjects Committee at the Department of Psychology (2004-2007)
Member: Human Subjects Committee at the Department of Psychology (2003-2004)

Continuing Education

Surface mining safety (2018) MSHA (30hr course to receive Surface Mining Certification)
Meetings with Thomas Cova on Graduate Training methods (2018-present)
Performance management and corrective action, University of Utah -2018
Giving and receiving feedback, University of Utah (2018)
Relationship management, University of Utah (2018)
Optimizing the practice of mentoring, University of Minnesota (2018)

Mentoring activities

Selected Career Award committees

1. Lindsey Croft, PhD (K12 Career Award Committee, Member) Current
2. Barbara Jones, MD ((K12 Career Award Committee, Member)
3. Elli Hirshberg MD (K12 Career Award Committee, Member)
4. Jonathan Bagdash, PhD (Research Career Award Committee, Mentor)
5. Jennifer Wagner, PhD (Research Career Award Committee, Mentor)

Former Post-Docs, PhD, and masters students with current employment information

1. Jonathan Zadra, Post-Doc, Director of Data Science Sorenson Center, David Eccles School of Business, University of Utah.
2. Tessa Sommer, MA; Intermountain Healthcare.
3. Kelly Eatchel, MA; Consumer Products.
4. Jonathan Bakdash, Post-Doc, US Army Research Laboratory South at the University of Texas Dallas.
5. Heidi Kramer, PhD; Research Professor, Department of Biomedical Informatics University of Utah.
6. Adrian Musters, MA; Human Factors Engineer, L3 Technologies.
7. Paul Picciano, PhD; MIT Lincoln Laboratory.

Human Factors Certificate Students

In addition to training masters and PhD students, my focus from 2002-2017 was on the development and directing of the award winning Human Factors Certificate program at the University of Utah. In this function, I mentored more than 75 undergraduate students to receive the Human Factors certificate. Many of these students were admitted to other programs where they received advanced degrees in Psychology, Human Factors or related fields of research. Some of this student work was published in peer-reviewed journals or proceedings, and presented at national and international conferences.

Selected Student Committees

1. James Newman, PhD. 2016 – present)
2. Lauren Williams, MA (2016 – present)
3. Tessa Sommer, MA (2014 - 2017)
4. Kelly Eatchel, MA (2014 – 2017)
5. Teresa Taft, PhD. (2015 – 2017)
6. Laurel Legenza, PharmD (2014 – 2016)
7. Heidi Kramer, PhD. (2010 - 2014)

8. Adrian Musters, PhD (2010 - 2011)
9. Joseph Dalto, PhD. (2009 – 2016)
10. Laverne Snow PhD. (2009 - 2014)
11. Jaqueline Blaz, PhD. (2011-2014)
12. Heidi Kramer, MA (2008-2010)
13. Adrian Musters, MA (2008-2010)
14. Paul Picciano PhD. (2006)
15. Alexa Doig PhD. (2006)
16. Davyn Osher PhD. (2006)
17. David Vavdrey PhD. (2007)
18. Ben Kunz, MA (2006)
19. Joel Cooper, MA (2005-2008)
20. David Fawcett, MA (2005-2007)
21. Rick Warne, MA, PhD (2005-2007)