

PHILIP TED KORTUM

RICE UNIVERSITY, SEWALL HALL 488, DEPARTMENT OF PSYCHOLOGY MS-25
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EDUCATION

- Ph.D. in Biomedical Engineering 1994
Dissertation: Light Adaptation Mechanisms in Spatial Vision
Advisor: Wilson S. Geisler (Member, National Academy of Sciences)
University of Texas at Austin, Austin, TX
- Master of Science in Industrial Engineering 1990
Concentration in Human Factors
Northeastern University, Boston, MA
- Bachelor of Science in Industrial Engineering 1985
University of Nebraska, Lincoln, NE

PROFESSIONAL EXPERIENCE

2005 - Present Rice University. Houston, TX
Associate Professor, Department of Psychology, 2017-present
Assistant Professor, Department of Psychology, 2012-2017
Professor in the Practice, Faculty Fellow, Department of Psychology, 2005-2012

1996 - 2005 SBC Laboratories. Austin, TX
Lead Member of Technical Staff, Human Factors Engineering, 2001-2005
Principal Member of Technical Staff, Human Factors Engineering, 2000-2001
Senior Member of Technical Staff, Human Factors Engineering, 1999-2000
Member of Technical Staff, Human Factors Engineering, 1996-1999

Responsible for conducting applied Human Factors research and development in all areas of telecommunications. Key areas of work have included:

Development of consumer usable broadband access systems

- Designed and developed 5 major releases of the DSL Consumer Self-Installation Kit, including software interface, instructional material, packaging, and physical hardware design. User success rates rose from 10% to >95% during this time. Kit progressed from over 150 pages of instructional material to an interactive computer-based instruction method. Ran human factors studies on over 700 users performing DSL installations
- Kit was awarded the 2001 International Engineering Consortium InfoVision Award
- Designed and developed the second generation DSL Gateway Self-Installation Kit
- Led the HF development effort on a consumer PC that had integrated DSL capability

- Participated in the development of SBC's two broadband entertainment offerings (HomeZone Satellite+DSL and LightSpeed Fiber-to-the-node/fiber-to-the-home, now branded as Uverse). Efforts included human factors design of the remote controls and the set-top hardware, specification of the user interaction models and design of the complete graphical user interface for both of these broadband systems

Conducting applied research to support medium-and-near term business goals

- Conducted ecologically-valid quality assessments of near-real-time video delivery to determine optimum DSL bandwidth requirements
- Conducted studies into user perceptions of Voice over IP. Conducted laboratory ITU P.800 studies, live field trial studies on a national network and longitudinal studies of CPE-based VoIP solutions
- Conducted research into users' perceptions of internet use under varying levels of bandwidth in an effort to understand DSL bandwidth requirements
- Conducted research into the dimensions along which users judged their overall web-surfing experience, as a function of the attributes of web page design and delivery
- Conducted collaborative research with the University of Texas Graduate School of Information (Dr. Sanda Erdelez) into the serendipitous discovery of information while using the internet
- Conducted collaborative research with the University of Texas Graduate School of Information (Dr. Randolph Bias) into user perception of wait time while on hold when using telephone menu systems
- Initiated and coordinated a decade-long longitudinal study of the usability of SBC products and services through the global administration of a usability survey instrument
- Conducted longitudinal studies of user behavior while using SBC's first consumer internet portal, developing novel techniques for the visualization of the data
- Performed testing of numerous non-DSL broadband technologies to understand human perceptions of the various connection technologies
- Mentored graduate student (Rebecca Grier, University of Cincinnati) doctoral research into visual attention mechanisms and web page design. Research involved extensive use of an ERICA eye-tracking system for data collection

Design, development and analysis of Web and Internet applications

- Led the Human Factors effort in the design and development of the global information architecture for the first generation of SBC's corporate and affiliate web presence (SBC, Southwestern Bell, Pacific Bell). Efforts included needs analysis, categorization studies, prototyping and extensive lab testing
- Designed and developed SBC's first consumer internet portal
- Performed multiple projects to insure compliance with universal design goals and government requirements (Section 508 of the Workforce Rehabilitation Act and Section 255 of the 1996 Telecommunications Act)
- Led the Human Factors effort in the design and development of SBC's first Ecommerce offering, the DSL self-ordering tool. Tool allowed users to qualify their location and computer and then order and configure DSL
- Performed testing of numerous web-based hardware and software solutions to insure compliance with SBC Usability Standards. Performed design and development work with vendors to improve these products. Product categories evaluated include parental controls, virus protection, PC backup, content filtering, electronic yellow pages, advertising technologies, email appliances and web appliances
- Author of SBC's Web Design Guidelines

1994 - 1996 **University of Texas Center for Vision and Image Sciences.** Austin, TX
Post-Doctoral Research Fellow

- Investigated the application of human vision capabilities and perceptions in the development of video display technologies. The research resulted in the development of a patented system for the display of highly compressed visual images in a perceptually loss-less fashion. Research involved the use of a Fourward Technologies (SRI) dual purkinje eye tracking system

1985 - 1990 **Raytheon Company.** Waltham, MA
Manager, Radar and Ship Systems Industrial Engineering, 1988-1990
Lead Industrial Engineer, Standard Missile Program, 1987-1988
Associate Industrial Engineer, 1985-1987

- Provided Technical and Managerial leadership for 16 engineers and graphic illustrators in the areas of manufacturing, human factors, and safety engineering
- Created paper and computer-based assembly instructional material for the manufacture of highly complex missile and radar systems
- Improved effectiveness, efficiency and safety of manufacturing through the development and implementation of user-centered tools and processes.
- As manager, had responsibility for budgeting and scheduling of existing industrial engineering work and the development of accurate estimates for proposed work

AWARDS AND HONORS

- Fellow, National Academy of Inventors, 2017
- Cletis Booher Service Award, Human Factors and Ergonomics Society Houston Chapter, 2016
- Sarah A. Burnett Superior Teaching Award, 2015
- Sophia Meyer Farb Phi Beta Kappa Award for Teaching, 2014
- Led the Human Factors design for the DSL self-installation kit, which was awarded the International Engineering Consortium's Infovision Award, 2001
- SBC Laboratories Cabinet Award, Design of DSL self-installation kit, 2001
- SBC Network Planning and Engineering ROSS award for performance excellence, 2001
- SBC Laboratories Cabinet Award, Design of SBC E-channel portals, 2000
- SBC Laboratories Human Factors Outstanding Achievement Award, 2000
- SBC Laboratories Cabinet Award, Design of SBC consumer web portals, 1998
- SBC Laboratories Cabinet Award, Design of SBC's Internet offerings, 1996
- Alpha Pi Mu, National Industrial Engineering Honorary, Past President, Nebraska Chapter
- Psi Chi, National Psychology Honorary
- Eagle Scout, 1978

SERVICE

- Editor, User's Guides to Human Factors and Ergonomic Methods Series, 2017, 2018
- Editorial Board, Journal of Usability Studies, 2014, 2015, 2016, 2017, 2018
- Editorial Board, Journal of Election Technology and Systems, 2013, 2014, 2015
- President, Houston Chapter, Human Factors and Ergonomics Society, 2007-2008, 2017-2018
- Human Factors and Ergonomics Society Paul M. Fitts Education Award Committee, 2016, 2017, 2018
- Rice University School of Social Sciences Faculty Advisory Committee, 2013, 2014, 2015
- Rice University Social Science School Course Review Committee, 2017
- Rice University, Co-Director, HCI/HF Professional Masters Program, 2018
- Rice University, Chair, Psychology Undergraduate Committee, 2017, 2018
- Rice University Faculty Conflicts Committee, 2013, 2014, 2015, 2016, 2017, 2018
- Travis County Texas Elections Division STAR Voting System Design Team, 2012, 2013, 2014, 2015, 2016, 2017
- Rice University Committee on Teaching, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018
- Human Factors and Ergonomics Society Education and Training Committee, 2014, 2015, 2016, 2017
- Rice University Faculty Owls Days Instructor, 2015
- Rice University Faculty Senate Executive Committee, 2009-2010
- Rice University Psi Chi International Psychology Honor Society Faculty Advisor, 2009, 2010
- Rice University Faculty Senate, 2005, 2006, 2007, 2008, 2009, 2010
- Rice University Childcare Provider Committee, 2007, 2008, 2009, 2010, 2011, 2012, 2013
- Rice University Admissions Office Faculty Phone-a-Thon, 2010
- Rice University Owl Days Speaker, 2010, 2013
- Vision Days Panel Speaker, 2013, 2015
- Rice University Psychology Graduate Committee, 2015, 2016
- Rice University Gardner Award Committee (Best Social Science Dissertation), 2015
- Rice University Psychology Undergraduate Research Pool Administrator, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018
- Rice University Psychology Undergraduate Committee, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018
- Rice University Faculty Senate Faculty Evaluations Committee, 2006-2007
- Rice University Faculty Senate Nominations and Elections Committee, 2005-2006, 2006-2007
- Human Factors and Ergonomics Society Ely Committee (best HF paper), 2011, 2012, 2013, 2015
- Director (1), Houston Chapter, Human Factors and Ergonomics Society, 2010, 2011, 2012, 2013, 2014, 2015
- Chair, Human Factors and Ergonomics Society Communications Technical Group, 2004, 2005, 2006, 2007, 2008
- Executive Committee, Texas Regional Human Factors and Ergonomics Society Conference, 2008, 2011, 2014, 2017

- Executive Committee, Houston Human Factors and Ergonomics Society Conference, 2006, 2007, 2009, 2010, 2012, 2013, 2015, 2018
- Program Chair, Houston Human Factors and Ergonomics Society Conference, 2010, 2012, 2013
- Developed innovative new session format for Human Factors and Ergonomics Society Conference called Posters with Fellows. Co-chair, 2013, 2014, 2015, 2016, 2017, 2018
- Conference Co-Chair, Houston Human Factors and Ergonomics Society, 2006
- Conference Co-Chair, 6th Conference on Human Factors and the Web, 2000
- Member, Rice 360 Institute for Global Health
- Member, Human Factors and Ergonomic Society (HFES)
- Member, Southwestern Psychological Association (SWPA)
- Member, Association for Computing Machinery SIGCHI
- Member, Usability Professionals Association (UPA)
- Ad Hoc Reviewer for: National Academies of Sciences, Engineering, and Medicine; Human-Computer Interaction; Applied Cognitive Psychology; Human Factors; Behavior Research Methods, Instruments and Computers; Journal of Usability Studies; Interacting with Computers; International Journal of Mobile HCI; International Journal of Human Computer Interaction; Engineering Studies; BMC Medical Informatics and Decision Making MobiSys; Journal of Medical Internet Research; Vaccine; Human Factors and Ergonomics Society Perception and Performance TG; Human Factors and Ergonomics Society Communications TG; HFES Internet TG; HFES Health Care TG; Human Factors and the Web; Association for Computing Machinery Computer-Human Interaction SIG; Wiley Publishing; Sage Publications; Cengage Publishers; NASA Human Research Program; Morgan-Kaufmann; McGraw-Hill.

GRANTS AND FUNDING

Rice University, Quality Enhancement Plan. Scaffolding Experiential Inquiry and Research into the Curriculum Phase II. Co-Investigator. \$27,500. 2018-2019.

Ford Motor Company University Research Program. Measuring Customers Trust with Autonomous Vehicles. Co-Investigator. \$100,000. 2018-2019.

Rice University, Inter-Disciplinary Excellence Award (IDEA). Toward Experience-Guided Design of Effective Assistive Devices. Co-Investigator. \$75,000. 2017-2018.

Rice University, Quality Enhancement Plan. Scaffolding Experiential Inquiry and Research into the Curriculum Phase 1 Planning Grant. Co-Investigator. \$10,000. 2017-2018.

National Science Foundation CNS-1409401. Voting Systems Architectures for Security and Usability. Co-PI. \$1,215,958. 2014-2018.

Cisco Systems – Usability of mobile applications. Research support funding of \$10,000. 2012-2013.

National Institute of Standards and Technology #60NANB12D249. Usability of e2e Voting Systems. PI. \$198,296. 2012-2014.

National Institute of Standards and Technology (through IDox). Voting Systems: Analysis of Auditory Ballot Interfaces. Co-PI. \$82,000. 2011-2013.

National Science Foundation #CNS-1049723. Usability of Voting Systems. PI. \$170,000. 2010-2013.

National Science Foundation #HCC-0803556. Understanding and Optimizing Wireless Mobile Computing for Underserved Urban Communities. Co-PI. \$569,000 total funding. 2008-2011.

ExxonMobil – Software Ergonomics and Usability. PI. \$39,700. 2009-2011.

United States Cancer Pain Relief Committee (through UTMDACC) Development of an Intelligent Monitoring System for Cancer Pain Using Bayesian Statistical Models. PI. \$62,361. 2009-2011.

ExxonMobil – Software Ergonomics. PI. \$33,000. 2008-2009.

Brown Teaching Grant – Human Factors of Non-Traditional Interfaces. \$2699. 2008.

Howard Hughes Medical Institute, Undergraduate Science Education – Beyond Traditional Borders. Collaborator. Grant total \$2,198,923. Collaboration total \$317,323. 2005-2009.

COURSES TAUGHT

- Introduction to Human Factors and Ergonomics Design PSYC 370: Fall 2005, Fall 2006, Fall 2007, Fall 2008, Fall 2009, Fall 2010, Fall 2011, Fall 2012, Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017
- Methods in Human Computer Interaction PSYC 409/609: Spring 2007, Fall 2008, Spring 2011, Fall 2012, Spring 2014, Fall 2015, Fall 2017
- Human Factors of Non-Traditional Interfaces PSYC 462/662: Fall 2007, Spring 2010, Spring 2013, Fall 2014, Fall 2016
- Medical Human Factors PSYC 463/663: Spring 2009, Spring 2012, Spring 2014, Spring 2016, Spring 2018
- Usability Assessment PSYC 464/664: Spring 2015, Spring 2017
- Statistical Methods for Psychology PSYC 339: Spring 2006, Fall 2006, Spring 2008, Fall 2009, Fall 2010, Fall 2011
- Seminar in Human Computer Interaction PSYC 531: Spring 2007, Spring 2008, Fall 2009, Fall 2010, Spring 2012, Fall 2013, Fall 2014, Fall 2015, Spring 2017
- Supervised Research PSYC 485/CSCI 390 (122 students) Includes 2 CogSci Honor students, 5 SSURE winners, and 1 Brelsford Award Winner
- Rice Century Scholar Advisor (2 students)
- Graduate student committees served on: 30
- Graduate student committees chaired: 10

PUBLICATIONS

Grier, R. A., Allanson, K., Bangor, A., Kortum, P., Acemyan, C.Z., & Oswald, F.L. (in press). Using the SUS: Lessons Learned & Forward looking Research. Submitted to *Proceedings of the Human Factors and Ergonomics Society*, Santa Monica, CA: Human Factors and Ergonomics Society.

Gao, M. and Kortum, P. (in press). Psychometric evaluation of the Usefulness, Satisfaction, and Ease-of-use questionnaire. Submitted to *Proceedings of the Human Factors and Ergonomics Society*, Santa Monica, CA: Human Factors and Ergonomics Society.

Acemyan, C.Z. and Kortum, P. (in press). 2FA Might Be Secure, But It's Not Usable: A Summative Usability Assessment of Google's Two-factor Authentication (2FA) Methods. Submitted to *Proceedings of the Human Factors and Ergonomics Society*, Santa Monica, CA: Human Factors and Ergonomics Society.

Robertson, I. and Kortum, P. (in press). Extraneous Factors in Usability Testing: Evidence of Decision Fatigue During Sequential Usability Judgments. Submitted to *Proceedings of the Human Factors and Ergonomics Society*, Santa Monica, CA: Human Factors and Ergonomics Society.

Kortum, P. and Acemyan, C.Z. (in press). The impact of geographic location on the subjective assessment of system usability. *International Journal of Human-Computer Interaction*.

Acemyan, C.Z. and Kortum, P. (2018). Does the Type of Presentation Medium Impact Assessments of the Built Environment? An Examination of Environmental Usability Ratings Across Three Modes of Presentation. *Journal of Environmental Psychology*, 56, 30-35.

Acemyan, C.Z. and Kortum, P. (2017). Assessing the usability of the Hart InterCivic eSlate during the 2016 presidential election. *Proceedings of the Human Factors and Ergonomics Society*, 61(1), pp. 1404-1408. Santa Monica, CA: Human Factors and Ergonomics Society.

Robertson, I. and Kortum, P. (2017). The Effect of mental fatigue on subjective usability scores. *Proceedings of the Human Factors and Ergonomics Society*, 61(1), pp. 1461-1465. Santa Monica, CA: Human Factors and Ergonomics Society.

Gao, M. and Kortum, P. (2017). Measuring the usability of home healthcare devices using retrospective measures. *Proceedings of the Human Factors and Ergonomics Society*, 61(1), pp. 1281-1285.. Santa Monica, CA: Human Factors and Ergonomics Society.

Kortum, P. and Oswald, F. (2017). The impact of personality on the subjective assessment of usability. *International Journal of Human-Computer Interaction*, 34(2), 177-186.

Kortum, P. (2017). Has human factors and usability lost its mojo? *Journal of Usability Studies*, 12(2), 50-55.

Holmes, D. & Kortum, P. (2017). Alternative review screen design for electronic voting systems. *International Journal of Technology and Human Interaction*, 13(1), 82-99.

Bell, S., Benaloh, J., Byrne, M.D., DeBeauvoir, D., Eakin, B., Fisher, G., Kortum, P., McBurnett, N., Montoya, J., Parker, M. and Pereira, O., (2016). STAR-Vote: A Secure, Transparent, Auditable and Reliable Voting System. In Feng Hao and Peter Y. A. Ryan (Eds.) *Real-World Electronic Voting: Design, Analysis and Deployment* (pp. 375-404). Boca Raton, FL: CRC Press.

Holmes, D. & Kortum, P. (2016). Vote-by-Phone: An Investigation of a Usable and Accessible IVR Voting System. *Journal of Accessibility and Design for All*, 6(2), 102-124.

Kortum, P. & Byrne, M.D. (2016). The importance of psychological science in a voter's ability to cast a vote. *Current Directions in Psychological Science*, 25(6), 467-473.

Kortum, P. (2016). *Usability Assessment: How to measure the usability of products, services, and systems*. Santa Monica, CA: HFES Press.

Kortum, P. and Acemyan, C.Z. (2016). The Relationship Between User Mouse-based Performance and Subjective Usability Assessments. *Proceedings of the Human Factors and Ergonomics Society*, 60(1), pp. 1174-1178. Santa Monica, CA: Human Factors and Ergonomics Society.

Acemyan, C.Z. & Kortum, P. (2016). Can Voters Tell When Their Voting Method Is Secure? Effects of End-to-end Security and Security Theater on Perceptions of Voting System Security. *Proceedings of the Human Factors and Ergonomics Society*, 60(1), pp. 1219-1223. Santa Monica, CA: Human Factors and Ergonomics Society.

Peres, S. C., Kortum, P., Akladios, M., & Muddimer, A. (2016). Developing and validating a self-report assessment tool for software biomechanics. *WORK: A Journal of Prevention, Assessment and Rehabilitation*, 53, 193–204.

Gao, M. & Kortum, P. (2015). The relationship between subjective and objective usability metrics for home healthcare devices. *Proceedings of the Human Factors and Ergonomics Society*, 59(1), pp. 1001-1005. Santa Monica, CA: Human Factors and Ergonomics Society.

Acemyan, C. Z., & Kortum, P. (2015). Does the polling station environment matter? The relation between voting machine layouts within polling stations and anticipated system usability. *Proceedings of the Human Factors and Ergonomics Society*, 59(1), pp. 1066-1070. Santa Monica, CA: Human Factors and Ergonomics Society.

Belton, M. G., Kortum, P., & Acemyan, C. Z. (2015). How hard can it be to place a ballot into a ballot box? Usability of ballot boxes in tamper-resistant voting systems. *Journal of Usability Studies*, 10(4), 129-139.

Rahmati, A., Shepard, C., Tossell, C., Zhong, L., & Kortum, P. (2015). Practical context awareness: Measuring and utilizing the context dependency of mobile usage. *IEEE Transactions on Mobile Computing*, 14(9), 1932-1946.

Acemyan, C. Z., Kortum, P., Byrne, M. D., & Wallach, D. S. (2015). From error to error: Why voters could not cast a ballot and verify their vote with Helios, Prêt à Voter, and Scantegrity II. *Journal of Election Technology and Systems*, 3(2), 1-25.

Kortum, P., & Sorber, M. (2015). Measuring the usability of mobile applications for phones and tablets. *International Journal of Human-Computer Interaction*, 31, 518-529.

Zemla, J. C., Tossell, C. C., Kortum, P., & Byrne, M. D. (2015). A Bayesian approach to predicting website revisitation on mobile phones. *International Journal of Human-Computer Studies*, 83, 43-50.

Acemyan, C. Z., Kortum, P., Byrne, M. D., & Wallach, D. S. (2015). Users' mental models for three end-to-end voting systems: Helios, Prêt à Voter, and Scantegrity II. *Human Aspects of Information Security, Privacy, and Trust - Lecture Notes in Computer Science*, 9190, 463-474.

- Nelson, R. A., Tossell, C. C., & Kortum, P. (2015). Emoticon use in mobile communications :-). In Z. Yan (Ed.), *Encyclopedia of Mobile Phone Behavior*, pp 1-11. Hershey, PA: IGI Global.
- Tossell, C. C., Kortum, P., Shepard, C. W., Rahmati, A., & Zhong, L. (2015). You can lead a horse to water but you cannot make him learn: Smartphone use in higher education. *British Journal of Educational Technology*, 46(4), 713-724.
- Kortum, P., & Peres, S. C. (2015). Evaluation of home health care devices: Remote usability assessment. *JMIR Human Factors*, 2(1), e10.
- Tossell, C. C., Kortum, P., Shepard, C. W., Rahmati, A., & Zhong, L. (2015). Exploring smartphone addiction: Insights from long-term telemetric behavioral measures. *International Journal of Interactive Mobile Technologies*, 9(2), 37-43.
- Acemyan, C. Z., & Kortum, P. (2014). To verify or not to verify, that is the question: Voters' use and expectations of voting verification methods. *Proceedings of the Human Factors and Ergonomics Society*, 58(1), pp. 1295-1299. Santa Monica, CA: Human Factors and Ergonomics Society.
- Kortum, P., Hebl, M. R., & Oswald, F. L. (2014). Applying usability measures to assess textbooks. *Proceedings of the Human Factors and Ergonomics Society*, 58(1), pp. 1346-1350. Santa Monica, CA: Human Factors and Ergonomics Society.
- Callen, A., & Kortum, P. (2014). The relationship between task-level and test-level System Usability Scale scores. *Proceedings of the Human Factors and Ergonomics Society*, 58(1), pp. 1139-1143. Santa Monica, CA: Human Factors and Ergonomics Society.
- Campbell, B., Tossell, C. C., Byrne, M. D., & Kortum, P. (2014). Towards more usable electronic voting: Testing the usability of a smartphone voting system. *Human Factors*, 56(5), 973-985.
- Acemyan, C. Z., Kortum, P., Byrne, M. D., & Wallach, D. (2014). Usability of voter verifiable end-to-end voting systems: Baseline data for Helios, Prêt à Voter, and Scantegrity II. *Journal of Election Technology and Systems*, 2(3), 26-56.
- Kortum, P., & Peres, S. C. (2014). The relationship between system effectiveness and subjective usability scores using the System Usability Scale. *International Journal of Human-Computer Interaction*, 30(7), 575-584.
- Rahmati, A., Shepard, C., Tossell, C., Zhong, L., Kortum, P., Nicoara, A., and Singh, J. (2014). Seamless TCP migration on smartphones without network support. *IEEE Transactions on Mobile Computing*, 13(3), 678-692
- Kortum, P. (2013). Evaluating the usability of multimedia, mobile and network-based products. *International Journal of Wireless Networks and Broadband Technologies*, 2(3), 10-17.
- Kortum, P., & Acemyan, C. Z. (2013). How low can you go? Is the System Usability Scale range restricted? *Journal of Usability Studies*, 9(1), 14-24.
- Bias, R. G., Kortum, P., Sauro, J., & Gillan, D. (2013). Clothing the naked Emperor: The unfulfilled promise of the science of usability. *Interactions*, November+December 2013, 72-77.

Glaser, D., Jain, S., & Kortum, P. (2013). Benefits of a physician-facing tablet presentation of patient symptom data: Comparing paper and electronic formats. *BMC Medical Informatics and Decision Making*, 13(99), 1-8.

Kortum, P., & Johnson, M. (2013). The relationship between levels of user experience with a product and perceived system usability. *Proceedings of the Human Factors and Ergonomics Society*, 57(1), pp. 197-201. Santa Monica, CA: Human Factors and Ergonomics Society.

Grier, R. A., Bangor, A., Kortum, P., and Peres, S. C. (2013). The System Usability Scale beyond standard usability testing. *Proceedings of the Human Factors and Ergonomics Society*, 57(1), pp. 187-191. Santa Monica, CA: Human Factors and Ergonomics Society.

Holmes, D., & Kortum, P. (2013). Vote-by-phone: Usability evaluation of an IVR voting system. *Proceedings of the Human Factors and Ergonomics Society*, 57(1), pp. 1308-1312. Santa Monica, CA: Human Factors and Ergonomics Society.

Acemyan, C. Z., Kortum, P., & Payne, D. (2013). Do voters really fail to detect changes to their ballots? An investigation of voter error detection. *Proceedings of the Human Factors and Ergonomics Society*, 57(1), pp. 1405-1409. Santa Monica, CA: Human Factors and Ergonomics Society.

Evans, R., & Kortum, P. (2013). Increasing accuracy of video quality ratings through direction of attention and training. *Applied Cognitive Psychology*, 27(5), 600-610.

Bell, S., Benaloh, J., Byrne, M., DeBeauvoir, D., Eakin, B., Fisher, G., Kortum, P., McBurnett, N., Montoya, J., Parker, M., Pereira, O., Stark, P. B., Wallach, D. S., & Winn, M. (2013). STAR-Vote: A Secure, Transparent, Auditable, and Reliable Voting System. *Journal of Election Technology and Systems*, 1(1), 18-37.

Kortum, P., & Bangor, A. (2013). Usability ratings for everyday products measured with the System Usability Scale (SUS). *International Journal of Human Computer Interaction*, 29(2), 67-76.

Evans, R., & Kortum, P. (2012). He says, she says. Does voice affect usability? *Proceedings of the Human Factors and Ergonomics Society*, 56(1), pp. 1486-1490. Santa Monica, CA: Human Factors and Ergonomics Society.

Kortum, P., & Scharff, L. V. S. (2012). Where's my webpage? How aesthetic changes affect user performance when critical navigation links change. *Proceedings of the Human Factors and Ergonomics Society*, 56(1), pp. 1599-1603. Santa Monica, CA: Human Factors and Ergonomics Society.

Acemyan, C. Z., & Kortum, P. (2012). The relationship between trust and usability in systems. *Proceedings of the Human Factors and Ergonomics Society*, 56(1), pp. 1842-1846. Santa Monica, CA: Human Factors and Ergonomics Society.

Rahmati, A., Shepard, C., Tossell, C., Zhong, L., & Kortum, P. (2012). Exploring iPhone usage: The influence of socioeconomic differences on smartphone adoption, usage and usability. *ACM SIGCHI's International Conference on Human-Computer Interaction with Mobile Devices and Services, MobileHCI 2012*, pp. 11-20.

Tossell, C. C., Kortum, P., Shepard, C. W., Rahmati, A., & Zhong, L. (2012). An empirical analysis of smartphone personalization: Measurement and user variability. *Behaviour and Information Technology*, 31(10), 995-1010.

Tossell, C. C., Kortum, P., Shepard, C. W., Rahmati, A., & Zhong, L. (2012). Getting real: A naturalistic methodology for using smartphones to collect mediated communications. *Advances in Human Computer Interaction*, 2012 (815972), 1-10.

Tossell, C. C., Kortum, P., Rahmati, A., Shepard, C. W., & Zhong, L. (2012). Characterizing web use on smartphones. *Human Factors in Computing Systems: Proceedings of CHI 2012* (pp. 2769-2778). New York, NY: Association for Computing Machinery.

Tossell, C. C., Kortum, P., Shepard, C. W., Rahmati, A., Barg-Walkow, L., & Zhong, L. (2012). A longitudinal study of emoticon use in text messaging from smartphones. *Computers in Human Behavior*, 28, 659-663.

Peres, S. C., Kortum, P., Muddimer, A., Akladios, M., & Napit, S. (2011). Geophysical software ergonomics: Methods for effective evaluation. *Proceedings of the Society of Exploration Geophysicists SEG11* (pp. 2044-2048). Tulsa, OK: Society of Exploration Geophysicists.

Kortum, P., & Scharff, L. V. F. (2011). The impact of web site familiarity on user performance when critical navigation links change. *Proceedings of the Human Factors and Ergonomics Society*, 55(1), pp. 1308-1312. Santa Monica, CA: Human Factors and Ergonomics Society.

Garcia, A., Peres, S. C., Ritchey, P., Kortum, P., & Stallmann, K. (2011). Auditory progress bars: Estimations of time remaining. *Proceedings of the Human Factors and Ergonomics Society*, 55(1), pp. 1338-1341. Santa Monica, CA: Human Factors and Ergonomics Society.

Campbell, B., Tossell, C. C., Byrne, M. D., & Kortum, P. (2011). Voting on a smartphone: Evaluating the usability of an optimized voting system for handheld mobile devices. *Proceedings of the Human Factors and Ergonomics Society*, 55(1), pp. 1100-1104. Santa Monica, CA: Human Factors and Ergonomics Society.

Tossell, C. C., Jardina, J. R., Kortum, P., Peres, S. C., Shepard, C. W., Rahmati, A., & Zhong, L. (2011). Effects of socioeconomic diversity on iPod Touch device usage in real-world environments. *Proceedings of the Human Factors and Ergonomics Society*, 55(1), pp. 1293-1297. Santa Monica, CA: Human Factors and Ergonomics Society.

Kortum, P., Peres, S. C., & Stallmann, K. (2011). Extensible auditory progress bar design: Performance and aesthetics. *International Journal of Human-Computer Interaction*, 27(9), 864-884.

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