



BRYGG A. ULLMER

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Professional Experience

Louisiana State University, Department of Computer Science and Center for Computation and Technology (CCT) (50/50 appointment)

Baton Rouge, LA

Associate Professor (tenured), January 2011 – present.

Assistant Professor, January 2005 – December 2010

- Lead, CCT Cultural Computing Focus Area (July 2012-present; leading 15 faculty in computer science, electrical and computer engineering, music, art, mass communications, information systems and decision sciences, and digital media arts & engineering units).
- Director, Bioinformatics, Biostatistics, and Computational Biology Core, NIH Louisiana Biomedical Research Network (LBRN) (interim, August 2011-June 2014; regular, June 2014-present). Leading faculty, staff, postdocs, and students at four universities. Full NIH project funding @\$15M.
- Co-lead of Tangible Visualization research group (with Dr. Chris Branton).
- Effie C. and Donald M. Hardy Professorship (September 2014-)
- Supervise(d) 2 staff; 2 postdoctoral researchers; 4 Ph.D. students; 6 M.S. students; and 35 undergraduate student researchers.
- Co-supervised 4 additional Ph.D. students (including @ ETH- Zürich and LMU Munich) and 3 M.S. students
- Principle investigator on 3 NSF grants + 1 Louisiana Board of Regents grant; \$1.95M.
- Including co-PI'ed grants, summed funding between \$6M and \$27M (larger number includes full valuation of multi-campus grants).
- Campus co-PI on large NSF cyberinfrastructure grant (\$2.5M subcontract on ~\$12M grant)
- Digital Media Arts & Engineering program founding director search committee chair.
- Member of numerous other director and faculty search committees (including nine between fall 2012-2013 alone.)
- ACM UIST “Lasting Impact” paper award (2009). (6th such award, in 23rd year of conference)
- Baton Rouge Business Report: Top Forty under 40 (2008). (Sole assistant professor awarded)
- LSU Rainmaker (2009). (One of 100 faculty in university recognized.)
- LSU Flagship Faculty (2009).
- Hosted visiting postdoctoral researcher from France (Guillaume Riviere, 3 months); now Asst. Prof. at ESTIA (Bidart, France).
- Hosted Ph.D. student from Germany (Matthias Kranz, 3 months); now Asst. Prof. at TU/München.

Klarquist Sparkman Intellectual Property Law

Technical consultant, 2007-08

- Consulting in defense of Microsoft against patent litigation.

Hong Kong Polytechnic University, School of Design

Hong Kong, China

Remote lecturer, August 2006

Visiting lecturer, November-December 2002

- 2006: Co-taught four-week course, “Tangible Interfaces,” w/ Dr. Thomas Fischer.

- 2002: Co-taught five-week projects course, “Giving Physical Form to Digital Information,” w/ Miriam Konkel, M.D.

Zuse Institute Berlin (ZIB), Visualization Department

Berlin, Germany

Postdoctoral researcher, October 2002 – October 2004

- Postdoctoral researcher supported by EC IST “GridLab” FP5 grid computing project.
- Developed grid-enabled tangible interfaces for facilitating collaborative simulation, visualization, and presentations, and grid-enabled visualization services and reports.
- Collaborated intensively w/, received grant from the Max Planck Institute for Gravitational Physics (Albert Einstein Institute) toward deployment of tangible interfaces.

MIT Media Laboratory, Tangible Media group

Cambridge, MA

Research assistant, August 1995-August 2002

- Ph.D. graduate and first student of the Tangible Media group with Prof. Hiroshi Ishii, closely involved in group’s formation.
- Developed user interfaces for physically representing and manipulating abstract digital information (e.g., online media). Results published in ACM SIGGRAPH, CHI, UIST, et al.
- Hired and managed eleven undergraduate students.
- Co-manager of Media Laboratory’s laser cutter and mini-mill, and broader fab lab.

Sony CSL

Tokyo, Japan

Student intern, Summer 2000

- Research on mixed physical & graphical user interfaces with Dr. Jun Rekimoto.
- Resulting “DataTiles” research published in CHI 2001.

Interval Research Corporation

Palo Alto, CA

Student intern, January-August 1995; Summers 1993-94

- Research, news systems integrating video, audio, text, and Internet connectivity.
- Research, 3D graphical interfaces for representing high bandwidth information flows with Professor Terry Winograd.
- Internal development of Web-based technologies.
- Co-inventor on three patents.

University of Illinois, Urbana-Champaign

Urbana, IL

Volunteer and hourly employee, 1991-94 (part time)

- User interface development in NCSA’s Virtual Reality Lab.
- Initiator and consultant for C-SPAN Internet connectivity project (1992-93).
- Member of university committee guiding digital information infrastructure for UIUC’s Grainger Engineering Library and Information Center.
- Creator of the “Personal Gopher,” an early personal hyperlink management tool.
- Presented short courses, lectures, and articles on resources of the Internet.
- Administered IBM PC, Macintosh labs and networks (Campus Honors Program).

Summus, Ltd.

Columbia, SC

Consultant, 1991-92 (part time)

- Programmed user interfaces for wavelet-based image compression.

University of South Carolina Mathematics Department

Columbia, SC

Student intern, Summers 1990-92

- Wrote software for scientific visualization and wavelet-based image compression.
- Created USC-Math Gopher service, an early hierarchy of Internet-wide hyperlinks.
- Involved in creation and support of the *Wavelet Digest* (> 24K subscribers).

Hansley Industries

Columbia, SC

Hourly programmer, Summers 1987-89

- User interface design, database programming, and PC systems administration.

Education

Massachusetts Institute of Technology

Cambridge, MA

Ph.D., Program in Media Arts and Sciences (MIT Media Laboratory)

Dissertation: Tangible interfaces for manipulating aggregates of digital information

Committee: Profs. Hiroshi Ishii, John Maeda, and Robert Jacob (Tufts)

Graduated September 2002

Massachusetts Institute of Technology

Cambridge, MA

M.S., Program in Media Arts and Sciences (MIT Media Laboratory)

Thesis title: Models and Mechanisms for Tangible User Interfaces

Committee: Profs. Hiroshi Ishii, Mitchell Resnick, and Terry Winograd (Stanford)

Graduated June 1997

University of Illinois at Urbana-Champaign

Urbana, IL

B.S., Computer Engineering (Chancellor's Scholar)

Graduated December 1994

IBM Media Lab Fellow 1998-2002

Mitsubishi Media Lab Fellow 1996-98

AT&T Media Lab Fellow 1995-96

IEEE Undergraduate Papers Contest: First place (regional), 1992

("End-User Customization Mechanisms for Distributed Information Resources")

International Science and Engineering Fair, 2nd place Computer Science division
(+ 7 other awards), 1991

International Science and Engineering Fair, 1st place Engineering division, 1989

Publications

[Google Scholar reports](#) 9,600 citations as of September 2014.

Refereed Conference Papers

Valdes, C., Eastman, D., Grote, C., Thatte, S., Shaer, O., Mazalek, A., **Ullmer, B.**, and Konkel, M. K. Exploring the Design Space of Gestural Interaction with Active Tokens through User-Defined Gestures. In *Proc. of ACM CHI'14*, pp. 4107-4116. (Best Paper Honorable Mention.)

Branton, C., **Ullmer, B.**, Wiggins, A., Rogge, L., Setty, N., Beck, S.D., and Reeser, A. Toward rapid and iterative development of tangible, collaborative, distributed user interfaces. *Proc. of ACM EICS'13*, pp. 239-248.

Shaer, O., Mazalek, A., **Ullmer, B.**, and Konkel, M. From Big Data to Insights: Opportunities and Challenges for TEI in Genomics. *Proc. Of ACM TEI'13*, pp. 109-116.

Ullmer, B., Ardaud, G., Dell, C., Reeser, A., Setty, N., Sankaran, R., Toole, C., Branton, C., and Allison, J. Employing and extending mass-market platforms as core tangibles. *Work in Progress, Proceedings of ACM TEI'12*.

Ullmer, B., Dell, C., Gill, C., Toole, C., Wiley, C., Dever, Z., Rogge, L., Bradford, R., Riviere, G., Sankaran, R., Liu, K., Freeman, C., Wallace, A., DeLatin, M., Washington, C., Reeser, A., Branton, C., and Parker, R. (2011). "Casier: Structures for Composing Tangibles and

- Complementary Interactors for Use Across Diverse Systems.” In *Proceedings of ACM TEI’11*, pp. 229-236.
- Beck, S.D., Branton, C., Maddineni, S., **Ullmer, B.**, and Jha, S. (2011). “Performance Management of Laptop Orchestras.” In *Proceedings of NIME’11*.
- Branton, C., Carver, D., and **Ullmer, B.** (2011). “Interoperability Standards for Pervasive Games.” In *Proceedings of the Games and Software Engineering Workshop’11*.
- Ullmer, B.**, Dever, Z., Sankaran, R., Toole, C., Freeman, C., Cassady, B., Wiley, C., Diabi, M., Wallace, A., DeLatin, M., Tregre, B., Liu, K., Jandhyala, S., Kooima, R., Branton, C., and Parker, R. (2010). “Cartouche: Conventions for Tangibles Bridging Diverse Interactive Systems.” In *Proceedings of ACM TEI’10*, pp. 93-100.
- Bohara, B., Harhard, F., Bengler, W., Brener, N., Iyengar, S., Karki, B., Ritter, M., Liu, K., **Ullmer, B.**, Shetty, N., Natesan, V., Cruz-Neira, C. (2010). “Evolving Time Surfaces in a Virtual Stirred Tank.” In *Proceedings of the Winter School for Computer Graphics (WSCG)’10*.
- Sekeroglu, K., Kodiyalam, S., **Ullmer, B.**, Sankaran, R., Bengler, W., Roy, S., Wallace, A., Acharya, S., and Jana, J. (2010). Exploring stirred tank CFD simulation data via tangible interaction with mechatronic interface coupled to CAVE-based visualization. *Proceedings of the 2010 ASEE Gulf-Southwest Annual Conference*.
- Sankaran, R., **Ullmer, B.**, Ramanujam, J., Kallakuri, K., Jandhyala, S., Toole, C., and Laan, C. (2009). “Decoupling Interaction Hardware Design Using Libraries of Reusable Electronics.” In *Proceedings of Tangible and Embedded Interaction (TEI)*, February 2009, pp. 331-337.
- Ullmer, B.**, Sankaran, R., Jandhyala, S., Tregre, B., Toole, C., Kallakuri, K., Laan, C., Hess, M., Harhad, F., Wiggins, U., and Sun, S. (2008). “Tangible Menus and Interaction Trays: Core tangibles for common physical/digital activities.” In *Proceedings of Tangible and Embedded Interaction (TEI)*, February 2008, pp. 209-212.
- Chakraborty, P., **Ullmer, B.**, Larkin, J., and Wiley-Patton, S. (2008). Architecture of a tangible interface for modeling the plant cell cycle. In *Proc. of the 15th Mardi Gras Conference*, February 2008.
- Sankaran, R., **Ullmer, B.**, Jandhyala, S., Kallakuri, K., Sun, S., and Laan, C. (2007). “Blades & Tiles: an extensible hardware architecture for ubiquitous interaction devices.” In *Proceedings of Ubiquitous Computing (UbiComp)’07*.
- Ullmer, B.**, and Ishii, H. (2003). Tangible Query Interfaces: Physical Constrained Tokens for Manipulating Database Queries. In *Proceedings of INTERACT’03*, pp. 279-286.
- Rekimoto, J., **Ullmer, B.**, and Oba, H. (2001). DataTiles: A Modular Platform for Mixed Physical and Graphical Interactions. In *Proceedings of CHI’01*, pp. 269-276.
- Ullmer, B.**, Kim, E., Kilian, A., Gray, S., and Ishii, H. (2001). Strata/ICC: Physical Models as Computational Interfaces. In *Proceedings of CHI’01 Extended Abstracts*, pp. 373-374.
- Ullmer, B.**, and Ishii, H. (1999). mediaBlocks: Tangible Interfaces for Online Media. In *Proceedings of CHI’99 Extended Abstracts (video demonstration)*, pp. 31-32.
- Wisneski, C., Ishii, H., Dahley, A., Gorbet, M., Brave, S., **Ullmer, B.** and Yarin, P. (1998). Ambient Displays: Turning Architectural Space into an Interface between People and Digital Information. In *Proceedings of CoBuild’98*, pp. 22-32.
- Ullmer, B.**, and Ishii, H. (1997). The metaDESK: Models and Prototypes for Tangible User Interfaces. In *Proceedings of UIST’97*, pp. 223-232.
- Ishii, H., and **Ullmer, B.** (1997). Tangible Bits: Towards Seamless Interfaces between People, Bits, and Atoms. In *Proceedings of CHI’97*, pp. 234-241.

Journal-level Papers and Book Chapters

- Gibbon Genome Sequencing and Analysis Consortium (2014). Gibbon genome and the fast karyotype evolution of small apes. In *Nature*, v513, n. 7517, pp. 195-201. (Cover article.)
- Marmoset Genome Sequencing and Analysis Consortium (2014). The common marmoset genome provides insight into primate biology and evolution. In *Nature Genetics*, v46, pp 850-857.
- Ullmer, B.** (2012). Entangling Space, Form, Light, Time, Computational STEAM, and Cultural Artifacts. *ACM interactions*, XIX.4, pp. 32-39.
- Walker, J. A., M. K. Konkel, **B. Ullmer**, C. P. Monceaux, O. A. Ryder, R. Hubley, A. F. A. Smit and M. A. Batzer (2012) Orangutan Alu quiescence reveals possible source element: support for ancient backseat drivers. *Mobile DNA* 3:8.
- Ishii, H., and **Ullmer, B.** (2012). Tangible User Interfaces. In *Handbook of Human-Computer Interaction*, 3e, J. Jacko, ed.
- Walker, J. A.*, M. K. Konkel*, **B. Ullmer**, C. P. Monceaux, O. A. Ryder, R. Hubley, A. F. A. Smit and M. A. Batzer (2012). Orangutan Alu quiescence reveals possible source element: support for ancient backseat drivers. *Mobile DNA* 3:8.
*These authors contributed equally to this work.
- Orangutan Genome Sequencing and Analysis Consortium (2011). Comparative and demographic analysis of orangutan genomes. In *Nature*, v469, n. 9687, pp. 529-533. (Cover article.)
- Panchaphongsaphak, B., Riener, R., and **Ullmer, B.** (2008). Contact-sensitive artefacts: implementing tangible interfaces through force-torque sensing. In *International Journal of Arts and Technology*, v1 n3-4, 2008, pp. 332-350.
- Rhesus Macaque Genome Sequencing and Analysis Consortium (2007). The Rhesus macaque genome sequence informs biomedical and evolutionary analyses. In *Science*, v316, pp. 222-234, April 13, 2007. (Cover article.)
- Han K., M. Konkel, J. Xing, H. Wang, J. Lee, T. J. Meyer, C. T. Huang, E. Sandifer, K. Hebert, E. W. Barnes, A. F. A. Smit, **B. Ullmer**, and M. A. Batzer. (2007). Mode and tempo of Old World monkey retrotransposon evolution: a glimpse through the Rhesus macaque genome. In *Science*, v316, pp. 238-240 .
- Hutanu, A., Allen, A., Beck, S.D., Holub, P., Kaiser, H., Kulshrestha, A., Liska, M., MacLaren, J., Matyska, L., Paruchuri, R., Prohaska, S., Seidel, E., **Ullmer, B.**, Venkataraman, S. (2006). Distributed and collaborative visualization of large data sets using high-speed networks. *Future Generation Comp. Syst.* 22(8): 1004-1010.
- Ullmer, B.**, Ishii, H., and Jacob, R. (2005). Token+Constraint Systems for Tangible Interaction with Digital Information. In *ACM Transactions on Human-Computer Interaction*, special issue on sensing-based interaction, pp. 81-118.
- Allen, G., Davis, K., Goodale, T., Hutanu, A., Kaiser, H., Kielmann, T., Merzky, A., van Nieuwpoort, R., Reinefeld, A., Schintke, F., Schütt, T., Seidel, E., and **Ullmer, B.** (2005). The Grid Application Toolkit: Toward Generic and Easy Application Programming Interfaces for the Grid. In *Proceedings of the IEEE*, v93n5, pp. 534-550.
- Konkel, M., Leung, V., **Ullmer, B.**, and Hu, C. (2004). Tagaboo: a collaborative childrens' game based upon wearable RFID technology. In *Personal & Ubiquitous Computing*, 8:382-384 (journal design sketch).
- Ullmer, B.**, and Ishii, H. (2001). Emerging Frameworks for Tangible User Interfaces. In *Human-Computer Interaction in the New Millenium*, John M. Carroll, ed. Boston: Addison-Wesley, 2001, pp. 579-601.

Ullmer, B., and Ishii, H. (2000). Emerging Frameworks for Tangible User Interfaces. In *IBM Systems Journal*, v39, n3-4, pp. 915-931.

Underkoffler, J., **Ullmer, B.**, and Ishii, H. (1999). Emancipated Pixels: Real-World Graphics in the Luminous Room. In *Computer Graphics (Proc. of SIGGRAPH'99)*, pp. 385-392.

Ullmer, B., Ishii, H., and Glas, D. (1998). mediaBlocks: Physical Containers, Transports, and Controls for Online Media. In *Computer Graphics (Proc. of SIGGRAPH'98)*, pp. 379-386.

Refereed Magazine Articles

Panchaphongsaphak, B., Riener, R., **Ullmer, B.**, Burgkart, R., and Ravi, N. The Hacking Tradition. In *IEEE Pervasive Computing*, 7(3), July-September 2008, pp. 70-71.

Hornecker, E., Jacob, R., Hummels, C., **Ullmer, B.**, Schmidt, A., van den Hoven, E., and Mazalek, A. (2008). TEI Goes On: Tangible and Embedded Interaction. In *IEEE Pervasive Computing* 7(2), April-June 2008, pp. 90-96.

Refereed Workshop Papers

Mazalek, A., Shaer, O., **Ullmer, B.**, and Konkel, M.K. Tangible meets gestural: Gesture based interaction with active tokens.

Ullmer, B. (2006). Core tangibles and tangible visualizations: prospects for tangible convergence and divergence. In *What is the next generation of human-computer interaction?*, refereed workshop at CHI'06.

Ullmer, B., Hutanu, A., Bengler, W., and Hege, H.-C. (2003). Emerging tangible interfaces for facilitating collaborative immersive visualizations. In *NSF Lake Tahoe Workshop for Collaborative Virtual Reality and Visualization*.

Hege, H.-C., Hutanu, A., Kähler, R., Merzky, A., Radke, T., Seidel, E., and **Ullmer, B.** (2003). Progressive retrieval and hierarchical visualization of large remote data. In *Proc. of the Workshop on Adaptive Grid Middleware*.

Editorial

Hornecker, E., Schmidt, A., and **Ullmer, B.**, editors (2008). Tangible and Embedded Interaction. Introduction to like-titled journal special issue, *International Journal of Arts and Technology* (Inderscience journal), 1(3-4), December 2008.

Ullmer, B., Schmidt, A., Hornecker, E., Hummels, C., Jacob, R.J., and Hoven, E.v.d. (2007). Tangible and Embedded Interaction (preface). Proceedings of *Tangible and Embedded Interaction* (ACM digital library archival), 2007.

Holmquist, L.-E., Schmidt, A., and **Ullmer, B.**, editors (2004). Tangible Interfaces in Perspective. Introduction to like-titled journal special issue, *Personal & Ubiquitous Computing* (Springer journal with ACM digital library archival), September 2004.

Panels

Valsaraj, K., Gonzalez, G., **Ullmer, B.**, and Watkins, S. (2010). "What to expect in college: a professor's perspective." LSU LA-STEM panel. (Invited)

Valsaraj, K., Homberger, D., **Ullmer, B.**, and Watkins, S. (2009). "What to expect in college: a professor's perspective." LSU LA-STEM panel. (Invited)

Ullmer, B., Gross, M., Fernaeus, Y., Hurtienne, J., Hummels, C., Hornecker, E., Izadi, S., and Coffin, J. (2008). "Where, when, what, why, how, for whom, and toward what ends tangibles live in the world." Conference panel, Tangible and Embedded Interaction (TEI)'08, Bonn, Germany. (Invited moderator.)

Abbiatti, M., Diack, M., Gay, K., **Ullmer, B.**, Ware., H., Williams, D. (2007). "A Need for Speed: Internet Bandwidth and Associated Computing Power." WCET annual conference on E-learning in Higher Education, Atlanta, Georgia. (Invited.)

Zuckerman, O., Fitzmaurice, G., Holmquist, L.E., Ishii, H., Mackay, W., Rodden, T., and **Ullmer, B.** (2006). The state of tangible interfaces: projects, studies, and open issues. In *CHI'06 Extended Abstracts*, pp. 61-64, Montreal, Quebec, Canada. (Invited.)

Gallery installations

Dog Tail Wars. Louisiana Biennial. Interactive kinetic sculpture installation driven by live news. Contemporary Arts Center, New Orleans, Louisiana, 2006.
With Asst. Prof. Malcolm McClay (sculpture)

Dog Tail Wars. Dallas University. Interactive kinetic sculpture installation driven by live news, Dallas, Texas, 2006. With Asst. Prof. Malcolm McClay (sculpture).

Preußisch Grün (Prussian Green), Schloss Gleinecke, Potsdam, Germany, Summer 2004
Lenné3D interactive landscape visualization system. With Philip Paar.

NTT InterCommunications Center; Tokyo, Japan, Summer 2000
Strata/ICC: an interactive installation within the "Tangible Bits" exhibition.

Patents

(all as co-inventor)

Methods and systems for providing human/computer interface (US 6076734, US 6164541)

Filed October 1997, first issued June 2000; work at Interval Research
Content: invisible (IR&UV) hyperlinking & browsing of paper + other physical media

Browser for use in navigating a body of information, with particular application to browsing information represented by audiovisual data (US 6263507)

Filed December 1996, issued July 2001; work at Interval Research
Content: technologies for automatic cross correlation & browsing of electronic media spanning multiple media types (e.g., news in text, audio, and video formats)

Display pause with elastic playback (US 6005564, US 6259441)

Filed December 1996, first issued October 1998; work at Interval Research
Content: technologies underlying time shift function found in many modern DVRs (e.g., TiVo)

Funded proposals

1. NSF MRI, Ullmer as PI

Project title: Development of Melete: an interaction-oriented, software-rich compute cluster with tangible interface support for collaborative research and the classroom.

Co-PIs: L. Butler, S. Brenner, M. Batzer, R. Parker

Award amount: \$1.2M (\$900K NSF, \$300K LSU match)

Duration: 9/2011 -8/2015

2. NSF Creative-IT, Ullmer as PI

Project title: Pilot: Tangible Interaction Kiosks: Integrating Physical/Digital Interaction and Visual Design to Support Creativity in K-12 Informal Science Education.

Co-PI: R. Parker

Award amount: \$200K

Duration: 7/2009 -6/2012

- 3. NSF MRI, Ullmer as PI**
Project title: Development of “Viz Tangibles” and “VizNet:” Instrumentation for Interactive Visualization, Simulation, and Collaboration.
Co-PIs: S. D. Beck, W. Bengner, S. S. Iyengar
Award amount: \$397K.
Duration: 9/2005 – 3/2011
- 4. Louisiana Board of Regents, Ullmer as PI**
Project title: LIGO Outreach Tangibles: Physical interaction kiosks for middle school education of space science and beyond.
Award amount: \$150K.
Duration: 2/2008 – 8/2010
- 5. NIH INBRE, Ullmer as interim core director (grant includes two research cores)**
Project title: Louisiana Biomedical Research Network
PI: T. Klei
Award amount: \$15M.
Duration: 3/2010-3/2015
- 6. NSF CC-NIE, Ullmer as co-PI**
Project title: Network Infrastructure: CADIS – Cyberinfrastructure advancing data-interactive sciences
PI: J. Tohline
Award amount: \$500K.
Duration: 1/2013 – 12/2014
- 7. NSF REU, Ullmer as co-PI**
Project title: REU Site: Interdisciplinary Research Experience in Computational Sciences
PI: J. Moreno
Award amount: \$254K.
Duration: 5/2010 – 8/2012
- 8. NSF EPSCoR RII, Ullmer as campus co-PI**
Project title: Cybertools: Comprehensive Computing, Data, Network, and Visualization Services for LONI.
Campus PI: S. Jha
Campus co-PIs: M. Tyagi
Award amount: \$2.2M subcontract of \$9M.
Duration: 9/2007 – 9/2010
Other: co-lead, Visualization work package (WP3)

9. **NSF ARI-R2 (2010-2013).**
Project title: BIPAS – Bifurcated Infrastructure Promoting the Advance of Science: Revitalizing LSU’s Data Network Infrastructure.” \$2M.
Role: senior personnel.

10. **Louisiana Board of Regents Support Fund Enhancement, Ullmer as co-PI**
Project title: Internal Operations/External Communications (Graphic Design department compute resources).
PI: L. Baggett
Co-PIs: M. Kornhauser, R. Parker
Award amount: \$82K
Duration: 2008-2009

11. **CCT GDP, Ullmer as PI**
Project title: Personnel to apply “viz tangibles” equipment from a funded NSF MRI grant.
Co-PIs: P. Diener, M. Tiglio, F. Muldoon, M. Tyagi,
Award amount: \$48K.
Duration: 2006-2007

12. **Louisiana Board of Regents, Biological Computing and Visualization Center, Ullmer as lead investigator**
Project title: Scope-on-a-Rope (SOAR) Tangibles
Award amount: \$41K (two awards, one 20K, one 21K)
Duration: 2006-2007

13. **NSF DDAS, Ullmer as senior personnel**
Project title: DynaCode: A General DDDAS Framework.
PI: G. Allen
Award amount: \$220K.

14. **NIH INBRE, Ullmer as lead of visualization and interaction components**
Project title: INBRE supplement.
Award amount: \$330K.
Duration: 2005

15. **NSF IGERT, Ullmer as participant**
Project title: IGERT on Multi-scale Computations of Fluid Dynamics. \$3.2M.
PI: S. Acharaya
Award amount: \$3.2M
Duration: 2005-2010

16. NIH INBRE, Ullmer as other key support personnel

Project title: Louisiana Biomedical Research Network.

PI: H. Silverman / T. Klei

Award amount: \$16M.

Duration: 2005-2010

17. Max Planck Institute, BAR grant, lead of interaction devices component

Total award amount: 100K € (with MPG Albert Einstein Institute; ~15K€ subaward)

Duration: 2003

Academic service

- Conference co-chair, ACM TEI, 2016 (to be hosted at TU/Eindhoven).
- Graduate Student Consortium co-chair, ACM TEI, 2015 (to be hosted at Stanford University).
- Papers Associate Chair, Interaction using Specific Capabilities or Modalities subcommittee, ACM CHI conference (2010, 2012).
- Co-founder, program co-chair, and inaugural host, TEI (Tangible and Embedded Interaction) 2007.
- Steering committee member, ACM TEI (Tangible, Embedded, and Embodied Interaction), 2008-present. Acting Chair, 2008.
- Associate editor, International Journal of Human-Computer Studies (2004-2005).
- Co-editor, journal special issue (with E. Hornecker and A. Schmidt; 2008). "Tangible and Embedded Interaction." Special issue of *International Journal of Arts and Technology*, 1(3-4) (Inderscience).
- Co-editor, journal special issue (with L.E. Holmquist and A. Schmidt; 2004). "Tangible Interfaces in Perspective." Special issue of *Personal & Ubiquitous Computing* (Springer journal with ACM digital library archival).
- NSF proposal review panelist, April 2013
- NSF proposal review panelist, April 2012
- NSF proposal review panelist, June 2011
- NSF proposal review panelist, July 2010
- NSF proposal review panelist, March 2010
- NSF proposal review panelist, April 2008
- NSF INCISE workshop participant on MRI/CRI programs direction (2008). (Sole assistant professor participant in national event. Most participants department chairs, deans, and center directors.)
- Reviewer for the MacArthur Foundation Fellowship Program (2009).
- Reviewer for Austrian Science Foundation (two proposals), 2008-2009.
- Reviewer for ACM SIGCHI, ACM SIGGRAPH, ACM TEI, ACM UIST, IEEE Tabletop+ITS, et al. (since 1996).
- Member of numerous other director and faculty search committees (including nine between fall 2012-2013 alone.)
- 2012, CS/ECE Merger Coordination Committee
- 2009 CS Department Internal Review, co-lead on ad-hoc committee

- Member, CCT Leadership Transition Team (July-August 2008)
- Member, “Big Arts” Provost Committee (2008-10)
- Member, LSU Physical Sciences Research Development Group (2005-present; sole assistant professor member, 2005-2010).
- Founding co-editor, Tangint Wiki and Digest (2004-2006, with E. Hornecker and A. Schmidt).
- LSU Center for Computation and Technology: Library committee (2005-2006); Web committee (2006-2008).
- LSU Computer Science: Undergraduate Curriculum Committee (2005-2011); Admissions Committee (2006).

Teaching

Louisiana State University (2005-) [*teaching on reduced load/CCT dual-appointment*]

CS4103: Operating Systems	2013 Fall
<i>32 students (undergraduate+graduate)</i>	
CS4243: Interface Design+Technology	2013 Spring
<i>19 students (undergraduate+graduate)</i>	
CS4700: Interface Design+Technology	2012 Spring
<i>25 students (undergraduate+graduate)</i>	
CS4103: Operating Systems	2011 Fall
<i>28 students (undergraduate+graduate)</i>	
CS4700: Interface Design+Technology	2011 Spring
<i>21 students (undergraduate+graduate)</i>	
CS4700: Interface Design+Technology	2010 Spring
<i>19 students (undergraduate+graduate)</i>	
CS1350: Introduction to Computer Science (Java)	2009 Fall
<i>39 students (undergraduate)</i>	
CS4700: Human-Computer Interaction Design	2009 Spring
<i>28 students (undergraduate)</i>	
CS4700: Programming Embedded Interfaces	2008 Spring
<i>35 students (graduate and undergraduate)</i>	
CS1350: Introduction to Computer Science (Java)	2007 Fall
<i>38 students (undergraduate)</i>	
CS4700: Programming Embedded Interfaces	2007 Spring
<i>13 students (primarily graduate)</i>	
CS4700: Programming Embedded Interfaces	2006 Spring
<i>33 students (primarily undergraduate)</i>	

CS4103: **Operating Systems** 2005 *Fall*

48 students (*undergraduate*)

CS4999: **Programming Embedded Interfaces** 2005 *Spring*

13 students (*primarily graduate*)

Intermedia Summer School (June 2009)

Invited two-day research tutorial.

Chania, Crete

Topic: “Tangible Interfaces”

Troisième Cycle Romand d'Informatique (March 2004)

Spring School of the 3rd Cycle in Computer Science of Swiss Universities

One of four invited two-day tutorials on “Multimodal and Mobile Interfaces”

(Other three lecturers were department chairs and center directors.)

Anzère, Switzerland

Topic: “Tangible Interfaces”

Hong Kong Polytechnic University, School of Design (2002, 2006)

2006: Remote lecturer and co-instructor for four-week invited course for continuing-education graduate design students (w/ Dr. Thomas Fischer): “Tangible Interfaces”

2002: Five-week invited projects course for undergraduate design students (w/ Miriam Konkel): “Giving Physical Form to Digital Information”

MIT Media Laboratory (1996-2001)

“Tangible Interfaces:” teaching assistant, 1996-99 (w/ Prof. Hiroshi Ishii)

“Issues in Tangible Interfaces:” teaching assistant, 1999 (w/ Prof. Hiroshi Ishii)

“How to Make (Almost) Anything:” teaching assistant (laser cutting & mini-mills), 1999-2001

(w/ Profs. Neil Gershenfeld, Joseph Jacobson, and Joseph Paradiso)

University of Illinois, Urbana-Champaign, Campus Honors Program (1992)

“Resources of the Internet” (two short courses)

Postdoctoral researchers supervised

Dr. Guillaume Riviere 2009 (September to December; visiting from ESTIA)

Dr. Chris Branton co-supervised w/ Dr. Carver, 2008-present;
co-supervised w/ Dr. S. D. Beck, 2009-present

Theses/dissertations directed

Mr. Alexandre Siqueira CS, Ph.D.; 2014-

Mr. Shantanu Thatte CS, M.S.; 2013-

Mr. Guillaume Ardaud CS, M.S.; 2010-2012

Dr. Cornelius Toole, Jr. CS, Ph.D.; 2005-2012

Mr. Narendra Setty ECE, M.S.; 2010-2012

Ms. Kexi Liu CS, M.S.; 2008-2011

Dr. Rajesh Sankaran ECE, Ph.D.; 2005-2011

Ms. Hali Dardar	Engineering Sciences, Ph.D.; 2013
Mr. Farid Harhad	CS, Ph.D.; co-advisor w/ Prof. Karki, 2006-2013
Mr. Sean O'Connell	CS, M.S.; co-advisor w/ Prof. Kooima, 2008-2009
Mr. Jason Charrier	CS, M.S.; co-advisor w/ Prof. S. D. Beck, 2007-2009
Mr. Srikanth Jandhyala	CS, M.S.; 2005-2008
Mr. Karun Kallakuri	ECE, M.S.; 2005-2007
Ms. Promita Chakraborti	CS, M.S.; co-advisor w. Prof. S. Jha, 2007

Thesis/dissertation committees

Mr. Samuel Huron	reviewer; supervisor, Jean-Daniel Fekete, INRIA (Paris) Ph.D., 2014 (scheduled September 29)
Dr. Hendrik Richter	secondary supervisor with Prof. A. Butz, LMU (Munich), Ph.D., 2013
Dr. Bundit Panchaphongsaphak	co-supervised with Prof. R. Riener, ETH-Zürich, Ph.D., 2007
Ms. Archana Vallabhaneni	committee member, LSU, Prof. Baumgartner; M.S., exp. 2010
Mr. Alexandre Tabbal	committee member, LSU, Prof. Sterling; Ph.D. exp. 2010
Mr. Feng Jiao	committee member, LSU, Prof. Allen; M.S., 2009
Dr. Gaurav Khanduja	committee member, LSU, Prof. Karki; Ph.D., 2008
Mr. Dylan Stark	committee member, LSU, Prof. Allen; M.S., 2007
Mr. Joseph Cali	committee member, LSU, Prof. Baumgartner; Honors B.S., 2007
Mr. Yoonhyuk Jung	Dean's Representative, LSU, Ph.D. qualifier, 2008
Dr. Larry Nabatilan	Dean's Representative, LSU, Ph.D., 2007
Dr. Elise van den Hoven	committee member, TU-Eindhoven, Ph.D., 2004

Undergraduate research students supervised

Mr. Benjamin Birk	2011-present
Mr. Benjamin Guitreau	2012-present
Ms. Morgan Hargrove	2011-present
Ms. Alexandra Willis	2012-present
Mr. Xavier Allen	2010-2012
Ms. Rachel Bradford	2010
Mr. Michael Carroll	2004-2006
Mr. Michael DeLatin	2008-2011
Mr. Christian Dell	2009-2012
Mr. Zachary Dever	2007-2010
Mr. Mohamed Diabi	2008-2009
Mr. John Douthut	2008
Mr. Trevor Foley	2004-2005
Mr. Matthew Gavin	2007
Mr. James Hamilton	2011-2012
Mr. Matthew Hess	2007-2008
Mr. Kevin James	2005

Mr. Michael Lynn	2014
Mr. Taylor Morris	2009-2011
Mr. Christopher Laan	2006-2007
Mr. Mariel Losso	2006
Ms. Courtney Oliver	2004-2006
Mr. Brandon Oubre	2011
Ms. Rebecca Ramb	2009
Ms. Victoria Reed	2014
Mr. Alex Reeser	2008-2012
Mr. Eric Seidel	2005
Mr. Reynaldo Siu-Chang	2011
Mr. Ning Sun	2005-2007
Mr. Blake Tregre	2007-2008
Mr. Alvin Wallace, Jr.	2008-2011
Mr. Christian Washington	2009-2013
Mr. Charles Werther	2014
Mr. Ian Wesley-Smith	2006-2008
Mr. Andre Wiggins	2011-2013
Mr. Cole Wiley	2008-2010
Ms. Kathryn Williams	2013-2014

Invited talks

NCSA Colloquium, October 2014. “Tangible Visualization: Paths toward physically-entangled interactive computational STEAM”

SIGCHI Paris (France), September 2014. “Tangible Visualization: Paths toward physically-entangled interactive computational STEAM”

French German Tangible Interaction Studio, August 2013. “Culturally-specific prospects for the future of tangibles.” (Video lecture; <http://www.youtube.com/watch?v=1X2ejPIhz2o>)

LSU iOS BootCamp, August 2013. “ICY STEAM, Cultural Computing, Tangible Visualization, and beyond.”

NSF SFS workshop, July 2013. “Tangible Visualization and Interactive Computational (ICY) STEAM”

Louisiana Gear-Up program; June, July 2013. ICY STEAM, Cultural Computing, Tangible Visualization, and beyond.

ChemITC, quarterly national meeting, May 2013. “Entangling cyberphysical systems, mobile devices, diverse audiences, and architectural spaces”

Microsoft Research (Seattle), April 2013. “Entangling surfaces, tangibles, webs, clouds, and architectural space”

LSU Science Scholars, April 2013. “Entangling surfaces, tangibles, webs, clouds, and architectural space”

LSU Department of Statistics, March 2013. “Toward computational biology and biostatistics support via novel collaborative user interfaces and interactive supercomputing”

Wellesley College, November 2012. “Toward computational biology support via novel collaborative user interfaces and interactive supercomputing”

LSU Health Sciences Center (New Orleans), October 2012. “Toward computational biology and biostatistics support via novel collaborative user interfaces and interactive supercomputing”

University of Tokyo, August 2012. “Entangling tangible, graphical, architectural, cloud, and robotic media”

Ubiquitous and Mobile Computing conference, Anglet, France, June 2012. “Mobility, Ubiquity, and Tangibility: New ecologies linking research and mass market interaction platforms”

Tangint/FR workshop, Bidart, France, June 2012. “of medium and message: le tangibles passé et le futur / tangibles historisch und zukünftig.”

MIT Media Lab, December 2011. “Tangibles past and future; and tangible ecologies, IC STEAM machines, and cultural genkan.”

LSU CCT, October 2011. “Tangibles past and future.” 10th Anniversary Symposium.

LSU iOS Bootcamp, August 2011. Welcome Address and “Harnessing Computational STEAM with iOS/Android, TouchOSC, and ~20 lines of code”

LSU CS CIOS Bootcamp, August 2011. “What is Computer Science” + “History of Computer Science”

Hasselt University (Hasselt, Belgium), April 2011. Core Tangibles and Tangible Visualizations: approaches for general and special purpose physical interaction across diverse systems.

Philips Research (Eindhoven, Netherlands), March 2011. Core Tangibles and Tangible Visualizations: approaches for general and special purpose physical interaction across diverse systems.

TU/Delft (Delft, Netherlands), March 2011. “Tangible Interfaces and Interactive Visualization.”

ESTIA (Bidart, France), December 2010. “Perspectives on Future for Tangible Interaction.”

LSU CS CIOS Bootcamp, August 2010. “What is Computer Science” + “History of Computer Science”

Exploratorium (San Francisco), July 2010. “Tangible interfaces for net-linked physical + digital informal science experiences”

Oblong Industries (Los Angeles), July 2010. “Of medium and message: tangibles past, present, and future.”

LSU Beowulf Bootcamp, June 2010. “Building your future with LSU.”

LSU CCT REU program, June 2010. “Tangibles Past, Present, and Future.”

Digital Humanities group, LSU, February 2010. “Tangible Visualization for the Computational Sciences, Arts, and Humanities.”

Southern University, LIGO Professional Development Day, September 2009. “Introducing LIGO Outreach Tangibles”

LSU CIOS, August 2009. “What is Computer Science?”

Louisiana Board of Regents (including Commissioner), August 2009. “LIGO Outreach Tangibles/Tangible Science Portal: Physical interaction kiosks for middle school education of space science and beyond.”

LBRN Computational Biology workshop, April 2009. “Whole genome analysis of mobile elements on LSU and LONI resources”

HCI seminar, University of Illinois, Urbana-Champaign, Dept. of Computer Science. Invited seminar by Prof. Karrie Karahalios, 2009. Deferred due to scheduling conflict.

Schlumberger, teleconference collaboration discussion, November 2008. “Tangible Interfaces for Visualization, Collaboration, and Education”

LSU ACM, November 2008. "Of tangible, interaction design, middle school space science, and computational biology"

LSU CIOS, August 2008. "Basic Concepts in Programming."

University of Zürich, May 2008. "Tangible Interfaces for Visualization, Collaboration, and Education"

LSU CS Industrial Advisory Board, April 2008. "Tangible Interfaces for Visualization, Collaboration, and Education"

Hasso Plattner Institute/University of Potsdam, February 2008. "Tangible Interfaces for Visualization, Collaboration, and Education"

Louisiana Board of Regents, January 2008. "LIGO Outreach Tangibles: Physical interaction kiosks for middle school education of space science and beyond"

LSU IGERT workshop, January 2008. "Viz tangibles for CFD research and education"

ETH-Zürich, November 2007. "Tangible Interfaces for Visualization, Collaboration, and Education"

LSU CCT, Colloquium, September 2007. "Tangible Interfaces for Visualization, Collaboration, and Education"

LSU visit, Prof. Zull, May 2007: "Tangibles, Visualization, and SOAR: Computational tools for collaborative teaching and science."

Teaching in Higher Education, April 2007: Keynote
"Tangibles, Visualization, and THE: Computational Tools for Collaboration, Teaching, and Scholarship"

LSU Saturday Science, March 2007. "Seeing the invisible, and grasping the intangible: scientific, tangible, and information visualization"

LSU CS Industrial Advisory Board, February 2007. "Visualization at CCT."

INBRE/LBRN annual meeting (Shreveport), January 2007. "Visualization, Tangibles, and LONI: physical + computational tools for collaborative science."

Louisiana State University, November 2006: Learning Communities Council Meeting
"Learning Communities: Sculpture and Computer Science"

Louisiana Tech University, September 2006: NSF Grant Writing Workshop
"Visualization, Tangibles, and LONI: Computational Tools for Collaborative Science"

Technical University/Eindhoven, Depts. of Industrial Design & Technology Management, May 2004: Colloquium series on "New Visions on Interaction Design"
"Giving Form to the Formless: Digital Artifacts for Tangible Interaction with Online Information"

IBM Zürich Research Labs, November 2003:
"Tangible- and Web-based Tools for Facilitating Interactive 3D Visualization"

Louisiana State University, Center for Computing and Technology, October 2003:
"Tangible Interfaces for Computational Science"

Max Planck Institute for Gravitational Physics, February 2003 (Potsdam, Germany):
"Giving Physical Form to Digital Information"

Hong Kong Polytechnic University, School of Design, December 2002:
"Giving Physical Form to Digital Information"

IBM Zürich Research Labs, May 2002:

“Tangible User Interfaces for Abstract Digital Information”

SAP Research (Waldorf, Germany), May 2002:

“Tangible User Interfaces for Abstract Digital Information”

Fraunhofer IPSI, May 2002 (Darmstadt, Germany):

“Tangible User Interfaces for Abstract Digital Information”

Fraunhofer FIT, May 2002 (Sankt Augustin, Germany):

“Tangible User Interfaces for Abstract Digital Information”

University of Maryland, Human-Computer Interaction Lab, November 2001:

“Tangible User Interfaces for Abstract Digital Information”

IBM, Design and Information Development division, April 2001 (RTP, North Carolina):

“Tangible User Interfaces: Giving Physical Form to Digital Information”

Governor’s School for Science and Mathematics, April 1999 (Hartsville, South Carolina):

“Beyond the TV Typewriter: Tangible Interfaces for Computational Media”

IMPACT’99, March 1999 (Gothenburg, Sweden):

“Beyond the TV Typewriter: Tangible Interfaces for Computational Media”

Governor’s School for Science and Mathematics, Nov. 1992 (Hartsville, South Carolina):

“Resources of the Internet”

Last updated 2014-09