I. Personal Information (12/4/2015)

I.A. UID, Last Name, First Name, Middle Name, Contact Information

UID:	101001302
Last Name:	Shneiderman
First Name:	Ben
Mailing Address:	A.V. Williams Building, Dept. of Computer Science, University of Maryland, College Park, MD 20742
Phone Number:	+1-301-405-2680
Fax Number:	+1-301-405-6707
Email:	ben@cs.umd.edu
Personal URL:	http://www.cs.umd.edu/~ben
HCIL URL:	http://www.cs.umd.edu/hcil
Wikipedia:	https://en.wikipedia.org/wiki/Ben_Shneiderman

I.B. Academic Appointments at UMD

1991- 2005	Member, Institute for Systems Research
1989-	Professor, Department of Computer Science
1987-	Member, Institute for Advanced Computer Studies
1983- 1989	Associate Professor, Department of Computer Science
1979- 1983	Associate Professor
1976- 1979	Assistant Professor, Department of Information Systems Management

I.C. Administrative Appointments at UMD

1983- 2000	Founding Director, Human-Computer Interaction Lab, Institute for Advanced Computer Studies

I.D. Other Employment

1973- 1976	Indiana University	Assistant Professor, Department of Computer
1972- 1973	State University of NY	Instructor, Department of Computer Science at Stony Brook
1968- 1972	State University of NY	Instructor, Department of Data Processing at Farmingdale

I.E. Educational Background

City College of New York	B.S., Mathematics/ Physics	1968
State University of New York at Stony Brook	M.S., Computer Science	1972
State University of New York at Stony Brook	Ph.D., Computer Science	1973

University of Guelph, Canada	Honorary Doctorate of Science	1995
University of Castilla-LaMancha, Spain	Honorary Doctorate	2010
State University of New York at Stony Brook	Honorary Doctorate	2015

II. Research, Scholarly, and Creative Activities

II.A. Books (include full citation information and ISBN)

II.A.1. Books Authored (specify original or revised edition)

1. Kreitzberg, C. and Shneiderman, B., *Elements of FORTRAN Style: Techniques for Effective Programming*, Harcourt Brace Jovanovich, Inc., New York (1972), 121 pages.

2. Shneiderman, B., *A Self Study Guide to FORTRAN Programming*, State University of New York Independent Study Program, Empire State College, 86 pages, revised edition (1974).

3. Kreitzberg, C. and Shneiderman, B., *FORTRAN Programming: A Spiral Approach*, Harcourt Brace Jovanovich, New York (1975) 2nd Edition (1982), 437 pages plus Instructor's Guide. Bestselling book in this competitive market for several years.

4. Shneiderman, B., *Introduction to Computer Programming*, Indiana University Independent Study Division (1976), 56 pages.

5. Shneiderman, B., *Software Psychology: Human Factors in Computer and Information Systems*, Little, Brown and Co., (formerly Winthrop Publ.) Boston, MA (1980), 320 pages. Main selection - June 1980 Library of Computer and Information Sciences and August 1980 McGraw-Hill Computer Professionals Book Club. Russian translation, 1984.

6. Shneiderman, B., *Let's Learn BASIC: A Kids' Introduction to BASIC Programming*, Apple, Atari, Commodore 64, and IBM versions, Little, Brown and Co., Boston, MA, (1984).

7. Shneiderman, B., *Designing the User Interface: Strategies for Effective Human-Computer Interaction*, Addison-Wesley Publ. Co., Reading, MA (1987), 448 pages. Japanese version published by Nikkei-McGraw-Hill (1987), 385 pages. Excerpted in Forester, T. (editor), *Computers in the Human Context: Information Technology, Productivity, and People*, MIT Press, Cambridge, MA, (1989), 166-173. Excerpted in *Educational Media International 26*, 2, (June 1989), 101-106.

8. Shneiderman, B. and Kearsley, G., *Hypertext Hands-On! An Introduction to a New Way of Organizing and Accessing Information*, Addison-Wesley Publ. Co., Reading, MA , book and hypertext disk using Hyperties (May 1989), 192 pages and two disks.

9. Shneiderman, B., *Designing the User Interface: Strategies for Effective Human-Computer Interaction: Second Edition*, Addison-Wesley Publ. Co., Reading, MA (1992), 573 pages. Japanese version appeared October 1993. Extracts printed in: *Computer Science Syllabus 7*, (Fall 1993), 6-9, and *8* (Winter, 1993), 2-5; *The Review: Association of Human Resources Professionals 10*, 2 (April/May 1994), 12-16. Received Rigo Award from ACM SIG Documentation, 1996.

10. Shneiderman, B., *Designing the User Interface: Strategies for Effective Human-Computer Interaction: Third Edition*, Addison-Wesley Publ. Co., Reading, MA (1998), 639 pages. Related book site at <http://www.awl.com/DTUI>. German edition, translated by Jurgen Dubau and Arne Willner, MITP-Verlag, Bonn (2002), 701 pages.

11. Card, S., Mackinlay, J., and Shneiderman, B., *Readings in Information Visualization: Using Vision to Think*, Morgan Kaufmann Publ., San Francisco, CA (1999), 686 pages.

12. Shneiderman, B., *Leonardo's Laptop: Human Needs and the New Computing Technologies*, MIT Press, Cambridge, MA (October 2002), 256 pages. Book site contains links to numerous reviews and interviews: http://mitpress.mit.edu/books/leonardos-laptop Finalist in the Independent Book Publishers Awards for 2003, Internet/Computers category. **Winner of IEEE 2004 book award for "Distinguished Literary Contribution furthering Public Understanding of the Profession**." Korean edition (August 2005). Chinese edition (2006), Portugese edition (2006). Revised extracts published in:
    [1] *ACM Interactions 9*, 5 (Sept-Oct 2002), 40-53.
    [2] Creativity support tools, *Communications of the ACM 45*, 10 (October 2002), 116-120.
    [3] Meeting human needs with new digital imaging technologies, *IEEE Multimedia 9*, 4 (Oct-Dec 2002), 8-14.
    [4] Imagining the New Computing, *User Experience 1*, 3 (Winter 2002), 20-24.

13. Bederson, B. and Shneiderman, B., *The Craft of Information Visualization: Readings and Reflections*, Morgan Kaufmann Publ., San Francisco, CA (2003), 410 pages.

14. Shneiderman, B. and Plaisant, C., *Designing the User Interface: Strategies for Effective Human-Computer Interaction*: Fourth Edition, Addison-Wesley Publ. Co., Reading, MA (2005), 684 pages. Related book site at <http://www.awl.com/DTUI>. Chinese and Spanish versions appeared in 2005. Revised extracts published in:
    [1] Shneiderman, B., User interface design with speech technologies: A cognitive limitations review, *Intl Journal for Language Data Processing 28*, 2 (2004), 101-109.
    [2] Shneiderman, B. and Plaisant, C., Chapters 1, 2, 9, and Appendices 1 and 2, in Adams, R. (Compiler), *Natural Computing and Interactive System Design*, Pearson Education, Inc., London (2005), 209-383.

[3] Shneiderman, B., Section 3.1-3.3, Managing Design Processes for Successful User Interfaces, in Holziner, A. (Editor), *Proc. 1st Usability Symposium, Austrian Computer Society*, November 8, 2005, Vienna, Austria (2005), 15-27.

15. Shneiderman, B. and Plaisant, C., *Designing the User Interface: Strategies for Effective Human-Computer Interaction: Fifth Edition*, Addison-Wesley Publ. Co., Reading, MA (2010), 606 pages. http://www.pearsonhighered.com/dtui5einfo/ Chinese and Greek editions (2010).

16. Wilson, M., Kules, W., Schraefel, M., and Shneiderman, B., *From Keyword Search to Exploration: Designing Visual Search Interfaces for the Web*, Monograph in Foundations and Trends in Web Science, http://www.nowpublishers.com/web/ (2010) Vol. 2: No 1, pp 1-97. http://dx.doi.org/10.1561/1800000003

17. Hansen, M., Shneiderman, B, and Smith, M. A., *Analyzing Social Media Networks with NodeXL: Insights from a Connected World*, Morgan Kaufmann Publishers (2011). ISBN: 9780123822291 http://www.elsevierdirect.com/product.jsp?isbn=9780123822291

18. Rind, A., Wang, T. D., Aigner, W., Miksch, S., Wongsuphasawat, K., Plaisant, C., and Shneiderman, B., *Interactive Information Visualization for Exploring and Querying Electronic Health Records: A Systematic Review*, Monograph in Foundations and Trends in Human-Computer Interaction 5, 3, http://www.nowpublishers.com/hci (2013), 207–298. http://dx.doi.org/10.1561/1100000039

19. Shneiderman, B., *The New ABCs of Research: Achieving Breakthrough Collaborations*, Oxford University Press (to appear, 2016). http://www.cs.umd.edu/hcil/newabcs

20. Shneiderman, B., Plaisant, C., Cohen, M., Jacob, S., and Elmqvist, N., *Designing the User Interface: Strategies for Effective Human-Computer Interaction: Sixth Edition*, Pearson (to appear 2016). http://www.cs.umd.edu/hcil/DTUI6

II.A.2. Books Edited

1. Shneiderman, B. (Editor), *Database Management Systems* (editor), AFIPS Press, Montvale, NJ (1976), 131 pages.

2. Shneiderman, B. (Editor), *Databases: Improving Usability and Responsiveness*, Academic Press, New York (1978), 431 pages.

3. Badre, A. and Shneiderman, B. (Editor), *Directions in Human/Computer Interaction*, Ablex Publ., Norwood, NJ (1982), 225 pages.

4. Shneiderman, B. (Editor), *Hypertext on Hypertext*, Hyperties disk with 1Mbyte data and graphics incorporating July 1988 *CACM*, ACM Press, New York, NY (July 1988).

5. Shneiderman, B. (Editor), *Sparks of Innovation in Human-Computer Interaction*, Ablex Publishers, Norwood, NJ (1993), 387 pages.

II.A.3. Books Translated (as translator)
II.A.4. Textbooks
II.A.5. Major Reference Works
II.A.6. Exhibition Catalogs
II.A.7. Other

Book Forewords

1. Friedman, D. P., *The Little LISPer*, Science Research Associates, Inc., Chicago (1974).

2. Debski, R., Gassin, J., and Smith, M. (Editors), *Language Learning through Social Computing*, Applied Linguistics Association of Australia, Melbourne (1997), v-viii.

3. Hazemi, R., Hailes, S., and Wilbur, S. (Editors), *The Digital University: Reinventing the Academy*, Springer, London (1998), xxi-xxii.

4. Aggarwal, A., *Web-based Learning and Teaching Technologies: Opportunities and Challenges*, Idea Group Publishing, Hershey, PA (2000), v-vi.

5. ****NCI Research-based Web Design and Usability Guidelines*, Dept of Health & Human Services, National Institutes of Health, National Cancer Institute, (Sept 2003, revised edition 2006), iii-v. http://www.usability.gov/pdfs/guidelines.html

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8. Hanegan, K., *Building Solutions with the DecisionSite Analytics Platform*, iUniverse, Lincoln, NE (2005), ix-xi.

9. Zhang, P. and Galletta, D. eds., *Human-Computer Interaction and Management Information Systems - Foundations*, M. E. Sharpe, Inc., Armonk, NY (2006).

10. Design for All Newsletter, Vol. 2, No. 1, Universal Usability: Shaping the world for ourselves and our children (January 2007), 6-13. www.designforall.in

11. Lazar, J. (Editor), *Universal Usability: Designing User Interfaces for Diverse Users*, John Wiley & Sons, New York (2007), vii-xiv.

12. Inselberg, A., *Parallel Coordinates: Visual Multidimensional Geometry and Its Applications*, Springer, New York (2009), v-vi.

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15. Jacko, J. (Editor), *Handbook of Human-Computer Interaction: 3rd Edition*, Foreword: The Expanding Impact of Human-Computer Interaction, Taylor & Francis, London (2012), xv-xvi.

16. Newell, Alan, *Design and the Digital Divide: Insights from 40 Years in Computer Support for Older and Disabled People*, Synthesis Lectures on Assistive, Rehabilitative, and Health-Preserving Technologies (Ron Baecker, Editor), Morgan & Claypool Publishers (2011), xvii-xviii.

17. Chen, Chaomei, *Turning Points: The Nature of Creativity*, Springer, New York (2012), v-vii.

18. Golbeck, Jennifer, *Analyzing the Social Web*, Morgan Kaufmann, Waltham, MA (2013), xxiii-xxiv.

19. Lima, Manuel, *The Book of Trees: Visualizing Branches of Knowledge*, Princeton Architectural Press, New York (2014), 7-8.

20. Marcus, Aaron, *Mobile Persuasion Design*, Springer (2015).

21. Parush, Avi, *Conceptual Design for Interactive Systems: Designing for Performance and User Experience*, Morgan Kaufmann Publishers (2015), ix-x.

22. Arias, Ernesto G., Eden, Hal, and Fischer, Gerhard, *The Envisionment and Discovery Collaboratory (EDC): Explorations in Human-Centered Informatics with Tabletop Computing Environments*, Synthesis Lectures on Human-Centered Informatics (Jack M. Carroll, Editor), Morgan & Claypool Publishers (2015), xvii-xix.

II.B. Chapters

II.B.1. Books

1. Shneiderman, Ben, "Errors", "Data Type", "Rings", "FIFO-LIFO", sections in *Encyclopedia of Computer Science*, Anthony Ralston, Editor, Petrocelli/Charter Publisher, (1976).

2. Shneiderman, Ben, Human Factors Experiments for Developing Quality Software, *INFOTECH State of the Art Report on Software Reliability*, 1977, 263-276.

3. Shneiderman, Ben, System message design: Guidelines and experimental results, In *Directions in Human-Computer Interaction*, Badre, A. and Shneiderman, B. (Editors), Ablex Publ. Co., Norwood, NJ, (1982), 55-78.

4. Shneiderman, Ben, "Human Factors in Computing", 688-690, and "Data Base On-Line", 447-448, Sections of the *Encyclopedia of Computer Science, 2nd Edition*, A. Ralston, Editor (1983).

5. Shneiderman, Ben, Human factors in interactive software, *End User Systems and their Human Factors*, A. Blaser and M. Zoeppritz, Editors, Springer-Verlag, Berlin, (1983), 9-29. Keynote address IBM Heidelberg Conference.

6. Shneiderman, Ben, Correct, complete operations and other principles of interaction, Invited paper for the First USA-Japan Conference on Human-Computer Interaction (August 1984), In *Human-Computer Interaction*, (G. Salvendy, Ed.), Elsevier Science Publishers B.V., (North-Holland), (1984), 135-147.

7. Shneiderman, Ben, A model programming environment, In *Advances in Human-Computer Interaction 1*, (R. Hartson, Ed.), Ablex Publ., Norwood, NJ (1985), 105-131.

8. Weiser, M. and Shneiderman, Ben, Human factors of computer programming, In *Handbook of Human Factors* (G. Salvendy, Ed.), John Wiley & Sons, Inc., (1986), 1398-1415, Reprinted in *Tutorial on Software Restructuring*, (R. Arnold, Editor), IEEE EH0244-4 (1986), 67-81.

9. Shneiderman, Ben, Reflections on authoring, editing, and managing hypertext, In (Barrett, E., Editor), *The Society of Text*, MIT Press, Cambridge, MA (1989), 115-131.

10. Shneiderman, Ben, Design guidebook for interaction styles: A taxonomy, rule-base, and some opinions, In (B. Shackel, Ed.), *Human Factors for Informatics Usability*, Cambridge University Press (1990), 325-342. Reprinted in Baecker, R. M., Grudin, J., Buxton, W. A. S., and Greenberg, S. (Editors), *Readings in Human-Computer Interaction: Toward the Year 2000, Second Edition*, Morgan Kaufmann Publishers, Inc., San Francisco, CA (1995), 401-410.

11. Shneiderman, Ben, User interface races, In (B. Laurel, Ed.), *The Art of Human-Computer Interface Design*, Addison-Wesley Publ., Reading, MA (1990), 221-224.

12. Shneiderman, B., Direct manipulation versus agents: Paths to predictable, controllable, and comprehensible interfaces, In Bradshaw, J. (Editor), *Software Agents*, AAAI Press, Menlo Park, CA (1997), 97-106.
13. Shneiderman, B., Universal Usability: A research agenda for human-computer interaction research to empower every citizen. In Earnshaw, R., Guedj, R., Van Dam, A., and Vince, J. (Editors), *Human-Centred Computing, Online Communities, and Virtual Environments*, Springer-Verlag London (2001), 179-189.

14. Shneiderman, B., Supporting creativity with advanced information-abundant user interfaces. In Earnshaw, R., Guedj, R., Van Dam, A., and Vince, J. (Editors), *Human-Centred Computing, Online Communities, and Virtual Environments*, Springer-Verlag London (2001), 469-480.

15. Ceaparu, I., Demner, D., Hung, E., Zhao, H. and Shneiderman, B., "In Web We Trust": Establishing strategic trust among online customers, In Rust, R. and Kannan, P. K. (Editors), *E-Service*, M. E. Sharpe Publishers, Armonk, NY (August 2002), 90-107.

16. Bessiere, K., Ceaparu, I., Lazar, J., Robinson, J., and Shneiderman, B., Social and psychological influences on computer user frustration, In Bucy, E. P. and Newhagen, J. E. (Editors), *Media Access: Social and Psychological Dimensions of New Technology User*, Lawrence Erlbaum Associates, Mahwah, NJ (2004), 91-103.

17. Seo, J. and Shneiderman, B., A knowledge integration framework for information visualization, In Hemmje, M, Niederee, C., and Risse, T. (Editors), *From Integrated Publication and Information Systems to Virtual Information and Knowledge Environments*, Springer Lecture Notes in Computer Science, Berlin (2005), 207-220.

18. Plaisant, C., and Shneiderman, B., Personal role management: Overview and a design study of email for university students, In Czerwinski, M. and Kaptelinin, V. (Editors), *Designing Integrated Digital Work Environments: Beyond the Desktop*, MIT Press, Cambridge, MA (2007), 143-170.

19. Zhao, H., Plaisant, C., and Shneiderman, B., Listening to choropleth maps: Interactive sonification of geo-referenced data for users with vision impairment, In Lazar, J. (Editor), *Universal Usability: Designing User Interfaces for Diverse Users*, John Wiley & Sons, New York (2007), 141-173.

20. Jank W., Shmueli G., Plaisant, C., and Shneiderman B., Visualizing Functional Data with an Application to eBays Online Auctions, In *Handbook on Data Visualization*, Eds: Chen, Haerdle, and Unwin, Springer Verlag, Heidelberg, ISBN: 3-540-33036-4 (2008), 873-898.

21. Shneiderman, B., Creativity Support Tools: A Grand Challenge for HCI Researchers, In Redondo, Miguel; Bravo, Crescencio; Ortega, Manuel (Eds.), *Engineering the User Interface: From Research to Practice*, Springer, Berlin (2009), 1-9.

22. Gillam, M., Shneiderman, B., Feied, C., Handler, J., Plaisant, C., Dickason, J., Moody, E., and Smith, M., The healthcare singularity and the age of semantic medicine, In, Hey, A., Tansley, S., and Tolle, K. (Editors), *The Fourth Paradigm: The Future of Information Science and Data Intensive Computing*, Microsoft Research, Redmond, WA (2009), 57-64.

23. Gregory, M. and Shneiderman, B., Shape identification in temporal data sets, In Dill, J., Earnshaw. R., Kasik, D., Vince, J., Wong, P.C. (Editors), *State-of-the-Art volume on Computer Graphics, Visualization, Visual Analytics, VR and HCI: Dedicated to the memory of Jim Thomas*, Springer, Berlin (2012), 305-321.

24. Zalinger, J., Freier, N., and Shneiderman, B., Reading Ben Shneiderman's Email: Identifying Narrative Elements in Email Archives, In Hawkins, D. (Editor), *Personal Archiving: Preserving Our Digital Heritage*, Information Today, Inc. (2013), 109-135.

25. Shneiderman, B., Building trusted social media communities: A research roadmap for promoting credible content, In Bertino, E. and Matei, S. A. (editors), *Roles, Trust, and Reputation in Social Media Knowledge Markets: Theory and Methods*. Series: Computational Social Science. New York: Springer Publishing (2014), 35-43. DOI 10.1007/978-3-319-05467-4_2.

26. Smith, A., Malik, S., and Shneiderman, B., Visual analysis of topical evolution in unstructured text: Design and evaluation of TopicFlow, In Kazienko, P. and Chawla (Editors), N., *Applications of Social Media and Social Network Analysis, Lecture Notes on Social Network Analysis*, Springer (2015), 159-176.

27. Plaisant, C., Monroe, M., Meyer, T., and Shneiderman, B., Interactive Visualization, In Marconi, K. and Lehman, H. (Editors), *Big Data and Health Analytics*, CRC Press - Taylor and Francis (2014), 243-262.

28. Smith, M., Himelboim, I., Rainie, L., and Shneiderman, B., The Structures of Twitter Crowds and Conversations, In Matei, S. A. et al. (Editors), *Transparency in Social Media, Computational Social Science*, Springer (2015).

II.B.2. Collections
II.B.3. Encyclopedia
II.B.4. Series
II.B.5. Research Paper
II.B.6. Other

II.C. Articles in Refereed Journals

Full citation, inclusive of all authors in the order of publication and page numbers. Review articles and invited articles should be so identified. Optional: include DOI.

1. Shneiderman, B., Polynomial search, *Software: Practice and Experience 3*, 5 (January – March 1973), 5-8.

2. Shneiderman, B., Optimum data base reorganization points, *Communications of the ACM 16*, 6 (June 1973), 362-365.

3. Shneiderman, B., A computer graphics system for polynomials, *The Mathematics Teacher 67*,2 (February 1974), 111-113.

4. Shneiderman, B. and Scheuermann, P., Structured data structures, *Communications of the ACM 17*, 10 (October 1974), 566-574.

5. Shneiderman, B., A model for optimizing indexed file structures, *International Journal of Computer and Information Sciences 3*, 1 (March 1974), 93-103.

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8. Shneiderman, B., Exploratory experiments in programmer behavior, *International Journal of Computer and Information Sciences 5*, 2 (June 1976), 123-143.

9. Shneiderman, B., A review of design techniques for programs and data, *Software: Practice and Experience 5* (1976), 555-567.

10. Goodman, V., Shneiderman, B., Batched searching of sequential and tree structured files, *ACM Transactions on Database Systems 1*, 3 (September 1976), 268-275

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19. Shneiderman, B., Information policy issues: Selecting the policy framework and defining the schema horizon, *Information and Management 1* (1978), 207-218. Reprinted in *Best Computer Science Papers of 1980*, Auerbach Publishers.

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22. Shneiderman, B., Multi-party grammars and related features for defining interactive systems, *IEEE Systems, Man, and Cybernetics SMC-12*, 2 (March-April 1982), 148-154.

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25. DiPersio, T., Isbister, D., and Shneiderman, B., An experiment using memorization/ reconstruction as a measure of programmer ability, *International Journal of Man-Machine Studies 13* (1980), 339-354.

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    [1] *Nikkei Computer*, November 28, 1983, 155-169 (Japanese).
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38. Shneiderman, B., When children learn programming: Antecedents, concepts and outcomes, *The Computing Teacher 12*, 5 (February 1985), 14-17.

39. Parton, D., Huffman, K., Pridgen, P., Norman, K., and Shneiderman, B., Learning a menu selection tree: Training methods compared, *Behaviour and Information Technology 4*, 2 (1985), 81-91.

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II.D.2. Non-Refereed Conference Proceedings
II.D.3. Historical Conference Proceedings (10+ years ago)
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II.E. Conferences, Workshops, and Talks
II.E.1. Keynotes
II.E.2. Invited Talks
(approximately 40 per year), see list at:
http://www.lib.umd.edu/archivesum/findingaids/shneiderman/biolectures.jsp

II.E.3. Refereed Presentations
II.E.4. Refereed Abstracts
II.E.5. Refereed Posters
II.E.6. Refereed Panels
II.E.7. Non-Refereed Presentations
II.E.8. Non-Refereed Abstracts
II.E.9. Non-Refereed Posters
II.E.10. Non-Refereed Panels
II.E.11. Symposia

II.E.12. Workshops
II.E.13. Colloquia
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14. Peer, N. and Shneiderman, B., Detecting precursors and sequelae of sentinel events: A visual data mining approach, Technical Report, University of Maryland (2009).

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II.F.3. Legal Briefs
II.F.4. Policy Briefs
II.F.5. Other

<u>II.G. Book Reviews, Notes, and Other Contributions</u>
II.G. 1. Book Reviews
II.G. 2. Essays
II.G. 3. Notes
II.G. 4. Manuals
II.G. 5.Other

<u>II.H. Completed Creative Works</u>
II.H.1. Digital Media (e.g., CDs, DVDs)
II.H.2. Datasets
II.H.3. Constructed Projects
II.H.4. Demonstrations
II.H.5. Inventions
II.H.6. Original Plans and Designs

II.H.7. Photography
II.H.8. Software and Applications
II.H.9. Websites
II.H.10. Exhibitions and Installations
II.H.11. Curatorial Practice
II.H.12. Performance or Interpretation— Performing Arts
II.H.13. Direction - Performing Arts
II.H.14. Production - Performing Arts
II.H.15. Costume, Stage, Multimedia, and Theatrical Design
II.H.16. Artistic and Graphic Design
II.H.17. Dramaturgy
II.H.18. Artwork
II.H.19. Choreography
II.H.20. Playwriting, Screenwriting, and Musical Composition
II.H.21. Works of Creative Writing
II.H.22. Performance or Interpretation - Film, Video, and Multimedia
II.H.23. Direction - Film, Video, and Multimedia
II.H.24. Production - Film, Video, and Multimedia
II.H.25. Citations and Reviews
II.H.26. Historical Completed Creative Works (10+ years ago)
II.H.27. Other

II.I Significant Works in Public Media
II.I.1. Explanatory, Investigative, or Long-Form Journalism
II.I.2. Other Significant Journalism
II.I.3. Commentary/Analysis
II.I.4. Interactive Online Database
II.I.5. Other

II.J. Sponsored Research
II.J.1. Grants

1. NSF Travel Grant to attend lectures of Edsger Dijkstra, 1974.

2. National Academy of Sciences Travel Grant: International Federation for Information Processing in Stockholm, Sweden, 1974.

3. Research Committee, Indiana University ($2990) participation in Stored Data Definition and Translation Task Group, 3/74-7/75.

4. NSF MCS-77-18641 ($20,300) Collaborative US/USSR Research in the use of a conceptual schema in agricultural systems and human factors issues in database facilities 7/77-6/78, with Sibley and Hardgrave.

5. NSF MCS-77-22244 ($76,400) Towards the development of a methodology for application program conversion based on database semantics 8/77-1/80, Supplement for Teleconference ($7,973).

6. NSF MCS-77-22509 ($52,300) Structured Data Base Systems, 2/80-7/81.

7. Control Data Corp. 80M15 ($49,580) Human Factors Research in Editor Interfaces, 1/81-12/83.

8. Control Data Corp. 83M102 ($99,993), Human-Computer Interaction Research, 7/6/83-7/5/85.

9. IBM Corp. ($235,000 for first 30 months) Multiple Coordinated Windows for Programmer Workstations, 7/1/83-12/31/85.

10. Dept. of Health and Human Services, ($25,000) Impact of Personal Computers on Office Workers, 6/84-6/85.

11. IBM Corp. and University of Maryland FULCRUM Project, Expert Networks for Cooperative Problem-Solving.

12. IBM Corp. ($33,000) Converting paper manuals to online access, 8/21/84-12/31/84.

13. Dept. of Interior and US Holocaust Memorial Museum, ($49,999), Development and Testing of TIES (The Interactive Encyclopedia System), 12/7/84-4/15/85.

14. Inference Corp. ($73,000) User interface for expert systems, 8/1/85-7/31/86.

15. National Science Foundation, ($42,000) Developing an effective user evaluation questionnaire for interactive systems), 8/1/86-7/31/87.

16. A T & T Information Systems, ($232,000), Human-Computer Interaction Research, 9/1/86-8/31/87.

17. National Aeronautics and Space Administration - Ames Laboratory ($50,000), Structuring and searching online knowledge - TIES, 2/1/87-1/31/88.

18. Maryland Industrial Partnerships with American Voice & Robotics, ($26,400), 1/1/88 - 6/30/88.

19. A T & T Information Systems, ($289,000), Human-Computer Interaction Research, 11/1/87 - 12/31/88.

20. Apple Corporation, ($34,086) - Graduate Research Assistants for the Human-Computer Interaction Laboratory, 1/1/88 - 12/31/88. Additional hardware contribution, approx. $15,000, 4/88.

21. National Cash Register Corporation, ($50,000), Extensions to Hyperties, 1/1/88 - 12/31/88.

22. Museum of Jewish Heritage, ($41,000), Learning Center User Interfaces, 4/1/88 - 12/31/88.

23. Maryland Industrial Partnerships with American Voice and Robotics, ($50,000), User interfaces for home applications, 7/1/88 - 12/31/88.

24. Museum of Jewish Heritage, ($61,000), Learning Center User Interfaces, 6/1/89 - 5/30/90.

25. National Cash Register Corporation, ($50,000), Extensions to Hyperties, ($50,000) User interface for a portable touchscreen computer, 1/1/89 - 12/31/89.

26. SUN Microsystems ($35,000 equipment), SUN4 workstation for NeWS implementation of Hyperties, 3/89.

27. Library of Congress, ($24,999), Survey of LOCIS users, 1/1/89 - 6/30/89.

28. National Library of Medicine, ($25,000), Usability evaluation of microanatomy videodisk database, 3/15/89 - 9/15/89.

29. Apple Corporation, ($20,000), Do What I Did Interfaces, 6/89-5/90.

30. NEC Corporation, ($90,000), Human-Computer Interaction Research, 8/89-8/90.

31. National Library of Medicine, ($24,999), Usability evaluation of microanatomy videodisk database, 12/1/89 - 4/15/90.

32. Engineering Research Center, ($12,700) Hypermedia Workstation, 12/89.

33. NCR Corporation, ($75,000), Human-Computer Interaction Research, 1/1/90 - 12/31/90.

34. Maryland Industrial Partnerships with Custom Command Systems, ($50,000), User interfaces for home applications, 2/1/90 - 1/31/91.

35. Maryland Industrial Partnerships with Corabi, Inc., ($37,500), User interfaces for telemedicine, 2/1/90 - 1/31/91.

36. Sun Microsystems, ($130,000), Orientation, traversal, and mental models for large documents, 6/1/90 - 5/31/91.

37. NEC Corporation, ($10,000), 10/15/90 - 10/14/91.

38. NCR Corporation, ($50,000), Human-Computer Interaction Research, 1/1/91 - 12/31/91.

39. General Electric Information Services, ($50,000), Graphic Boolean Queries and User Interface Research, 12/1/90 - 11/30/91.

40. Maryland Industrial Partnerships with Corabi, Inc., ($50,000), User interfaces for telemedicine, 2/1/91 - 1/31/92.

41. NASA Graduate Fellowship (for Andrew Sears) ($18,000), 7/1/91 - 6/30/92.

42. Johnson Controls Graduate Fellowship ($20,000), 6/5/91 - 6/4/92.

43. Toshiba Corporation ($65,000), 9/1/91 - 2/28/93.

44. SONY Corporation ($50,000), 9/1/91 - 8/31/92.

45. Apple Corporation, Graduate Fellowship, Programming in the User Interface ($20,000 + $12,000 equipment), 10/1/91 - 9/30/92.

46. NEC Corporation, ($10,000), 10/1/91 - 9/30/92.

47. Maryland Industrial Partnerships with Corabi, Inc., ($50,000), User interfaces for telemedicine, 2/1/92 - 1/31/93.

48. General Electric Information Services, ($50,000), Research on Platform Independent User Interface Builders, 3/1/92 - 2/28/93.

49. Panasonic Corporation, ($10,000), 3/1/91 - 2/28/92, Home Automation Consortium.

50. NEC Corporation, ($50,000), 10/1/92 - 9/30/93, Human-Computer Interaction Research.

51. National Library of Medicine, ($24,500), 7/6/92 - 11/30/92, Computer Interface Design for Intermediate Results (Grateful Med).

52. National Center for Health Statistics, ($10,000), 6/5/92 - 9/5/92, Development of a prototype for dynamic queries on a health statistics atlas.

53. National Center for Health Statistics, ($25,000), 10/1/92 - 5/15/93, Development of a prototype for dynamic queries on cause of death statistics.

54. Johnson Controls Graduate Fellowship ($20,000), 6/5/92 - 6/4/93.

55. Apple Corporation, Graduate Fellowship, Programming in the User Interface ($20,000), 11/1/92 - 10/31/93.

56. Maryland Industrial Partnerships with General Electric Information Services, ($108,000), 3/1/93 - 2/28/94, Improving Usability in Information Services.

57. Maryland Industrial Partnerships with Hughes Network Systems, ($160,000), 2/1/93 - 1/30/94, Next generation network management system, with J. Baras (ISR).

58. Johnson Controls Graduate Fellowship ($20,000), 6/5/93 - 6/4/94.

59. Online Computer Library Center, Information Visualization Consortium ($10,000), 7/93 - 7/94.

60. Visix Corporation, Donation of Galaxy Software ($15,000), 9/93.

61. World Bank, Future User Interfaces ($30,000), 10/93 - 1/94.

62. NEC Corporation, Human-Computer Interaction Research ($10,000), 10/1/93 - 9/30/94.

63. IBM, Video-on-demand User Interfaces ($29,000), 2/94 - 6/94.

64. Maryland Industrial Partnerships with General Electric Information Services, ($108,000), 3/1/94 - 2/28/95, Improving Usability in Information Services.

65. Maryland Industrial Partnerships with Hughes Network Systems, ($160,000), 2/1/94 - 1/30/95, Next generation network management system, with J. Baras (ISR).

66. State of Maryland, Department of Juvenile Services ($272,000), Advanced User Interfaces for Case Workers, 7/1/94 - 6/30/95.

67. National Science Foundation, SGER ($48,000), Multiple Window Coordination for Visual Information Access in High Performance User Interfaces, 8/15/94 - 8/14/95.

68. National Library of Medicine (approx $40,000, 2 graduate fellowships), User Interfaces for the Visible Human Project, 8/94 - 8/95.

69. NEC Corporation, Human-Computer Interaction Research ($10,000), 10/1/94 - 9/30/95.

70. National Library of Medicine ($24,981), User Interfaces for the Visible Human Project, 11/15/94 - 9/15/95.

71. Maryland Industrial Partnerships with General Electric Information Services, ($108,000), 3/1/95 - 2/28/96, Improving Usability in Information Services.

72. NASA - Goddard ($103,145, NAG52895), 3/1/95 - 2/28/96, Dynamic Queries Interfaces for the EOSDIS Information System.

73. IBM, Boca Raton, FL ($10,000 + $30,000), 8/95 - 7/96, Next generation graphical user interfaces.

74. State of Maryland, Department of Juvenile Justice ($650,000), Advanced User Interfaces for Case Workers, 9/1/95 - 8/31/96.

75. NEC Corporation, Human-Computer Interaction Research ($10,000), 10/1/95 - 9/30/96.

76. NASA - Goddard ($130,000, NAG52895), 3/1/96 - 2/28/97, Dynamic Queries Interfaces for the EOSDIS Information System. Plus supplement to support Richard Beigel sabbatical visit ($34,876).

77. National Science Foundation, IRIS ($72,648, IRI9615534), Information Abundant Interfaces: Advanced Organization and Coordination, 10/01/96 - 09/30/97.

78. NASA - Goddard ($163,240, NAG52895), 3/1/97 - 2/28/98, Dynamic Queries Interfaces for the EOSDIS Information System.

78. NASA - Goddard ($145,000, NAG57126), Dynamic Queries Interfaces for the EOSDIS Information System, 3/1/98 - 2/28/99. Expanded to $281,299 and extended to 12/31/99.

79. IBM University Partner Program ($40,000), Information Visualization for Electronic Commerce, 6/15/98 - 6/14/99.

81. West Publishing ($149,875, 9712229014), User Interfaces for Visualizing Legal Information, 6/1/98 - 8/31/99.

82. U. S. Bureau of the Census, Human Computer Interface Design, 8/1/1998-9/30/1998 ($30,000). Renewal 2/25/1999 - 09/15/1999 ($100,000, 40YABC909111). Renewal 09/16/99 - 06/30/00 ($100,000, 43YABC917123). Renewal 09/21/00 - 06/30/01 ($100,000, 43YABC039062).
Renewal 7/1/2001-6/30/2002 ($100,000). Renewal 7/1/2002-6/30/2003 ($100,000).

83. IBM University Partner Program, E-Commerce: Visualization for Customer Relationship Management ($40,000), 7/1999-7/2000.

84. Microsoft ($30,000), Information Visualization Graduate Fellowship, 9/1/1999-8/30/2000.

85. National Science Foundation Digital Government Program ($80,000), Citizen Access to Government Statistical Data in Tables, 08/15/99 - 07/31/01.

86. Intel ($100,000), User Interfaces for Photo Libraries, 9/3/1999-9/2/2000, plus equipment grants (approx $20,000 additional).

87. Toyota Support for Industrial Visitor ($50,000), 5,2000-5/2001.

88. IBM University Partner Program, Extending Search Interfaces to Support Creative Exploration ($40,000), 7/2000-7/2001.

89. Agilent Bio-informatics visualization, ($35,000 + $35,000), 2000 + 2001.

90. America Online Fellowship in Human-Computer Interaction, ($35,000/year), 7/2000-7/2001. Awarded to Harry Hochheiser. Renewed 7/2001-7/2002. Renewed 7/2002-7/2003.

91. Ricoh Innovations, Inc., User Interfaces for Digital Photos ($35,000), 3/2001. Addition ($15,000), 9/2001.

92. National Science Foundation Information Technology Research (PI-John Robinson, Sociology,
$2.7Million, IIS-0086143) Understanding the Social Impact of the Internet: A Multifaceted Multidisciplinary Approach (9/1/2000-9/1/2003).

93. National Science Foundation Digital Government Program ($492,000, EIA 0129978) Integration of Data and Interfaces to Enhance Human Understanding of Government Statistics: Toward the National Statistical Knowledge Network, Supplement for AudioMap ($50,000) (7/1/2002-6/30/2006).

94. Adobe, Inc. User Interfaces for Presenting Digital Photos ($38,000), (1/2004).

95. America Online Fellowship in Human-Computer Interaction, ($38,000/year), 7/2003-7/2004. Awarded to Bill Kules. Renewed 7/2004-7/2005. Renewed (8/2005-12/2005).

96. National Science Foundation ($45,000, IIS-0527109) Workshop on Creativity Support Tools (5/1/2005-4/31/2006).

97. Microsoft Contribution to social computing research ($15,000) 9/2005. Renewed ($15,000) 9/2006. Renewed ($47,000) 7/2008.

98. National Science Foundation ($60,000, IIS-0633843) Developing Ethnographic Evaluations for Creativity Support Tools: A Case Study with Expert Users of a New Social Network Visualization (8/15/2006-8/14/2007).

99. Washington Hospital Center ($100,000), Discovering Patterns of Events in Patient Histories (1/1/2007-12/31/2007).

100. Office of the Vice President for Research, University of Maryland. Yan Qu, Paul T. Jaeger, Jenny Preece, Ben Shneiderman, Ken Fleischmann, & Philip Fei Wu. University of Maryland Community Response Grid: Building Emergency Response Infrastructure ($40,421), (5/2007-5/2008).

101. National Science Foundation ($720,000, IIS-0705832) iOPENR--A Flexible Framework to Support Rapid Learning in Unfamiliar Research Domains (8/1/2007-7/31/2010). PI Bonnie Dorr, also includes J. Klavans, J. Lin, D. Radev. No cost extension to 7/31/2011.

102. National Cancer Institute (subcontract from iDOXsolutions, inc.) ($100,235) Evaluating Cooperation Among NCI Partners, (2/11/08 - 8/31/08).

103. Washington Hospital Center ($100,000) Discovering Patterns of Events in Medical Patient Records (1/1/2008-12/31/2008). Renewed ($150,000) (1/1/2009-12/31/2009). Renewed
($100,000) (06/01/2010 - 05/31/2011).

104. Lockheed Martin Corporation ($100,000), Human-Computer Interaction Research (12/01/2008 - 12/01/2009). Add-on for Social networking ($50,000).

105. TIBCO/Spotfire ($40,000) Unrestricted Gift for Social Networking Visualization (8/28/2009-8/27/2010).

106. National Science Foundation ($718,644, SBE-0915645) TLS: Science & Technology Innovation Concept Knowledge-base (STICK): Monitoring, Understanding, and Advancing the (R)Evolution of Science & Technology Innovations, Ping Wang, Ben Shneiderman, Yan Qu (9/1/2009-8/31/2012).

107. National Science Foundation ($86,744, IIS-0956571) Proposal for Two NSF Workshops: Technology-Mediated Social Participation Jennifer Preece (PI), Peter Pirolli & Ben Shneiderman (co-PIs) (9/1/2009-8/31/2010).

108. NIH-National Cancer Institute ($337,134, RC1-CA147489), Interactive Exploration of Temporal Patterns in Electronic Health Records (9/30/2009 - 8/31/2010). Second Year ($345,086), (9/30/2009 - 8/31/2011).

109. National Science Foundation - Computing Research Association ($140,000, CIFB90), Computing Innovations Fellow: Postdoctoral Research Grant for Jae-Wook Ahn, (9/01/2010 - 08/31/2011). Renewal ($127,000, 09/21/2011 - 09/20/2012)

110. Office of the National Coordinator (ONC), Strategic Health IT Advanced Research Projects (SHARP). Patient-Centered Cognitive Support: (sub of The University of Texas Health Science Center at Houston). Approx $960,000 over four years. Cognitive Information Design and Visualization for the National Center for Cognitive Informatics and Decision Making in Healthcare ($228,232, UT-007593, UMCP-FRS-432658) (4/1/2010-3/31/2011). ($188,194, 4/1/2011-3/31/2012), ($188,194, 04/01/2010 - 03/31/2013) ($187,820, 04/01/2010 - 03/31/2013)

111. National Science Foundation ($249,926, IIS-0968521) Social Computational Systems (SoCS): Supporting a Nation of Neighbors with Community Analysis Visualization Environments, Ben Shneiderman, Alan Neustadtl, Catherine Plaisant (8/1/2010-8/31/2012).

112. National Science Foundation ($47,000, IIS-1135022) Webshop 3.0: Technology-Mediated Social Participation, Jennifer Preece, Ben Shneiderman, Alan Neustadtl (5/1/2011-4/30/2012).

Additional sponsorship obtained from Google ($10,000) and Intel ($5,000).

113. Oracle ($100,000) Gift for research on Temporal Event Sequences (8/2011). Renewal ($188,000, 10/2012) ($147,601, 11/2013).

114. National Science Foundation ($99,995, IIS- 1239863) Summer Social Webshop 3.0: Technology-Mediated Social Participation, J. Preece, B. Shneiderman, A. Neustadtl (07/01/2012-06/30/2013).

115. YAHOO Research Award for HCIL projects (4/2013, $19,000).

116. State of Maryland, Center for Health Informatics & BioImaging, Interactive Visualization of Temporal Patterns in Electronic Health Record Data, Ben Shneiderman, Catherine Plaisant, Lise Getoor (9/2013-8/2014, $200,000).

117. YAHOO Grants for HCIL (1/2014, $10,000). Renewal for HCIL (1/2015, $5,000) and for Campus Visualization Partnership (1/2015, $5,000).

118. University of Maryland Seed Grant (11/ 2014, $50,000), Interactive Visual Analytics for Insider Threat Detection and Evaluation, collaborate with Leidos on use of EventFlow, Ben Shneiderman and Catherine Plaisant.

119. Adobe Research Award, EventFlow and Cohort Comparison (5/2015, $50,000).

120. National Science Foundation ($59,297, 1661041) Visualizing Science, Technology, and Innovation Activity Sequences with EventFlow, Scott Dempwolf and B. Shneiderman, (09/01/2015-08/31/2016).

121. Oracle, Gift for research on Cohort Comparison (10/2015-9/2016, $95,000).

II.J.2. Contracts
II.J.3. Other

<u>II.K. Fellowships, Gifts and Other Funded Research</u>
II.K.1. Fellowships
II.K.2. Gifts
II.K.3. Other

<u>II.L. Submissions and Works in Progress</u>
List press, journal, or granting agency.
II.L.1. Current Grant Applications
II.L.2. Manuscripts in Preparation
II.L.3. Manuscripts under Review (indicate status: submitted or revising to resubmit)
II.L.4. Working Papers in Preparation
II.L.5. Designs in Preparation

II.L.6. Other

II.M. Centers for Research, Scholarship, and Creative Activities

Specify Name of the Center, Description of Center, Collaborators, Start and End Dates.

II.M.1. Centers Established
II.M.2. Centers Directed
II.M.3. Symposia Organized (through center)
II.M.4. Other

II.N. Patents

II.N.1. Device
II.N.2. Other

II.O. Other Research/Scholarship/Creative Activities

III. Teaching, Mentoring and Advising.

III.A. Courses Taught

Course No.	**Description**	**Semester**	**Enrollment**
CMSC498F	Human factors in computer and information systems	Fall 83	44
CMSC424	Database design	Spring 84	40
CMSC434	Human factors in computer and information systems	Fall 84	34
CMSC434	Human factors in computer and system information	Spring 85	16
CMSC424	Database design	Fall 85	36
CMSC434	Human factors in computer and information systems	Spring 86	26
CMSC434	Human factors in computer and information systems	Fall 87	9
CMSC434	Human factors in computer and information systems	Spring 88	21
CMSC828S	User interface design	Fall 88	12
CMSC434/828	Human factors in computer and information systems	Spring 89	12
CMSC112	Introduction to Computer Science	Spring 90	100
CMSC434/828	Human factors in computer and information systems	Fall 90	20
CMSC498A	Computers and Society	Spring 91	30
CMSC828S	User interface design seminar	Spring 91	3
CMSC434/828	Human factors in computer and information systems	Fall 91	17
CMSC112	Introduction to Computer Science	Spring 92	40
CMSC424	Database Systems	Fall 92	40

CMSC434/828	Human factors in computer and information systems	Spring 93	25
CMSC828S	Virtual Reality, Telepresence & Beyond	Fall 93	30
CMSC112	Introduction to Computer Science	Spring 94	12
CMSC434	Human factors in computer And information systems	Fall 94	38
CMSC434	Human factors in computer and information systems	Fall 95	40
CMSC434	Human factors in computer and information systems	Spring 97	37
CMSC 828/838	Information Visualization	Fall 97	10
CMSC434	Human factors in computer and information systems	Spring 98	38
MSWE 613	Usability Engineering	Fall 98	40
CMSC434	Human factors in computer and information systems	Spring 99	42
CMSC 828/838	Information Visualization	Fall 99	12
CMSC434/838	Human factors in computer and information systems	Spring 2000	40
CMSC434/838	Human factors in computer and information systems	Spring 2001	44
CMSC838S	Advanced Usability-Mobile devices	Fall 2001	9
CMSC434/838	Human factors in computer and information systems	Spring 2002	34
CMSC838S	Advanced Usability-Creativity Support Tools	Fall 2002	7
CMSC434	Human factors in computer and information systems	Spring 2004	41
CMSC434	Human factors in computer and information systems	Fall 2004	50
CMSC 838S	Information Visualization	Spring 2005	16
CMSC434	Human factors in computer and information systems	Fall 2005	44
CMSC 838S	Information Visualization	Spring 2006	19
CMSC434	Human factors in computer and information systems	Fall 2006	31
CMSC 734	Information Visualization	Spring 2007	24
CMSC 734	Information Visualization	Spring 2008	23
CMSC 434	Introduction to HCI	Fall 2008	36
CMSC 734	Information Visualization	Fall 2009	29
CMSC 734	Information Visualization	Spring 2011	30
CMSC 434	Introduction to HCI	Fall 2011	39
CMSC 734	Information Visualization	Fall 2012	29
CMSC 734	Information Visualization	Fall 2013	30
CMSC 734	Information Visualization	Spring 2015	26
CMSC 798F	How to Conduct Great Research	Spring 2015	50

III.B. Teaching Innovations

III.B.1. Major Programs Established

III.B.2. Education Abroad Established

III.B.3. Software, Applications, Online Education, etc.

III.B.4. Instructional Workshops and Seminars Established

III.B.5. Course or Curriculum Development

III.B.6. Historical Innovations (10+ years ago)

III.B.7. Other

University of Maryland University College, Center for Professional Development: June 5-6, 1980, June 15-17, 1981, December 14-15, 1981, January 9-11, 1984, May 30-June 1, 1984 (UCLA), January 8-10, 1985, May 29-31, 1985 (UCLA), January 13-17, 1986, January 12-16, 1987, May 27-29, 1987 (UCLA), January 11-15, 1988, July 11-15, 1988 (UCLA), January 9-13, 1989, August 23-25, 1989 (UC Santa Cruz, CA), June 27-29, 1990, July 9-11, 1990 (UC Santa Cruz, CA), January 14-15, 1991 (Univ. of Calgary).

III.C. Advising: Research or Clinical

III.C.1. Undergraduate

III.C.2. Master's

Master's Student	Thesis Title	Date
Alan Laverson	Menu selection systems jump-ahead techniques: Evaluation of type-ahead vs. direct access methodologies	5/1985
Lawrence Koved	Restructuring textual information for online retrieval	8/1985
Gupta Pradeep	Evaluation of user interface for computer based communication	12/1985
Joe Reisel	The effects of display size on program comprehension	5/1986
Dan Ostroff	Selection systems: Interactive devices and strategies	5/1986
Richard Seabrook	User interface for a hypertext program browsing system	12/1988
Jacob Lifshitz	Multiwindow display systems for a hypertext system	12/1989
Patricia Jones	Hypertext for educational applications	8/1990
Rodrigo Botafogo	Structural analysis of hypertexts	5/1991
William Weiland	A graphical query interface based on aggregation/generalization hierarchies	5/1991
Degi Young	A graphical filter/flow model for boolean queries: An implementation and experiment	5/1992
Boon-Teck Kuah	Providing advisory notices for UNIX command users: Design, implementation, and empirical evaluations	12/1992
Vinit Jain	Data structures for dynamic queries	8/1993
David Turo	Enhancing treemap displays via distortion and animation: Algorithms and experimental evaluation	12/1993
Harsha Kumar	Browsing hierarchical data with multi-level dynamic queries and pruning	12/1994
Rohit Mahajan	Layout and textual consistency in user interfaces	5/1996
Irina Ceaparu	(No thesis)	5/2003

Gouthami Chintalapani	Temporal treemaps for visualizing time series data	5/2004
Jack Kustanowitz	(No Thesis – worked on BRQ)	5/2005
Joonghoon Lee	(No Thesis)	5/2008
Machon Gregory	Shape identification and ranking in temporal data sets	5/2009
Robert Gove	Understanding scientific literature networks: Case study evaluations of integrating visualizations and statistics	5/2011
Ran Liu	(No Thesis – worked on ManyLists)	5/2012
Lyndsey Franklin	Designing interactive decision aids for medical communication and exploration of treatment options	12/2013

III.C.3. Doctoral

Andrew Sears, Layout Appropriateness: Guiding user interface design with simple task descriptions (5/1993) (Prof & Dean, College of Computing & Info Sciences, RIT).

Brian Johnson, Treemaps: Visualizing hierarchical and categorical data (12/1993) (eBay).

David Carr, Specification methods for user interface objects (5/1995) (Prof. Lulea Univ., died 2005).

Eser Kandogan, Hierarchical multi-window management with elastic layout dynamics (8/1998) (IBM Research, Almaden, CA).

Richard Potter, Pixel data access: Interprocess communication in the user interface for end-user programming and graphical macros (5/1999) (Researcher, Univ of Tokyo).

Zhijun Zhang, (jointly with Victor Basili), Perspective-based usability inspection: empirical studies of efficacy (5/1999).

Chris North, A user interface for coordinating visualizations based on relational schemata: Snap Together Visualization (5/2000) (Prof, Virginia Tech).

Egemen Tanin, Exploration of large online data tables using generalized query previews (5/2001) (Assoc Prof, Univ of Melbourne).

Harry Hochheiser, Interactive graphical querying of time series and linear sequence data sets (5/2003) (Asst Prof. Univ. of Pittsburgh).

Hyunmo Kang, Dynamic personal management and exploration of media using semantic regions: A spatial interface supporting user-defined mental models (12/2003) (MicroStrategy).

Jinwook Seo, Information visualization design for multidimensional data: Integrating the rank-by-feature framework with hierarchical clustering, (5/2005) (Asst Prof. Seoul National Univ).

William Kules, Supporting exploratory web search with meaningful and stable categorized overviews (5/2006) (Assoc. Prof. & Chair, Catholic Univ. of America).

Haixia Zhao, Interactive sonification of abstract data - Framework, design space, evaluation, and user tool (5/2006) (Google).

Aleks Aris, Visualizing & exploring networks with semantic substrates (8/2008) (Google).

Adam Perer, Integrating statistics and visualization to improve exploratory social network analysis (5/2008). (IBM Research, Yorktown Heights, NY).

David Wang, Interactive visualization techniques for searching temporal categorical data (5/2010). (PartnersHealthCare & Harvard Medical School).

Krist Wonsuphasawat, Interactive exploration of temporal event sequences (5/2012) (Twitter).
Cody Dunne, Measuring and improving the readability of network visualizations (5/2013) (IBM).
Sureyya Tarkan, Interactive visual displays for results management in complex medical workflows (5/2013) (PARC).
John Alexis Guerra-Gómez, Exploring differences in multivariate datasets using hierarchies: An interactive information visualization approach (5/2013) (PARC).
Megan Monroe, Interactive event sequence query and transformation (5/2014) (IBM).

III.C.4. Post-doctoral
III.C.5. Other Research Directions (K-12 Interactions)

III.D. Mentorship
III.D.1. Junior Faculty
III.D.2. Other

III.E. Advising: Other than Research Direction
III.E.1. Undergraduate
III.E.2. Master's
III.E.3. Doctoral
III.E.4. Post-doctoral
III.E.5. Other Advising Activities
(Include advising student groups, special assignments, recruiting, etc.)

III.F. Professional and Extension Education
III.F.1. Professional Programs Established
III.F.2. Major Extension Programs
III.F.3. Workshops
III.F.4. Other

III.G. Other Teaching Activities

IV. Service and Outreach

IV.A. Editorships, Editorial Boards, and Reviewing Activities

IV.A.1. Editorships
1. Book series, Human/Computer Interaction, Ablex Publishers, (21 books published, list available on request)

IV.A.2. Editorial Boards
Previous *ACM Transactions on Database Systems* (1974-80).
Hypermedia (1989-92)
HCI Abstracts (1990-91)
International Journal of Man-Machine Studies (1985-95)
ACM Transactions on Computer-Human Interaction (1992-95)

Empirical Software Engineering (1999-2002)
Journal of Digital Information (1997-2004)
ACM Interactions (1994-2007)
Journal of Information Technologies and International Development (2003-2010)

Current *International Journal of Human-Computer Interaction* (1988-).
Interacting with Computers (1989-)
Behaviour and Information Technology (1989-)
Information Visualization (2002-) Advisory Editor
Journal of Biomedical Discovery and Collaboration (BioMed Central) (2005-)
Foundations and Trends in Web Science (2005-)
Association for Information Systems (AIS) Advisory Board for *Transactions on Human-Computer Interaction* (THCI) (2008-)

IV.A.3. Reviewing Activities for Journals and Presses
List available on request
IV.A.4. Reviewing Activities for Agencies and Foundations
List available on request
IV.A.5. Reviewing Activities for Conferences
IV.A.6. Historical Editorships, etc. (10+ years ago)
IV.A.7. Other

1. Assistant Editor - *Information Processing and Management*, (1974-78).

2. Guest Editor - *Communications of the ACM*, Special Section on Ecological Studies of Professional Programmers, (November 1988).

3. Special Issue Editor, Usability Engineering, *Empirical Software Engineering*, (March 1999), with J. Scholtz.

4. Special Issue Editor, Web Navigation, *IT and Society 1*, 3 (March 2003), with Melody Ivory and Jonathan Lazar, http://www.stanford.edu/group/siqss/itandsociety/v01i03/

<u>IV.B. Committees, Professional & Campus Service</u>
IV.B.1. Campus Service - Department
IV.B.2. Campus Service - College
IV.B.3. Campus Service – University
Director of Departmental Colloquium (1982-1987) - Obtained corporate contributions, arranged for speakers, prepared brochures, developed publicity, and arranged visits.
Chairman Appeals Committee, August 1984 Comprehensive Exam.
Member, Search Committee for MPSE Division Assistant Provost (1988).
Member Department Advisory Board (1984).
Annual Report Editor (1985).
Chairman, January 1985 Comprehensive Exam.
Member of Promotion Committee for Nicholas Roussopoulos (1989).

Member, Hiring and Tenure Committee for Gary Knott (1989).
Organizer for High School Day (April 1989).
Member, Campus Review Committee for the Center for Automation Research (1990).
Member, Undergraduate Studies Committee (1990-91).
Member Tenure committee for David Stotts (1990).
Member Systems Engineering Advisory Board (1990-).
Member, Faculty Senate (1990-93?)
Member Tenure committee for Richard Furuta (1991).
Chairman Tenure committee for Leo Mark (1991).
Chairman, January 1992 IP Comprehensive Exam.
Member Information Processing Field Committee, Dept. of Computer Science.
Member of Appointments, Promotions and Tenure Committe, Dept. of Computer Science.
Liaison with College of Business (1982-).
Liaison with College of Library and Information Services (1982-).
Liaison with Department of Psychology (1982-).
Member Steering Committee for AT&T Teaching Theater (1988-)
Member University Senate (September 1991-September 1994).
Member Search Committee: Dean of College of Library and Information Services (1992-93).
Chair, Instructor Evaluation Criteria Committee (1994-95).
Member Promotion Committee for Yiannis Aloimonos (1997)
Member, University Senate (1997- 2000)
Member, College of Library and Information Services, Search Committee (1998-99)
Member Search Committee: Dean of College of Library and Information Services (2000-2001)
Chair of Software Engineering & Programming Languages Field Committee (2000-2001)
Chair Dept of Computer Science Distinguished Lecture Series (2002)
Member, Hornbake Library Advisory Committee (2002-)
Chair, Tenure Committee for Ben Bederson (2003)
Member, CS Department Awards Committee (2004-)
Member, Tenure Committee for Alison Druin (2004)
Reviewer for 3-year renewal for Francois Guimbretiere (2005)
Chair of Software Engineering & Programming Languages Field Committee (Fall 2005)
Member Promotion Committee for Amitabh Varshney (2005)
UMIACS Newsletter/Brochure (2006)
HCIL Symposium (2006)
Chair, Tenure Committee for Francois Guimbretiere (2007-2008)
Member, UMIACS Promotion Committee for Catherine Plaisant (2008-2009)
Reviewer for Chau-Wen Tseng (2009)
Reviewer for Ben Bederson (2010)
Member, University Senate (2009-2013)
Member, Dept of Computer Science Chair Search Committee (2011-2012)
Member, Promotion Committee for Lise Getoor (2012)
Member, Dept of Computer Science Faculty Teaching Review committee (2013-2016)
Member, Promotion Committee for Mihai Pop (2015)

IV.B.4. Campus Service - Special Administrative Assignment
IV.B.5. Campus Service - Other
IV.B.6. Offices and Committee Memberships

Co-chair and Founder, Software Psychology Society (1975-96), more than 600 members.
Member, Association for Computing Machinery, National ACM Lecturer.
Member, International Commission on Human Aspects in Computing (1986-92)
Member of the Executive Committee of the Special Interest Group on Computer-Human Interaction (SIGCHI) (1987-89).
Member of the Executive Committee of the USACM, Public Policy Group .
Member ACM SIGART, CAS, CHI, CSE, IR, MOD, PC, PLAN, SOFT.
Member, CODASYL Stored Data Definition and Translation Task Group (1973-76) and Database Program Conversion Task Group (1977-80).
Senior Member, IEEE Society (2004 -)
Affiliate Member, IEEE Computer Society.
Member, Human Factors Society, Computer Systems Technical Group.
Program committee member for 28 conferences.

IV.B.7. Leadership Roles in Meetings and Conferences
IV.B.8. Other Non-University Committees, Memberships, Panels, etc.
IV.B.9. Historical Committees, etc. (10+ years ago)
IV.B.10. Other

IV.C. External Service and Consulting

IV.C.1. Community Engagements, Local, State, National, International
IV.C.2. International Activities
IV.C.3. Corporate and Other Board Memberships

Corporate Advisory Boards:

October 2015- current, Technical Advisory Board for Visual Action www.visualaction.com
October 2011-current, Technical Advisor for Centrifuge Systems, www.centrifugesystems.com
October 2002- 2015, Technical Advisory Board for HiveGroup www.hivegroup.com
November 2006 - August 2009, Technical Advisory Board for Groxis www.grokker.com
January 2001-June 2006, Technical Advisory Board for ILOG www.ilog.com , Paris, France
August 2000 – Dec 2005, Technical Advisory Board for Clockwise3d www.clockwise3d.com, Tel Aviv, Israel
March 2000 – Dec 2000, Member Advisory Board for TheDotComGroup, Reston, VA
March 2000 – June 2002, Computer Science Advisor, www.Smartmoney.com New York, NY
1996-2001, Member, Board of Directors, Spotfire Inc., www.spotfire.com Somerville, MA

Government Advisory Boards:

May 2006 – April 2010, Member, Board of Scientific Counselors – National Library of Medicine Lister Hill Center
May 2006 – October 2008, Member, National Academies Committee on Technical and Privacy Dimensions of Information for Terrorism Prevention and Other National Goals.

Report: *Protecting Individual Privacy in the Struggle Against Terrorists: A Framework for Program Assessment*, National Academies Press, Washington, DC (2008), Available at:
http://www.nap.edu/catalog.php?record_id=12452
June 2006 – June 2008, Member, President's Council of Advisors on Science and Technology, Networking and Information Technology Technical Advisory Group (TAG).

Professional Advisory Boards
2010-current, IEEE Information Visualization Conference Steering Committee
2008- current, SEMVAST Advisory Board.
2007 - current, State of the USA Product Advisory Group.
2007 - current, Web Science Trust, Scientific Council
2005 - 2007, Member, IEEE Von Neumann Medal Award Committee.

Consulting for industrial corporations (AT&T, Apple, GE, CDC, IBM, Intel, Bell Labs, Microsoft, Honeywell, etc.), government agencies (Library of Congress, NASA, Office of Technology Assessment, Dept. of Energy, etc.), international agencies (Int'l Atomic Energy Agency, World Bank), university research groups (CCNY, NYU, VPI), and publishers (Ablex (series editor), Harcourt Brace Jovanovich, Addison-Wesley, Prentice-Hall, McGraw-Hill, Van Nostrand Reinhold (Consulting Editor, University Series in Computer Science), etc.).

Data Structures: Description, Manipulation and Evaluation, Ph.D. Thesis, State University of New York at Stony Brook, May, 1973.

IV.C.4. Entrepreneurial Activities
IV.C.5. Consultancies (to local, state and federal agencies; companies; organizations)
IV.C.6. Historical External Service and Consulting (10+ years ago)
IV.C.7. Other

IV.D. Non-Research Presentations
IV.D.1. Outreach Presentations
IV.D.2 Other

IV.E. Media Contributions
IV.E.1. Internet
IV.E.2. TV
IV.E.3. Radio
IV.E.4. Digital Media
IV.E.5. Print Media
IV.E.6. Blogs
IV.E.7. Feeds
IV.E.8. Other

1. *TROOLS: techniques, rules and tools*, half-hour television interview, WCQR,

2. *It's About Time*, half-hour television interview, WTIU (Public Broadcasting System), Bloomington, IN (1975).

3. Audio cassettes of talks at National Computer Conference 1979, 1975, and ACM National Conference, 1978, 1974.

4. *Software Psychology: Human Factors in Computer and Information Systems*,12 one hour videotape cassettes, with printed visual aids and related readings, Ethnotech, Inc., Lincoln, NE (1979).

5. *Designing the User Interface*, 5 hour videotape with accompanying notes, University of Maryland Instructional Television, College Park, MD (1987).

6. *User Interface Strategies '88*, 10 hour videotape course with accompanying notes, University of Maryland Instructional Television, College Park, MD (1988), with D. Norman, T. Malone, and J. Foley.

7. *User Interface Strategies '90*, 5 hour videotape course with accompanying notes, University of Maryland Instructional Television (1990), with A. Marcus, J. Carroll, and J. Mountford.

8. *User Interface Design for Advanced Workstations*, Flagship Channel, 29 min., (1990).

9. *User Interface Strategies '91*, 5 hour videotape course with accompanying notes, University of Maryland Instructional Television (1991), with A. Van Dam, E. Soloway, and B. Curtis.

10. Scheduling ON-OFF home control devices, *SIGGRAPH Video Review 63/64*, 6 min. (Refereed) (1991), with Catherine Plaisant.

11. Human-Computer Interaction Laboratory Open House Video (1991), 64 min.

12. Ahlberg, C., Shneiderman, B., and Williamson, C., Dynamic Queries, *SIGGRAPH Video Review 77*, 10 min. (Referreed) (1991).

13. *User Interface Strategies '92*, 5 hour videotape course with accompanying notes, University of Maryland Instructional Television (1992), with T. Landauer, B. Myers, and B. Laurel.

14. Human-Computer Interaction Laboratory Open House Video (1992), 78 min, compiled by Plaisant, C.

15. *Managing the Human-Computer Interface*, 2 hour videotape course with accompanying notes, University of Maryland Instructional Television (June 1992).

16. *User Interface Strategies '93*, 5 hour videotape course with accompanying notes, University of Maryland Instructional Television (1993), with Mantei, M., Furness, T., and Martin, J.

17. Human-Computer Interaction Laboratory Open House Video (1993), 49 min.compiled by Plaisant, C.

18. *User Interface Strategies '94*, 5 hour videotape course with accompanying notes, University of Maryland Instructional Television (1994), with Nielsen, J., Olson, J., and Krueger, M.

19. Ahlberg, C. and Shneiderman, B., Visual Information Seeking: Tight coupling of dynamic query filters with starfield displays, *SIGGRAPH Video Review 97*, 7 min.(April 1994) (Referreed).

20. Human-Computer Interaction Laboratory Open House Video (1994), 80 min.compiled by Plaisant, C.

21. *User Interface Strategies '95*, 5 hour videotape course with accompanying notes, University of Maryland Instructional Television (1995), with Stein, F., Norman, K., Hartson, H. R., and Hix, D.

22. Asahi, T., Shneiderman, B., and Turo, D., Visual Decision-Making: Using Treemaps for the Analytic Hierarchy Process, *SIGGRAPH Video Review*, (April 1995) (Referreed).

23. *User Interface Strategies '96*, 5 hour videotape course with accompanying notes, University of Maryland Instructional Television (1996), with Kreitzberg, C. B. and Yourdon, E.

24. Shneiderman, B., *Designing the User Interface: Third Edition*, 5-hour videotape course with accompanying notes, University of Maryland Instructional Television (September 1997).

25. Shneiderman, B., *Treating Web Fever: Human Values for Educational Technology*, 1-hour videotape, available from Wisconsin Educational Technology Center, Madison, WI (November 1998).

26. Kandogan, E. and Shneiderman, B., Using Elastic Windows for World-Wide Web browsing, *CHI98 Video* and *Proc. ACM CHI98 Conference: Summary*, ACM, New York (April 1996), 189-190.

27. Shneiderman, B., World Usability Day talk during 14th ACM Conference on Information and Knowledge Management in Bremen, Germany (November 4, 2005), 77 minutes, available on the net:

http://netzspannung.org/cat/servlet/CatServlet?cmd=netzkollektor&subCommand=showEntry&entryId=316147&lang=en

28. Ben Shneiderman featured on NPR's Kojo Nnamdi Show, Oct 30, 2013 https://www.cs.umd.edu/article/2013/11/ben-shneiderman-featured-npr%E2%80%99s-kojo-nnamdi-show

IV.F Community & Other Service

V. Awards, Honors and Recognition

V.1. Research Fellowships, Prizes and Awards

***October 8, 2013: Distinguished University Professor, Univ of Maryland.

*May 7, 2013: Univ. of Maryland Graduate Faculty Mentor of the Year Award.

***October 16, 2012: IEEE Visualization Career Award,
http://www.vgtc.org/PDF/awards/vis_career12.pdf
Video: http://www.youtube.com/watch?v=QmUpgw7FhJs),

***Nov 2011: Elected IEEE 2012 Fellow for contributions to human-computer interaction and information visualization,
http://www.ieee.org/membership_services/membership/fellows/index.html

Nov 2011: Best Paper Award for 2009, *AIS Transactions on Human-Computer Interaction*.

February 28, 2011, Miles Conrad Lecture Award, National Federation of Advanced Information Services, http://www.nfais.org/page/39-miles-conrad-lectures

Guest Editor: Cover Feature: Technology-Mediated Social Participation: Reports from National Science Foundation Workshops, *IEEE Computer 43*, 11 (November 2010), 20-67, with P. Pirolli and J. Preece.

*** February 17, 2010 - Elected to National Academy of Engineering
http://www.newsdesk.umd.edu/scitech/release.cfm?ArticleID=2083
http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=02172010

***February 9, 2010 - Honorary Doctorate, University of Castilla-LaMancha, Spain.
http://www.cs.umd.edu/hcil/UCLM-honorary-doctorate/

December 10-11, 2009 (Palo Alto, CA) and April 22-23, 2010 (Ballston, VA) - Co-Chair, National Science Foundation sponsored workshops on Technology-Mediated Social Participation, http://www.tmsp.umd.edu

May 2008 - Distinguished Faculty Award from Board of Visitors of the University of Maryland College of Computing, Mathematics, and Physical Sciences.

*** December 2007 - Special issue in honor of Ben Shneiderman's 60th Birthday, *International Journal of Human-Computer Interaction* Vol. 23, Issue 3, Edited by C. Plaisant and C. North. http://www.leaonline.com/toc/ijhc/23/3

June 13-15, 2007 - General Chair, Creativity & Cognition Conference, Washington, DC http://www.cs.umd.edu/hcil/CC2007

*** March 7, 2006 - **US patent 7,010,751**, Methods for the Electronic Annotation, Retrieval, and Use of Electronic Images. Sold Summer 2007.

June 13-14, 2005 - Co-Chair, National Science Foundation sponsored workshop on Creativity Support Tools, Washington, DC http://www.cs.umd.edu/hcil/CST/

*February-March 2003 - Erskine Fellowship recipient for sabbatical visits to Univ. of Waikato (Hamilton, NZ) and Univ of Canterbury (Christchurch, NZ).

***November 2001 – Testimony before House subcommittee on National ID Cards
http://www.house.gov/reform/gefmir/hearings/2001hearings/1116_nationa._id/1116_witnesses.htm
http://www.acm.org/usacm/National.htm

***May 2001 – ACM SIGCAS Making a Difference Award
http://www.acm.org/sigcas/awards/difference.htm

***April 2001 – ACM SIGCHI Lifetime Achievement Award and CHI Academy.
http://www1.acm.org/sigchi/documents/awards.html
http://www.cs.umd.edu/~ben/CHI-award.htm

***February 2001 – Fellow of the American Association for the Advancement of Science
http://www.aaas.org/about/aaas_fellows/AAAS_Intro_AFellows.html

November 2000 – Founding General Chair for ACM Conference on Universal Usability (Washington, DC) http://www.acm.org/sigchi/cuu/

May 1998 - General Co-Chair, ACM Policy '98 Conference (Washington, DC)
www.acm.org/policy98

***March 1997 - Association for Computing Machinery Fellow.
http://www.acm.org/awards/fellows/

***June 1995 - Honorary Doctorate of Science, University of Guelph, Ontario, Canada.

June 1995 - Co-Chair for Conference on Society and the Future of Computing (Durango, CO)

***1983-2000 – Founding Director, Human-Computer Interaction Laboratory.
http://www.cs.umd.edu/hcil

1985-91, 97 - current, Member, University of Maryland Institute for Advanced Computer Studies. http://www.umiacs.umd.edu/

1991-2006, University of Maryland Institute for Systems Research. www.isr.umd.edu

June 1986 - Program Chairman for Conference on Empirical Studies of Programmers.

July 1982 - July 1986 - Consultant with IBM Federal Systems Division.
August 1978 - Program Chairman International Conference on Databases: Improving Usability and Responsiveness, Technion, Haifa, Israel.

July 1978 - IBM Systems Research Institute, Course 56 - Designing Effective Person/Computer Interfaces.

November 1977 - Member of NSF Sponsored U.S. Delegation to Moscow and Novosibirsk, USSR.

Summer 1975 - Summer Faculty Research Fellowship, Indiana University.

Summer 1973 - Taught Summer Session, Computer Science Department, University of British Columbia, Vancouver, Canada.

Summer 1969 - Research in the Department of Applied Mathematics, Weizmann Institute of Science, Rehovoth, Israel. Advisor: Amir Pnueli.

V.2 Teaching Awards
V.3 Service Awards and Honors
V.4 Recognition in Media

Steve Lohr, **Humanizing Technology: A History of Human-Computer Interaction** (New York Times, September 7, 2015)
http://bits.blogs.nytimes.com/2015/09/07/humanizing-technology-a-history-of-human-computer-interaction/

Tom Ventsias. Health IT: an RX for health care. Terp, 7(1):20-23, 2009.
http://issuu.com/umaryland/docs/fall2009_final

Between the Columns**,** University of Maryland (March 2008)
http://betweenthecolumns.org/2008/03/01/pioneering/

User Experience Pioneers (Interview by T. Adlin, July 2007)
http://www.adlininc.com/uxpioneers/original_pioneers/ben_shneiderman.html

Interview by Ivo Weevers & Wouter Sluis (June 2004)
http://www.ivoweevers.nl/HCI/Docs/Weevers-Interview%20Ben%20Shneiderman.pdf

The New Computing (Ubiquity, ACM Interview, 2003)
http://www.acm.org/ubiquity/interviews/b_shneiderman_3.html

A Visual Rather Than Verbal Future, Leslie Walker, *Washington Post* (May 9, 2002) http://www.washingtonpost.com/ac2/wp-dyn?pagename=article&node=&contentId=A56499-2002May8&notFound=true

Experts: Computers slouching toward usability, Mathew Schwartz, *Computerworld* (April 12, 2001) http://www.computerworld.com/cwi/story/0,1199,NAV47_STO59553,00.html

Computer Controls? Save Your Breath, Anne Eisenberg, *New York Times* (November 2, 2000) http://www.nytimes.com/2000/11/02/technology/02NEXT.html
*** Humans Unite! Tim Beardsley, *Scientific American* profile (March 1999) http://www.sciam.com/1999/0399issue/0399profile.html

Banks that chat, and other irrelevancies, Carrie Shook, *Forbes Magazine* (April 20, 1998) http://www.forbes.com/forbes/1998/0420/6108224a.html

The Passion to Know: An Interview with Ben Shneiderman, Amy Friedlander, *D-Lib Magazine* (September 1997). http://www.dlib.org/dlib/september97/09editorial.html

VI. Other Information

Ben Shneiderman's biography appears in Marquis's *Who's Who in America*, *Who's Who in Science and Technology*, and *Who's Who in Education*. He is listed in the American Men and Women of Science. He is listed among the top 1000 creative people in the USA in the book: *1000: Richard Wurman's Who's Really Who* (2002). His Wikipedia page is https://en.wikipedia.org/wiki/Ben_Shneiderman

Ben Shneiderman's broad impact is seen in citation counts (October 2, 2015) from Google Scholar (64195, h-index 101) and Microsoft Academic Search (reports only up to 2012) puts him at the top of the Human-Computer Interaction field with 22356 citations. His h-index of 81 at (http://www.cs.ucla.edu/~palsberg/h-number.html) ranks him as 56 among all computer scientists of all time.

Ben Shneiderman explored the artistic side of information visualization in his Treemap Art Project (http://treemapart.wordpress.com), which was titled "Every AlgoRiThm has ART in it". Three sets of the twelve large images were produced: (1) hangs in the Computer Science Instructional Center at the University of Maryland, (2) is in the collection of the National Academies in Washington, DC (http://www.cpnas.org/exhibitions/archive/every-algorithm-has-art-in.html), and (3) is in the collection of the Museum of Modern Art in New York City.

An important component of his work has been related to photography, including development of the Photofinder and PhotoMesa tools. His devotion to photography includes a long history of photographing professional events, which has resulted in the 3300 photos at the ACM SIGCHI PhotoHistory and the Univ. of Maryland Dept. of Computer Science PhotoHistory. The March/April 2007 issue of ACM Interactions has an 8-page portfolio of 100+ photos from the 25-year history of ACM CHI conferences.

During his professional career Ben Shneiderman photographed conferences and colleagues. His MyLifePix archive of 12,000 photos is available with descriptions and indexing by name, date, and location. He has selected a set of key personalities who are leading HCI researchers and developers to profile with text and photos with Encounters with HCI Pioneers: A Personal Photo Journal, which was featured in the New York Times (September 7, 2015)