Dr. Benjamin B. Bederson
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Professor Emeritus, Computer Science

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I have read the following and certify that it is a current and accurate statement of my professional record as of October 17, 2024.

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 & ROLES

3/22 – Present	**J.S. Bryant School, Inc.** Therapeutic high school for LGBTQ+ students Co-founder, Board member, Treasurer and Clerk	**Cummington, MA**
1/19 – Present	**Bederson Expert Services, Inc.** Technical and expert witness consulting	**Windsor, MA**
1/98 – Present	**University of Maryland, Computer Science Dept./UMIACS** 7/19 – Present: Professor Emeritus, Computer Science Department. 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	**College Park, MD**
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. 7/17 – present: President, secretary and treasurer	**Windsor, MA**
10/14 – 4/23	**Hazel Analytics, Inc.** Co-founder & Board member: regulatory data analytics 10/14 – 12/19: Chief Technology Officer	**Seattle, WA**
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**

GOOGLE EXHIBIT 1003

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**
1/87 – 5/87	**North Slope Borough/North Slope Higher Education Center** Instructor. Taught Computers & Society to rural Eskimo population.	**Barrow, AK**

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. – **Won 2021 IEEE Vis Test of Time Award in InfoVis, http://ieeevis.org/year/2021/info/awards/test-of-time-awards.**

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]

10. **Bederson, B. B.**, Clamage, A., Plaisant, C., (2008) Enhancing In-Car Navigation Systems with Personal Experience, *in Proc. of the Transportation Research Board 87th annual meeting*, The National Academies, Washington, DC (2008) 1-11.

11. Karlson, A., & **Bederson, B. B.*** (2007) ThumbSpace: Generalized One-Handed Input for Touchscreen-Based Mobile Devices, *Proceedings of INTERACT 2007*, 324-338 – **Winner of Brian Shackel Award for making an "outstanding contribution with international impact in the field of HCI".**

12. Druin, A., Weeks, A., Massey, S., & **Bederson, B. B.** (2007) Children's Interests and Concerns When Using the International Children's Digital Library: A four country case study, *Proceedings of the Joint Conference on Digital Libraries (JCDL 2007)*, 167-176. – **Nominated for Best Paper Award, came in #2.** [36% acceptance rate].

13. Parhi, P., Karlson, A., & **Bederson, B. B.*** (2006). "Target Size Study for One-Handed Thumb Use on Small Touchscreen Devices", *Proceedings of MobileHCI 2006*, ACM Press, 203-210. – **Winner of Best Historical Paper Award, September 2016.**

14. Hutchinson, H. B., **Bederson, B. B.**, & Druin, A. (2006). "The Evolution of the International Children's Digital Library Searching and Browsing Interface", *Proceedings of 5th International Conference for Interaction Design and Children (IDC 2006)*, ACM Press, 105-112. [38% acceptance rate]

15. Hutchinson, H., Druin, A., **Bederson, B. B.**, Reuter, K., Rose, A., Weeks, A. (2005) How do I Find Blue Books About Dogs? The Errors and Frustrations of Young Digital Library Users, *Proceedings of HCII 2005*, Las Vegas, NV (CD-ROM).

16. Shneiderman, B. & **Bederson, B. B.** (2005). "Maintaining Concentration to Achieve Task Completion", *Proceedings of Designing User Experience (DUX 2005)*.

17. Karlson, A., **Bederson, B. B.**, & SanGiovanni, J. (2005). AppLens and LaunchTile: Two Designs for One-Handed Thumb Use on Small Devices, CHI Letters, 7(1), 201-210. [25% acceptance rate] – **Nominated for Best Paper Award.**

18. Khella, A., **Bederson, B. B.*** (2004). Pocket PhotoMesa: A Zoomable Image Browser for PDAs. *In Proceedings of Mobile and Ubiquitous Multimedia (MUM 2004)* ACM Press, 19-24.

19. Lee, B., Parr, C. S., Campbell, D., & **Bederson, B. B.*** (2004). How Users Interact With Biodiversity Information Using TaxonTree. *In Proceedings of Advanced Visual Interfaces (AVI 2004)* ACM Press, 320-327. [25% acceptance rate]

20. Suh, B., Ling, H., **Bederson, B. B.**, & Jacobs, J. W. (2003). Automatic Thumbnail Cropping and Its Effectiveness. UIST 2003, ACM Symposium on User Interface Software and Technology, CHI Letters, 5(2), 95-104. [22% acceptance rate] – **Winner of Best Student Paper Award**.

21. **Bederson, B. B.**, Lee, B., Sherman, R., Herrnson, P. S., Niemi, R. G. (2003). Electronic Voting System Usability Issues. CHI 2003, ACM Conference on Human Factors in Computing Systems, CHI Letters, 5(1), 145-152. [16% acceptance rate]

22. Hutchinson, H., Mackay, W., Westerlund, B., **Bederson, B. B.**, Druin, A., Plaisant, C., Evans, H., Hansen, H., Conversy, S., Beaudouin-Lafon, M., Roussel, N., Lacomme, L., Eiderbäck, B., Lindquist, S., Sundblad, Y. (2003). Technology Probes: Inspiring Design for and with Families. CHI 2003, ACM Conference on Human Factors in Computing Systems, CHI Letters, 5(1), 17-24. [16% acceptance rate]

23. Knudtzon, K., Druin, A., Kaplan, N., Summers, K., Chisik, Y., Kulkarni, R., Moulthrop, S., Weeks, H., & **Bederson, B.** Starting an Intergenerational Technology Design Team: A Case Study. *In Proceedings of* Interaction Design and Chidlren (*IDC 2003*) ACM Press, 51-58.

24. Baudisch, P., Cutrell, P., Robbins, D., Czerwinski, M., Tandler, P., **Bederson, B. B.**, & Zierlinger, A. (2003) Drag-and-Pop and Drag-and-Pick: Techniques for Accessing Remote Screen Content on Touch- and Pen-Operated Systems. *Proceedings of Interact 2003*, Austria: International Federation for Information Processing, 57-64. [33% acceptance rate]

25. Plaisant, C., Grosjean, J., & **Bederson, B. B.*** (2002) SpaceTree: Design Evolution of a Node Link Tree Browser. *Proceedings of Information Visualization Symposium (InfoVis 2002)* New York: IEEE, 57-64. [27% acceptance rate] – **Won 2022 IEEE Vis Test of Time Award in InfoVis, https://ieeevis.org/year/2022/info/awards/test-of-time-awards.**

26. Suh, B., & **Bederson, B. B.*** (2002) OZONE: A Zoomable Interface for Navigating Ontology Information. *Proceedings of International Conference on Advanced Visual Interfaces (AVI 2002)*, ACM Press, Trento, Italy, 139-143. [30% acceptance rate]

27. Boltman, A., Druin, A., **Bederson, B.**, Hourcade, J.P., Stanton, D., O'Malley, C., Cobb, S., Benford, S., Fast, C., Kjellin, M., & Sundblad, Y. (2002). The nature of children's storytelling with and without technology. *Proceedings of American Educational Research Association (AERA) Conference*, New Orleans.

28. **Bederson, B. B.** (2001). PhotoMesa: A Zoomable Image Browser Using Quantum Treemaps and Bubblemaps. UIST 2001, ACM Symposium on User Interface Software and Technology, CHI Letters, 3(2), 71-80. [19% acceptance rate]

29. Druin, A., **Bederson, B. B.**, Hourcade, J.P., Sherman, L., Revelle, G., Platner, M., Weng, S. (2001) Designing a Digital Library for Young Children. *In Proceedings of Joint Conference on Digital Libraries (JCDL 2001)* ACM Press, 398-405. [30% acceptance rate]

30. Benford, S., **Bederson, B. B.**, Åkesson, K., Bayon, V., Druin, A., Hansson, P., Hourcade, J. P., Ingram, R., Neale, H., O'Malley, C., Simsarian, K., Stanton, D., Sundblad, Y., & Taxén, G. (2000). Designing Storytelling Technologies to Encourage Collaboration Between Young Children. CHI 2000, ACM Conference on Human Factors in Computing Systems, CHI Letters, 2(1), 556-563. [19% acceptance rate]

31. **Bederson, B. B.**, Meyer, J., & Good, L. (2000). Jazz: An Extensible Zoomable User Interface Graphics Toolkit in Java. UIST 2000, ACM Symposium on User Interface Software and Technology, CHI Letters, 2(2), 171-180. [26% acceptance rate]

32. **Bederson, B. B.** (2000). Fisheye Menus. UIST 2000, ACM Symposium on User Interface Software and Technology, CHI Letters, 2(2), 217-225. [26% acceptance rate]

33. Gandhi, R., Kumar, G., **Bederson, B. B.**, & Shneiderman, B. (2000). Domain Name Based Visualization of Web Histories in a Zoomable User Interface. *In Proceedings of Eleventh International Workshop on Database and Expert Systems Applications – Second International Workshop on Web-Based Information Visualization (WebVis 2000)*, IEEE Computer Society, Los Alamitos, CA (2000), 591-598.

34. **Bederson, B. B.**, & Boltman, A. (1999). Does Animation Help Users Build Mental Maps of Spatial Information? *In Proceedings of Information Visualization Symposium (InfoVis 99)* New York: IEEE, 28-35. [23% acceptance rate]

35. Combs, T. T. A., & **Bederson, B. B.*** (1999). Does Zooming Improve Image Browsing? *In Proceedings of Digital Library (DL 99)* New York: ACM, 130-137. [21% acceptance rate]

36. Stewart, J., **Bederson, B. B.**, & Druin, A. (1999). Single Display Groupware: A Model for Co-Present Collaboration. *In Proceedings of Human Factors in Computing Systems (CHI 99)* ACM Press, 286-293. [25% acceptance rate]

37. Hightower, R. R., Ring, L., Helfman, J., **Bederson, B. B.**, & Hollan, J. D. (1998). Graphical Multiscale Web Histories: A Study of PadPrints. *In Proceedings of ACM Conference on Hypertext (Hypertext 98)* ACM Press, 58-65.

38. Druin, A., Stewart, J., Proft, D., **Bederson, B. B.**, & Hollan, J. D. (1997). KidPad: A Design Collaboration Between Children, Technologists, and Educators. *In Proceedings of Human Factors in Computing Systems (CHI 97)* ACM Press, 463-470. [22% acceptance rate]

39. **Bederson, B. B.**, Hollan, J. D., Stewart, J., Rogers, D., Druin, A., & Vick, D. (1996). A Zooming Web Browser. *In Proceedings of SPIE Multimedia Computing and Networking* New York: IEEE, 260-271. https://www.spiedigitallibrary.org/conference-proceedings-of-spie/2667/0000/Zooming-Web-browser/10.1117/12.235898.short

40. **Bederson, B. B.**, & Hollan, J. D. (1995). Advances in the Pad++ Zoomable Graphics Widget. *In Proceedings of USENIX Tcl/Tk '95 Workshop (Tcl/Tk 95)* New York: USENIX, 3.

41. Furnas, G. W., & **Bederson, B. B.** (1995). Space-Scale Diagrams: Understanding Multiscale Interfaces. *In Proc. of Human Factors in Computing Systems (CHI 95)* ACM Press, 234-241. [29% acceptance rate]

42. **Bederson, B. B.**, & Hollan, J. D. (1994). Pad++: A Zooming Graphical Interface for Exploring Alternate Interface Physics. *In Proc. of User Interface and Software Technology (UIST 94)* ACM Press, 17-26.

43. **Bederson, B. B.**, Wallace, R. S., & Schwartz, E. L. (1993). Control & Design of the Spherical Pointing Motor. *In Proceedings of IEEE International Conference on Robotics and Automation (ICRA 93)* New York: IEEE, 2, 630-636.

44. **Bederson, B. B.**, Wallace, R. S., & Schwartz, E. L. (1992). A Miniaturized Active Vision System. *In Proceedings of Eleventh International Conference on Pattern Recognition*, IEEE Press, 58-61.

45. **Bederson, B. B.**, Wallace, R. S., & Schwartz, E. L. (1992). Two Miniature Pan-Tilt Devices. *In Proceedings of IEEE International Conference on Robotics and Automation*, New York: IEEE Press, (1), 658-663.

46. Wallace, R. S., **Bederson, B. B.**, & Schwartz, E. L. (1992). Voice-Bandwidth Visual Communication Through Logmaps: the Telecortex. *In Proceedings of IEEE Workshop on Applications of Computer Vision* New York: IEEE Press, 4-10.

iii. Other Publications

1. Yalcin, M. A., Elmqvist, N., & **Bederson, B. B.*** (2017). Piled Bars: Dense Visualization of Numeric Data. Poster presented at Graphics Interfaces, 2017.

2. **Bederson, B. B.**, Barker, K., Owens, L., Kim, Y. J. & Palmer, K. (2017) Designing Organizations to Support Tech on Campus. Panel at SXSW Edu, Austin, TX, March 6, 2017.

3. Yalcin, M. A., Elmqvist, N., & **Bederson, B. B.*** (2016). Keshif: Out-of-the-Box Visual and Interactive Data Exploration Environment. In *Proceedings of IEEE VIS 2016 Workshop on Visualization in Practice: Open Source Visualization and Visual Analytics Software*.

4. Yalcin, M. A., Elmqvist, N., & **Bederson, B. B.*** (2016). Cognitive Stages in Visual Data Exploration. In *Proceedings of Beyond Time and Errors: Novel Evaluation Methods for Visualization* (BELIV 2016) at IEEE VIS 2016.

5. Roberts, S., Swan, L., & **Bederson, B. B.** (2016). "Fishing for Faculty: The Bait and Hooks", Workshop in 2016 Professional and Organizational Development (POD) Conference, Louisville, KY, November, 2016.

6. Anderson, L. B., Gardner, E. E., Wolvin, A., Kirby-Straker, R., Yalcin, A., & **Bederson, B. B.*** (2015), "Incorporating Learning Analytics into Basic Course Administration: How to Embrace the Opportunity to Identify Inconsistencies and Inform Responses". *In NCA 2015 - 101th Annual meeting of the National Communication Association*. **Top Paper in Basic Course Division.**

7. Anderson, L. B., Gardner, E. E., Wolvin, A., Kirby-Straker, R., Yalcin, A., & **Bederson, B. B.*** (2015), "Utilizing learning analytics to improve the basic course: A qualitative analysis of the instructor feedback captured in Revealer". *Paper presented at the annual meeting of the Eastern Communication Association, Philadelphia, PA, June 2015*.

8. Hara, K, Hajiaghayi, M., & **Bederson, B. B.** (2015). FluTCHA: Using Fluency to Distinguish Humans from Computers, short paper and poster, WWW2015, Florence, Italy, May 18-22, 2015.

9. Teasley, S., & **Bederson, B. B.** (2015). Learning Analytics and iSchools: What, Why & Worries, *at iConference*, Session for Interaction and Engagement, March 24-27, 2015, Newport Beach, CA.

10. Xu, Z., Goldwasser, D., **Bederson, B. B.**, Lin, J. (2014) Visual Analytics of MOOCs at Maryland, *Poster at Learning @ Scale Conference (L@S '14)*.

11. **Bederson, B. B.**, Jin, G., Leslie, P., Quinn, A.J., & Zhou, B. (alphabetical order), (2014) "Incomplete Disclosure: Insights from Maricopa", International Industrial Organization Conference, April 11-13, 2014, Chicago.

12. Lee, T.Y., Mauriello, M.L., Ingraham, J., Sopan, A., Ahn, J., & **Bederson, B. B.*** (2012) "CTArcade: Learning Computational Thinking while Training Virtual Characters Through Game Play", WiP at CHI 2012, ACM Press, 2309-2314.

13. Cranor, L., **Bederson, B. B.**, & Quesenberry, W. (2012) "Occupy CHI! Engaging U.S. Policymakers", Panel in CHI 2012, ACM Press, 1139-1142.

14. **Bederson, B. B.**, Quinn, A. J., & Rose, A. (2012) SearchParty: Learning to Search in a Web-based Classroom, Workshop paper at CHI 2012.

15. Hu, C., Resnik, P., Kronrod, Y., & **Bederson, B. B.*** (2012) Deploying MonoTrans Widgets in the Wild. Note at CHI 2012, ACM Press, 2935-2938.

16. Hu, C., Resnik, P., Kronrod, Y., Eidelman, V., Buzek, O., & **Bederson, B. B.*** (2011) The Value of Monolingual Crowdsourcing in a Real-World Translation Scenario: Simulation using Haitian Creole Emergency SMS Messages. *In Proceedings of EMNLP 2011 Sixth Workshop on Statistical Machine Translation, 399-404.*

17. Kronrad, Y., Hu, C., Buzek, O., & Quinn, A.J. (2011) Using Monolingual Crowd to Improve Translation. Student poster at AAAS 2011. **Winner of poster in Math, Technology and Engineering category.**

18. **Bederson, B. B.**, & Quinn, A.J. (2011) Web Workers Unite! Addressing Challenges of Online Laborers. Alt.CHI paper at CHI 2011, ACM Press, 97-106.

19. Hu, C., **Bederson, B. B.**, & Resnik, P. (2011) MonoTrans2: A New Human Computation System to Support Monolingual Translation. Short paper at CHI 2011, ACM Press, 1133-1136.

20. Kronrod, Y., Buzek, O., Hu, C., Quinn, A., Resnik, P., & **Bederson, B. B.*** (2010) Using Crowdsourcing to Translate Without Bilinguals. Poster at CrowdConf 2010.

21. Hu, C., **Bederson, B. B.**, and Resnik, P. (2010) Translation by Iterative Collaboration Between Monolingual Users. Abstract and demo at the Human Computation Workshop (HCOMP 2010), 54-55.

22. Buzek, O., Resnik, P., & **Bederson, B. B.*** (2010) Error Driven Paraphrase Annotation using Mechanical Turk, In Creating Speech and Language Data With Amazon's Mechanical Turk, NAACL 2010 Workshop, 2010.

23. Chen, R., Rose, A., & **Bederson, B. B.*** (2009) How People Read Books Online: Mining and Visualizing Web Logs for Use Information. In Proceedings of European Conference on Digital Libraries (ECDL 2009), Short Paper, 364-369.

24. **Bederson, B. B.**, Rutledge, P., Quinn, A. (2009) Generalizing the International Children's Digital Library. In Proceedings of the Digital Humanities Conference (DH 09), Poster.

25. **Bederson, B. B.**, Quinn, A., Druin, A. (2009) Designing the Reading Experience for Scanned Multi-lingual Picture Books on Mobile Phones. In Proceedings of the Joint Conference on Digital Libraries (JCDL 2009), Short Paper, ACM Press, New York, NY, 305-308.

26. Hu, C., Rose, A., **Bederson, B. B.*** (2009) Locating Text in Scanned Books. In Proceedings of the Joint Conference on Digital Libraries (JCDL 2009), Poster.

27. Druin, A., Cavallo, D., Fabian, C., **Bederson, B. B.**, Revelle, G., Rogers, Y. (2009) Mobile Technologies for the World's Children. In Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 2009), ACM Press, Panel.

28. **Bederson, B. B.** (2008) "Experiencing the International Children's Digital Library", Interactions Magazine, ACM Press, 15 (6), 50-54.

29. Lazar, J., Hochheiser, H., Johnson, J., Karat, C-M., **Bederson, B. B.** (2008) "CHI Policy Issues Around the World", Panel in CHI 2008, ACM Press, 2277-2280.

30. Teevan, J., Jones, W., **Bederson, B. B.**, (2006) "Introduction: Personal Information Management," Communications of the ACM, 49 (1), 40-43. Ranked #3 "Year Rank" in annual downloads among ACM Magazines and Computing Surveys articles (CACM, 50 (12), 92-93).

31. Lee, B., Parr, C.S., Plaisant, C., **Bederson, B. B.**, (2006) "TreePlus: Visualizing Graphs as Trees," Video in InfoVis 2006.

32. Herrnson, P.S., Niemi, R.G., Hanmer, M.J., **Bederson, B. B.**, Conrad, F.G., Traugott, M., (2006) "The Importance of Usability Testing of Voting Systems," in Usenix/Accurate Electronic Voting Workshop.

33. Herrnson, P., Niemi, R., Hanmer, M., **Bederson, B. B.**, Conrad, F., Traugott, M., (2006) "Voter Errors in Electronic voting: Voting Systems, Ballot Type, and Voter Traits," In Midwest Political Science Association annual conference.

34. Herrnson, P., Niemi, R., Hanmer, M., **Bederson, B. B.**, Conrad, F., Traugott, M., (2006) "Voters' Abilities to Cast Write-In Votes Using Electronic Voting Systems," In Midwest Political Science Association annual conference.

35. Conrad, F., Peytcheva, E., Traugott, M., Lewis, B., Herrnson, P., **Bederson, B. B.** (2006) "Usability of Electronic Voting Systems: Field and Laboratory Experiments," In Midwest Political Science Association annual conference.

36. Lee, B., Parr, C. S., Plaisant, C., & **Bederson, B. B.*** (2005) "Visualizing Graphs as Trees: Plant a Seed and Watch it Grow", Proceedings of Graph Drawing 2005, 516-518.

37. Klein, C. &, **Bederson, B. B.*** (2005). "Benefits of Animated Scrolling", Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 2005) ACM Press, Short Paper, 1965-1968.

38. Lee, B., Czerwinski, M., Robertson, G. G. &, **Bederson, B. B.** (2005). "Understanding Research Trends in Conferences using PaperLens", Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 2005) ACM Press, Short Paper, 1969-1972.

39. Traugott, M.W., Hanmer, M.J., Park, W.H., Herrnson, P.S., Niemi, R.G., **Bederson, B. B.**, Conrad, F.G.,(2005) "The Impact of Voting Systems on Residual Votes, Incomplete Ballots, and Other Measures of Voting Behavior," In American Political Science Association meeting (APSA 2005).

40. Lee, B., Czerwinski, M., Robertson, G. G. &, **Bederson, B. B.** (2004). "Understanding Eight Years of InfoVis Conferences using PaperLens", InfoVis 2004 Symposium Compendium. **Winner of InfoVis Contest**.

41. **Bederson, B. B.** (2004) Interfaces for Staying in the Flow. In Ubiquity, ACM Press, (5) 27.

42. Hourcade, J. P., **Bederson, B. B.**, Druin, A. (2004) Preschool Children's Use of Mouse Buttons. In Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 2004) ACM Press, Short Paper, 1411-1412.

43. Selker, T., Fischer, E. A., **Bederson, B. B.**, McCormack, C., Nass, C. (2003) Voting: User Experience, Technology and Practice. In Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 2003) ACM Press, Panel, 700-701.

44. **Bederson, B. B.**, Clamage, A., Czerwinski, M. P., Robertson, G. G. (2003) A Fisheye Calendar Interface for PDAs: Providing Overviews in Small Displays. In Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 2003) ACM Press, Demonstration, 618-619.

45. Hourcade, J.P., **Bederson, B. B.**, Druin, A., Rose, A., Farber, A., Takayama, Y. (2002). The International Children's Digital Library: Viewing Digital Books Online. Interaction Design and Children International Workshop, August 28-29, 2002, Eindhoven, The Netherlands 15 (3), 151-167.

46. Herrnson, P., **Bederson, B. B.** (2002) Debugging Maryland Balloting, Washington Post, Outlook Section, p. B08, Sunday May 12th, 2002.

47. Good, L., **Bederson, B. B.**, Stefik, M., Baudisch, P. (2002) Automatic Text Reduction For Changing Size Constraints. In Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 2002) ACM Press, Short Paper, 798-799.

48. Hourcade, J.P., **Bederson, B. B.**, Druin, A., Taxén, G. (2002) KidPad: A Collaborative Storytelling Tool for Children. In Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 2002) ACM Press, Referred Demo, 500-501.

49. Hourcade, J.P., **Bederson, B. B.**, Druin, A. (2002) SearchKids: A Digital Library Interface for Young Children. In Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 2002) ACM Press, Referred Demo, 512-513.

50. **Bederson, B. B.** (2001). PhotoMesa: A Zoomable Image Browser Using Quantum Treemaps and Bubblemaps. UIST 2001, ACM Symposium on User Interface Software and Technology. Refereed demo.

51. Browne, H., **Bederson, B. B.**, Druin, A., Sherman, L., & Westerman, W. (September 2000) Designing a Collaborative Finger Painting Application for Children, HCIL-2000-17, CS-TR-4184, UMIACS-TR-2000-66

52. Hourcade, J., **Bederson, B. B.** (May 1999) Architecture and Implementation of a Java Package for Multiple Input Devices (MID) HCIL-99-08, CS-TR-4018, UMIACS-TR-99-26

53. Hightower, R.R., Ring, L.T., Helfman, J.I., **Bederson, B. B.**, Hollan, J.D. (1998) PadPrints: Graphical Multiscale Web Histories. UIST 1998, ACM Symposium on User Interface Software and Technology. Tech Note, 121-122.

54. Stewart, J., Raybourn, E., **Bederson, B. B.**, & Druin, A. (1998). When Two Hands Are Better Than One: Enhancing Collaboration Using Single Display Groupware. In Proceedings of Extended Abstracts of Human Factors in Computing Systems (CHI 98) ACM Press, Short Paper, 287-288.

55. **Bederson, B. B.**, Hollan, J. D., Druin, A., Stewart, J., Rogers, D., & Proft, D. (1996). Local Tools: An Alternative to Tool Palettes. In Proceedings of User Interface and Software Technology (UIST 96) ACM Press, Short Paper, 169-170.

56. **Bederson, B. B.**, Hollan, J. D. (1995) Pad++: A Zoomable Graphical Interface System. In Proceedings of Conference on Human Factors in Computing Systems Conference Companion (CHI 95) ACM Press, Short Paper, 23-24.

57. **Bederson, B. B.**, & Davenport, G., & Druin, A., & Maes, P. (1994). Immersive Environments: A Physical Approach to the Multimedia Experience, In Proceedings of IEEE International Conference on Multimedia Computing and Systems, Boston, Massachusetts, May 17-19, 1994, (Panel).

58. **Bederson, B. B.** (1995). Audio Augmented Reality: A Prototype Automated Tour Guide. In Proceedings of Human Factors in Computing Systems (CHI 95) New York: ACM Press, (Short Paper), 210-211.

59. Stone, L. M., Erickson, T., **Bederson, B. B.**, Rothman, P., Muzzy, R. (1994) Visualizing Data: Is Virtual Reality the Key? IEEE Visualization, IEEE Press, Short Paper, 410-413.

60. **Bederson, B. B.**, Stead, L., & Hollan, J. D. (1994). Pad++: Advances in Multiscale Interfaces. In Proceedings of Human Factors in Computing Systems (CHI 94) New York: ACM Press, Short Paper, 315-316.

61. **Bederson, B. B.** (1992). A Miniature Space-Variant Active Vision System: Cortex-I. Doctoral dissertation, New York University, New York, NY.

E. TALKS, ABSTRACTS, AND OTHER PROFESSIONAL PAPERS PRESENTED

i. Keynote Talks

1. April 2017 **CHIuXiD - The International Conference in Human-Computer Interaction & User Experience**, Jakarta, Indonesia
   "From Human-Computer Interaction to Strategic Leadership for Change"

2. March 2017 **Maryland College Learning Center Association**, Shady Grove, MD
   "Fishing for Faculty: Teaching & Learning Engagement at UMD"

3. April 2014 **Innovations in Teaching and Learning Conference**, College Park, MD
   "An Introduction to the Teaching and Learning Transformation Center"

4. October, 2012 **South African Institute for Computer Scientists and Information Technologists** Johannesburg, South Africa
   "Social Participation: How Collective Activity Can Make Change"

5. September, 2010 **Visual Information Communication International Symposium**, Beijing, China
   "The Promise of Zoomable User Interfaces"

6. May, 2010 **Human-Computer Interaction Lab's 27th Annual Symposium**, College Park, MD
   "The Promise of Zoomable User Interfaces"

7. November, 2009 Raja Roy Singh Keynote Lecture at the **UNESCO Asia-Pacific Programme of Educational Innovation for Development**, Hangzhou. China
   "Educational Technology for Creativity, Collaboration and Community"

8. February, 2009 **Microsoft Internal "UX Canvas Camp"**, Redmond, WA
   "A Short History of Zoomable User Interfaces"

9. September, 2002 **IEEE Symposium on Human Centric Computing Languages and Environments (HCC 02)**, Arlington, VA
   "Interfaces for Staying in the Flow"

ii. Invited Talks (doesn't include Keynote talks, which are listed above)

1. October 3, 2018, **Rutgers University**, Newark, NJ
   "Transforming Teaching at the University of Maryland"

2. September 28, 2018, **EPAM Executive Roundtable**, Minsk, Belarus
   "Workforce of the Future"
   on Panel with Eugene Roman (Canada Tire), Sjoerd Gehring (Johnson & Johnson) & Sandra Loughlin (UMD)

3. September 27, 2018, **EPAM Software Engineering Conference (SEC 2018)**, Minsk, Belarus
   "Open Company, Open Community, Open World"
   on Panel with Elaina Shekhter (EPAM), Sjoerd Gehring (Johnson & Johnson), Scott Nissenbaum (Ben Franklin Technology Partners) & Sandra Loughlin (UMD)

4. December 4, 2017, **Cornell Tech**, New York, NY
   "Academic Technologies in Higher Ed"

5. November 10, 2017, **Online Programs and MOOCs – Opportunities and Challenges**, in The 7th Annual MIS Academic Leadership Conference, RHSmith School of Business, University of Maryland

6. Sept 2, 2017, **Google**, New York, NY
   "Academic Technologies in Higher Ed"

7. June 11, 2015 **Designing a Learning Environment**, in "Open Textbooks: Challenges for Policy" workshop, University of Haifa, Haifa, Israel

8. May 13, 2015 **Strategic Integration of MOOCs into Graduate and Professional STEM Programs**, Champaign, Illinois
   Raineri, D., Breslow, L., **Bederson, B. B.**
   "Future of MOOCs in Research Universities"

9. April 13, 2015 **#EduAnalyticsDC Workshop**, Washington, DC
   "Understanding Consistency in a Large Multi-Section Course with Many Instructors"

10. March 3, 2015 **Coursera Partners Conference**, Newport Beach, CA
    Verstelle, M., Bennett, A., **Bederson, B. B.**, & Jeffries, Pam
    "Designing a MOOC Portfolio: Content Strategy for Online Education"

11. March 1, 2015 **Coursera Partners Conference**, Newport Beach, CA
    Buitendijk, S., **Bederson, B. B.**, Kerrison, M., & Price, V.
    "Value to Partners: Case Studies From Partner Institutions"

12. January 29, 2015 **University of Wisconsin, Madison**, Madison, WI
"Reflections on 20 Years Doing HCI Systems Research"
Department of Computer Science, Distinguished Lecture Series

13. Sheil, M., Rock, E., O'Brien, L., **Bederson, B. B.**, & Xiaoming, L. (2014) "Future Trajectories of MOOCS in Higher Ed", Panel at Coursera Partners' Conference.

14. February 12, 2014 **Patuxent Partnership**, Lexington Park, MD
"UMD MOOCs and What the Future Holds For Them"

15. January 29, 2014 **Carnegie Mellon University**, Pittsburgh, PA
"Power to the People: Approaches to Crowdsourcing"

16. January 14, 2014 **Microsoft**, Friendship Heights, MD
"Cracking the Code: Improving Computer Science Education Outcomes in the State of Maryland"
Panel participant on Microsoft public series "Conversations on Education"

17. November 20, 2013 **University of Maryland**, College Park, MD
"Mobile, Online, Flipped, Active: New Uses of Educational Technologies"
College of Education

18. October 11, 2013 **Huawei**, Hong Kong, China
"When Crowds Come Together"

19. October 8, 2013 **National Institute of Information and Communications Tecnology**, Osaka, Japan
"Crowdsourced Monolingual Translation"
in 2nd Workshop on Future Directions in Translation Research

20. February 1, 2013 **Google**, Mountain View, CA
"Social + MOOCs + Hcomp = SMOOCH: Computing Comes to Education"

21. January 29, 2013 **Google**, Mountain View, CA
"The Promise of Zoomable User Interfaces: Reflections on Design of Simple UX"

22. December 6, 2012 **Sunlight Foundation**, Washington, DC
"Digital Disclosure of a Nationally Standardized Database of Restaurant Food Safety Inspections" (with Ginger Jin)

23. November 19, 2012 **University of Maryland**, College Park, MD
"Innovation, Iteration & Creation: A Discussion about the Development of New Ideas in the Modern World"

24. November 6, 2012 **World Usability Day**, Minsk, Belarus
"The Promise of Zoomable User Interfaces"

25. November 2, 2012 **Central & Eastern European Software Engineering Conference in Russia** Moscow, Russia
"Learning to Code in an Online World"

26. November 2, 2012 **Central & Eastern European Software Engineering Conference in Russia** Moscow, Russia
Panelist in "Peopleware: what skills and qualifications we need to build a dream team of software engineers"

27. October 4, 2012 **UNISA – University of South Africa**, Johannesburg, South Africa
"Innovation, Iteration & Creation: A Discussion about the Development of New Ideas in the Modern World"

28. June 20, 2012 **University of Haifa**, Haifa, Israel
"Books that are Blue: What Children Can Teach Us About Creating New Technologies" (with Allison Druin)

29. June 19, 2012 **Interdisciplinary Center**, Herzilya, Israel
"Books that are Blue: What Children Can Teach Us About Creating New Technologies" (with Allison Druin)

30. Nov 17, 2011 **Future of Information Alliance**, College Park, MD
"Anonymity and Privacy While Learning"

31. Sept 21, 2011 **U.S. Senate and Congress Briefings**, Washington, DC
Panel participant in "Deconstructing the iPad: How Federally Supported Research Leads to Game-Changing Innovation" run by the Task Force on American Innovation and the CRA

32. Aug 24, 2011 **Summer Social Webshop** College Park, MD
"Translation by Collaboration Among Monolingual Users"

33. May, 2011 **National Science Foundation**, Arlington, VA
Distinguished Lecture Series
"Translation by Collaboration among Monolingual Users" (with Philip Resnik)

34. September, 2010 **Microsoft Research Asia**, Beijing, China
"Collaborative Monolingual Translation"

35. September, 2010 **Tsinghua University**, Beijing, China
"Collaborative Monolingual Translation"

36. April, 2010 **CHI 2010**, Atlanta, GA
Social Impact Award talk

37. October, 2009 **Google**, Mountain View, CA
Panel participant in "Breakthrough Learning in a Digital Age" invitation only conference

38. September, 2009 **Google Tech Talk**, Mountain View, CA
"Translation by Iterative Collaboration between Monolingual Users"

39. April, 2009 **University of Illinois (CS Dept.)**, Champaign-Urbana, IL
"Zoomable User Interfaces from Sun Sparcstations to iPhones"

40. April, 2009 **University of Illinois (iSchool)**, Champaign-Urbana, IL
"From Ulann Baatar to iPhone: A Digital Library for the World's Children"

41. February, 2009 **Tufts University**, Medford, MA
"From iPhone to Ulaan Baatar: A Digital Library for the World's Children"

42. February, 2009 **Microsoft Internal "UX Canvas Camp"**, Redmond, WA
"A Short History of Zoomable User Interfaces"

43. September, 2008, **Carnegie Mellon University**, Pittsburgh, PA
"Black Ears to Blonde Cats: Paths for Designing Change"

44. May, 2008, **Manchester Public Library** Manchester by the Sea, MA
"No Road, Drive: The ICDL Travels to Mongolia"

45. April, 2008 **Web 2.0 Expo**, San Francisco, CA
"Next Generation Mobile UI" (with John SanGiovanni)

46. February, 2008 **USACM Executive Council**, Washington, DC
"Voting Technology: The Not-So-Simple Act of Casting a Ballot"

47. October, 2007 **Widget Summit**, San Francisco, CA
"Mobile Widget Design"

48. September, 2007 **Knight Center for Specialized Journalism**, College Park, MD
"Mobile Technology Trends"

49. June, 2007 **Mobile Marketing Association**, New York, NY
"Designing for Usability"

50. May, 2007 **MIT Enterprise Forum**, Arlington, VA
"Co-present Mobile Collaboration"

51. December, 2006 **Human Factors and Ergonomics Society Potomac Chapter**, Bethesda, MD
"A Library for the World's Children"

52. June, 2006 **Open Society Forum**, Ulaan Baatar, Mongolia
"A Library for the World's Children"

53. February, 2006 **Dingman Center for Entrepreneurship, R.H. Smith School of Business**, UMD
"Web 2.0 UI"

54. December, 2005 **World Bank**, Washington, DC
"The International Children's Digital Library"

55. December, 2005 **IBM T.J. Watson Research Center**, Hawthorne, NY
"Making Visualization Work"

56. November, 2005 **NSA**, Laurel, MD
"Making Visualization Work"

57. October, 2005 **IBM Research**, Cambridge, MA
"Making Visualization Work"

58. October, 2005 **Johns Hopkins University – Computer Science Dept.**, Baltimore, MD
"Making Visualization Work"

59. September, 2005 **InfoToday Conference on 'Innovations in Search'**, New York, NY
"Zooming Into Visual Search"

60. March, 2005 **NFAIS**, Philadelphia, PA
"Making Sense of Search Results"

61. February, 2005 **American Association for the Advancement of Science (AAAS)** Washington, DC
Panel in annual conference,
"Designing Interfaces for Voting Machines"

62. February, 2005 **National Association of State Election Directors (NASED)** Washington, DC
Invited talk at annual conference.
"Designing Interfaces for Voting Machines"

63. January, 2005 **Microsoft**, Seattle, WA
"Interfaces for Staying in the Flow"

64. January, 2005 **Google**, Mountain View, CA
"The International Children's Digital Library"

65. December, 2004 **National Library of New Zealand,** Wellington, New Zealand
"The International Children's Digital Library"

66. December, 2004 **University of Waikato**, Hamilton, New Zealand
"Interfaces for Staying in the Flow"

67. December, 2004 **Victoria University Wellington**, Wellington, New Zealand
"Interfaces for Staying in the Flow"

68. December, 2004 **University of Canterbury**, Christchurch, New Zealand
"Interfaces for Staying in the Flow"

69. November, 2004 **National Archives and Records Administration (NARA)**, College Park, MD
in Conference "Partnerships in Innovation: Serving a Networked Nation"
"International Children's Digital Library"

70. April, 2004 **Johns Hopkins University Applied Physics Lab**, Laurel, MD
"Interfaces for Staying in the Flow"

71. October, 2003 **University of Maryland, Robert H. Smith School of Business**, College Park, MD
on InForum 2003 panel on "Does IT Matter?"

72. September, 2003 **University of Maryland**, College Park, MD
"Making Visualization Work"

73. September, 2003 **University of Victoria**, Victoria, Canada
"Interfaces for Staying in the Flow"

74. March, 2003 **National Archives and Records Administration**, College Park, MD
”Visualizations for Archivists”

75. March, 2003 **Microsoft Research**, Redmond, WA
”DateLens: A Scalable Fisheye Calendar Interface”

76. January, 2003 **Sun Microsystems**, Menlo Park, CA
”Zoomable User Interfaces for Searching and Browsing”

77. September, 2002 **Microsoft Research Limited**, Cambridge, England
”Information Visualization for Mobile Devices”

78. July, 2002 **Microsoft Research**, Redmond ,WA
Demo of DateLens with Bill Gates at Microsoft Faculty Summit

79. July, 2002 **Microsoft Research**, Redmond, WA
”Scalable Interfaces for Mobile Devices”

80. June, 2002, **WebShop**, Dept. of Sociology, UMD, College Park, MD
”Access and Usability: The Importance of Internet Applications”

81. January, 2002 **Workshop on Election Standards and Technology**, Washington, DC
”Visualization Techniques for Electronic Voting”

82. October, 2001 **Microsoft Research**, Redmond, WA
“Zoomable User Interfaces for Searching and Browsing: SearchKids & PhotoMesa”

83. October, 2001 **Xerox PARC**, Palo Alto, CA
“Zoomable User Interfaces for Searching and Browsing: SearchKids & PhotoMesa”

84. November, 2000 **Census Bureau, Dept. of Commerce**, Suitland, MD
”Zoomable User Interfaces”

85. May, 2000 **Bowie State University**, Bowie, MD
“Zoomable User Interfaces and Single Display Groupware”

86. April, 2000 **University of Delaware**, DE
“Zoomable User Interfaces and Single Display Groupware”

87. August, 1999 **Xerox PARC**, Palo Alto, CA
“Zoomable User Interfaces and Single Display Groupware”

88. August, 1999 **University of California, Berkeley**, Berkeley, CA
“Zoomable User Interfaces and Single Display Groupware”

89. August, 1999 **Sun Microsystems, Inc. (Java Group)**, Palo Alto, CA
“Zoomable User Interfaces and Single Display Groupware”

90. July, 1999 **Nokia**, Linköping Sweden
"Zoomable Information Retrieval Systems and Single Display Groupware"

91. June, 1998 **IBM**, Yorktown, NY
"Zoomable User Interfaces"

92. May, 1998 **Washington DC Linux User's Group**, Alexandria, VA
"Zoomable User Interfaces"

93. April, 1998 **National Institute of Standards and Technology (NIST)**, Gaitherberg, MD
"Zoomable User Interfaces"

94. March, 1998 **Microsoft Research**, Redmond, WA
"Zoomable User Interfaces"

95. October, 1997 **Netherlands Design Institute**, Amsterdam, Holland
"Pad++: Zoomable User Interfaces"

96. October, 1997 **Philips Labs**, Eindhoven, Holland
"Pad++: Zoomable User Interfaces"

97. October, 1997 **CID, Royal Institute of Technology (KTY),** Stockholm, Sweden
"Pad++: Zoomable User Interfaces"

98. September, 1997 **Swedish Institute of Computer Science (SICS)**, Stockholm, Sweden
"Pad++: Zoomable User Interfaces"

99. October, 1996 **ART3000, A French society for the development of Art & Technology**, Paris, France
"Pad++: A Zoomable Graphical Interface"

100. October, 1996 **University of Michigan, Department of Information Sciences**, Ann Arbor, MI
"Pad++: A Zoomable Graphical Interface"

101. July, 1996 **AT&T Bell Labs**, NJ
"Pad++: A Zoomable Graphical Interface"

102. January, 1996 **Stanford University, Cognitive Psychology Group**, CA
"Pad++: A Zoomable Graphical Interface"

103. October, 1995 **Cornell University, Computer Science Department**, Ithaca, NY
"Pad++: A Zoomable Graphical Interface"

104. June, 1995 **Sandia National Labs**, Los Alamos, NM
"Pad++: A Zoomable Graphical Interface"

105. April, 1995 **Los Alamos National Labs**, Los Alamos, NM
"Pad++: A Zoomable Graphical Interface"

106. November, 1993 **Digital Equipment Corporation, Stanford Research Center**, CA
"Pad++: A Multiscale Hierarchical Sketchpad"

107. October, 1993 **Brown University, Computer Science Department**, Providence, RI
"Pad++: A Multiscale Hierarchical Sketchpad"

108. April, 1993 **University of Chicago, Computer Science Department**, |
"PA3D: A Multiscale Hierarchical Sketchpad"

109. October, 1992 **Rensselaer Polytechnic Institute, Computer Science Department**, Troy, NY
"Cortex-I: A Miniature Active Vision System"

H. ORIGINAL DESIGNS, PLANS, INVENTIONS, AND PATENTS

i. Patents

1. SanGiovanni, J., & **Bederson, B. B.** (Inventors). (2022) *Systems, methods, and computer program products displaying interactive elements on a canvas.* US Patent #11,243,673

2. **Bederson, B. B.,** & SanGiovanni, J. (Inventors). (2021) *Techniques to modify content and view content on a mobile device*. US Patent #11,061,524.

3. SanGiovanni, J., & **Bederson, B. B.**, and Painter, B. (Inventors). (2018) *Systems and methods for adaptive third party content*. US Patent #10,019,963.

4. SanGiovanni, J., & **Bederson, B. B.** (Inventors). (2018) *Systems, methods, and computer program products displaying interactive elements on a canvas*. US Patent #9,959,020.

5. **Bederson, B. B.,** & SanGiovanni, J. (Inventors). (2017) *Techniques to modify content and view content on mobile devices*. US Patent #9,778,810.

6. SanGiovanni, J., & **Bederson, B. B.** (Inventors). (2016) *Systems, Methods, and Computer Program Products Providing an Integrated User Interface for Reading Content*. US Patent #9,361,130.

7. SanGiovanni, J., & **Bederson, B. B.** (Inventors). (2014) *Systems, Methods, and Computer Program Products Displaying Interactive Elements on a Canvas.* US Patent #8,819,570.

8. Pahud, M., Murillo, O. E., Karlson, A. K., & **Bederson, B. B.** (Inventors). (2012). *Monitoring Pointer Trajectory and Modifying Display Interface*. US Patent #8,261,211.

9. Good, L.E., **Bederson, B. B.**, & Stefik, M.J. (Inventors). (2010). *Methods and Systems for Supporting Presentation Tools Using Zoomable User Interfaces*. US Patent #7,707,503.
10. **Bederson, B. B.**, Good, L. E., & Stefik, M.J. (Inventors). (2009). *Methods and Systems for Incrementally Changing Text Representation*. US Patent #7,650,562 B2.
11. **Bederson, B. B.**, Good, L. E., & Stefik, M. J. (Inventors). (2009). *Methods and Systems for Incrementally Changing Text Representation*. US Patent #7,549,114 B2.
12. Wallace, R. S., **Bederson, B. B.**, & Schwartz, E. L. (Inventors). (1997). *TV Picture Compression and Expansion*. US Patent #5,642,167.
13. **Bederson, B. B.**, Wallace, R. S., & Schwartz, E. L. (Inventors). (1993). *Two-Dimensional Pointing Motor*. US Patent #5,204,573.
14. Wallace, R. S., **Bederson, B. B.**, & Schwartz, E. L. (Inventors). (1992). *Telephone Line Picture Transmission*. US Patent #5,175,617.

ii. University Disclosures

1. **Bederson, B. B.** & Lin, J. (Inventors) (2009), CrowdFlow: A Computer-Human Hybrid Cloud Computing Model.
2. **Bederson, B. B.** (Inventor) (2002), Fisheye Calendar: A Calendar interface for small to large devices, IS-2002-015.
3. **Bederson, B. B.** (Inventor) (2001), PhotoMesa: A Zoomable Image Browser, IS-2001-053
4. **Bederson, B. B.**, & Chipman, L. G. (Inventors) (2000), *Physical Linear Slider Device to Control Computer Interface*, IS-2000-018.
5. **Bederson, B. B.** (Inventor) *Fisheye Menus For Selecting an Item From a Long List*, IS-2000-025.
6. **Bederson, B. B.**, Druin, A., & Pablo, J. P. (Inventors) (2000), *KidPad: A Collaborative Storytelling Environment for Children*, IS-2000-019.

I. CONTRACTS AND GRANTS

Total Funding: $18,036,144
UMD Portion: $10,329,299

1. **Ithaka SR, July 2016, co-PI**
   Elementary Statistics with an adaptive learning system
   $113,500
2. **Maryland Innovation Initiative, March 2014, PI**
   A Nationwide Database of Food Safety Inspections for Retail Establishments
   $100,000
3. **Huawei, July 2013, PI**
   XParty: Synchronous Online Language Learning
   $54,000
4. **Google, March 2013, PI**
   XParty: Synchronous Peer Learning in MOOCs (extension)
   $48,872
5. **Google, December 2011, PI**
   Search Party: Learning to Search in a Web-Based Classroom
   $60,000
6. **Alfred P. Sloan Foundation, November 2011, co-PI**
   Digital Disclosure of a Nationally Standardized Database of Restaurant Food Safety Inspections
   $465,272

7. **Google, June 2011, PI**
   Search Party: Web-Based Classroom Learning to Search
   $15,000

8. **Google, June 2011, co-PI**
   Translate the World: A Unified Framework for Crowdsourcing Translation
   $150,000

9. **Nokia Research, July 2010, PI**
   Mobile Learning
   $36,000

10. **NSF, CDI Type I: Translation as a Collaborative Process, Sep 2009, PI**
    $630,000

11. **Google, July 2009, PI**
    Translation as a Collaborative Process
    $70,000

12. **Sesame Workshop, January 2009, co-PI**
    Literacy 360 Alliance
    $22,500

13. **Eliassen Foundation, Nov 2008, co-PI**
    ICDL Elias Project
    $50,000

14. **Intel, Nov 2008, co-PI**
    ICDL ClassmatePC Project
    $50,000

15. **NSF, Designing and Understanding Intergenerational Mobile Learning Communities, Sep 2008, co-PI**
    $100,000

16. **Government of Mongolia Ministry of Education, Culture and Science – Nov2008, PI**
    International Children's Digital Library Phase 2
    $230,000
    $190,000 (for UMD)

17. **NSF, Usability Study of Independent Voter Verification Systems – July 2006, co-PI**
    PI – Paul Herrnson (Gov't & Politics)
    $68,000

18. **Government of Mongolia Ministry of Education, Culture and Science – May 2006, PI**
    Creating Digital Libraries in Mongolia
    $75,000

19. **IBM Faculty Award – December 2005, PI**
    Award to support my research on the open source Piccolo graphics toolkit.
    $30,000

20. **Maryland State Board of Elections, September 2005 – January 2006, co-PI**
    PI – Paul Herrnson (Gov't & Politics)
    $70,000

21. **(Agency not disclosed), April 2005 – March 2006, co-PI**
    Joint Institute for Knowledge Discovery
    $224,000 (my part of larger $2,000,000 effort led by VS Subrahmanian)

22. **Booz Allen (subcontract from ARDA), March 2005 – April 2006**
    Human-Information Interaction Research
    $325,000

23. **Toshiba, July 2004 – December 2006, PI**
    Automatic Thumbnail Cropping
    $20,000

24. **Microsoft, January 2004 – December 2006, PI**
    Interaction Design and Visualization
    $1,000,000

25. **DARPA, February, 2003 – January 2006, PI**
    Zoomable User Interfaces for the Semantic Web
    $230,000

26. **NSF, September, 2003 – August 2006, co-PI**
    PI – Paul Herrnson (Gov't & Politics), co-PI, Richard Niemi (Univ. of Rochester), Michael Traugott (Univ. of Michigan)
    An Assessment of Voting Technology and Ballot Design
    $900,000 – approx $540K for UMD research

27. **Chevron, Oct 2002 – Oct 2003, co-PI**
    PI – Catherine Plaisant (UMIACS)
    Information Visualization for the Oilfield of the Future
    $75,000

28. **IBM, September, 2002, PI**
    T221 high-resolution display
    $9,000 in kind

29. **IMLS, September, 2002 – August, 2005, co-PI**
    PI – Allison Druin (CLIS)
    The Children's International Digital Library
    $397,162

30. **NSF, September, 2002 – August 2005, PI**
    Search Interfaces for Biodiversity Informatics
    $380,000

31. **NSF, September 2002 – August 2007, co-PI**
    PI – Allison Druin (CLIS), co-PI, Anne Weeks
    Developing a Children's International Digital Library
    $3,000,000 ($2,125,000 to UMD)

32. **NSF, September 2002 – August 2005, co-PI**
    co-PI – Allison Druin (CLIS), PI - Nancy Kaplan (Univ. of Baltimore), Stuart Malthrop (U. of Balt.)
    An HCI Partnership Serving Under represented Groups
    $420,000 ($133,000 to UMD)

33. **Microsoft Research, May 2002 – April 2001, PI**
    Mobile Interfaces and .NET
    $100,000

34. **Microsoft Research, September 2001 – August 2002, PI**
    Mobile Interfaces
    $50,000

35. **DARPA, May 2001 – August 2003, PI**
    Zoomable User Interfaces for the Semantic Web
    $320,000

36. **European Union – Esprit, The Disappearing Computer, Jan 2001 – December 2003, co-PI**
    co-PI – Allison Druin (CLIS), Several PIs in Europe
    With Royal Institute of Technology (KTH – Sweden), Univ. of Paris Sud, France.
    InterLiving: Designing Interactive, Intergenerational Interfaces for Living Together
    ~$1,500,000 - approx $400K for UMD research

37. **Chevron, Nov 2000 – May, 2002, PI**
    co-PI – Catherine Plaisant (UMIACS)
    Information Visualization
    $141,000

38. **DARPA, May 1998 – June 2002, PI**
    Zoomable User Interfaces for InImEx and Command Post of the Future (CPOF)
    $1,000,000

39. **Lockheed Martin Corp. sub-contract from DARPA, June 1999 - June 2000, PI**
    Unified Zoomable Environment (UZE) for Command Post of the Future
    $40,000

40. **European Union – Esprit, Intelligent Information Interfaces, Sept. 1998 – August 2001, co-PI**
    co-PI – Allison Druin (CLIS), Several PIs in Europe
    With Swedish Institute of Computer Science, Royal Institute of Technology (KTH – Sweden)
    University of Nottingham, England.
    KidStory
    ~$1,500,000 - approx $300K for UMD research

41. **Sun Microsystems, May 1999, PI**
    Zoomable User Interfaces
    $30,000 in equipment

42. **UNM sub-contract from DARPA, February 1998 – March 1999, PI**
    Pad++: Zoomable User Interfaces
    $200,000

43. **Microsoft, April, 1998, PI**
    Productivity and development software
    $5,000 in software and tech support

44. **Trivista, PI January 1998 - January 1999, PI**
    Graphical User Interfaces based on Zooming
    $50,000

UNIVERSITY OF NEW MEXICO

45. **Sony Research Corporation, PI**
    co-PI – Jim Hollan (Univ. of New Mexico), co-PI – Ken Perlin (New York University)
    Licensing of Pad++ software from UNM and NYU
    $500,000 plus royalties

46. **Intel Donation, January, 1997, co-PI**
    PI – Jim Hollan (Univ. of New Mexico)
    200 MHz PC Computer
    $4,000 in-kind

47. **DARPA, July'94 - June'97, Worked on grant with Jim Hollan**
    Beyond Imitation: A Strategy For Building A New Generation of HCI Design Environments
    $3,000,000 over 3 years with subcontracts to New York University and the Univ. of Michigan

48. **Sandia LDRD (Sandia internal research project) Oct'95 - Oct'96, PI**
    Data Zooming - A New Physics for Information Navigation
    $64,000

49. **Sandia SURP (Sandia University Research Program) Oct'95 - Oct'96, PI**
    Pad++: A Zoomable Interface to the World-Wide Web
    $40,000

50. **Sony Research Corporation, Jan'96, PI**
    co-PI – Allison Druin (University of New Mexico)
    Help plan Sony's efforts to develop a Zooming User Interface system
    $3,674

51. **Sandia LDRD (Sandia internal research project) Oct'94 - Oct'95, Worked on grant with Jim Hollan**
$40,000

52. **Bellcore Donation, July'93, PI**
SGI Indigo Workstation computer
$30,000 in-kind

J. FELLOWSHIPS, PRIZES, AWARDS

1. **2022 – IEEE VIS Test of Time Award.** Joint with Catherine Plaisant and Jesse Grosjean – for my 2002 paper: SpaceTree: Supporting Exploration in Large Node Link Tree, Design Evolution and Empirical Evaluation. *IEEE Symposium on Information Visualization, 2002. INFOVIS 2002.*, 2002, pp. 57-64, doi: 10.1109/INFVIS.2002.1173148. https://ieeevis.org/year/2022/info/awards/test-of-time-awards

2. **2021 – IEEE VIS Test of Time Award.** Joint with Ben Shneiderman and Martin Wattenberg – for my 2001 and 2002 papers: Ordered and Quantum Treemaps: Making effective use of 2D space to display hierarchies. Benjamin B. Bederson, Ben Shneiderman, Martin Wattenberg. ACM TOG 21(4):833-854 200 DOI: 10.1145/571647.571649. https://ieeevis.org/year/2021/info/awards/test-of-time-awards

3. **2016 – Winner of Best Historical Paper Award.** Joint with Pekka Parhi and Amy K. Karlson MobileHCI 2016 – 18th International Conference on Human-Computer Interaction With Mobile Devices and Services for "Target Size Study for One-Handed Thumb Use on Small Touchscreen Devices", MobileHCI 2006.

4. **2012 – Elected to the CHI Academy**
http://www.sigchi.org/about/awards/

   The CHI Academy is an honorary group of individuals who have made substantial contributions to the field of human-computer interaction. These are the principal leaders of the field, whose efforts have shaped the disciplines and/or industry, and led the research and/or innovation in human-computer interaction. The criteria for election to the CHI Academy are:
   - Cumulative contributions to the field.
   - Impact on the field through development of new research directions and/or innovations.
   - Influence on the work of others.

5. **2011 – Recognized as an ACM Distinguished Scientist**
http://awards.acm.org/distinguished_member/year.cfm

   The Distinguished Member Grade recognizes those ACM members with at least 15 years of professional experience and 5 years of continuous Professional Membership who have achieved significant accomplishments or have made a significant impact on the computing field.

6. **2010 – ICDL received the American Library Association President's Award for International Library Innovation**. Joint with Allison Druin and Ann Weeks.

7. **2010 – Winner of SIGCHI Social Impact Award**
http://www.sigchi.org/about/awards/2010-sigchi-awards

8. **2009 – Winner of Digital Education Achievement Award from the Center for Digital Education and Converge magazine**
For joint work on the International Children's Digital Library with Allison Druin and Ann Weeks.

9. **2007 – Winner of Brian Shackel Award for**
"outstanding contribution with international impact in the field of HCI"
Karlson, A., & Bederson, B. B. (2007) ThumbSpace: Generalized One-Handed Input for Touchscreen-Based Mobile Devices, *Proceedings of INTERACT 2007*, 324-338.

10. **2005 – IBM Faculty Award**
$30,000 gift to support my work on open source Piccolo graphics toolkit

11. **2005 – The International Children's Digital Library (www.icdlbooks.org)** website was selected for inclusion by the National Endowment for the Humanities on their EDSITEment website (http://edsitement.neh.gov) as one of the best online resources for education in the humanities.

12. **2004 – Winner of InfoVis Contest**
    Lee, B., Czerwinski, M., Robertson, G. G. &, Bederson, B. B. (2004). "Understanding Eight Years of InfoVis Conferences using PaperLens", InfoVis 2004, IEEE, 216-217.

13. **2003 – Winner of Best Student Paper Award**
    Suh, B., Ling, H., Bederson, B. B., & Jacobs, J. W. (2003). "Automatic Thumbnail Cropping and Its Effectiveness". UIST 2003, ACM Symposium on User Interface Software and Technology, CHI Letters, 5(2), 95-104.

14. **1992 – Janet Fabri Memorial Award for Outstanding Doctoral Dissertation**,
    Department of Computer Science, Courant Institute, New York University

K. REVIEWING ACTIVITIES

ACM Conference on Graphics (SIGGRAPH)
ACM Conference on Human Factors in Computing Systems (CHI)
ACM Conference on Information Retrieval (IR)
ACM Conference on User Interfaces and Software Technology (UIST)
ACM Transactions on Computer-Human Interaction (TOCHI)
Communications of the ACM (CACM)
Computer Graphics and Applications
Graphics Interface Conference, Canada (GI)
International Conference on Information Visualization
International Journal of Human-Computer Interaction
IEEE Symposium on Information Visualization (InfoVis)
IEEE Symposium on Visual Analytics Science and Technology (VAST)
IEEE Transactions on Software Engineering (TSE)
IEEE Transactions on Visualization and Computer Graphics (TVCG)
Journal of Experimental Algorithmics
Journal of Information Visualization
Journal of Software Practice and Engineering (SPE)
NSERC (Canadian scientific funding agency)
National Science Foundation

L. OTHER
i. Software

StoryKit	iPhone app for children and their elders to create new books. Put in iPhone App Store August, 2009. Typical usage of 100,000 hours of story writing per month.
ICDL for iPhone	iPhone app for reading books from the International Children's Digital Library. Put in iPhone App Store November, 2008.
International Children's Digital Library	A library of children's books. Put on the Web Nov, 2002. http://www.childrensbooks.org • Unique accessors total: > 7,000,000 • Unique accessors monthly: ~130,000
DateLens	A calendar program for PDAs. Put on the Web July, 2002
SpaceTree	A general purpose tree browser. Put on the Web Dec, 2002. http://www.cs.umd.edu/hcil/spacetree
PhotoMesa	An end-user zoomable photo browser. Put on the Web May, 2001. http://www.cs.umd.edu/hcil/photomesa
CounterPoint	A zoomable presentation tool that works as a plug-in for Microsoft PowerPoint. Put on the Web in late 2001. http://www.cs.umd.edu/hcil/counterpoint
Piccolo	A library to support structured 2D graphics, the successor to jazz. Put on the Web in July 2002. http://www.cs.umd.edu/hcil/piccolo
Jazz	A general-purpose Java toolkit for building Zoomable User Interfaces. Put on the Web as Open Source software July 1999. http://www.cs.umd.edu/hcil/jazz
KidPad	An application that teaches young children communication skills through collaborative storytelling. Built using MID and KidPad. Put on the Web for non-commercial use March 2000. Access through March 2001 follow. http://www.cs.umd.edu/hcil/kidpad
Fisheye Menus	A new user interface widget for selecting one item for a long list using graphical distortion. Put on the Web for non-commercial use June 2000. Access through March 2001 follow. http://www.cs.umd.edu/hcil/fisheyemenu
MID	A general-purpose Java toolkit for supporting multiple input devices. It currently supports multiple USB mice on Windows 98. Put on the Web as Open Source software July 1999. It is used by the small but growing community of researchers investigating Single Display Groupware http://www.cs.umd.edu/hcil/mid
Pad++	Pad++ is described in detail in the papers referenced above. http://www.cs.umd.edu/hcil/pad++
Togl	An extension to Tcl/Tk that allows the creation of OpenGL graphics written in C to appear in a window managed by Tk. In addition, Tcl event bindings can be attached to the window which can then communicate with the C code that did the OpenGL rendering. Put on the net for public access. http://togl.sourceforge.net/

ii. Media

1. February 2, 2017 **The Diamondback** by Carly Taylor
   "McKeldin Mall's Newest Academic Building Will Be Completed in March After Nearly 3 Years"
   http://www.dbknews.com/2017/02/02/edward-st-john-construction-umd/

2. August 29, 2016 **The Diamondback** by Andrew Dunn
"University System of Maryland to offer an online course for free"
http://www.dbknews.com/2016/08/30/mooc-umb-umuc-online-usm/

3. February 15, 2016 **The Diamondback** by Samantha Reilly
"SGA passes resolution to revive 2012 syllabus bill"
http://www.dbknews.com/2016/02/16/umd-sga-passes-syllabus-resolution-to-revive-university-senate-bill/

4. September 24, 2015 **The Diamondback** by Taylor Swaak
"Active-Learning Courses Gain Traction at the University of Maryland"
http://www.diamondbackonline.com/news/active-learning-courses-gain-traction-at-the-university-of-maryland/article_435098ca-6247-11e5-a8e2-df59d97181a5.html

5. September 14, 2015 **Washington Post Express** by Beth Luberecki
"Massive open online courses (MOOCs) can help you achieve the next step in your career"
https://www.washingtonpost.com/express/wp/2015/09/14/massive-open-online-courses-moocs-can-help-you-achieve-the-next-step-in-your-career/

6. April 30, 2015 **The Diamondback** by Talia Richman
"USM Center for Academic Innovation to be renamed to honor Brit Kirwan"
http://www.diamondbackonline.com/news/article_51cbc02c-eeb7-11e4-a838-6b9857ba8e37.html

7. April 13, 2015 **The Diamondback** by Rokia Hassanein
"UMD Team Creates Nation's Largest Food Safety Inspection Database"
http://www.diamondbackonline.com/news/article_553da506-e181-11e4-b6c9-0f23d720b7cc.html#.VS1VV_HbNqc.twitter

8. April 6, 2015 **Quality Assurance & Food Safety Magazine**
"Database of Food Safety Inspection Information Created"
http://www.qualityassurancemag.com/food-safety-inspection-information.aspx

9. February 23, 2015 **Diamondback, UMD Student Newspaper** by Taylor Swaak
"New UMD website offers alternative ways to save money on textbooks"
http://www.diamondbackonline.com/news/article_0d910a34-baf5-11e4-826a-dfbcb9e8b5f8.html

10. January 13, 2015 **WAMU Kojo Nnamdi Show**
"The Rise of Mobile Apps"
http://thekojonnamdishow.org/shows/2015-01-13/tt_the_rise_of_mobile_apps

11. October 1, 2014 **The Chronicle of Higher Education**
"Optimism About MOOCs Fades in Campus IT Offices"
http://chronicle.com/blogs/wiredcampus/optimism-about-moocs-fades-in-campus-it-offices-survey-finds/54705

12. September 8, 2014 **WAMU Kojo Nnamdi Show**
"Beefing Up Photo, Cloud and Online Security"
http://thekojonnamdishow.org/shows/2014-09-09/beefing-photo-cloud-and-online-security

13. April 29, 2014 **Diamondback, UMD Student Newspaper** by James Levin
"Learning to ask for help"
http://www.diamondbackonline.com/news/article_632cbbb8-cf5b-11e3-b8b4-0017a43b2370.html

14. April 18, 2014 **CNN.com** by Emanuella Grinberg
"Removing 'barriers' to education through free college textbooks"
http://www.cnn.com/2014/04/18/living/open-textbooks-online-education-resources/

15. January 27, 2014 **DiamondBack, UMD Student Newspaper** by Ellie Silverman
"University expanding online class sequences through Vanderbilt partnership"
http://www.diamondbackonline.com/news/campus/article_dff739f4-86ed-11e3-9a18-001a4bcf6878.html

16. September 27, 2013 **Baltimore Business Journal** by Sarah Gantz
"Maryland Schools use Online Model to Tout Brand, Attract Students"
http://www.bizjournals.com/baltimore/print-edition/2013/09/27/maryland-schools-use-online-model-to.html?page=all

17. July 16, 2013 **HuffingtonPost.com**
"Blended Learning: College Classrooms of the Future"
http://www.huffingtonpost.com/uloop/blended-learning-college-_b_3598718.html

18. December 5, 2012 **Diamondback, UMD Student Newspaper** by Allison Gray
"University members hoping to see 'massive open online courses' integrated"
http://www.diamondbackonline.com/news/article_4873330c-3ef1-11e2-9a16-0019bb30f31a.html

19. September 21, 2012 **SmartMoney.com** by Quentin Fottrell
In Apple's Maps War vs. Google, Consumers Lose
http://blogs.smartmoney.com/advice/2012/09/21/in-apples-maps-war-vs-google-consumers-lose/?link=SM_hp_ls4e

20. September 18, 2012 **WAMU Kojo Nnamdi Show**
"Creativity and the Patent Wars" (guest on one-hour show)
http://thekojonnamdishow.org/shows/2012-09-18/creativity-and-patent-wars

21. September 7, 2012 **New York Magazine** by Matthew Shaer
"The Digital Elite: Smartphones are getting huge. Can the average-size thumb keep up?" (discusses my study on thumb size and mobile touch screens.

22. Aug 13, 2012 **Fact Witness in Apple v. Samsung trial covered broadly**
http://blogs.wsj.com/digits/2012/08/13/samsungs-first-witnesses-push-prior-art-after-minor-victory/

    http://news.cnet.com/8301-13579_3-57492486-37/samsung-goes-on-offense-aims-to-bust-apple-patents/

    http://arstechnica.com/tech-policy/2012/08/apple-rests-patent-case-as-judge-tosses-three-samsung-phones-from-trial/

    http://www.forbes.com/sites/connieguglielmo/2012/08/13/apple-says-it-complained-about-samsung-copying-in-2010-live-blog/

    http://allthingsd.com/20120813/judge-refuses-to-toss-most-of-apples-suit-against-samsung/

    http://www.theverge.com/2012/8/13/3240686/samsung-apple-patents-launchtile-diamondtouch-table

    http://www.eweek.com/c/a/Mobile-and-Wireless/Samsung-Begins-Presenting-Case-in-Apple-Patent-Infringement-Trial-162894/

23. May 7, 2012 **WAMU Kojo Nnamdi Show**
"Free Online Courses - Higher Ed of the Future?" (guest on hour show)
http://thekojonnamdishow.org/shows/2012-05-07/free-online-courses-higher-ed-future

24. January 24, 2012 **Washington Post** by Bonnie Berkowitz and Alberto Cuadra
"Touchscreens: How they work", I am the primary source
http://www.washingtonpost.com/national/health-science/touchscreens-how-they-work/2012/01/23/gIQAZHlAMQ_graphic.html

25. June 28, 2011 **New Scientist** by Jim Giles
"The man-machine: Harnessing humans in a hive mind", discussed MonoTrans.
http://www.newscientist.com/article/mg21028181.900-the-manmachine-harnessing-humans-in-a-hive-mind.html

26. June 14, 2011 **WAMU Kojo Nnamdi Show**
"A Shift in Cloud Computing" (guest on hour show)
http://thekojonnamdishow.org/shows/2011-06-14/shift-cloud-computing

27. May 13, 2011 **Discovery News** by Alyssa Danigelis
"Tech Turns Air into a Multi-touch screen", quoted.
http://news.discovery.com/tech/touch-screen-technology-zerotouch-110513.html

28. April 28, 2011 **Converge Magazine** by Tanya Roscorla
"Music Apps Take Top Prizes in U of Maryland Contest", discusses mobile app from the University of Maryland mobile app contest that I ran.

29. April 26, 2011 **Voice of America** by Do Noghte Sefr (in Persian)
"Mobility Initiative ابتکار تحرک"
http://www.youtube.com/donoghtesefr

30. April 24, 2011 **Washington Post**
"Business Rx: A jukebox democracy in search of voters", discusses mobile app from the University of Maryland mobile app contest that I ran.

31. February 25, 2011 **New Scientist** by Jim Giles and Jacob Aron
"Crowdsourced translations get the word out from Libya", discusses my MonoTrans project
http://www.newscientist.com/article/dn20174-crowdsourced-translations-get-the-word-out-from-libya.html

32. February 9, 2011 **DiamondBack, UMD Student Newspaper**
"Creativity at her fingertips" by Erin Egan
http://www.diamondbackonline.com/news/article_f7143841-131c-5695-a310-42596336345d.html

33. February 8, 2011 **WAMU Kojo Nnamdi Show**
"A Revolution in Tech Jobs? The Murky World of Online Labor" (hour show with me as only guest)
http://thekojonnamdishow.org/shows/2011-02-08/revolution-tech-jobs-murky-world-online-labor

34. November 23, 2010 **WAMU Kojo Nnamdi Show**
"The End of Email and other Tech Prognostications"
(hour show with me and one other guest)
http://thekojonnamdishow.org/shows/2010-11-23/end-email-and-other-tech-prognostications

35. November 9, 2010 **MIT Technology Review** by Erica Naone
"Gesturing at Your TV Isn't Ready for Prime Time" quotes me discussing Microsoft Kinect
http://www.technologyreview.com/computing/26691/

36. October 27, 2010 **MIT News** by Larry Hardesty
"Programming crowds" quotes me in analyzing Rob Miller's work
http://web.mit.edu/newsoffice/2010/programming-crowds-1027.html

37. October 2, 2010 **News 8 TV Austin**
"App Wrap: eReading for Kids" discussing StoryKit app for iPhone
http://www.news8austin.com/content/headlines/274426/app-wrap--ereading-for-kids

38. August 24, 2010 **WAMU Kojo Nnamdi Show**
"Automating Language Translation: The Future of a Unified Internet?" discussing my research and the general topic of crowdsourcing and translation.
http://thekojonnamdishow.org/shows/2010-08-24/automating-language-translation-future-unified-internet

39. May 4, 2010 **Technology Review**
"Redesigning the Web for Touch Screens"
http://www.technologyreview.com/printer_friendly_article.aspx?id=25236&channel=computing&section=

40. April 2010 **FutureGov Magazine** by Kelly Ng, Singapore
Description of ICDL for iPad application

41. April 17, 2010 **ABC 7 News, WLS-TV Chicago**
"Chicago Students Face Off in Battle of Books"
http://abclocal.go.com/wls/story?section=news/local&id=7392055

42. April 8, 2010 **Publisher's Weekly**
"The iPad Meets the Children's Book"
http://www.publishersweekly.com/article/455914-The_iPad_Meets_the_Children_s_Book.php?nid=2788&source=link&rid=16811925

43. April 3, 2010 **The Independent**, London
"Chlidren's book iPad apps offer multilingual tales, long-distance bedtime stories"
http://www.independent.co.uk/arts-entertainment/books/childrens-book-ipad-apps-offer-multilingual-tales-longdistance-bedtime-stories-1934847.html

44. January 28, 2010 **Baltimore Sun**, Baltimore, MD
"Apple unveils tablet computer" by Gus G. Sentementes
http://www.baltimoresun.com/business/technology/bal-bz.ipad28jan28,0,5120135.story

45. December 2009 **FutureGov Magazine** by Kelly Ng, Singapore
"Inside the Teacher's Lounge" covered Ben's keynote UNESCO talk in Hangzhou, China

46. November 20, 2009 **World Bank Blog**
http://blogs.worldbank.org/edutech/icdl-1

47. November 2, 2009 **Technology Review.com**
"First Test for Election Cryptography"
http://www.technologyreview.com/web/23836/

48. December 23, 2008 **WAMU Kojo Nnamdi Show**, Washington, DC
"Computer Guy"

49. September 18, 2008 **America.gov**
"Kids Help Design International Children's Digital Library" by Jeffrey Thomas
http://www.america.gov/st/educ-english/2008/September/200809181459141CJsamohT0.2946283.html
Also publised in **gulf-times.com** in Qatar
http://www.gulf-times.com/site/topics/article.asp?cu_no=2&item_no=245520&version=1&template_id=46&parent_id=26

50. April 25, 2008 **C|Net News.com**
"The Six Secrets of Mobile Computing Success" by Tom Krazit

51. February 8, 2008 **WYPR Maryland Morning**, Baltimore, MD
10 minute radio interview about usability of voting systems

52. January 30, 2008 **KCSN News** by Jessica Caldera
Short radio interview about usability of voting systems

53. January 29, 2008 **Technology Review.com** by Erica Naone
"Voting with (Little) Confidence"
http://www.technologyreview.com/Infotech/20122/

54. January 28, 2008 **ScienceDaily.com**
"Touch Screen Voting A Hit; Critics Miss Mark on Security, Study Says"
http://www.sciencedaily.com/releases/2008/01/080123170954.htm

55. January 26, 2008 **Newsweek** by Barrett Sheridan
"Like a Super Hero: Humans weren't made for scrolling and searching. We were made for zooming."
http://www.newsweek.com/id/105532/output/print

56. January 25, 2008 **Government Executive.com** by Gautham Nagesh
"Voters confused by e-voting machines, study finds"
http://www.govexec.com/dailyfed/0108/012508n1.htm

57. January 22, 2008 **WAMU Kojo Nnamdi Show**, Washington, DC
Thirty minute segment on "Technology User Frustrations – Spotlight on Cellphones"
http://wamu.org/programs/kn/08/01/22.php#19083

58. January 16, 2008 **KUOW, The Conversation**, Seattle, WA
The guest on an hour-long call-in talk show on the future of cellphones.
http://www.kuow.org/defaultProgram.asp?ID=14159

59. October 30, 2007 **WAMU Kojo Nnamdi Show**, Washington, DC
"Computer Guy", talking about software reliability

60. August 7, 2007 **WAMU Kojo Nnamdi Show**, Washington, DC
"Computer Guy", current tech events, iPhone, Tivo, and listeners email and calls
http://wamu.org/programs/kn/07/08/07.php

61. June 13, 2007 **New York Times** by John Markoff
"That iPhone has a keyboard, but it's not mechanical"
http://www.nytimes.com/2007/06/13/technology/13phone.ready.html

62. June 5, 2007 **WAMU Kojo Nnamdi Show**, Washington, DC
"Computer Guy", Microsoft Surface, cell phone problems, and listeners email and calls
http://wamu.org/programs/kn/computerguys/07/cg070605.php

63. April 3, 2007 **WAMU Kojo Nnamdi Show**, Washington, DC
"Computer Guy", Physical and virtual convergence, and listeners email and calls
http://wamu.org/programs/kn/computerguys/07/cg070403.php

64. March 17, 2007 **Science News** weekly magazine, by Ivars Peterson
"Games Theory", several quotes by me on article about von Ahn's games.
http://www.sciencenews.org/articles/20070317/bob9.asp

65. January 18, 2007 **Wall Street Journal**, by Jeremy Wagstaff
"The March of Time", covering DateLens

66. December 31, 2006 **Associated Press**, by Brian Bergstein
"Low-Cost Laptop Could Transform Learning"
http://www.washingtonpost.com/wp-dyn/content/article/2006/12/31/AR2006123100380.html
AP story picked up in 175 locations, including:

    - Washington Post
    - BusinessWeek
    - Chicago Tribune
    - Boston Globe
    - ABC News
    - CNN
    - FOX News
    - Eyewitness News
    - Forbes
    - BBC News, UK
    - Sydney Morning Herald, Australia
    - The Age, Australia
    - Economic Times, India

67. December 5, 2006 **WAMU Kojo Nnamdi Show**, Washington, DC
"Computer Guy", Vista, holiday tech gifts, and listeners email and calls
http://www.wamu.org/programs/kn/06/12/05.php#12452

68. September 22, 2006 **Salon.com** by Katharine Mieszkowski
"Written out of the story", discussing write-in votes using the Hart eSlate system
http://www.salon.com/news/feature/2006/09/22/delay_write_in/index_np.html

69. May 2, 2006 **WAMU Kojo Nnamdi Show**, Washington, DC
"Computer Guy – life in the fast lane", discussing broadband at home
http://www.wamu.org/programs/kn/06/05/02.php#10686

70. April 23, 2006 **Pittsburgh Post-Gazette** by Mark Roth
"Experts see computers getting bigger and smaller at the same time"
http://www.post-gazette.com/pg/06113/684425-96.stm

71. March 9, 2006 **Baltimore Sun** by Mike Himowitz
"PhotoMesa a nifty way to organize photographs"
http://www.baltimoresun.com/technology/bal-bz.himowitz09mar09,0,3518441.column

72. February 21, 2006 **WAMU Kojo Nnamdi Show**, Washington, DC
"Wiki Sites"
http://www.wamu.org/programs/kn/06/02/21.php#10383

73. February 3, 2006 **Baltimore Sun** by Frank D. Roylance
"Spreading the e-word" (quoted about Sony's new ebook reader e-paper)
http://www.baltimoresun.com/news/health/bal-hs.eink03feb03,1,3010066.story

74. January 13, 2006 **Washington Business Journal** by Jennifer Nycz-Conner
"What was I doing, again?"
http://www.bizjournals.com/washington/stories/2006/01/16/focus1.html

75. November 18, 2005 **c|net News.com** by Stefanie Olsen
"The 'millenials' usher in a new era" (about ICDL)
http://news.com.com/The+millennials+usher+in+a+new+era/2009-1025_3-5944666.html?tag=nefd.lede

76. September, 2005 **Chicago Parent** by Jane Huth
"Screen time=reading time"
http://www.chicagoparent.com/main.asp?SectionID=10&SubSectionID=32&ArticleID=529&TM=67415.63

77. September 22, 2005 **Delphos Herald**
"Site Seeing"
http://www.delphosherald.com/page2.php?story=8655&archive=

78. April, 2005 **Chicago Parent** by Judy Belanger
"Explore the world by turning pages"
http://www.chicagoparent.com/main.asp?SectionID=10&SubSectionID=33&ArticleID=306&TM=67012.6

79. April 5, 2005 **EE Times** by Nicolas Mokhoff
" Microsoft touts 'thumb-as-stylus' interface progress"
http://www.eetimes.com/showArticle.jhtml;jsessionid=NHVZOY3L1AQWUQSNDBGCKH0CJUMEKJVN?articleID=160500234
Also picked up by **Information Week**

80. March 10, 2005 **folha equilibrio (Brazil)** by Sérgio Rizzo
"Cibertentações" (article about computer-based distraction, describing some of my work.)

81. March, 2005 **Radio City (Ecuador) / BBC Affiliate**
5 minute radio interview (performed in English, translated into Spanish)

82. March 1, 2005 **The Statesman (India)** by Stanley Theodore
"Webcrawler: All About E-Attention Deficit Disorder"
http://www.thestatesman.net/page.news.php?clid=24&theme=&usrsess=1&id=70119

83. February 28, 2005 **Washington Times** by Ann Geracimos
"New Chapter in Online Books"
http://washingtontimes.com/metro/20050227-101610-1015r.htm

84. February 18, 2005 **North Carolina State Technician** by Danny Frye
"Research targets computer distraction such as AIM"
http://technicianonline.com/story.php?id=011167

85. February 13, 2005 **Bloomberg Radio, "Simply Put"** by Michael Goldman & Tom Moroney
9 minute interview discussing attention and interruptions on the computer

86. February 10, 2005 **New York Times** by Katie Hafner
"You There, at the Computer: Pay Attention"
http://www.nytimes.com/2005/02/10/technology/circuits/10info.html
Also picked up by
    a. **International Herald Tribune (France)**
    b. **ABS CBN News (Philippines)**
    c. **CNET News.com**
    d. **Spartanburg Herald (SC)**
    e. **Wilmington Morning Star (NC)**
    f. **Minneapolis Star Tribune (MN)**

87. Nov 11, 2004 **Maryland Public Television** by Frank Batavick
"Message in a Bottle", Bob the vid-tech guy 30 minute special including 5 minute segment of Allison Druin and me explaining email and instant messaging to children.

88. May 7, 2004 **Baltimore Sun** by Elizabeth Schuman
    ”Research Lab Crosses Cultures”

89. October 20, 2003 **The Feature** by Jeff Goldman
    ”A View Into Your Phone”
    http://www.thefeature.com/article?articleid=100146

90. October 10, 2003 **The Independent** by Charles Arthur
    ”Treemap Offers a New Way of Visualizing Complex Data. Nothing Beats it for Simplicity and the “wow!” effect when you first use it.”
    http://news.independent.co.uk/digital/features/story.jsp?story=451099

91. July, 2003 **Higher Learning – Technology Serving Education**
    ”Web Sites: The International Children’s Digital Library”

92. July 7, 2003 **Pittsburgh Post-Gazette** by Karen MacPherson
    ”Web Site Invites Children to Read Online: International Children’s Digital Library Caters to Young Around the Globe”

93. June 15, 2003 **San Antonio News 9** by Michael Garfield
    ”Website a Fun Way to Encourage Kids to Read”

94. April 11, 2003 **San Jose Mercury News** by Dan Gillmor
    ”Designing New Handhelds to Improve Interactions Between Humans, Computers”
    Also picked up by **New Jersey Star Ledger (NJ)**

95. February 12, 2003 **Tech TV Live** by Peter Barnes
    Also on **abcnews.com**
    ”Easy Online Reader: An International Online Nook for Children’s Books”

96. January 17, 2003 **Voice of America TV** by Larry Clamage
    4.5 minute video of children’s design team focusing on ICDL

97. December, 2002 **Sun’s Java Website**
    ICDL Linked to from http://java.sun.com/industry/

98. December 17, 2002 **Associated Press**
    Picture of Ben Bederson w/ Bill Gates at Microsoft about DateLens project
    a. **Seattle Post Intelligencer (WA)**
    b. **Times Daily (AL)**
    c. **Sarasota Herald-Tribute (FL)**
    d. **Naples Daily (FL)**

99. December 16, 2002 **Baltimore Sun** by Alex MacGillis
    ”Two Study Intricacies of Voting Machines”
    Also picked up by AP, excerpts in:
    a. **USA Today**
    b. **WMAR (MD)**
    c. **WBAL-TV (MD)**
    d. **News Channel 8.net**

100. December 12, 2002 **Philadelphia Inquirer** by Joyce Kasman Valenza
     ”tech.life @ school | New virtual library offers children much”

101. December 10, 2002 **Le Monde (France)** by Chantal Dussuel
     ”Livres en ligne pour internautes on herbe”

102. December 10, 2002 **Christian Science Monitor**
     News in Brief – ICDL

103. December 5, 2002 **New York Times** by Lisa Guernsey
     ”Online Library Project Plans a Digital and Cultural Trove for Children”

104. December 1, 2002 **Die Burger (South Africa)**
     ”Paragrawe”

105. November 30, 2002 **The Vancouver Sun (Canada)**
”Book Endz: Free Kid’s Books”

106. November 30, 2002 **La Vanguardia (Spain)**
”Nuevos Proyectos: TalentMatch.com, International Children’s Digital Library SoapCity”

107. November 27, 2002 **USA Today** by Karen Thomas
”World Books, Children Click”

108. November 27, 2002 **The Ohama World-Herald**
”TechBytes: Digital Library Links Kids to Other Cultures”

109. November 27, 2002 **Education Week**
”Internet Library for Children Invites the World to Read”

110. November 26, 2002 **The Gold Coast Bulletin (Australia)**
”The Net: News Bytes”

111. November 25, 2002 **intern.de (Germany)**
”Kinderbibliothek”

112. November 25, 2002 **Seattle Post-Intelligencer**
”Kids Books Now Online”

113. November 21, 2002 **AP Wire** by Sam Hannel
”Web Site to Give Free Access to Children’s Books”
    a. **ABCNews.com**
    b. **The Age (Australia)**
    c. **Ananova.com (UK)**
    d. **Asia Pacific Media Network**
    e. **The Baltimore Sun**
    f. **Globetechnology.com (Canada)**
    g. **KTVU 2 News (Bay Area)**
    h. **Indiana Gazette**
    i. **MSNBC.com**
    j. **Newsday.com**
    k. **Rapid City Journal**
    l. **San Jose Mercury News**
    m. **Sarasota Herald-Tribune (Florida)**
    n. **Santa Fe New Mexican**
    o. **Seattle Post-Intelligencer**
    p. **Sydney Morning Herald (Australia)**
    q. **Waterloo/Cedar Falls**
    r. **WFTV (Florida)**

114. November 21, 2002 **24ur.com (Slovenia)**
”Knjige brezplacno na internetu”

115. November 21, 2002 **Courier Mail (Australia)**

116. November 21, 2002 **United Press International (UPI)**
”New Online Library for Kids Launched”

117. November 21, 2002 **Washington Post (.COM Column)** by Leslie Walker
”A Library for Young Browsers”
    a. **International Herald Tribute**
    b. **SFGate.com (San Francisco)**

118. November 21, 2002 **Internet Magazine**
”Site Offers Free Access to Kids Books”

119. November 20, 2002 **Magasinet (Norway)**
”Lager verdensbarnebibliotek”

120. November 20, 2002 **Fox 5 TV News** by John Henrehan
Live 1.5 minutes on 5:00pm news

121. November 18, 2002 **All Things Considered on NPR** by David Kestenbaum
”Library for Kids Goes Online” (11 minutes)

122. October, 2002 **Digital Computer Magazine**
Review of PhotoMesa

123. September 23, 2002 **ComputerSweden** by Anders Lotsson
”Square Zoom in the Hand”

124. August 19, 2002 **Ohio Repository** by Joan Renner
”Ensuring validity is a big concern in electronic voting”

125. August 18, 2002 **Ohio Repository** by Joan Renner
”Voting test shows pros, cons”

126. August 12, 2002 **eWeek**, by Anne Chen
”DateLens Stays Organized in C#”

127. August 5, 2002 **Grid Today**
”Bill Gates Highlights Academic Collaboration Key to Future”

128. July 29, 2002 **eWeek**, by Anne Chen
”Gates: .NET Won’t Happen Overnight”

129. July 29, 2002 **InfoWorld**, by Matt Berger
”Gates, academics joins on security, shared source”

130. July 29, 2002 **NetworkWorldFusion**, by Matt Berger
”Gates, academics joins on security, shared source”

131. May 9, 2002 **Washington Post (.COM Column)**, by Leslie Walker
”A Visual Rather Than Verbal Future”

132. May 9, 2002 **Washington Post Website**, by Eleanor Hong
”Human-Computer Interaction Lab at the University of Maryland” – Interview with me, Allison Druin, and Ben Shneiderman.

133. August 1, 2001 **Sun Microsystems Java Website**, by Jon Byous
”View With a Zoom: Browse and Zoom Digital Images in One Application” describes PhotoMesa and my treemap algorithms.

134. July 2, 2001 **ComputerWorld** by Sami Lais
”Treemaps Bloom” describes my photo browser application PhotoMesa which uses Jazz

135. June 4, 2001 **ComputerWorld** by Sami Lais
”Software for the 4th Dimension” describes TimeSearcher which uses Jazz

136. August 12, 2000 **New Scientist Magazine**
”Maximizing MinimalisM”, an article Zoomable User Interfaces, KidPad, and Fisheye Menus

137. Fall, 2000 **College Park**, by Tom Ventsias
”Zooming Ahead”, an article about Zoomable User Interfaces

138. June 26, 2000 **ComputerWorld**, by Sami Lais
”Zoomin’ Ahead”, an article about Zoomable User Interfaces and Fisheye Menus

139. September, 1999 **Sun Microsystems Java Website**, by Jon Byous
An interview with me under their face-to-face column.

140. December 21, 1998 **Baltimore Sun**
Reprinted in New York Newsday, Dec. 30, 1998
“Children first: In designing toys, one lab turns to the experts in the field.”

141. April 4, 1997 **The Chronicle of Higher Education** by Jeffrey R. Young
"New Ways of Organizing Data Could Change Nature of Computers"

142. February, 1997 **Nov'Art**
a French Magazine sponsored by Art3000, a society devoted to integration of technology and art.

143. October 23, 1996 **The New York Times Online (CyberTimes)** by Ashley Dunn
"Seeing the Forest of Knowledge for the Trees of Data"

144. June, 1995 **The X Advisor**, by Gary Welz
"Peripheral Visions: Zooming Through Information Space on Pad++"

3. TEACHING AND ADVISING

A. COURSES TAUGHT
i. General

Fall 2015	*Paths to CS* (CMSC198C/D/E) – 96 Students	
Fall 2013	*Paths to CS* (CMSC198C/D/E, 1-3 credits) – 36 Students	
	CMSC198C	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	3.6 (College comparison: 2.8)
	Effective teacher:	3.9 (College comparison: 2.9)
	CMSC198D	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	3.8 (College comparison: 2.8)
	Effective teacher:	4.0 (College comparison: 2.9)
Fall 2012	*Tech for CS Startups – Team taught* (CMSC 498E, 1 credit) – 19 Students	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	3.0 (College comparison: 3.2)
	Effective teacher:	3.7 (College comparison: 2.9)
Spring 2012	*Reading Seminar: Future of HCI – Team taught* (CMSC 838B, 1 credit) – 13 Students	
Fall 2011	*Social Computing Seminar* (CMSC 838B, 3 credits) – 20 Students	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	3.7 (College comparison: 3.2)
	Effective teacher:	3.8 (College comparison: 3.2)
Fall 2011	*Intro to Human-Computer Interaction* (CMSC 434) – 37 Students	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	3.5 (College comparison: 3.2)
	Effective teacher:	3.5 (College comparison: 3.0)
Spring 2011	*Intro to Human-Computer Interaction* (CMSC 434) – 42 Students	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	2.9 (College comparison: 3.2)
	Effective teacher:	3.0 (College comparison: 3.0)
Fall 2010	*Reading Seminar in Human Computation* (CMSC 838B, 1 credit) – 9 Students	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	3.8 (College comparison: 3.2)
	Effective teacher:	3.9 (College comparison: 3.5)
Fall 2010	*Digital Cultures and Creativity* (HDCC 105, co-taught) – 56 Students	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	2.4 (College comparison: 2.5)
	Effective teacher:	3.2 (College comparison: 3.4)
Spring 2010	*Object-Oriented Programming I* (CMSC 131H) – 10 Students	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	3.8 (College comparison: 2.9)
	Effective teacher:	4.0 (College comparison: 3.0)
Fall 2009	*Intro to Human-Computer Interaction* (CMSC 434) – 39 Students	
	Student Evaluations	(Scale: 0 Poor – 4 Excellent)
	Students "learned a lot":	3.3 (College comparison: 3.2)
	Effective teacher:	3.5 (College comparison: 3.0)

Spring 2008	*Intro to Human-Computer Interaction* (CMSC 434) – 32 Students Student Evaluations (Scale: 0 Poor – 4 Excellent) Students "learned a lot": 3.1 (College comparison: 3.1) Effective teacher: 3.2 (College comparison: 3.0)
Spring 2005	*Developing User Interfaces* (CMSC 498B) – 14 Students Student Evaluations (Scale: 0 Poor - 4 Excellent) Course quality: 3.6 Instructor's teaching: 3.8
Spring 2004	*Object Oriented Programming I* (CMSC 131) – 75 Students Student Evaluations (Scale: 0 Poor - 4 Excellent) Course quality: 3.0 Instructor's teaching: 2.9
Spring 2003	*Information Visualization* (CMSC 828B) – 17 Students Student Evaluations (Scale: 0 Poor - 4 Excellent) Course quality: 3.1 Instructor's teaching: 3.4
Spring 2002	*Developing User Interfaces* (CMSC 498B) – 25 Students Student Evaluations (Scale: 0 Poor - 4 Excellent) Course quality: 3.6 Instructor's teaching: 3.9
Fall 2001	*Human Computer Interaction* (CMSC 434/828S) – 50 Students Student Evaluations (Scale: 0 Poor - 4 Excellent) Course quality: 3.5 Instructor's teaching: 3.6
Spring 2001	*Information Visualization* Taught by Catherine Plaisant and Ben Shneiderman due to my illness
Fall 2000	*Human Computer Interaction* (CMSC 434/828S) – 50 Students No evaluation due to my illness
Spring 2000	*Computer Graphics* (CMSC 427) – 45 students Student Evaluations (Scale: 0 Poor - 4 Excellent) Course quality: 3.4 Instructor's teaching: 3.3
Fall 1999	*Human Computer Interaction* (CMSC 434/828S) – 44 Students Student Evaluations (Scale: 0 Poor - 4 Excellent) Course quality: 3.9 Instructor's teaching: 3.9
Spring 1999	*Zoomable User Interfaces* (CMSC 838B) – 15 Students
Fall 1998	*Software Engineering* (CMSC 435) – 45 students Student Evaluations (Scale: 0 Poor - 4 Excellent) Course quality: 3.6 Instructor's teaching: 3.5
Spring 1998	*Computer Graphics* (CMSC 427) – 24 students Student Evaluations (Scale: 0 Poor - 4 Excellent) Course quality: 3.7 Instructor's teaching: 3.7
Spring 1997	*Software Engineering* (CS460) @ UNM (Didn't receive evaluations)
Fall 1996	*Introduction to Data Structures* (CS251) - 100 Students @ UNM (Didn't receive evaluations)

Spring 1996	*Human Computer Interaction* (CS462) @ UNM	
	Student Evaluations	(ICES scale: 1 poor - 6 excellent)
	Course content:	5.2
	Instructor:	5.5
	Course in general:	5.2
Spring 1996	*Computers & Society* (CS491/591) @ UNM	
	Introduced this course for the first time in the CS dept. 1 credit seminar	
	Student Evaluations	(ICES scale: 1 poor - 6 excellent)
	Course content:	4.9
	Instructor:	4.8
	Course in general:	4.8
Spring 1996	Taught one week *Computer Ethics* @ UNM section of a new five week introductory class on computing at UNM (CS101). Did this two times.	

ii. Specialized

Fall 2016	*Learning Analytics Research Group (TLTC 708)* – 1 credit, 3 students, 20 participants	
Spring 2016	*Learning Analytics Research Group* – 0 credits, 30 participants	
Fall 2015	*Learning Analytics Reading Group* – 0 credits, 20 participants	
Spring 2015	*Learning Analytics Reading Group* – 0 credits, 20 participants	
Fall 2003	*Readings in HCI Seminar* (CMSC 838B) – 1 credit, 13 students	
	Student Evaluations	(Scale: 0 Poor - 4 Excellent)
	Course quality:	3.9
	Instructor's teaching:	3.8
Fall 2001	*Readings in HCI Seminar* (CMSC 838B) – 1 credit, 12 students	
	Student Evaluations	(Scale: 0 Poor - 4 Excellent)
	Course quality:	3.8
	Instructor's teaching:	3.8
Fall 2000	*Readings in HCI Seminar* (CMSC 838B) – 1 credit, 15 students	
Fall 1999	*Readings in HCI Seminar* (CMSC 838B) – 1 credit, 6 students	
Spring 1999	*Zoomable User Interfaces* (CMSC 838B) – 15 students	
	Student Evaluations	(Scale: 0 Poor - 4 Excellent)
	Course quality:	3.5
	Instructor's teaching:	3.2
Fall 1998	*Readings in HCI Seminar* (CMSC 838B) - 1 credit, 9 students	
	Student Evaluations	(Scale: 0 Poor - 4 Excellent)
	Course quality:	4.0
	Instructor's teaching:	3.8

F. ADVISING RESEARCH DIRECTION
i. Undergraduate

	Independent Study Advisor:
2013	Andrej Resevic – new Paths to Computer Science course
2012 – 2013	Danny Michaelis – new Paths to Computer Science course
2010 – 2011	Jonathan Speiser Worked on tournament programmer in educational technologies group
2003-2004	Christian Klein Studied effect of animation when scrolling while reading

2000 – 2002	Rob Sherman Customized undergraduate degree in HCI & Law – focused on voting systems
Fall 2001	Steve Betten Visualizations for real-time monitoring
Spring 2000/ Fall 2000	Beth Weinstein Geographical interfaces for digital library for children
Spring 1999	Nuno Pereria End-user customizable systems
Spring 1996	Philip Eckenroth and Mike Tipping Built a 3D modeling system
Fall 1995	Josh Saiz Novel searching techniques in Pad++ (dynamic indicators)

ii. Master's

	Thesis Committee:
2005	Julie Staub in Applied Math. Research on Chaum's scheme for encrypted voter receipts.
1999	George Ziets in Psychology. Advisor is Kent Norman. Research is on gauge design for multiple orders of magnitude.
	Independent Study Advisor:
2013	Alina Goldman (iSchool) – Motivation in a self-paced computer science course
2012	Adam O'Sullivan – Computer vision for relative phone location
2000	Stephanie Thibeault (Dance Dept.) Technology and dance
1996	Ellen Killion Built a software library access tool in Pad++
1995	Tom Claus Worked on KidPad
1995	Sam Cancilla Shared calendar application in Pad++
1995	David Rogers Tossing for user interfaces
1995	Richard Bleakman Interfaces for teaching genetic algorithms
1995	Tom Claus Worked on Pad++

iii. Doctorate

	Dissertation Advisor:
2017	Tak Yeon Lee, Ph.D. (2017) in Computer Science. "Toward Symbiotic Human-AI Interaction Focusing on Programming by Example". **Currently at Adobe Research.**
2016	Adil Yalcin, Ph.D. (2016) in Computer Science. "Towards Rapid, Effective, and Expressive Visual Data Exploration". **Currently founding startup to commercialize his dissertation research - https://keshif.me/.**

2014 Alex Quinn, Ph.D. (2014) in Computer Science. "Crowdsourcing Decision Support: Frugal Human Computation for Efficient Decision Input Acquisition". **Currently Assistant Professor of ECE at Purdue.**

2012 Chang Hu, Ph.D. (2012) in Computer Science. "Crowdsourced Monolingual Translation". **Currently at Microsoft.**

2007 Amy Karlson, Ph.D. (2007) in Computer Science. Research on personal information management. **Winner of Microsoft Graduate Fellowship. Two CHI papers nominated for best paper. Worked at Microsoft Research for several years.**

2006 Bongshin Lee, Ph.D. (2006) in Computer Science. "Interactive Visualization for Trees and Graphs". **Co-first place winner of IEEE InfoVis 2004 Contest. Currently at Microsoft Research.**

2005 Hilary Hutchinson, Ph.D. (2005) in Computer Science. "Children's Interface Design for Searching and Browsing". **Awarded UMD CS Minker Fellowship. Awarded NSF Graduate Fellowship. Currently at Google.**

2005 Bongwon Suh, Ph.D. (2005) in Computer Science. "Image Management Using Pattern Recognition". **Worked at PARC, then at Adobe Research, now Assoc. Prof. at Seoul National University (Korea).**

2003 Lance Good, Ph. D. (2003) in Computer Science. "Zoomable User Interfaces for the Authoring and Delivery of Slide Presentations". **Worked at PARC as researcher for several years, now at Google.**

2003 Juan Pablo Hourcade, Ph.D. (2003) in Computer Science. "User Interface Technologies and Guidelines to Support Children's Creativity, Collaboration, and Learning". **Currently Assoc. Prof. of Computer Science at the University of Iowa.**

1998 Jason Stewart, Ph.D. (1998) in Computer Science at UNM. Research is on collaborative user interfaces for children using Pad++. **Awarded 1995 DEC Fellowship at UNM.**

Dissertation Committee:

2020 Virginia Leigh Byrne (2020) in Education. Advisor is Diane Jass Ketelhut. "The Chilling Effect of Cyberbullying on Women's Social Presence in Online Discussions"

2019 Zhenpeng Zhao (2019) in Computer Science. Advisor is Niklas Elmqvist. "Data-Driven Storytelling for Casual Users"

2016 Uran Oh, Ph.D. (2016) in Computer Science. Advisor is Leah Findlater. "Accessible On-Body Interaction for People with Visual Impairments"

2016 Kotaro Hara, Ph.D. (2016) in Computer Science. Advisor is Jon Froehlich. "Scalable methods to collect and visualize sidewalk accessibility data for people with mobility impairments"

2014 Aaron Dinin, Ph.D. (2014) in English. Advisor is Martha Nell Smith. "Hacking Literature: A Study in the Technology of Language."

2014 Brian Danielak, Ph.D. (2014) in College of Education. Advisor is Andy Elby. "How Electrical Engineering Students Design Computer Programs."

2013 Irene Eleta Mogollon, Ph.D. (2013) in iSchool. Advisor is Jen Golbeck. "Multilingual use of Twitter: Language Choice and Language Bridges in a Social Network."

2013 John Alexis Guerra Gomez, Ph.D. (2013) in Computer Science. Advisor is Ben Shneiderman. "Exploring Differences in Multivariate Datasets Using Hierarchies: An Interactive Information Visualization Approach"

2013 Sureyya Tarkan, Ph.D. (2013) in Computer Science. Advisor is Ben Shendierman. "Interactive Visual Displays for Results Management in Complex Medical Workflows"

2010 Taowei David Wang, Ph.D. (2010) in Computer Science. Advisor is Ben Shneiderman. "Interactive Visualization Techniques for Searching Temporal Categorical Data"

2009	Jerry Fails, Ph.D. (2009) in Computer Science. Advisor is Allison Druin. "Mobile Collaboration for Young Children"
2008	Chunyuan Liao, Ph.D. (2008) in Computer Science. Advisor is Francois Guimbretiere. "PapierCraft: A New Paper-Based Interface To Support Interaction With Digital Documents"
2008	Aleks Aris, Ph.D. (2008) in Computer Science. Advisor is Ben Shneiderman. "Visualization & Exploring Networks Using Semantic Substrates"
2008	Adam Perer, Ph.D. (2008) in Computer Science. Advisor is Ben Shneiderman. "Integrating Statistics and Visualization to Improve Exploratory Social Network Analysis"
2008	Walky Rivadeneira, Ph.D. (2008) in Psychology. Advisor is Kent Norman. "Tag Clouds: How Format and Categorical Structure Affect Categorization Judgement"
2007	Matthias Mayer, Ph.D. (2007) in Dept. Informatik, Universität Hamburg where I was an outside reader. Advisor is Prof. Dr. Arno Rolf. "Visualizing Web Sessions".
2007	Leslie Eugene Chipman, Ph.D. (2007) in Computer Science. Advisor is Allison Druin. "Collaborative Technology for Young Children's Outdoor Education".
2006	Haibin Ling, Ph.D. (2006) in Computer Science. Advisor is David Jacobs. "Techniques for Image Retrieval: Deformation Insensitivity and Automatic Thumbnail Cropping".
2005	Jinwook Seo, Ph.D. (2005) in Computer Science. Advisor is Ben Shneiderman. "Information Visualization Design for Multidimensional Data: Integrating the Rank-By-Feature Framework with Hierarchical Clustering".
2005	Jen Golbeck, Ph.D. (2005) in Computer Science. Advisor is Jim Hendler. "Computing and Applying Trust in Web-Based Social Networks".
2003	Harry Hochheiser, Ph.D. (2003) in Computer Science. Advisor is Ben Shneiderman. Research on interfaces for time-series data.
2002	Jenny Sterling, Ph.D. (2002) in Music. Advisor is Laszlo Payerle. Research on educational software she developed to teach undergrad music form. She won the campus award on educational technologies from the Center for Teaching Excellence.
2001	Mike Beynon, Ph.D. (2001) in Computer Science. Advisor is Joel Saltz. Research on filter-based programming model for grid computing.
2001	Angela Boltman, Ph.D. (2001) in Education, Advisor is Allison Druin. Research on KidPad's effect on children's storytelling.
2001	Jeff Heflin, Ph.D. (2001) in Computer Science. Advisor is Jim Hendler. Research on the semantic web.
2001	Egemen Tanin, Ph.D. (2001) in Computer Science. Advisor is Ben Shneiderman. Research on browsing large online databases using exploratory overviews.
2000	Vasanth Philomin, Ph.D. (2000) in Computer Science. Advisor is Larry Davis. Research on real-time computer vision for in-car navigation and warning systems.
2000	Byoung-Kee Yi, Ph.D. (2000) in Computer Science. Advisor is Christos Faloutsos. Research on similarity search and data mining in time-sequence databases.
2000	Chris North, Ph.D. (2000) in Computer Science. Advisor is Ben Shneiderman. Research on tight coupling between different visualizations.
1999	Richard Potter, Ph.D. (1999) in Computer Science. Advisor is Ben Shneiderman. Research on pixel data access for end-user customization.
1999	Harald Winroth, Ph.D. (1999) in Computer Science at the Royal Institute of Technology (KTH) in Stockholm, SWEDEN. I was invited to be the *opponent*. Advisor is Jan-Olof Eklundh Research on dynamic projective geometry.

1999	Ismail Haritaoglu, Ph.D. (1999) in Computer Science. Advisor is Larry Davis. Research on real-time computer vision for tracking people.
1999	Zhijun Zhang, Ph.D. (1999) in Computer Science. Advisors are Vic Basili and Ben Shneiderman. Research on perspective-based usability inspection techniques.
1998	Elaine Raybourne, Ph.D. (1998) in Communication and Journalism at the University of New Mexico. Advisor is Ed Rogers. Dissertation is on the use of MUDs for anonymous role-playing to teach about issues of culture, identity, and power.
1998	Fan-Tao Pu, Ph.D. (1998) in Computer Science, Advisor is David Mount. Research on data structures for view-independent 3D object visibility detection.
1998	Eser Kandogan, Ph.D. (1998) in Computer Science, Advisor is Ben Shneiderman. Research on a technique for window management – elastic windows.
1996	Eric Freeman, Ph.D. (1996) in Computer Science at Yale University. Advisor is David Gelernter. "Lifestreams", a computer interface that eliminates the need for filenames by indexing all files and connecting applications to a database.
	Proposal Committee:
2019	Maddalena Romano in Geographic Information Systems (City College of New York) Advisor is Carsten Kessler. "Distributed WiFi for Distributed GIS"
2018	Virginia Leigh Byrne in Education. Advisor is Diane Jass Ketelhut. "The Chilling Effect of Cyberbullying on Women's Social Presence in Online Discussions"
2017	Zhenpeng Zhao in HCI. Advisor is Niklas Elmqvist. "A Framework of Media Types for Data-Driven Storytelling"
2012	Irene Eleta in iSchool. Advisor is Jen Golbeck. "Multilingual Use of Twitter: Language Choice and Language Bridges in a Social Network"
2012	John Alexis Guerra Gómez in Computer Science. Advisor is Ben Shneiderman. "Exploring Differences in Trees by Comparing Structure and Node Value Changes: An Interactive Information Visualization Approach"
2011	Alex Quinn in Computer Science. Advisor is me. "Crowdsourcing Decision Support: Frugal Human Computation for Efficient Decision Input Acquisition"
2011	Sureyya Tarkan in Coputer Science. Advisor is Ben Shneiderman. "Enhancing Timely Management of Workflow with Interactive Visual Displays and Actions for Situation Awareness Processing"
2010	Chris Hayden in Computer Science. Advisors are Mike Hicks and Jeff Foster. "Clear and Correct Runtime Upgrades"
2010	Chang Hu in Computer Science. Advisor is me. "Translation by Collaboration Between Monolinguals"
2008	Walky Rivadeneira in Psychology. Advisor is Kent Norman. "Tag Clouds: How Format and Categorical Structure Affect Categorization Judgement"
2007	Jerry Fails in Computer Science. Advisor is Allison Druin. Research on children's collaborative mobile interfaces.
2005	Haibin Ling in Computer Science. Advisor is David Jacobs. Research on invariance in computer vision.
2001	Jaime Montemayor in Computer Science. Advisor is Allison Druin. Research on physical programming for children.
2001	Harry Hochheiser in Computer Science. Advisor is Ben Shneiderman. Research on interfaces for time-series data.

2001	Angela Boltman in Education. Advisor is Allison Druin. Research on the technology of storytelling.
2000	Jeff Heflin in Computer Science. Advisor is Jim Hendler. Research on knowledge representation on the Web.
1998	Egemen Tanin in Computer Science. Advisor is Ben Shneiderman. Research on query previews.
1998	Thanarat Horprasert in Computer Science. Advisor is Larry Davis. Research on real-time computer vision.
1998	Vasanth Philomin in Computer Science. Advisor is Larry Davis. Research on real-time computer vision.
1998	Chris North in Computer Science. Advisor is Ben Shneiderman. Research on Tightly Coupled Windows.

iv. Post-doc

2009-2012	Tom Yeh working in applied computer vision and HCI (co-mentored with Larry Davis). **Currently at Univ. of Colorado, Boulder.**

4. SERVICE

A. PROFESSIONAL

i. Office and Committee Memberships

2015 – 2018	SIGCHI Adjunct Chair for Awards
2015	TOCHI Special Issue Editor
2015	Learning @ Scale Program Committee
2014	Learning @ Scale Program Committee
2011	CHI 2011 Papers Subcommittee Co-chair
2010	CHI 2010 Papers Subcommittee Co-chair
2005 – 2016	US ACM Committee member
2004 – 2007	SIGCHI Adjunct Chair for US Public Policy Committee
2000	CHI Conference Video Paper Co-Chair
1999	CHI Conference Video Paper Chair
1998	UIST Technical Program Committee
1998	UIST Conference Panel Chair, Technical Program Committee
1998	CHI Conference Video Co-Chair.

ii. Editorial Boards

2015 – 2018	**PeerJ Computer Science**, PeerJ
2012 – 2018	**Transactions on Computer-Human Interaction (TOCHI)**, ACM Press
2007 – 2014	**Foundations and Trends in HCI** (Editor-in-chief), NOW Publishers
2002 – 2016	**Information Visualization**, Palgrave Press

iii. Advisory Boards

2016 – 2018	**Coursera**, Mountain View, CA Coursera Council advisory group
2012 – 2015	**Barrie School**, Silver Spring, MD Board of Trustees for this independent K-12 school 2013 – 2016: Secretary

2003	**Microsoft Research**, Redmond, WA University Relations Faculty Advisory Board

iv. Other non-University committees, commissions, panels, etc.

2012	**Judge for Joan Ganz Cooney, National STEM Video Game Challenge**

vi. Paid Consultancies

2022 – 2024	**IT Park University** Honorary Rector to help lead new tech educational institution	**Tashkent, Uzbekistan**
2022 – present	**EPAM** Chief Academic Advisor - help with corporate educational programs and creation of new universities	**Newtown, PA**
2020 – 2022	**Logitech** Consultant to help with new product development	**Seattle, WA**
2009 – present	**Consulting as an expert witness** largely for patent infringement cases for a range of clients	**Windsor, MA**
2006 – 2014	**Zumobi, Inc.** Founder of startup company to create mobile information services software	**Seattle, WA**
2008 – 2009	**Microsoft Research** Consultant to help with products related to my research	**Seattle, WA**
2005 – 2009	**Hillcrest Laboratories, Inc.** Advisor to help this start-up develop novel in-home entertainment system	**Rockville, MD**
2003 – 2008	**Windsor Interfaces, Inc.** President and CEO of start-up company to commercialize some HCIL projects	**Chevy Chase, MD**
2005	**ScholarOne, Inc.** Consultant to help them with visualization in their scholarly publication and conference management software	**Charlottsville, VA**
2004 – 2005	**ATTAP, Inc.** Consultant to help this start-up develop novel mobile device interfaces for personal information management	**New York, NY**
2003	**Microsoft Research Corp** On University Relations Faculty Advisory Board	**Redmond, WA**
2001 – 2003	**PARC** Advised on project to support brainstorming	**Palo Alto, CA**
2000	**NASA Goddard Space Flight Center** Designed prototype visualizations for satellite constellation control	**Greenbelt, MD**
1999 – 2001	**Swedish Institute of Computer Science (SICS)** Worked on European Union KidStory project	**Stockholm, Sweden**
1998 – 1999	**Lockheed Martin Astronautics** Advised on use of Pad++ for image analyst application	**Denver, CO**
1996 – 1997	**Sony Research Corporation** Advised on use of Pad++ for product development	**New York, NY**

B. UNIVERSITY
i. Departmental

2013 – 2014	CS Educational Transformation Committee co-chair
2008 – 2012	CS Teaching Evaluation Committee
2008 – 2011	CS Department Council
2007 – 2010	Software Engineering Field Committee chair
2010	UMIACS APT Committee
2009	CS Faculty Search Committee
2007	Chair of APT committee for Evan Golub's promotion to Senior Lecturer
2006	Undergraduate curriculum committee
2006	CS Distinguished Lecturer committee
2004	UMIACS steering committee
2004	High school programming contest
2004	Undergraduate curriculum
2003 – 2005	CS Department Council
2002	CFAR faculty recruiting committee
2001 – 2002	Lab committee
2001 – 2002	On department faculty recruiting committee
2001	Taught 1.5 hour course for high school students in Governor's program.
2000	Represented the computer science department on Capitol Hill for an exhibition to encourage Congressional appropriations for NSF.
2000	Helped with Computer Science Dept. research review day – made departmental demo.
1999 – 2000	Technical staff liaison – to help CS admin and technical staff.
1999	Helped with Computer Science Programming Contest
1996 – 1997	Graduate Admissions coordinator for the UNM Computer Science Department.

iii. University

2016 – 2018	USM Faculty Workload Workgroup
2015 – 2018	DIT Learning Technology Working Group
2015 – 2017	Senate Library Council Committee
2015 – 2018	Senate Educational Affairs Committee
2014 – 2018	Provost's Data Policy Advisory Committee
2013 – 2018	USM Academic Transformation Advisory Committee
2013 – 2018	Future of Information Alliance brainstorming board
2013 – 2018	DIT Technology Accessibility Committee
2013 – 2014	Journalism Faculty Search Committee
2013 – 2014	Learning @ Technology Working Group for DIT
2012 – 2013	Provost's Commission on Blended and Online Education

2012 – 2013	VP IT/CIO – IT Council
2012	CMNS Distinguished Research Scientist Prize comittee
2011	VP / CIO Search Committee
2010	UMD Campus-Wide Mobile App Programming Contest Chair
2002 – 2005	Advisory board member for MITH (Maryland Institute for Technology and the Humanities)
2000	Served on search committee for new intellectual property manager for Office of Technology Commercialization.
2000	Ran event for Maryland Day – opened lab to children to use KidPad to tell collaborative stories