## Curriculum Vita – Jeff Johnson, Ph.D.

# **Address**

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#### **Education**

• Yale University: 1970 – 1974

Degree: B.A.

Major: Psychology (experimental) Additional Studies: Computer Science

• Stanford University: 1974 – 1979

Degree: Ph.D.

Dept.: Psychology (developmental, experimental)

Additional Studies: Computer Science

### **Employment History (most recent first)**

• July 1996 - Present: UI Wizards, Inc., a product usability consulting firm (www.uiwizards.com)

Position: President and Principal Consultant

Duties: Perform product usability design, evaluation, testing, and training for clients. Write software design

books. Manage company, including occasional subcontractors.

• August 2016 – December 2022: University of San Francisco, Department of Computer Science.

Position: Assistant Professor (retired December 2022)

Duties: Teach undergraduate computer science courses, including User Interface Design, Intro to Computer

Science for CS Majors (Python programming), Intro to Computer Science for non-CS majors (App

Inventor 2 programming), and Senior Team Projects.

November 1994 – July 1996: Sun Microsystems / SunSoft Developer Products (Menlo Park, CA)

Position: Staff Engineer, Human Interface

Duties: Designed and evaluated user interfaces for software programming tools. Educated software engineers

about user-interface design issues and guidelines. Conducted usability testing. Helped manage a

summer intern laboratory assistant.

• June 1993 – October 1994: Sun Microsystems / First Person (Palo Alto)

Position: Staff Engineer, Human Interface

Duties: Responsible for usability of user interfaces for consumer electronics and interactive TV product

prototypes that were precursors of Sun's Java product. Designed and evaluated user interfaces. Established and operated a usability testing lab. Conducted usability testing. Managed a laboratory

assistant.

• November 1988 – June 1993: Hewlett-Packard Laboratories (Palo Alto, CA)

Position: Member of Technical Staff, Software Technologies Laboratory

Duties: Human-computer interaction research. Member of a team developing an application-development

environment for use by end-users as well as programmers. Member of a task-force on handheld computer-based appliances for non-technical consumers. Member of a project to develop systems to

support people in businesses in working together over long distances.

• March 1987 – November 1988: U S West Advanced Technologies (Denver)

Position: Member of Technical Staff, "Advanced User Interfaces" Group, Science and Technology Research

Lab

Duties: User-studies using prototype systems to derive principles of user-interface design and to examine new

user-interface technologies. Included research on user-interface modes and on proper design of information services and terminals for the general public. User-interface design consulting. Training

programmers in principles of user-interface design.

• March 1984 – March 1987: Xerox Information Systems (Sunnyvale, CA)

Position: Development Team Leader; User Interface Designer

Duties: Design and implementation on various projects related to enhancing the Star/ViewPoint office

computing system for electronic publishing applications. Designed and led implementation of a Stylesheets facility for the ViewPoint document editor. User-interface designer for most of the

ViewPoint 2.0 enhancements.

• October 1978 - February 1984: Cromemco, Inc. (Mountain View, CA)

Position: Software Engineer and Engineer Manager

Duties: Designing and implementing applications software (word processing, statistical analysis, graphics),

designing keyboards, developing user-interface standards, designing user-interface toolkits, writing

documentation, managing software engineers, LISP support.

• Summer, 1973 and 1974: Jet Propulsion Laboratories, Pasadena, CA

Position: Programmer

Duties: Software development for Viking and Mariner data analysis.

#### **Teaching Positions**

• Assistant Professor, Computer Science Department, University of San Francisco (August 2016–December 2022).

- Visiting Lecturer (Erskine Teaching Fellow), Computer Science and Software Engineering Department, University of Canterbury, New Zealand (Winter 2013).
- Visiting Lecturer (Erskine Teaching Fellow), Computer Science and Software Engineering Department, University of Canterbury, New Zealand (Winter 2006).
- Assistant Professor, part-time, Math and Computer Science Department, Mills College (Spring 2003)
- Lecturer, part-time, Computer Science Department, Stanford University (1997-1998).
- Teaching Assistant, Stanford University Psychology Department, 1974-1978.

Subjects Taught: Introduction to Programming, Human Computer Interaction, User Interface Design, User-Interface Frameworks and Components, Usability Testing, Statistics, Cognitive Psychology, Developmental Psychology.

## **Honors and Awards**

- Association for Computing Machinery (ACM) Distinguished Member, 2019.
- Association for Computing Machinery (ACM) SIGCHI Lifetime Achievement in Practice Award, 2016.
- Elected to ACM SIGCHI Academy, January 2014.
- Erskine Fellow, Computer Science and Software Engineering Department, University of Canterbury, New Zealand, 2013.
- Distinguished Speaker, Association for Computing Machinery (ACM), 2011-2015.
- Erskine Fellow, Computer Science and Software Engineering Department, University of Canterbury, New Zealand, 2006.

#### **Patents**

• Method and Apparatus for Detecting Seatbelt Compliance in Commercial Passenger Aircraft, US11465746B2, filed 2022-10-10, granted: 2022-10-11.

Wide-Area Fire-Retardant System Using Distributed Dense Water Fogger, US11666788B2, filed: 2020-09-07, granted: 2023-06-06.

## **Professional Committee Service**

- USF Interdisciplinary Committee on Aging, 2018 present.
- ACM Social Responsibility Task Force, 2018 2019.
- ACM SIGCHI Awards Committee, 2017 2020.
- Heidelberg Laureate Forum, student candidates review committee, 2017 2019.
- ACM SIGCHI Public Policy Committee, 2004 present.
- Communications of the ACM Web Advisory Board, Association of Computing Machinery (ACM), 2007 2017.
- Chair of Board of Directors, Computer Professionals for Social Responsibility, 1991-1994.
- Co-Chair, first conference on Participatory Design of Computer Systems (PDC'90), Seattle, WA, 1990.

### **Invited Technical Presentations**

- Stanford University, Guest lecture on designing technology for older adults, Stanford Computer Science course on Designing for Accessibility: April 2020.
- Stanford University: Invited talk on designing technology for older adults at Stanford Center on Longevity, November 2018.
- Authors@Google: December 2017.
- SF Bay Area LASER (Leonardo Art Science Evening Rendezvous) talks: Nov 14, 2017.
- ACM SIGCHI Bay Area Chapter (BayCHI): Oct 10, 2017.
- Keynote and workshop, Interaction South America (ISA) 2016 conference, Santiago, Chile, Nov 2016.
- Keynote, CHI New Zealand (CHINZ) conference, Christchurch, New Zealand, Nov 2013.
- Computer Science Department, University of Waikato, Hamilton, New Zealand, Sept 2013.
- ACM SIGCHI Bay Area Chapter (BayCHI): May 2013.
- Authors@Google: January 2013.
- Design Workshops: Product Management Storm Training, PM-China, Shanghai & Beijing, May 2012.
- North Bay Internet Society: Sebastapol, CA, May 2012.
- Stanford University, Computer Science Department: Stanford, CA, April 2012.
- Keynote and Workshop: 1st Product Manager Conference, PM-China, Shanghai & Beijing, Nov 2011.
- ACM SF Bay Area Chapter: Cupertino, CA, July 2011.
- Academy of Art University: San Francisco, CA, July 2011.
- Bay Area Editors Forum: San Francisco, CA, March 2011.
- Mills College, Computer Science and Psychology Departments: Oakland, CA, March 2011.
- Center for Technology Innovation, University of Wisconson at Milwaukee: Milwaukee, WI, Jan 2011.
- Lawrence Berkeley National Labs, University of California at Berkeley: Berkeley, CA, Jan 2011.
- ACM SIGCHI Bay Area Chapter (BayCHI): July 2010.
- Keynote: UX Prague 2010, Prague, Czech Republic, June 2010.
- Keynote: Expo:QA 2009, Madrid, Spain, Oct 2009.
- Usability NJ: Princeton, NJ, Feb 2009.
- Software Test & Performance 2009 Conference (STPcon 2009), San Mateo, CA, 2009.

- Keynote: FutureTest 2009 Conference, NY, NY, 2009.
- Keynote: Yggdrasil 2008 Conference, Lillehammer, Norway, 2008.
- Guest Lecture: Computer Science Department, Technical University of Berlin, Germany, 2008.
- User Experience Russia 2008 Conference (UXR 2008), Moscow, Russia, 2008.
- Usability Professionals Conference (UPA 2008), Baltimore, MD, 2008.
- Software Test & Performance 2008 Conference (STPcon 2008), San Mateo, CA, 2008.
- Computer Society of South Africa, Johannesburg, South Africa, 2008.
- University of South Africa, Pretoria, South Africa, 2008.
- Keynote, CHI New Zealand (CHINZ) conference, Christchurch, New Zealand, July 2006.
- Keynote, Society for Technical Communication Trans-Alpine Chapter 2004 conference, Vienna, Austria, 2004.
- PARC Forum talk: Palo Alto Research Center, Palo Alto, CA, 2003.
- Keynote: WinWriters 2003 Technical Help Conference, Seattle, WA, Feb. 17, 2003.
- Guest lecture: Computer Science Department, University of California, Berkeley, CA, 1999, 2000, 2002.
- Guest lecture: Computer Science Department, Stanford University, CA, 1993, 1994, 1995, 1996, 1997, 2000, 2001, 2002, 2004, 2010, 2012, 2014.
- Guest lecture: Computer Science Department, University of San Francisco, CA, 1996, 2000, 2002, 2004, 2007, 2010.
- Guest lecture: Computer Science Department, Cal. State University, San Francisco, CA, 2001, 2002.
- Guest lecture: Mathematics and Computer Science Department, Cal. State University, Hayward, CA, 2000, 2002.
- Guest lecture: Computer Science Department, Mills College, Oakland, CA, 2001, 2002, 2011.
- Guest lecture: Computer Science Department, Tabor College, KS, 1998.
- Guest lecture: Computer Science Department, McPherson College, KS, 1998.
- Guest lecture: Computer Science Department, Bethel College, KS, 1998.
- Invited talk: ACM SIGCHI'97 Conference, Atlanta, GA, 1997.
- Guest lecture: Department of Informatik and Mathematik, University of Bremen, Germany, 1994.
- Guest lecture: Department of Informatik and Mathematik, University of Paderborn, Germany, 1994.
- Guest lecture: Psychology Department, University of Colorado, Boulder, 1987.

# **Invited Podcast Interviews**

- Not Born Yesterday podcast: <u>Technology for the Mature</u>, posted June 23, 2023.
- Content Wrangler podcast: <u>Reading is Unnatural</u>: <u>Jeff Johnson on why we should be designing content with the mind in mind</u>, posted Mar 31, 2022.
- Boomer Living | Senior Living podcast: <u>How To Make Technology Work Better For Older Adults</u>, posted July 28, 2021.
- The Informed Life podcast: <u>Design for Aging</u>, posted October 11, 2020.
- Adobe Wireframe podcast: Why Can't Dad Unmute Himself on Zoom?, posted July 27, 2020.
- Tech-Enhanced Life podcast: Designing Technology for an Aging Population, posted July 17, 2019.

# **Technical Publications (most recent first)**

• Johnson, J., Bullock, D. "Fragility in Als Using Artificial Neural Networks", Communications of the ACM, Volume 66, Issue 7, July 2023, pp 28–31.

- Johnson, J., "Myths about digital technology and older adults", Nature Aging, 24 November 2022, DOI: 10.1038/s43587-022-00319-4.
- Johnson, J., "Reading is Unnatural", abridged from Chapter 6, Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines, 3rd edition, InterCom Magazine, Sep/Oct 2021, Society for Technical Communication.
- Johnson, J., Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines, 3rd edition, 2020, Morgan Kaufman Publishers.
- Johnson, J., Hastak, M., Jansen, J., Ravel, D. (2018). "Analyzing Advertising Labels: Testing Consumers' Recognition of Paid Content Online", *Proceedings of ACM CHI'18*, doi: 10.1145/3170427.3188533.
- Johnson, J. and Finn, K., Designing User Interfaces for an Aging Population: Towards Universal Design, Morgan Kaufmann Publishers, March 2017.
- Lazar, J., ..., Johnson, J., et al (2015). Human-Computer Interaction and International Public Policymaking: A Framework for Understanding and Taking Future Actions. *Foundations and Trends in Human-Computer Interaction*, 9(2), 69-149.
- Johnson, J., "See the Change. Or not.", *Elsevier SciTech connect*, April 2015, Elsevier. Web: http://scitechconnect.elsevier.com/see-the-change-or-not.
- Johnson, J., Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines, 2<sup>nd</sup> edition, 2014, Morgan Kaufman Publishers.
- Finn, K. and Johnson, J. "A Usability Study of Websites for Older Travelers", *Proceedings of HCI International* 2013, Las Vegas, NV, July 2013.
- Johnson, J. "Can Computer Professionals and Digital Technology Engineers Help Reduce Gun Violence?", *Communications of the ACM*, Volume 56, Issue 3, March 2013, pp. 35-37.
- Johnson, J., Henderson, D.A. "Conceptual Models in a Nutshell", Boxes and Arrows, Volume 7, Jan 22, 2012.
- Johnson, J., Henderson, D.A. "Usability of Interactive Systems: It Will Get Worse Before It Gets Better", *Journal of Usability Studies*, Volume 7, Issue 3, May 2012, pp. 88-93.
- Johnson, J., Henderson, D.A. Conceptual Models: Core to Good Design, 2011, Morgan & Claypool, Publishers.
- Johnson, J., "GUI Bloopers: Common Interface Blunders and How to Avoid Them", *Software Test & Performance*, 4 (12), December 2007, pages 22-26.
- Johnson, J., "Updating Our Understanding of Perception and Cognition: Part II", UX Matters, Aug 9, 2010.
- Johnson, J., "Updating Our Understanding of Perception and Cognition: Part I", UX Matters, July 5, 2010.
- Johnson, J., "See the Change. Or Not.", *Inside MK*, June 2010, Morgan Kaufman Publishers.
- Johnson, J., Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Rules, 2010, Morgan Kaufman Publishers.
- Molich, R., Hornbaek, K., Krug, S., Scott, J., and Johnson, J., "Recommendations on Recommendations: Making Usability Usable", *User Experience*, 7 (4), Nov-Dec 2008, pages 26-30.
- Johnson, J. "Web Usability in 2008: Mediocre", Proceedings of Usability Professionals 2008 Conference (UPA 2008), Baltimore, MD.
- Johnson, J., *GUI Bloopers 2.0: Common User Interface Design Don'ts and Dos*, forthcoming 2007, Morgan Kaufman Publishers, in press.
- Jarrett, C., Chisnell, D., and Johnson, J. "Usability Testing Then, Now, and Tomorrow", *Proceedings of Society for Technical Communication 2005 Conference* (STC 2005).
- Johnson, J., Marshall, C. "Convergent Usability Evaluation: A Case Study from the EIRS Project", Proceedings of ACM CHI 2005.
- Johnson, J., "The Web: Not Ready for Prime Time?", JavaRanch Journal, Nov 2003, Java Ranch.

- Johnson, J., Web Bloopers: 60 Common Web Design Mistakes and How to Avoid Them, March 2003, Morgan Kaufman Publishers.
- Nardi, B., Whittaker, S., Isaacs, E., Creech, M., Johnson, J., and Hainsworth, J. "Integrating Communication and Information Through ContactMap", *Communications of the ACM*, pages 89-95, April 2002.
- Johnson, J., Henderson, D.A. "Conceptual Models: Begin by Designing What to Design", *Interactions*, Jan-Feb 2002, 9(1), pages 25-32.
- Clement, A., Stalder, F., Johnson, J., Guerra, R. "National Identification Schemes (NIDS) and the Fight against Terrorism: Frequently Asked Questions", *Proceedings of IFIP World Computer Congress*, 2002 (also published in *CPSR Journal*, Winter 2002).
- Johnson, J., Web Bloopers: 60 Common Web Design Mistakes and How to Avoid Them, in press March 2003, Morgan Kaufman Publishers.
- Nardi, B., Whittaker, S., Isaacs, E., Creech, M., Johnson, J., and Hainsworth, J. "Integrating Communication and Information Through ContactMap", *Communications of the ACM*, pages 89-95, April 2002.
- Johnson, J., Henderson, D.A. "Conceptual Models: Begin by Designing What to Design", *Interactions*, Jan-Feb 2002, 9(1), pages 25-32.
- Johnson, J., "Walking the Fine Line between Helpful and Harmful", *Software Testing and Quality Engineering*, September 2001, pages 12-14.
- Johnson, J., "GUI Bloopers: How NOT to Design Software", Usability Interface, October 2000, 7(2), pages 6-7.
- Johnson, J., "Textual Bloopers", *Interactions*, September 2000, 7(5), pages 28-48.
- Johnson, J., *GUI Bloopers: DON'Ts and DOs for Software Developers and Web Designers*, March 2000, Morgan Kaufman Publishers.
- Nardi, B., Whittaker, S., Isaacs, E., Johnson, J., Creech, M. and Hainsworth, J. "ContactMap: Designing Our Digital Lives", submitted to ACM CHI'2001.
- Johnson, J., "Netiquette Training: Whose Responsibility?", *CPSR Newsletter*, Summer 1998. [Also available at CPSR's website: www.cpsr.org/publications/newsletters/issues/1998/netiquette.html].
- Johnson, J., "Simplifying the Controls of an Interactive Movie Game", *Proceedings of ACM CHI'98*, April 1998, Los Angeles, CA. [Also available at UI Wizards website: www.uiwizards.com/fork.html]
- Johnson, J., "Universal Access to the Net: Requirements and Social Impact", Invited talk, ACM CHI'97, March 1997, Atlanta, GA. [Also available at ACM's website: www.acm.org/pubs/citations/journals/cacm/1996-39-9/p32-johnson].
- Johnson, J., "R<->D, Not R&D", Communications of the ACM, September 1996, pages 32-34. [Part of a special issue on Technology Transfer.]
- Johnson, J. and Nardi, B., "Creating Presentation Slides: A Study of User Preferences for Task-Specific vs. Generic Applications Software," *ACM Transactions on Computer-Human Interaction*, March 1996.
- Johnson, J., "The Information Highway: A Worst-Case Scenario," *Communications of the ACM*, February 1996, 39(2), pages 15-17. [Also published in shortened form in *Electronic Engineering Times*, August 28, 1995].
- Miller, L. and Johnson, J., "The Xerox Star: An Influential User Interface Design," chapter in Marianne Rudisill, Clayton Lewis, Peter B. Polson, and Timothy D. McKay (eds.), *Human-Computer Interface Design: Success Stories, Emerging Methods, and Real-World Context*, 1996, San Francisco: Morgan Kaufmann Publishers, Inc.
- Johnson, J. and Jeffries, R., "Intuitive Statistics for CHI Practitioners: Developing Understanding and Avoiding Bloopers," 1995 ACM Conference on Computer-Human Interaction Tutorial Notes. [Summary published in CHI'95 Conference Companion.]
- Johnson, J., "A Comparison of User Interfaces for Panning on a Touch-Controlled Display," *Proceedings of 1995 ACM Conference on Computer-Human Interaction*, pages 218-225.
- Johnson, J. and Keavney, M., "The Effect of Touch-Pad Size on Pointing Accuracy," *FirstPerson Technical Report FP-1994-2*.

- Nardi, B. and Johnson, J., "User Preferences for Task-Specific vs. Generic Application Software," *Proceedings of 1994 ACM Conference on Computer-Human Interaction*, pages 392-398.
- Johnson, J., Nardi, B., Zarmer, C., and Miller, J., "ACE: A New Approach to Building Interactive Graphical Applications," *Communications of the ACM*, April 1993.
- Johnson, J., "Selectors: Going Beyond User-Interface Widgets," *Proceedings of the 1992 ACM Conference on Computer-Human Interaction* (CHI'92).
- Zarmer, C., Nardi, B., Johnson, J., and Miller, J., "ACE: Zen and the Art of Application Building," *Proceedings of the 1992 Hawaii International Conference on System Science*, [Also published as HP Labs Technical Report HPL-91-146].
- Johnson, J., "Effect of Modes and Mode Feedback on Performance in a Simple Computer Task," *HP Labs Technical Report HPL-91-167*, 1991 [also presented as a poster at CHI'89].
- Zarmer, C. and Johnson, J., "User Interface Tools: Past, Present, and Future Trends," *HP Labs Technical Report HPL-90-20*, 1990.
- Duis, D. and Johnson, J., "Improving User-Interface Responsiveness Despite Performance Limitations." *Proceedings of the IEEE Computer Society International Conference* (CompCon'90), February 1990, San Francisco, CA, pages 380-386.
- Johnson, J., "Modes in Non-Computer Devices." International Journal of Man-Machine Studies, 32, 1990.
- Johnson, J., Roberts, T., Verplank, W., Smith, D.C., Irby, C., Beard, M., and Mackey, K., "The Xerox Star: A Retrospective." *IEEE Computer*, September 1989.
- Johnson, J. and Engelbeck, G., "Modes Survey Results," SIGCHI Bulletin, April 1989.
- Alexander, J. and Johnson, J., "Creating an Information Appliance." *Pioneers of Innovation*, US WEST Advanced Technologies, Fall 1988.
- Johnson, J. and Beach, R., "Styles in Document Editing Systems." *IEEE Computer*, January 1988, 21(1), pages 32-43.
- Johnson, J., "How Faithfully Should the Electronic Office Simulate the Real One?" *SIGCHI Bulletin*, October 1987.
- Johnson, J., "Calculator Functions on Bitmapped Computers." SIGCHI Bulletin, July 1985, 17(1), pages 23-28.
- Johnson, J., "How to Write Software for People." *I/O News*, 1986, 5(5). [Also presented at Data Processing Management Association Regional Conference, April 21, 1983.]
- Johnson, J., "Guideposts to User-friendliness." Data Management, 1982, 20(10).
- Chapters 24 (Communication in the Brain) and 25 (Behavioral Biology) in *Discovering Psychology: Instructors' Guide*. Science Research Associates, Inc., 1977.

#### **Implementation & Prototyping Experience**

- Programming languages: Python 3, C++, Mesa, C, LISP, Z-80 assembler, SAIL, APL, FORTRAN, BASIC, App Inventor 2.
- Web tools: HTML, CSS
- Desktop UI tools: UIM/X, XDesigner, InterViews, Motif, Macromedia Director, Symantec Visual Café
- Wireframing tools: OmniGraffle, Photoshop, Adobe XD, Figma, JustInMind, Word and Powerpoint graphics.

# Miscellaneous Activities (most recent first)

- · Co-founder, Wiser Usability, Inc., a consulting firm focusing on senior accessibility and usability (2011-2017).
- CACM Web Advisory Board, Association of Computing Machinery (ACM), 2007 2023.
- ACM Special Interest Group on Computer-Human Interaction (SIGCHI) U.S. Public Policy Committee, 2004 2020.

- Founder, President, and Principal Consultant, UI Wizards, Inc., a product usability consulting firm (1996 present).
- Co-Chair, first conference on Participatory Design of Computer Systems (PDC'90), Seattle, WA, 1990.
- Chairman of Board of Directors, Computer Professionals for Social Responsibility, 1991-1994.
- Cofounder, Vice-President, and Programmer, Carrybit Corporation, producer of microprocessor data-analysis systems for the biological and behavioral sciences (1977 1983).