

Dr. Benjamin B. Bederson

University of Maryland, College Park
Professor, Computer Science

bederson@umd.edu
www.cs.umd.edu/~bederson

I have read the following and certify that it is a current and accurate statement of my professional record as of July 1, 2019.



1. PERSONAL INFORMATION

EDUCATION

9/89 – 6/92	Ph.D., New York University, Computer Science Dept.	New York, NY
9/87 – 8/89	M.S., New York University, Computer Science Dept.	New York, NY
9/82 – 6/86	B.S., Rensselaer Polytechnic Institute, Computer Science Dept. Minor, Electrical Engineering	Troy, NY

EMPLOYMENT

1/98 – Present	University of Maryland, Computer Science Dept./UMIACS Professor Emeritus, Computer Science Department.	College Park, MD
	4/14 – 6/18: Associate Provost of Learning Initiatives, and Executive Director of Teaching and Learning Transformation Center	
	4/13 – 4/14: Special Advisor to the Provost on Technology and Educational Transformation	
	8/11 – 6/19: Professor	
	9/04 – 7/11: Associate Professor	
	6/00 – 9/06: Director of the Human-Computer Interaction Lab (HCIL)	
	1/98 – 8/04: Assistant Professor	
1/06 – Present	International Children’s Digital Library Foundation Co-founder and Technical Director for this library of exemplary free online children’s books from around the world.	Manchester, MA
	7/17 – present: President, secretary and treasurer	
10/14 – Present	Hazel Analytics, Inc. (Potomac, MD) Co-founder & Chief Technology Officer: regulatory data analytics	Potomac, MD
9/06 – 10/14	Zumobi, Inc. Co-founder of VC-funded startup for mobile apps and advertising. 9/06–1/08: VP Client Technologies 1/08–10/14: Chief Scientist	Seattle, WA
6/03 – 11/08	Windsor Interfaces, Inc. Founder: Small company to commercialize HCIL products.	Chevy Chase, MD
1/95 – 8/97	University of New Mexico, Computer Science Department Assistant Professor in the Computer Science Department.	Albuquerque, NM
9/92 – 8/94	Bell Communications Research (Bellcore) Research Scientist in Computer Graphics and Interactive Media group.	Morristown, NJ
6/93 – 7/94	New York University, Media Research Laboratory Visiting Research Scientist.	New York, NY
9/90 – 8/92	Vision Applications, Inc. Research Scientist.	New York, NY
9/88 – 6/90	New York University, Computer Science Department Teaching Assistant.	New York, NY

2. RESEARCH, SCHOLARLY, AND CREATIVE ACTIVITIES

Note about publications:

- In all references, my name is in bold.
- Authors are displayed as published. Authors are usually listed in order of decreasing contribution – except that sometimes the last author is the lead advising faculty member. I put an asterisk next to my name when I served that role.
- Students that I supervised are underlined.

A. BOOKS

i. Authored Books

1. Herrnson, P.S., Niemi, R.G., Hanmer, M.J., **Bederson, B. B.**, Conrad, F.G., Traugott, M., (2008) “Voting Technology and the Not-So-Simple Act of Casting a Ballot,” *Brookings Institute Press*.

ii. Edited Collections

1. Teevan, J., Jones, W., **Bederson, B. B.** (Eds.) (2006) *Communications of the ACM (CACM)*, Editors of special issue on “Personal Information Management”, 49 (1), ACM Press.
2. **Bederson, B. B.**, Shneiderman, B. (Eds.) (2003). *The Craft of Information Visualization: Readings and Reflections*. San Francisco: Morgan Kaufmann.

iii. Book Chapters

1. Fails, J., Druin, A., **Bederson, B. B.**, Weeks, A., & Rose, A. (2009) A Child’s Mobile Digital Library: Collaboration, Community and Change. Druin, A. (Ed.) *Mobile Technology for Children: Designing for Interaction and Learning*, Morgan Kaufmann Press.
2. Herrnson, P.S., Niemi, R.G., Hanmer, M.J., **Bederson, B. B.**, Conrad, F.G., Traugott, M.W. (2008) The Current State of Electronic Voting in the United States. Chen, H., Brandt, L., Dawes, S., Gregg, V., Hovy, E., Macintosh, A., Traunmüller, R., Larson, C. (Eds.) *Digital Government: Advanced Research and Case Studies*, Springer, 157-180.
3. Karlson, A., **Bederson, B. B.**, & Contreras-Vidal, Jose L. (2007) Understanding One Handed Use of Mobile Devices. Lumsden, Jo (Ed.), *Handbook of Research on User Interface Design and Evaluation for Mobile Technology*, Idea Group Reference, 86-101.
4. Hutchinson, H., Druin, A., **Bederson, B. B.** (2007) Designing Searching and Browsing Software for Elementary-Age Children. Lazar, J. (Ed.), *Universal Usability*. John Wiley. 1618-1630.
5. Druin, A., **Bederson, B. B.**, Boltman, A., Muira, A., Knotts-Callahan, D., & Platt, M. (1999). Children As Our Technology Design Partners. A. Druin (Ed.), *The Design of Children's Technology* (51-72). San Francisco: Morgan Kaufmann.
6. Hollan, J. D., **Bederson, B. B.**, & Helfman, J. (1998). Information Visualization. Helander, M., Landauer, T. K., & Prabhu, P. V. (eds.), *The Handbook of Human Computer Interaction* (Chap. 2, 33-48). Amsterdam: Elsevier Press.
7. **Bederson, B. B.**, Hollan, J. D., Stewart, J., Rogers, D., Druin, A., Vick, D., Ring, L., Grose, E., & Forsythe, C. (1997). A Zooming Web Browser. C. Forsythe, J. Ratner, & E. Grose (eds.), *Human Factors and Web Development* (Chap. 19, 255-266). New Jersey: Lawrence Erlbaum.
8. **Bederson, B. B.**, & Druin, A. (1995). Computer Augmented Environments: Physical Spaces to Enrich Our Lives. Jakob Nielsen (eds.), *Advances in Human-Computer Interaction* (Vol. 5, Chap. 2, 37-66). New Jersey: Ablex Press.

-
9. **Bederson, B. B.**, Wallace, R. S., & Schwartz, E. L. (1993). A Miniaturized Space-Variant Active Vision System: Cortex-I. Richard Mammone (eds.), *Artificial Neural Networks for Speech and Vision*. Chapman-Hall Publishers.
 10. Wallace, R. S., Ong, P.-W., **Bederson, B. B.**, & Schwartz, E. L. (1993). Connective Graphs in Space-Variant Active Vision. George A. Bekey & Ken Goldberg (eds.), *Neural Networks in Robotics*. Kluwer Academic Publishers.

B. REFEREED ARTICLES

i. Journals

1. **Bederson, B. B.**, Jin, G. Z., Leslie, P., Quinn, A. J., Zou, B. (2017) "Incomplete Disclosure: Evidence of Signaling and Countersignaling", in *American Economic Journal: Microeconomics*, (in press).
2. Anderson, L. B., Gardner, E. E., Wolvin, A., Kirby-Straker, R., Yalcin, A., & **Bederson, B. B.*** (2016), "Incorporating Learning Analytics into Basic Course Administration: How to Embrace the Opportunity to Identify Inconsistencies and Inform Responses", in *Journal of the Association for Communication Administration*, 35 (1), Winter-Spring 2016, pp 2-14.
3. Lee, T. Y., **Bederson, B. B.*** (2016) "Give the people what they want: studying end-user needs for enhancing the web", *PeerJ Computer Science*, Nov, 2016, 2:e91 <https://doi.org/10.7717/peerj-cs.91>
4. Yalcin, M. A., Elmqvist, N. & **Bederson, B. B.***. (2015) "AggreSet: Rich and Scalable Set Exploration using Visualizations of Element Aggregations". in *IEEE Transactions on Visualization and Computer Graphics*, 22(1), 688–697, 2015.
5. Hu, C., Resnik, P., & **Bederson, B. B.*** (2014) "Crowdsourced Monolingual Translation", in *ACM Transactions on Computer-Human Interaction (TOCHI)*, 21 (4), Aug 2014, pp. 22:1–22:35.
6. Lee, T.Y., Mauriello, M., Ahn, J. & **Bederson, B. B.*** (2014) "CTArcade: Computational Thinking with Games in School Age Children", in *International Journal of Child-Computer Interaction*, 2 (1), Jan 2014, 26–33.
7. Bonsignore, E., Quinn, A. J., Druin, A. & **Bederson, B. B.*** (2013) "Sharing Stories 'In The Wild': A Mobile Storytelling Case Study using StoryKit", in *Transactions on Computer-Human Interaction (TOCHI)*, ACM, 20 (3), July 2013, Article 18.
8. Resnik, P., Buzek, O., Kronrod, Y., Hu, C., Quinn, A.J. & **Bederson, B. B.** (2013) "Using Targeted Paraphrasing and Monolingual Crowdsourcing to Improve Translation", in *Transactions on Intelligent Systems and Technology*, ACM, 4 (3), July 2013, Article 38, 21 pages.
9. **Bederson, B. B.** (2011) "The Promise of Zoomable User Interfaces", in *Behaviour & Information Technology*, Taylor & Francis, Nov-Dec 2011, 30 (6), 853-866.
10. Druin, A., **Bederson, B. B.**, Rose, A., Weeks, A. (2009) "From New Zealand to Mongolia: Co-Designing and Deploying a Digital Library for the World's Children", in *Children, Youth and Environments*, University of Colorado, 19 (1), 34-57.
11. Conrad, F.G., **Bederson, B. B.**, Lewis, B., Peytcheva, E., Traugott, M.W., Hanmer, M.J., Herrnson, P.S., & Niemi, R.G. (2009) "Electronic voting eliminates hanging chads but introduces new usability challenges", in *International Journal of Human-Computer Studies (IJHCS)*, Elsevier Press, 67 (1), 111-124.
12. Hanmer, M.J., Park, W-H., Traugott, M.W., Niemi, R.G., Herrnson, P.S., **Bederson, B. B.**, and Conrad, F.C. (2008) "Losing Fewer Votes: The Impact of Changing Voting Systems on Residual Votes", in *Political Research Quarterly*, Sage Publications, September, 2008. doi:10.1177/1065912908324201.
13. **Bederson, B. B.**, Clamage, A., Plaisant, C. (2008) Enhancing In-Car Navigation Systems with Personal Experience, in *Transportation Research Record (TRR)*, The National Academies, 2064 (2008) 33-42.
14. Herrnson, P.S., Niemi, R.G., Hanmer, M.J., Francia, P.L., **Bederson, B. B.**, Conrad, F.G., Traugott, M. (2008) Voter's Evaluations of Electronic Voting Systems: Results from a Usability Field Study, *American Politics Research*, Sage Journals, 36 (4), July 2008, 580-611.

-
15. Cockburn, A., Karlson, A., & **Bederson, B. B.*** (2008) A Review of Overview+Detail, Zooming, and Focus+Context Interfaces, *ACM Computing Surveys*, ACM Press, December 2008, 41 (1).
 16. Kang, H., **Bederson, B. B.**, & Suh, B. (2008) Capture, Annotate, Browse, Find, Share: Novel Interfaces for Personal Photo Management, *International Journal of Human-Computer Interaction (IJHCI)*, 23 (3), 1-23.
 17. Parr, C.S., Lee, B., **Bederson, B. B.*** (2007) EcoLens: Integration and Interactive Visualization of Ecological Datasets, *Journal of Ecological Informatics*, Elsevier, 2 (1), 61-69.
 18. Suh, B., and **Bederson, B. B.*** (2007) Semi-Automatic Photo Annotation Strategies Using Event Based Clustering and Clothing Based Person Recognition, *Interacting With Computers*, Elsevier, 19 (4), 524-544.
 19. Hutchinson, H., **Bederson, B. B.**, Druin, A., (2007) Supporting Elementary-Age Children's Searching and Browsing: Design and Evaluation Using the International Children's Digital Library, *Journal of the American Society for Information Science and Technology*, John Wiley & Sons, 58 (11), 1618-1630.
 20. Kang, H., Plaisant, C., Lee, B., **Bederson, B. B.***, (2007) NetLens: Iterative Exploration of Content-Actor Network Data, *Information Visualization*, Palgrave Macmillan, 6 (1), 18-31.
 21. Lee, B., Parr, C.S., Plaisant, C., **Bederson, B. B.**, Veksler, V.D., Gray, W.D., Kotfila, C. (2006) TreePlus: Interactive Exploration of Networks with Enhanced Tree Layouts, *IEEE Transactions on Vision and Computer Graphics (TVCG)*, IEEE Press, 12 (6), 1414-1426.
 22. Plaisant, C., **Bederson, B. B.**, Clamage, A., Hutchinson, H.B., Druin, A. (2006) Shared Family Calendars: Promoting Symmetry and Accessibility, *Transactions on Computer-Human Interaction*, New York: ACM, 13 (3), 313-346.
 23. Shneiderman, B., **Bederson, B. B.**, and Drucker, S., (2006) Find that photo! Interface strategies to annotate, browse, and share, *Communications of the ACM*, 49 (4), 69-71.
 24. Hutchinson, H.B., Rose, A., **Bederson, B. B.**, Weeks, A.C., Druin, A. (2005) The International Children's Digital Library: A Case Study in Designing for a Multi-Lingual, Multi-Cultural, Multi-Generational Audience, *Information Technology and Libraries*, 24 (1), 4-12.
 25. Herrnson, P.S., **Bederson, B. B.**, Lee, B., Francia, P. L., Sherman, R.M., Conrad, F.G., Traugott, M., Niemi, R.G. (2005) Early Appraisals of Electronic Voting, *Social Science Computing Review*, 23 (3), 274-292.
 26. Hourcade, J. P., **Bederson, B. B.**, Druin, A., & Guimbretière, F. (2004) Differences in pointing task performance between preschool children and adults using mice, *Transactions on Computer-Human Interaction*, New York: ACM, 11 (4), 357-386.
 27. Parr, C. S., Lee, B., & **Bederson, B. B.*** (2004). Visualizations for Taxonomic and Phylogenetic Trees. *Bioinformatics*, Oxford University Press, 20 (17), 2997-3004.
 28. **Bederson, B. B.**, Grosjean, J., Meyer, J. (2004) Toolkit Design for Interactive Structured Graphics, *Transactions on Software Engineering*, New York: IEEE, 30 (8), 535-546.
 29. Chipman, L. E., **Bederson, B. B.**, Golbeck, J. A. (2004) SlideBar: Analysis of a Linear Input Device. *Journal of Behaviour and Information Technology*, London, Taylor & Francis, 23 (1), 1-9.
 30. **Bederson, B. B.**, Clamage, A., Czerwinski, M. P., & Robertson, G. G. (2004) DateLens: A Fisheye Calendar Interface for PDAs, *Transactions on Computer-Human Interaction*, New York: ACM, 11 (1), 90-119.
 31. Hourcade, J. P., **Bederson, B. B.**, & Druin, A. (2004) Building KidPad: An Application for Children's Collaborative Storytelling, *Software: Practice & Experience*, New Jersey: John Wiley & Sons, Ltd, 34 (9), 895-914.
 32. Druin, A., **Bederson, B. B.**, Weeks, A., Farber, A., Grosjean, J., Guha, M. L., Hourcade, J. P., Lee, J., Liao, S., Reuter, K., Rose, A., Takayama, Y., & Zhang, L. (2003). The International Children's Digital Library: Description and Analysis of First Use. *First Monday*, 8(5).
 33. Druin, A., Revelle, G., **Bederson, B. B.**, Hourcade, J. P., Farber, A., Lee, J., & Campbell, D. (2003) A Collaborative Digital Library for Children: A Descriptive Study of Children's Collaborative Behavior and Dialogue. *The Journal of Computer-Assisted Learning*, 19 (2), 239-248.

-
34. Hourcade, J.P., **Bederson, B. B.**, Druin, A., Rose, A., Farber, A., Takayama, Y. (2003). The International Children's Digital Library: Viewing Digital Books Online. *Interacting with Computers*, Elsevier Press, 15 (3), 151-167.
 35. Hornbæk, K., **Bederson, B. B.**, & Plaisant, C. (2002) Navigation Patterns and Usability of Zoomable User Interfaces With and Without an Overview, *ACM Transactions on Computer-Human Interaction*, 9 (4), 362-389.
 36. **Bederson, B. B.**, Shneiderman, B., & Wattenberg, M. (2002) Ordered and Quantum Treemaps: Making Effective Use of 2D Space to Display Hierarchies, *ACM Transactions on Graphics*, 21 (4), 833-854, ACM Press.
 37. Good, L., & **Bederson, B. B.*** (2002) Zoomable User Interfaces as a Medium for Slide Show Presentations, *Information Visualization*, Palgrave Macmillan, 35-49.
 38. Revelle, G., Druin, A., Platner, M., **Bederson, B. B.**, Hourcade, J.P., & Sherman, L. (2002) A Visual Search Tool for Early Elementary Science Students, *Journal of Science Education and Technology*, 11(1), 49-57.
 39. **Bederson, B. B.**, & Meyer, J. (1998). Implementing a Zooming User Interface: Experience Building Pad++. *Software: Practice and Experience*, 28(10), 1101-1135.
 40. **Bederson, B. B.**, Hollan, J. D., Perlin, K., Meyer, J., Bacon, D., & Furnas, G. W. (1996). Pad++: A Zoomable Graphical Sketchpad for Exploring Alternate Interface Physics. *Journal of Visual Languages and Computing*, 7, 3-31.
 41. **Bederson, B. B.**, Wallace, R. S., & Schwartz, E. L. (1995). A Miniaturized Space-Variant Active Vision System: Cortex-I. *Machine Vision and Applications*, 8 (2), 101-109.
 42. **Bederson, B. B.**, Wallace, R. S., & Schwartz, E. L. (1994). A Miniature Pan-Tilt Actuator: the Spherical Pointing Motor. *IEEE Transactions on Robotics and Automation*, 10(3), 298-308.
 43. Wallace, R. S., Ong, P.-W., **Bederson, B. B.**, & Schwartz, E. L. (1994). Space-Variant Image Processing. *International Journal of Computer Vision*, 13(1), 71-90.

ii. Peer-Reviewed Published Full-Length Conference Papers

1. Yalçın, M. A., Elmqvist, N., & **Bederson, B. B.*** (2017) Raising the Bars: Evaluating Treemaps vs. Wrapped Bars for Dense Visualization of Sorted Numeric Data, *Proceedings of Graphics Interface (GI 2017)*, 41-49. DOI: <https://doi.org/10.20380/GI2017.06>
2. Quinn, A., & **Bederson, B. B.*** (2014) AskSheet: Efficient Use of Web Workers to Support Decision Making, *Proceedings of ACM CSCW (CSCW 2014)*, ACM Press, pp. 1456–1466.
3. Yeh, T., Chang, T.-H., Xie, B., Walsh, G., Watkins, I., Wongsuphasawat, K., Davis, L.S., & **Bederson, B. B.*** (2011) Creating Contextual Help for GUIs Using Screenshots, *Proceedings of ACM UIST (UIST 2011)*, ACM Press, 145-154.
4. Quinn, A., & **Bederson, B. B.*** (2011) Human Computation: A Survey and Taxonomy of a Growing Field, *Proceedings of ACM CHI (CHI 2011)*, ACM Press, 1403-1412.
5. Resnik, P., Buzek, O., Hu, C., Kronrod, Y., Quinn, A.J., & **Bederson, B. B.*** (2010) Improving Translation via Targeted Paraphrasing, *Proceedings of Conference on Empirical Methods in Natural Language Processing (EMNLP 2010)*, 127-137.
6. Hu, C., **Bederson, B. B.**, & Resnik, P. (2010) Translation by Interactive Collaboration between Monolingual Users, *Proceedings of Graphics Interface (GI 2010)*, 39-46.
7. Dearman, D., Karlson, A., Meyers, B., & **Bederson, B. B.** (2010) Multi-Modal Text Entry and Selection on Mobile Devices, *Proceedings of Graphics Interface (GI 2010)*, 19-26.
8. Quinn, A., Hu, C., Arisaka, T., & **Bederson, B. B.*** (2008) Readability of Scanned Books in Digital Libraries, *Proceedings of ACM CHI (CHI 2008)*, ACM Press, 705-714. [22% acceptance rate]
9. Karlson, A., & **Bederson, B. B.*** (2008) One-Handed Touchscreen Input for Legacy Applications, *Proceedings of ACM CHI (CHI 2008)*, ACM Press 1399-1408. [22% acceptance rate]

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.