## Bibliography

- Accot, J., Zhai, S., 1997. Beyond Fitts' law: models for trajectory-based HCI tasks. In: Proceedings of ACM CHI 1997 Conference on Human Factors in Computing Systems, pp. 295–302.
- Alvarez, G., Cavanagh, P., 2004. The capacity of visual short-term memory is set both by visual information load and by number of objects. Psychol. Sci. 15 (2), 106–111.
- Angier, N., April 1, 2008. Blind to change, even as it stares us in the face. New York Times. Retrieved from: www.nytimes.com/2008/04/01/science/01angi.html.
- Arons, B., 1992. A review of the cocktail party effect. J. Am. Voice I/O Soc. 12, 35-50.
- Apple Computer, 2020a. Human Interface Guidelines: MacOS Design Themes. Retrieved from: https://developer.apple.com/design/human-interface-guidelines/macos/overview/themes/.
- Apple Computer, 2020b. Human Interface Guidelines: iOS Design Themes. Retrieved from: https://developer.apple.com/design/human-interface-guidelines/ios/overview/themes/.
- Baddeley, A., 2012. Working memory: theories, models, and controversies. Annu. Rev. Psychol. 63, 1-29.
- Barber, R., Lucas, H., 1983. System response time, operator productivity, and job satisfaction. Commun. ACM. 26 (11), 972-986.
- Bays, P.M., Husain, M., 2008. Dynamic shifts of limited working memory resources in human vision. Science 321, 851-854.
- Beyer, H., Holtzblatt, K., 1997. Contextual Design: A Customer-Centered Approach to Systems Design. Morgan Kaufmann, San Francisco, CA.
- Bilger, B., April 25, 2011. The possibilian: David Eagleman and the mysteries of the brain. New Yorker. Retrieved from: www.newyorker.com/reporting/2011/04/25/110425fa\_fact\_bilger.
- Blauer, T., 2007. On the startle/flinch response. Blauer Tactical Intro to the Spear System: Flinching and the First Two Seconds of an Ambush YouTube Video Retrieved from: www.youtube.com/wat ch?v5jk Ai8qT2s4.
- Borkin, M.A., Vo, A.A., Bylinskii, Z., Isola, P., Sunkavalli, S., Oliva, A., Pfister, H., December 2013. What makes a visualization memorable? IEEETrans. Visual. Comput. Graph. 19 (12), 2306–2315. Retrieved from: http://www.ncbi.nlm.nih.gov/pubmed/2405179710.1109/TVCG.2013.234.
- Boulton, D., 2009. Cognitive science: the conceptual components of reading and what reading does for the mind. In: Interview of Dr. Keith Stanovich, Children of the Code Website Retrieved from: www.childrenofthecode.org/interviews/stanovich.htm.
- Bower, J.M., Parsons, J.M., 2003. Rethinking the lesser brain. Sci. Am. 289, 50-57.
- Broadbent, D.E., 1975. The magical number seven after fifteen years. In: Kennedy, A., Wilkes, A. (Eds.), Studies in Long-Term Memory. Wiley, London, pp. 3–18.
- Brown, C.M., 1988. Human-Computer Interface Design Guidelines. Ablex Publishing Corporation, Norwood, NJ.
- Budiu, R., December 16, 2018. Can Users Control and Understand a UI Driven by Machine Learning? Nielsen Norman Group. Retrieved from: https://www.nngroup.com/articles/machine-learning-ux/.

- Budiu, R., Laubheimer, P., July 22, 2018. Intelligent Assistants Have Poor Usability: A User Study of Alexa, Google Assistant, and Siri. Nielsen Norman Group et al. https://www.nngroup.com/articles/intelligent-assistant-usability/.
- Budman, G., June 12, 2011. 94% of computer users still risk data loss. Backblaze Blog. Retrieved from: backblaze.com/2011/07/12/94-of-computer-users-still-risk-data-loss/.
- Card, S., Moran, T., Newell, A., 1983. The Psychology of Human-Computer Interaction. Lawrence Erlbaum Associates, Hillsdale, NJ.
- Card, S., Robertson, G., Mackinlay, J., 1991. The information visualizer, an information workspace. In: Proceedings of the Conference on Human Factors in Computing Systems: Reaching Through Technology. ACM Press, New York, NY, pp. 181-188.
- Carroll, J., Rosson, M., 1984. Beyond MIPS: performance is not quality. Byte 168-172.
- Cheriton, D.R., 1976. Man-machine interface design for time-sharing systems. In: Proceedings of ACM National Conference, pp. 362–380.
- Chi, E.H., Pirolli, P., Chen, K., Pitkow, J., 2001. Using information scent to model user information needs and actions on the web. In: Proceedings of ACM SIGCHI 2011 Conference on Computer-Human Interactions, pp. 490–497.
- Clark, A., 1998. Being There: Putting Brain, Body, and World Together Again. MIT Press, Cambridge, MA.
- Cooper, A., 1999. The Inmates are Running the Asylum. SAMS, Indianapolis.
- Cowan, N., Chen, Z., Rouder, J., 2004. Constant capacity in an immediate serial-recall task: a logical sequel to Miller (1956). Psychol. Sci. 15 (9), 634-640.
- Doidge, N., 2007. The Brain that Changes Itself. Penguin Group, New York, NY.
- Dubuc, B., 2012. The Brain from Top to Bottom. McGill University (Online book). Retrieved from: http://www.thebrain.mcgill.ca.
- Duis, D., Johnson, J., 1990. Improving user-interface responsiveness despite performance limitations. In: Proceedings of the IEEE CompCon '90, pp. 383–386.
- Eagleman, D., 2012. Incognito: The Secret Lives of the Brain. Vintage Books, New York, NY.
- Eagleman, D., 2015. The Brain: The Story of You. Vintage Press, New York, NY.
- Finn, K., Johnson, J., 2013. A usability study of websites for older travelers. In: Proceedings of HCI International 2013. Springer-Verlag, Las Vegas.
- Fitts, P.M., 1954. The information capacity of the human motor system in controlling the amplitude of movement. J. Exp. Psychol. 47 (6), 381–391.
- Fogg, B.J., 2002. Persuasive Technology: Using Computers to Change What We Think and Do. Morgan Kaufmann.
- Gazzaley, A., 2009. The aging brain: at the crossroads of attention and memory. User Ex. 8 (1), 6-8.
- Geelhoed, E., Toft, P., Roberts, S., Hyland, P., 1995. To influence time perception. In: Proceedings of ACM CHI'955, pp. 272–273.
- Google, December 2019. Android Design. Retrieved from: https://developer.android.com/design.
- Grudin, J., 1989. The case against user interface consistency. Commun. ACM 32 (10), 1164-1173.
- Hackos, J., Redish, J., 1998. User and Task Analysis for Interface Design. Wiley, New York, NY.
- Herculano-Houzel, S., 2009. The human brain in numbers: a linearly scaled-up primate brain. Front. Hum. Neurosci. 3 (31). Retrieved from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2776484.
- Herrmann, R., June 14, 2011. How Do We Read Words and How Should We Set Them? OpenType.info blog. Retrieved from: http://opentype.info/blog/2011/06/14/how-do-we-read-words-and-how-should-we-set-them.

- Heusser, M., September 6, 2019. How to Achieve Speedy Application Response Times, Blog Post. Search-SoftwareQuality. TechTarget.com. Retrieved from: https://searchsoftwarequality.techtarget.com/ti-p/Acceptable-application-response-times-vs-industry-standard.
- Hoxmeier, J., DiCesare, C., 2000. System response time and user satisfaction: an experimental study. In: Proceedings of Americas Conference on Information Systems (AMCIS 2000), pp. 140-145.
- Hudlicka, E., 2021. "Overview of emotions research", Chapter 3. In: Hudlicka, E. (Ed.), Affective Computing: Theory, Methods and Applications. Chapman and Hall/CRC Press.
- Husted, B., September 8, 2012. Backup your data, then backup your backup. Ventura County Star. Retrieved from: http://www.vcstar.com/news/2012/sep/08/back-up-your-data-then-back-up-your-backup.
- Isaacs, E., Walendowski, A., 2001. Designing From Both Sides of the Screen: How Designers and Engineers Can Collaborate to Build Cooperative Technology. SAMS, Indianapolis.
- Isakson, C., September 30, 2013. Importance of Response Time in Mobile Applications. Sundog Blog. Retrieved from: https://www.sundoginteractive.com/blog/importance-of-response-time-in-mobil e-applications.
- Johnson, J., 1987. How faithfully should the electronic office simulate the real one? SIGCHI Bull. 19 (2), 21-25.
- Johnson, J., 1990. Modes in non-computer devices. Int. J. Man-Mach. Stud. 32, 423-438.
- Johnson, J., 2007. GUI Bloopers 2.0: Common User Interface Design Don'ts and Dos. Morgan Kaufmann, San Francisco.
- Johnson, J., Finn, K., 2017. Designing User Interfaces for an Aging Population: Towards Universal Design. Morgan Kaufmann Publishers, Waltham, MA.
- Johnson, J., Henderson, D.A., 2002. Conceptual models: begin by designing what to design. Interactions 9 (1), 25–32.
- Johnson, J., Henderson, D.A., 2011. Conceptual Models: Core to Good Design. Morgan and Claypool, San Rafael, CA.
- Johnson, J., Henderson, D.A., January 22, 2013. Conceptual Models in a Nutshell. Boxes and Arrows. (Online magazine). Retrieved from: http://boxesandarrows.com/conceptual-models-in-a-nutshell.
- Johnson, J., Roberts, T., Verplank, W., Smith, D.C., Irby, C., Beard, M., Mackey, K., 1989. The xerox star: a retrospective. IEEE Comput. 22 (9), 11–29.
- Jonides, J., Lewis, R.L., Nee, D.E., Lustig, C.A., Berman, M.G., Moore, K.S., 2008. The mind and brain of short-term memory. Annu. Rev. Psychol. 59, 193–224.
- Kahneman, D., 2011. Thinking Fast and Slow. Farrar Straus and Giroux, New York, NY.
- Koyani, S.J., Bailey, R.W., Nall, J.R., 2006. Research-based Web Design and Usability Guidelines. U.S. Department of Health and Human Service. Retrieved from: usability.gov/pdfs/guidelines.html.
- Krug, S., 2014. Don't Make Me Think, Revisited: A Common Sense Approach to Web and Mobile Usability, third ed. New Riders Press, Indianapolis.
- Lally, P., van Jaarsveld, H., Potts, H., Wardie, J., 2010. How are habits formed: modeling habit formation in the real world. Eur. J. Soc. Psychol. 40 (6), 998–1009.
- Lambert, G., 1984. A comparative study of system response time on program developer productivity. IBM Syst. J. 23 (1), 407-423.
- Landauer, T.K., 1986. How much do people remember? Some estimates of the quantity of learned information in long-term memory. Cognit. Sci. 10, 477–493.

- Larson, K., July 2004. The Science of Word Recognition. Microsoft.com. http://www.microsoft.com/t ypography/ctfonts/WordRecognition.aspx.
- Liang, P., Zhong, N., Lu, S., Liu, J., Yau, Y., Li, K., Yang, Y., 2007. The Neural Mechanism of Human Numerical Inductive Reasoning Process: A Combined ERP and fMRI Study. Springer-Verlag, Berlin.
- Lindsay, P., Norman, D.A., 1972. Human Information Processing. Academic Press, New York and London.
- Macdonald, F., July 25, 2016. Scientists have found a woman whose eyes have a whole new type of colour receptor. Science Alert. Retrieved from: https://www.sciencealert.com/scientists-have-found-a-woman-whose-eyes-have-a-whole-new-type-of-colour-receptor.
- Marcus, A., 1992. Graphic Design for Electronic Documents and User Interfaces. Addison-Wesley, Reading, MA.
- Mastin, L., 2010. Short-term (Working) Memory. The Human Memory: What it is, How it Works, and How it Can Go Wrong. Retrieved from: http://www.human-memory.net/types\_short.html.
- McAfee, May 29, 2012. Consumer Alert: McAfee Releases Results of Global Unprotected Rates Study. McAfee blog. Retrieved from: https://blogs.mcafee.com/consumer/family-safety/mcafee-releases-results-of-global-unprotected-rates.
- McInerney, P., Li, J., 2002. Progress Indication: Concepts, Design, and Implementation. IBM. Developer Works. Retrieved from: www-128.ibm.com/developerworks/web/library/us-progind.
- Microsoft Corporation, 2018. User Interface Principles. Retrieved from: https://docs.microsoft.com/en-us/windows/win32/appuistart/-user-interface-principles.
- Miller, G.A., 1956. The magical number seven, plus or minus two: some limits on our capacity for processing information. Psychol. Rev. 63, 81–97.
- Miller, R., 1968. Response time in man-computer conversational transactions. In: Proceedings of IBM Fall Joint Computer Conference, vol. 33, pp. 267–277.
- Minnery, B., Fine, M., 2009. Neuroscience and the future of human-computer interaction. Interactions 16 (2), 70-75.
- Monti, M.M., Osherson, D.N., Martinez, M.J., Parsons, L.M., 2007. Functional neuroanatomy of deductive inference: a language-independent distributed network. NeuroImage 37 (3), 1005–1016.
- Moran, K., March 20, 2016. How Chunking Helps Content Processing. Nielsen-Norman Group. Retrieved from: https://www.nngroup.com/articles/chunking/.
- Mullet, K., Sano, D., 1994. Designing Visual Interfaces: Communications Oriented Techniques. Prentice-Hall, Englewood Cliffs, NJ.
- Nah, F., 2004. A study on tolerable waiting time: how long are Web users willing to wait? Behav. Inf. Technol. 23 (3), 153–163. Retrieved from: http://sighci.org/uploads/published\_papers/bit04/BIT \_Nah.pdf.
- Nielsen, J., 1993. Usability Engineering. Morgan Kaufmann, San Francisco.
- Nielsen, J., January 28, 1997. The Need for Speed, Blog Post. Nielsen-Norman Group. Retrieved from: https://www.nngroup.com/articles/the-need-for-speed/.
- Nielsen, J., 1999. Designing Web Usability: The Practice of Simplicity. New Riders Publishing, Indianapolis.
- Nielsen, J., June 30, 2003. Information Foraging: Why Google Makes People Leave Your Site Faster.

  Nielsen-Norman Group. Retrieved from: http://www.nngroup.com/articles/information-scent/2003.

- Nielsen, J., May 5, 2008a. How Little Do Users Read? Nielsen-Norman Group. Retrieved from: https://www.nngroup.com/articles/how-little-do-users-read.
- Nielsen, J., April 27, 2008b. Right-justified Navigation Menus Impede Scanability. Nielsen-Norman Group. Retrieved from: https://www.nngroup.com/articles/right-justified-navigation-menus.
- Nielsen, J., June 20, 2010. Website Response Times, Blog Post. Nielsen-Norman Group. Retrieved from: https://www.nngroup.com/articles/website-response-times/.
- Nielsen, J., 2014. Web-Based Application Response Time, Blog Post. Nielsen-Norman Group.
- Nielsen, J., Molich, R., 1990. Heuristic evaluation of user interfaces. In: Proceedings of ACM CHI'90 Conference, Seattle, pp. 249–256.
- Nielsen, J., Mack, R.L., 1994. Usability Inspection Methods. John Wiley & Sons, Inc., New York, NY.
- Nichols, S., February 6, 2013. Social Network Burnout Affecting Six in Ten Facebook Users. Retrieved from: http://www.v3.co.uk/v3-uk/news/2241746/social-network-burnout-affecting-six-in-ten-facebook-users.
- Norman, D.A., 1983a. Design rules based on analysis of human error. Commun. ACM 26 (4), 254-258.
- Norman, D.A., 1983b. Design principles for human-computer interfaces. In: Janda, A. (Ed.), Proceedings of the CHI-83 Conference on Human Factors in Computing Systems, Boston. ACM Press, New York, NY. Reprinted in Baecker, R.M., Buxton, W.A.A. (Eds.), Readings in human-computer interaction. Morgan Kaufmann (1987), San Mateo, CA.
- Norman, D.A., 1988. The Design of Everyday Things. Basic Books, New York, NY.
- Norman, D.A., April 13, 2014. Human Error? No, Bad Design. JND Blog-post. Retrieved from: https://jnd.org/stop\_blaming\_people\_blame\_inept\_design/.
- Norman, D.A., Draper, S.W., 1986. User-centered System Design: New Perspectives on Human-Computer Interaction. CRC Press, Hillsdale, NJ.
- Oracle Corporation, 2017.Alta Mobile UI:A Design System for Native Mobile Apps. Retrieved from: htt ps://www.oracle.com/webfolder/ux/mobile/index.html.
- Park, M., 2018. Here's what Went Wrong with the Hawaii False Alarm. CNN.com. January 31, 2018, retrieved from: https://www.cnn.com/2018/01/31/us/hawaii-false-alarm-investigation-findings/in dex.html.
- Pearl, C., 2018a. Designing Voice UIs. O'Reilly Press.
- Pearl, C., May 28, 2018b. Making the Shift From Designing GUIs to Designing VUIs, UX Matters. Retrieved from: https://www.uxmatters.com/mt/archives/2018/05/making-the-shift-from-designing-guis-to-designing-vuis.php.
- Perfetti, C., Landesman, L., January 31, 2001. The Truth about Download Time. User Interface Engineering. Retrieved from: http://uie.com/articles/download\_time.
- Rainie, L., Smith, A., Duggan, M., Feb 5, 2013. Coming and Going on Facebook. Report from Pew Internet and American Life Project. Retrieved from: http://www.pewinternet.org/~/media//Files/Reports/2013/PIP\_Coming\_and\_going\_on\_facebook.pdf.
- Raymond, J.E., Shapiro, K.L., Arnell, K.M., 1992. Temporary suppression of visual processing in an RSVP task: an attentional blink? J. Exp. Psychol. Hum. Percept. Perform. 18 (3), 849–860.
- Redish, G., 2007. Letting Go of the Words: Writing Web Content that Works. Morgan Kaufmann, San Francisco.
- Reeves, T., 2010. The Psychology of Human Error. HumanFactorsMD Blog. Retrieved from: http://www.humanfactorsmd.com/psychology-of-human-error/.

- Robertson, G., Card, S., Mackinlay, J., 1989. The cognitive co-processor architecture for interactive user interfaces. In: Proceedings of the ACM Conference on User Interface Software and Technology (UIST'89). ACM Press, pp. 10–18.
- Robertson, G., Card, S., Mackinlay, J., 1993. Information visualization using 3D interactive animation. Commun. ACM. 36 (4), 56-71.
- Rosenberg, D., 2020. UX Magic. Interaction-Design Foundation.
- Rushinek, A., Rushinek, S., 1986. What makes users happy? Commun. ACM. 29, 584-598.
- Sapolsky, R.M., 2002. A Primate's Memoir: A Neuroscientist's Unconventional Life Among the Baboons. Scribner, New York, NY.
- Schneider, W., Shiffrin, R.M., 1977. Controlled and automatic human information processing: 1. Detection, search, and attention. Psychol. Rev. 84, 1–66.
- Schrage, M., 2005. The password is fayleyure. Technol. Rev. Retrieved from: http://www.technologyreview.com/read\_article.aspx?ch5specialsectionsandsc5securityandid516350.
- Shneiderman, B., 1984. Response time and display rate in human performance with computers. ACM Comput. Surveys 16 (4), 265–285.
- Shneiderman, B., 1987. Designing the User Interface: Strategies for Effective Human-Computer Interaction, first ed. Addison-Wesley, Reading, MA.
- Shneiderman, B., Plaisant, C., 2009. Designing the User Interface: Strategies for Effective Human-Computer Interaction, fifth ed. Addison-Wesley, Reading, MA.
- Simon, H.A., 1969. The Sciences of the Artificial. MIT Press, Cambridge, MA.
- Simons, D.J., 2007. Inattentional blindness. Scholarpedia 2 (5), 3244. Retrieved from: http://www.scholarpedia.org/article/Inattentional\_blindness.
- Simons, D.J., Levin, D.T., 1998. Failure to detect changes in people during a real-world interaction. Psychon. Bull. Rev. 5, 644–669.
- Simons, D.J., Chabris, C.F., 1999. Gorillas in our midst: sustained inattentional blindness for dynamic events. Perception 28, 1059-1074.
- Smith, S.L., Mosier, J.N., 1986. Guidelines for Designing User Interface Software (Technical Report ESD-TR-86-278). National Technical Information Service, Springfield, VA.
- Soegaard, M., 2007. Gestalt Principles of Form Perception. Interaction-Design.org. Retrieved from: http://www.interaction-design.org/encyclopedia/gestalt\_principles\_of\_form\_perception.html.
- Sohn, E., October 8, 2003. It's a math world for animals. Science News for Kids. Retrieved from: http://www.sciencenewsforkids.org/articles/20031008/Feature1.asp.
- Sousa, D.A., 2005. How the Brain Learns to Read. Corwin Press, Thousand Oaks, CA.
- Stafford, T., Webb, M., 2005. Mind Hacks: Tips and Tools for Using Your Brain. O'Reilly, Sebastapol, CA.
- Stefanovic, D., 2018. Digital Psychology: Principles and Examples. Retrieved from: digitalpsychology.io.
- Stone, D., Jarrett, C., Woodroffe, M., Minocha, S., 2005. User Interface Design and Evaluation. Morgan Kaufmann, San Francisco.
- Stroop, J.R., 1935. Studies of interference in serial verbal reactions. J. Exp. Psychol. 18 (6), 643-662.
- Strunk, W., White, E.B., 1999. The Elements of Style, fourth ed. Macmillan Publishing Co., New York, NY..
- Thadhani, A., 1981. Interactive user productivity. IBM Syst. J. 20 (4), 407-423.

- Trevellyan, S., November 28, 2017. Centered Text vs. Flush Left, Blog-Post. Trevellyan.biz. Retrieved from: https://trevellyan.biz/centered-text-vs-flush-left.
- Treisman, A.M., Gelade, G., 1980. A feature-integration theory of attention. Cognit. Psychol. 12 (1), 97–136.
- Tufte, E., 2001. The Visual Display of Quantitative Information, second ed. Graphics Press, Cheshire, Connecticut.
- van Duyne, D.K., Landay, J.A., Hong, J.I., 2002. The Design of Sites: Patterns, Principles, and Processes for Crafting a Customer-Centered Web Experience. Addison-Wesley, Reading, MA.
- W3C, December, 2008a. Web Content Accessibility Guidelines (WCAG) 2.0. Worldwide Web Consortium. Retrieved from: https://www.w3.org/TR/WCAG20/.
- W3C, December, 2008b. H42: Using h1-h6 to Identify Headings. Worldwide Web Consortium. Retrieved from: https://www.w3.org/TR/WCAG20-TECHS/H42.html.
- Ware, C., 2008. Visual Thinking for Design. Morgan Kaufmann, San Francisco.
- Ware, C., 2012. Information Visualization: Perception for Design, third ed. Morgan Kaufmann, San Francisco.
- Weber, P., July 8, 2013. Why Asiana flight 214 crashed at San Francisco International Airport. The Week. Retrieved from: http://theweek.com/article/index/246523/why-asiana-flight-214-crashed-at-san-francisco-international-airport.
- Weinschenk, S.M., 2009. Neuro Web Design: What Makes Them Click? New Riders, Berkeley, CA.
- Wharton, C., Rieman, J., Lewis, C., Polson, P., 1994. The Cognitive Walkthrough: A practitioner's guide, In: Jakob Nielsen and Robert L. Mack (eds.), *Usability Inspection Methods*. John Wiley and Sons, Inc. 1994.
- Wikipedia, 2019. 2018 Hawaii False Missile Alert. Wikipedia.org. Retrieved from: https://en.wikipedia.org/wiki/2018 Hawaii false missile alert.
- Wolfe, J.M., 1994. Guided search 2.0 a revised model of visual search. Psychon. Bull. Rev. 1 (2), 202-238.
- Wolfe, J.M., Gray, W., 2007. Guided Search 4.0. Integrated Models of Cognitive Systems, pp. 99–119.
- Wolfmaier, T., 1999. Designing for the Color-Challenged: A Challenge. ITG Publication. Retrieved from: http://www.internettg.org/newsletter/mar99/accessibility\_color\_challenged.html.
- W3C, 2016. Accessibility, Usability, and Inclusion. Retrieved from: https://www.w3.org/WAI/fundamentals/accessibility-usability-inclusion/.
- Yale University, 2020. Usability and Web Accessibility. https://usability.yale.edu/usability-best-practices.