

Publications

*Below are our publications, with links to pdfs and websites after most.
Last updated on 11/08/08*

Books and edited collections:

- J. Cohen, G. Turk & B.A. Watson. (2007). *Proceedings of ACM Interactive 3D Graphics and Games*. ([website](#))
- D. Luebke, M. Reddy, J. Cohen, A. Varshney, B.A. Watson, & R.Huebner. (2003). *Level of Detail for 3D Graphics*. Morgan Kaufman: San Francisco. In second printing. Also published in Japan. ([gcites](#)) ([website](#))
- B.A. Watson & J. Buchanan (eds.). (2001). *Proceedings of Graphics Interface*. ([website](#))

Journal publications — full refereed research:

- E. Sharlin, B.A. Watson, S. Sutphen, L. Liu, R. Lederer & J. Frazer. (2008). A tangible user interface for assessing cognitive mapping ability. *Int. J. Human-Computer Studies*, Special Issue on 3D User Interfaces, to appear. ([website](#)) ([pdf](#))
- Y. Itoh, E. Sharlin, Y. Kitamura, F. Kishino, B.A. Watson, S. Sutphen & L. Liu. (2006). A user interface for spatial cognitive assessment using ActiveCube. *J. Information Processing Soc. Japan*, 47, 4, 1316-1326. (In Japanese). ([website](#))
- P. Ren, Y. Gao, Z. Li, Y. Chen, & B.A. Watson. (2006). IDGraphs: intrusion detection and analysis using stream compositing. *IEEE Computer Graphics & Applications*, 26, 2, 28-39. Special issue on Visualization for Cybersecurity. ([website](#)) ([pdf](#))
- C. Albrecht-Buehler, B.A. Watson & D.A. Shamma. (2005). Visualizing live text streams using motion and temporal pooling. *IEEE Computer Graphics and Applications*, 25, 3, 52-59. Special issue on Smart Depiction for Visual Communication. ([website](#)) ([pdf](#))
- B.A. Watson, N. Walker & L.F. Hodges. (2004). Supra-threshold control of peripheral LOD. Proc. ACM SIGGRAPH 2004. *ACM Trans. Graphics*, 23, 3, 750-759. Acceptance rate: 17.4%. (All SIGGRAPH conference papers from 2004 onwards are published in ACM Trans. Graphics). ([gcites](#)) ([acm site](#)) ([website](#)) ([pdf](#)).
- E. Sharlin, B. A. Watson, Y. Kitamura, F. Kishino & Y. Itoh. (2004). On tangible user interfaces, humans and spatiality. *Personal and Ubiquitous Computing*, 8, 338-346. Theme issue Tangible Interfaces in Perspective. ([gcites](#)) ([acm site](#)) ([website](#)) ([pdf](#)).
- L. Liu, B.A. Watson & M. Miyazaki. (1999). VR for the elderly: quantitative and qualitative differences in performance with a driving simulator. *Cyberpsychology & Behavior*, 2, 6, 567-576. ([gcites](#)) ([website](#)) ([pdf](#))
- L. Liu, M. Miyazaki & B.A. Watson. (1999). Norms and validity of the “DriVR” – a virtual reality driving assessment for persons with head injury. *Cyberpsychology & Behavior*, 2, 1 (Feb), 53-67. ([gcites](#)) ([website](#)) ([pdf](#))
- B.A. Watson, N. Walker, W.R. Ribarsky V. Spaulding. (1998). The effects of variation in system responsiveness on user performance in virtual environments. *Human Factors*, Special Section on Virtual Environments, 40, 3 (Sept), 403-414. ([gcites](#)) ([website](#)) ([pdf](#))

B.A. Watson, N. Walker, L.F. Hodges & A. Worden. (1997). Managing level of detail through peripheral degradation: effects on search performance with a head-mounted display. *ACM Trans. on Computer-Human Interaction*, 4, 4, 323-346. ([gcites](#)) ([acm site](#)) ([website](#)) ([pdf](#)).

M. Reddy, B.A. Watson, N. Walker & L.F. Hodges. (1997). Managing level of detail in virtual environments: a perceptual framework. *Presence*, 6, 6, 658-666. ([gcites](#)) ([website](#)) ([pdf](#))

B.A. Watson, N. Walker, L.F. Hodges & M. Reddy. (1997). An evaluation of level of detail degradation in head-mounted display peripheries. *Presence*, 6, 6, 630-637. ([gcites](#)) ([website](#)) ([pdf](#)).

L.F. Hodges, B.O. Rothbaum, B.A. Watson, G.D. Kessler, & D. Opdyke. (1996). Virtually conquering fear of flying. *IEEE Computer Graphics & Applications*, 16,6 (November), 42-49. ([gcites](#)) ([pdf](#)).

B.O. Rothbaum, L.F. Hodges, B.A. Watson, G.D. Kessler & D. Opdyke. (1996). Virtual reality exposure therapy in the treatment of fear of flying: a case report. *Behavioral Research Therapy*, 34, 5/6, 477-481. ([gcites](#)) ([pdf](#)).

L.F. Hodges and B.A. Watson. (1989). A fast scan-conversion algorithm for quadratic functions. *Journal of Theoretical Graphics and Computing*, 2, 2, 4-13.

Journal publications — surveys, short papers, editorials etc.:

B.A. Watson, P. Mueller, P. Wonka, C. Sexton, A. Fuller & O. Veryovka. (2008). Procedural urban modeling in practice. *IEEE Computer Graphics and Applications*, 28, 3, 18-26. Special issue on Procedural Methods for Urban Modeling. ([website](#)) ([pdf](#))

B.A. Watson & P. Wonka. (2008). Procedural methods for urban modeling. *IEEE Computer Graphics and Applications*, 28, 3, 16-17. Editor's introduction, special issue on Procedural Methods for Urban Modeling. ([website](#)) ([pdf](#))

B.A. Watson. (2006). Broadening our collaboration with design. *IEEE Computer Graphics and Applications*, 26, 5, 18-21. ([pdf](#))

B.A. Watson & D. Luebke. (2005). The ultimate display: where will all the pixels come from? *IEEE Computer*, 38, 8, 54-61. ([website](#)) ([pdf](#))

B.A. Watson, J. Kim, T. MacInearny, T. Moher, C. Hindo, L. Gomez & S. Fransen. (2005). StoryGrid: technology supporting classroom narrative. *IEEE Potentials*, 24, 2, 42-46. ([website](#)) ([pdf](#))

G.C. Burdea, M.C. Lin, W. Ribarsky, B.A. Watson. (2005). Guest editorial: special issue on haptics, virtual, and augmented reality. *IEEE Trans. Visualization and Computer Graphics*, 11, 6, 611-613. ([pdf](#))

B.A. Watson, J. Kim, T. MacInearny, T. Moher, C. Hindo, L. Gomez & S. Fransen. (2004). StorySpace: technology supporting reflection, expression and discourse in classroom narrative. *IEEE Computer Graphics and Applications*, 24, 2, 13-15. ([website](#)) ([pdf](#))

B.A. Watson, D. Luebke, A. Dayal & C. Woolley. (2004). Improving adaptive display with temporally adaptive rendering. *Cyberpsychology & Behavior*, 7, 6, 667-672. ([website](#)) ([pdf](#))

E. Sharlin, B.A. Watson, S. Sutphen, R. Lederer, P. Figueroa & J. Frazer. (2001). 3D computer interaction using physical objects: exploration of tangible user interfaces. *Leonardo Electronic Almanac*, 9, 7, 8 pages. (This is an electronic journal without page numbers). ([website](#)) ([pdf](#)).

B.A. Watson. A survey of virtual reality in Japan. (1994). *Presence*, 3, 1, 1-18. ([pdf](#))

Conference publications — full refereed:)

A. Dayal, C. Woolley, B.A. Watson & D. Luebke. (2005). Adaptive frameless rendering. Proc. Eurographics Symposium on Rendering, 265-275. Acceptance rate 33%. ([gcites](#)) ([acm site](#)) ([website](#)) ([pdf](#))

C. Woolley, D. Luebke, B.A. Watson, A. Dayal. (2003). Interruptible rendering. Proc. ACM Interactive 3D Graphics (Monterey, April), 143-151. Acceptance rate: 26.5%. ([gcites](#)) ([acm site](#)) ([website](#)) ([pdf](#)).

B.A. Watson, N. Walker, P. Woytiuk, W.R Ribarsky. (2003). Maintaining usability during 3D placement despite delay. Proc. IEEE Virtual Reality 2003 conference, (Los Angeles, March), 133-140. Acceptance rate: 28%. ([gcites](#)) ([website](#)) ([pdf](#)).

E. Sharlin, Y. Itoh, B.A. Watson, Y. Kitamura, S. Sutphen & L. Liu. (2002). Cognitive cubes: a tangible user interface for cognitive assessment. Proc. ACM CHI: Computer-Human Interaction (Minneapolis, April), 347-354. Acceptance rate: 15%. ([gcites](#)) ([acm site](#)) ([website](#)) ([pdf](#))

B.A. Watson, A. Friedman, A. McGaffey. (2001). Measuring and predicting visual fidelity. Proc. SIGGRAPH 2001 (Los Angeles, August). In Computer Graphics Proceedings, Annual Conference Series, ACM SIGGRAPH, 213-220. Acceptance rate: 22%. (All SIGGRAPH conference papers from 2004 onwards are published in ACM Trans. Graphics). ([gcites](#)) ([acm site](#)) ([website](#)) ([pdf](#)).

G. Li, B.A. Watson. (2001). Semiautomatic simplification. Proc. ACM Interactive 3D Graphics, (Research Triangle, North Carolina, March), 43-48, 244. Acceptance rate: 37%. ([gcites](#)) ([website](#)) ([pdf](#))

D. Brodsky, B.A. Watson. (2000). Model simplification through refinement. Proc. Graphics Interface (Montreal, May), 221-228. Acceptance rate: 28%. ([gcites](#)) ([website](#)) ([pdf](#)).

E. Sharlin, M. Green, B.A. Watson, P. Figueroa. (2000). A wireless, inexpensive optical tracker for the CAVE. Proc. IEEE Virtual Reality (New Brunswick, New Jersey, March), 271-280. Acceptance rate: 33%. ([pdf](#))

B.A. Watson, A. Friedman, A. McGaffey. (2000). Using naming time to evaluate quality predictors for model simplification. Proc. ACM CHI: Computer-Human Interaction (The Hague, April), 113-120. Acceptance rate: 22%. ([gcites](#)) ([acm site](#)) ([website](#)) ([pdf](#))

B.A. Watson, N. Walker, L.F. Hodges. (1997). Managing level of detail through head-tracked peripheral degradation: a model and resulting design principles. Proc. ACM VRST '97, Virtual Reality Software Technology (Lausanne, Switzerland, September), 59-64. Acceptance rate: 41%. ([gcites](#)) ([acm site](#)) ([website](#)) ([pdf](#))

B.A. Watson, V. Spaulding, N. Walker & M.W. Ribarsky. (1997). Evaluation of the effects of frame time variation on VR task performance. Proc. VRAIS '97, IEEE Virtual Reality Annual Symposium (Albuquerque, April, 1997), 38-44. ([gcites](#)) ([website](#)) ([pdf](#))

L.F. Hodges, B.O. Rothbaum, B.A. Watson, G.D. Kessler, & D. Opdyke. (1996). A virtual airplane for fear of flying therapy. Proc. VRAIS '96, IEEE Virtual Reality Annual Symposium (San Jose, April), 86-93. Acceptance rate: 35%. ([gcites](#)) ([pdf](#)).

B.A. Watson and L.F. Hodges. (1995). Using texture maps to correct for optical distortion in head-mounted displays. Proc. VRAIS '95, IEEE Virtual Reality Annual Symposium (Research Triangle Park, March), 172-178. ([gcites](#)) ([pdf](#))

B.A. Watson and L.F. Hodges. (1992). Fast algorithms for rendering cubic curves. Proc. Graphics Interface (Vancouver, May), 19-28.

Workshops and small events — full refereed:

B.A. Watson. (2007). Higher-order image representations for hyper-resolution image synthesis and capture. Proc. SPIE/IS&T Human Vision and Electronic Imaging, Vol. 6492, W-1 – W-6. ([website](#)) ([pdf](#))

P. Ren, Y. Gao, Z. Li, Y. Chen, & B.A. Watson. (2005). IDGraphs: intrusion detection and analysis using Histograms. Proc. IEEE Workshop on Visualization for Computer Security, 39-46. ([website](#)) ([pdf](#))

E. Sharlin, Y. Itoh, B. A. Watson, Y. Kitamura, S. Sutphen, L. Liu & F. Kishino, Spatial tangible user interfaces for cognitive assessment and training. (2004). Proc. Bio-ADIT 2004 (Lausanne, Switzerland). 410-425. ([website](#)) ([pdf](#))

V. Salamon, P. Lu, B.A. Watson, D. Brodsky & D. Gomboc. (2001). A case study of improving memory locality in model simplification: metrics and performance. Proc. High Performance Computing, pp. 137-148 (Hyderabad, India, December). Springer Verlag, ISBN 3-540-43009-1. ([website](#)) ([pdf](#))

P. Figueroa, M. Green & B.A. Watson. (2001). A framework for 3D interaction techniques. Proc. CAD/Graphics (Kunming, China, August). International Academic Publishers. ([pdf](#))

B.A. Watson, N. Walker & L.F. Hodges. (1995). A user study evaluating level of detail degradation in the periphery of head-mounted displays. Proc. FIVE '95, Framework for Interactive Virtual Environments Conference (London, England, December), 203-212. ([gcites](#)) ([website](#)) ([pdf](#)).

B.A. Watson and L.F. Hodges. (1994). Fast distortion correction for head-mounted displays. Proc. 14th IMACS Conference on Computation and Applied Mathematics, 2 (Atlanta), 989-992.

B.A. Watson and L.F. Hodges. (1989). A fast algorithm for rendering quadratic curves on raster displays. Proc. 27th Annual SE ACM Conference (Atlanta), 160-165.

Conference publications — short refereed:

T. Moher, J. Kim, T. MacInearny, C. Hindo, L. Gomez, B.A. Watson, & S. Fransen. (2005). StoryGrid: a tangible interface for student expression. Proc. ACM CHI, Extended Abstracts, 1669-1772. ([acm site](#)) ([website](#)) ([pdf](#)).

J.C. Woolley, D. Luebke & B. Watson. (2002). Interruptible rendering. Technical sketch, ACM SIGGRAPH 2002 Conference Abstracts and Applications, 205. (San Antonio, July). ([website](#)) ([pdf](#))

Dayal, B.A. Watson & D. Luebke. (2002). Improving frameless rendering by focusing on change. Technical sketch, ACM SIGGRAPH 2002 Conference Abstracts and Applications, 201. (San Antonio, July). ([website](#)) ([pdf](#))

E. Sharlin, B.A. Watson, L. Liu, S. Sutphen, R. Lederer, P. Figueroa & J. Frazer. (2001). Printing virtual reality interfaces: the Cognitive Map Probe. Proc. Workshop on the *Future of VR and AR Interfaces: multi-modal, humanoid, adaptive and intelligent*, at IEEE Virtual Reality (July), 40-42. In W. Broll & L. Schafer eds., GMD Report 138, ISSN 1435-2702, ISBN 3-88457-975-4. Published by GMD – German Nat. Rsrch. Ctr. for Info. Tech. ([website](#)) ([pdf](#))

D. Brodsky & B.A. Watson. (2000). Model simplification for interactive applications. Poster and extended abstract, Proc. IEEE Virtual Reality 2000 conference, 286. ([website](#)) ([gif](#))

B.A. Watson, N. Walker, W. Ribarsky & V. Spaulding. (1999). Managing temporal detail in virtual environments: relating system responsiveness to feedback. ACM CHI 99 Extended Abstracts, Human Factors in Computing Systems (ACM CHI 99 Conference), 280-281. ([acm site](#)) ([website](#)) ([pdf](#))

B.A. Watson, L.F. Hodges, N. Walker. (1997). A model for managing level of detail with head-tracked peripheral degradation. Technical sketch, ACM SIGGRAPH 1997 Conference Visual Proceedings (Los Angeles, August), 183. ([website](#)) ([pdf](#))

B.A. Watson, N. Walker, L.F. Hodges. (1996). Effectiveness of spatial level of detail degradation in the periphery of head-mounted displays. ACM CHI 96 Conference Companion (Vancouver, April), 227- 228. ([website](#)) ([pdf](#))

Conference panels — refereed:

A. Rizzo, H. Hoffman, L. Hodges, B.A. Watson, M. Wiederhold, D. Strickland. (2001). Immersed in anxiety or a process to healing? VR meets mental health. Panel discussion, ACM SIGGRAPH conference, (Los Angeles, California, August). ([ppt.zip](#)) ([pdf](#))

A. Rizzo, L. Hodges, D. Strickland, H. Hoffman & B.A. Watson. (2000). Virtual reality applications for mental health assessment and treatment: a brief review of the future. Panel discussion, ACM SIGGRAPH 2000 conference (New Orleans, Louisiana, August). ([gif.zip](#)) ([ppt.zip](#))

Conference posters, presentations and demos — refereed:

J.R. Benson, D. Crist, P. Lafleur & B.A. Watson. (2008). Agent-based visualization of streaming text. IEEE Information Visualization Interactive Demos. ([website](#)) ([pdf](#))

J.R. Benson, D. Crist, P. Lafleur & B.A. Watson. (2008). Agent-based visualization of streaming text. IEEE Information Visualization Conference Poster. ([website](#)) ([pdf](#))

B.A. Watson, D. Brink, M. Stallmann, R. Devarajan, M. Rakow, T.-M. Rhyne & H. Patel. (2007). Visualizing very large layered graphs with quilts. IEEE Information Visualization Conference Poster. ([website](#)) ([pdf](#))

B.A. Watson, D. Brink, M. Stallmann, R. Devarajan, M. Rakow, T.-M. Rhyne & H. Patel. (2007). Visualizing very large layered graphs with quilts. IEEE Information Visualization Conference Interactive Demo. ([website](#)) ([pdf](#))

- C. Sexton & B.A. Watson. (2007). Vectorization of gridded urban land use data. ACM SIGGRAPH Conference Poster. ([website](#)) ([pdf](#))
- T. Lechner, P. Ren, B.A. Watson, C. Brozefski & Uri Wilensky. (2006). Procedural modeling of urban land use. ACM SIGGRAPH Conference Poster. ([acm downloads](#)) ([website](#)) ([pdf](#))
- P. Ren, B. Gooch & B.A. Watson. (2006). Dimensional compositing for visualizing high-dimensional dataset. ACM SIGGRAPH Conference Poster. ([acm downloads](#)) ([website](#)) ([pdf](#))
- C. Albrecht-Buehler, B.A. Watson, D.A. Shamma. (2004). TextPool: visualizing live text streams. Interactive Poster, IEEE Information Visualization, 1-2. ([website](#)) ([pdf](#))
- P. Ren & B.A. Watson. (2004). Histograms: interactive clustering of stacked graphs. Interactive Poster, IEEE Information Visualization, 35-36. ([website](#)) ([pdf](#))
- E. Sharlin, B.A. Watson, Y. Kitamura, D. Rorabeck, R. Lederer, S. Sutphen, M. Takimoto & F. Kishino. (2004). The Tangible Pathfinder – design of a wayfinding trainer for the visually impaired. Poster at Graphics Interface 2004 Conference (London, Ontario, May). ([pdf](#))
- L. Liu, E. Sharlin, B.A. Watson & S. Sutphen. (2003). Assessing wayfinding ability using virtual reality. Canadian Assoc. of Occupational Therapists National Conference. ([website](#))
- E. Sharlin, B.A. Watson, L. Liu, S. Sutphen, R. Lederer, P. Figueroa & J. Frazer. (2001). Assessmentville – a preview. Poster at Graphics Interface 2001 conference (Ottawa, Canada, June). ([website](#)) ([pdf](#))
- B.A. Watson. (2001). Measuring visual and temporal fidelity. ACM/Eurographics Perceptually Adaptive Graphics Campfire. (Snowbird, Utah, May). ([website](#)) ([pdf](#))
- D. Brodsky, B.A. Watson. (1999). R-Simp: model simplification in reverse. Graphics Interface 99 conference poster abstracts, 39-40 (London, Canada, June).
- L. Liu, M. Miyazaki & B.A. Watson. (1999). Virtual reality for assessing the driving ability of persons who have suffered head injury. *Medicine Meets Virtual Reality 7*, 92 (San Francisco, California, January).
- B.A. Watson, N. Walker, M.W. Ribarsky, V.A. Spaulding & A. Worden. (1996). Finding the target for level of detail management: how does frame rate affect users of virtual environments? Technical sketch, ACM SIGGRAPH 1996 Conference (New Orleans, August).
- R. Kooper, L.F. Hodges, B.A. Watson, G.D. Kessler, D. Bowman, D. Allison. (1996). Virtual environments for the treatment of phobias. A demonstration in the Digital Bayou, ACM SIGGRAPH 1996 Conference (New Orleans, August).
- B.A. Watson, N. Walker & L.F. Hodges. (1995). A user study evaluating level of detail degradation in the periphery of head-mounted displays. Technical sketch, ACM SIGGRAPH 1995 Conference (Los Angeles, August).

Conference tutorials — refereed:

- B.A. Watson, P. Mueller, P. Wonka, & A. Fuller. (2007). Real and virtual urban design. Half-day tutorial, ACM SIGGRAPH 2007 conference (San Diego, CA, July). ([acm downloads](#)) ([website](#)) ([pdf](#))

P. Wonka, B.A. Watson, P. Mueller, E. Hansen & N. Eskuri. (2006). Procedural modeling of urban environments. Half-day tutorial, ACM SIGGRAPH 2006 conference (Boston, MA, July). ([acm downloads](#)) ([website](#)) ([pdf](#))

J. Ferwerda, H. Rushmeier & B.A. Watson. (2003). Frontiers in perceptually-based image synthesis: modeling, rendering, display, validation. Half day tutorial, ACM SIGGRAPH 2003 conference (San Diego, CA, July). ([website](#) 1, 2) ([pdf](#) 1, 2)

D. Luebke, J. Cohen, A. Varshney, M. Reddy, B.A. Watson & R. Huebner. (2003). Managing level of detail for 3D games. Tutorial, Game Developer's Conference (GDC) (San Jose, CA, February). ([website](#) 1, 2) ([pdf](#) 1, 2)

J. Ferwerda, H. Rushmeier & B.A. Watson. (2002). Psychometrics 101: how to design, conduct, and analyze perceptual studies of computer graphics visualization techniques. Half day tutorial, IEEE Visualization 2002 conference (Boston, MA, November). ([website](#)) ([pdf.zip](#))

J. Ferwerda, H. Rushmeier & B.A. Watson. (2002). Psychometrics 101: how to design, conduct, and analyze perceptual experiments in computer graphics. Half day tutorial, ACM SIGGRAPH 2002 conference (San Antonio, Texas, July) ([website](#)) ([pdf.zip](#)).

D. Luebke, J. Cohen, A. Varshney, M. Reddy, B.A. Watson & R. Huebner. (2002). Advanced issues in level of detail. Full day tutorial, ACM SIGGRAPH 2002 conference (San Antonio, Texas, July). ([websites](#) 1, 2, 3) ([pdf.zip](#) 1, 2)

D. Luebke, J. Cohen, A. Varshney, M. Reddy & B.A. Watson. (2001). Advanced issues in level of detail. Full day tutorial, ACM SIGGRAPH 2001 conference (Los Angeles, California, August). ([website](#)) ([pdf](#))

D. Luebke, J. Cohen, A. Varshney, M. Reddy & B.A. Watson. (2000). Advanced issues in level of detail. Full day tutorial, ACM SIGGRAPH 2000 conference (New Orleans, Louisiana, August). ([website](#)) ([ppt.zip](#)) ([bw.pdf](#))

D. Luebke, J. Cohen, M. Reddy & B.A. Watson. (2000). Advanced LOD for dynamic fidelity control. Full day tutorial, IEEE VR 2000 conference (New Brunswick, New Jersey, March). ([website](#)) ([pdf](#))

D. Luebke, M. Reddy & B.A. Watson. (1999). Dynamic LOD: what, why, how and how much. Half day tutorial, IEEE VR 1999 conference (Houston, Texas, March). ([website](#)) ([pdf](#))

Technical reports:

B.A. Watson, D. Brink, M. Stallman, R. Devajaran, Rakow, M., T.-M. Rhyne & H. Patel. (2008). Matrix depictions for large layered graphs. North Carolina State U., Dept. Computer Science, Technical report TR-2008-17. ([website](#)) ([pdf](#))

B.A. Watson, D. Brink, M. Stallman, R. Devajaran, T.-M. Rhyne & H. Patel. (2008). Visualizing very large layered graphs with quilts. North Carolina State U., Dept. Computer Science, Technical report TR-2008-10. ([website](#)) ([pdf](#))

T. Lechner, B.A. Watson, U. Wilensky, S. Tissue, M. Felsen, A. Moddrell, P. Ren & C. Brozefsky. (2007). Procedural modeling of urban land use. North Carolina State U., Dept. Computer Science, Technical report TR-2007-33. ([website](#)) ([pdf](#))

- P. Ren & B.A. Watson. (2005). Histograms: interactive visualization of complex data with graphs. Northwestern U., Dept. Computer Science, Technical report NWU-CS-05-12.
- A. Dayal, C. Woolley, B.A. Watson & D. Luebke. (2005). Adaptive frameless rendering. Northwestern U., Dept. Computer Science, Technical report NWU-CS-05-07. ([website](#)) ([pdf](#))
- A. Dayal, C. Woolley, B.A. Watson & D. Luebke. (2004). Temporally adaptive frameless rendering. Northwestern U., Dept. Computer Science, Technical report NWU-CS-04-47. ([website](#)) ([pdf](#))
- C. Albrecht-Buehler, B.A. Watson, D.A. Shamma. (2004). TextPool: visualizing large text streams. Northwestern U., Dept. Computer Science, Technical report NWU-CS-04-44. ([website](#)) ([pdf](#))
- T. Lechner, P. Ren, M. Felsen, U. Wilensky, S. Tisue & B.A. Watson. (2004). Procedural modeling of land use in cities. Northwestern U., Dept. Computer Science, Technical report NWU-CS-04-38. ([website](#)) ([pdf](#))
- E. Sharlin, B.A. Watson, L. Liu, S. Sutphen, J. Frazer, R. Lederer. (2003). A tangible user interface for assessing cognitive mapping ability. Northwestern U., Dept. Computer Science, Technical report NWU-CS-02-14. ([website](#)) ([pdf](#))
- P. Choudhury, B.A. Watson. (2002). Completely adaptive simplification of massive meshes. Northwestern U., Dept. Computer Science, Technical report NWU-CS-02-09. ([gcites](#)) ([website](#)) ([pdf](#)).
- D. Luebke, B. Hallen, D. Newfield & B.A. Watson. (2000). Perceptually driven simplification using gaze-directed rendering. U. Virginia, Dept. Computer Science, Technical report CS-2000-04. ([gcites](#)) ([website](#)) ([pdf](#)).

Patent disclosures:

- B.A. Watson. (2008). Graph quilting: a scalable method for depicting layered graphs. NC State software disclosure 09S001 filed Feb 9, 2008.

Other publications and presentations, non-refereed:

- M. Schwartz & B.A. Watson. (2008). Meaningful evaluation of adaptive computer graphics rendering techniques. *Proc. NCSU Summer Undergraduate Research Symposium*. ([website](#))
- J.R. Benson, D. Crist, P. Lafleur & B.A. Watson. (2008). Agent-based visualization of streaming text. *Proc. NCSU Summer Undergraduate Research Symposium*. ([website](#))
- M. Crenshaw, L., S. Bens, & B.A. Watson. (2006). Visualization of real-time data from RSS feeds using Processing. *Proc. NCSU Summer Undergraduate Research Symposium*. ([website](#))
- A. Levesque, M. Mohr, & B.A. Watson. (2006). Virtual window shopping. *Proc. NCSU Undergraduate Summer Research Symposium*.
- T. Lechner, B.A. Watson. (2004). Painting digital cities. 2nd Midwestern Graphics Conference (Evanston, IL).

- A. Dayal, C. Woolley, B.A. Watson & D. Luebke. (2004). Temporally adaptive frameless rendering. 2nd Midwestern Graphics Conference (Evanston, IL).
- C. Albrecht-Buehler, D.A. Shamma & B.A. Watson. (2004). Visualizing live text streams using motion and temporal pooling. 2nd Midwestern Graphics Conference (Evanston, IL).
- P. Ren & B.A. Watson. (2004). Histograms: interactive clustering of stacked graphs. 2nd Midwestern Graphics Conference (Evanston, IL).
- T. Lechner, B.A. Watson, U. Wilensky & M. Felsen. (2003). Procedural city modeling. 1st Midwestern Graphics Conference (St. Louis, MO).
- A. Dayal & B.A. Watson. (2003). Adaptive frameless rendering. 1st Midwestern Graphics Conference (St. Louis, MO).
- Y. Itoh, E. Sharlin, Y. Kitamura, F. Kishino, B.A. Watson, S. Sutphen, L. Liu. (2002). A user interface for cognitive assessment with ActiveCube. IPSJ SIGNotes Human Interface Abstract No.098 – 009. Information Processing Society of Japan.
- A. Cho, R. Lederer, E. Sharlin, B.A. Watson, L. Liu & S. Sutphen. (2002). Designing virtual worlds – the Cognitive Map Probe. Proc. 13th Western Canadian Computer Graphics Symposium (Silver Star, Canada, March).
- P. Figueroa, B.A. Watson & M. Green. (2000). A framework for 3D interaction techniques. Proc. 11th Western Canadian Computer Graphics Symposium, (Panorama, Canada, March), 205-212.
- S. Sutphen, E. Sharlin, B.A. Watson & John Frazer. (2000). Reviving a tangible interface affording 3D spatial interaction. Proc. 11th Western Canadian Computer Graphics Symposium, (Panorama, Canada, March), 155-166.
- D. Brodsky & B.A. Watson. (2000). Parallelization, small memories and model simplification. Proc. 11th Western Canadian Computer Graphics Symposium, (Panorama, Canada, March), 75-84.
- D. Brodsky & B.A. Watson. (1999). R-Simp: model simplification in reverse, a vector quantization approach. Proceedings 10th Western Canadian Computer Graphics Symposium, (Banff, Canada, March), 83-92.