

Brenda A. López Silva

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Work: (312) 996-3002

EDUCATION

MFA in Electronic Visualization

May 2004

University of Illinois at Chicago, Electronic Visualization Laboratory, Chicago, IL

Real-time immersive virtual reality using CAVE, GeoWall, and high-resolution tiled displays; information visualization; advanced modeling for real-time applications

Post-baccalaureate degree in Hypermedia

August 1998

Universidad Autónoma Metropolitana, Mexico City, México

BFA in Graphic Design and Communication

August 1997

Universidad Autónoma Metropolitana, Mexico City, México

EXPERIENCE

Visiting Project Coordinator

July 2006 - present

Department of Computer Science, University of Illinois at Chicago, IL

Learning Technologies Group

Oversees the research, development, and assessment of learning technologies for use in formal and informal educational settings in support of K-16 student learning in the areas of science and technology. Responsible for software development, graphic design and modeling, project management and coordination, interfacing with domain specialists in the physical and computing sciences, education and learning sciences.

Electronic Visualization Manager

September 2004 – June 2006

The University of Chicago, Chicago, IL

Center for the Presentation of Science

Coaching graduate interns in the design and development of exhibits and demonstrations for Chicago area science museums as part of an NSF-funded outreach program to bridge university science research and informal science education. Direct graduate student groups to move ideas from the concept phase to final prototypes and live science demonstrations. Develop and maintain the center's web site and VR technology.

RESEARCH ACTIVITIES AT THE ELECTRONIC VISUALIZATION LABORATORY, UNIVERSITY OF ILLINOIS AT CHICAGO

CAVERN Group (CAVE Research Network)

2000-2004

Design graphic interfaces for visualization, human-computer interaction, education and networking projects; developed and maintained web sites for networking research projects including OptIPuter, Quanta, CAVERNsoft G2, ImmersaView and GeoWall; developed and implemented router traffic maps for NSF-funded international advanced Internet exchange facilities in Chicago (STAR TAP/StarLight).

Visualization Group

Designed and implemented demo application launchers for scientific volume visualizations, virtual reality applications and high-resolution displays; developed artistic virtual reality applications for public exhibition; supported documentation efforts at iGrid 2002, an international advanced networking event in Amsterdam; designed real-time web-based network traffic visualizations at iGrid 2000 in Yokohama, Japan.

OTHER RESEARCH ASSISTANTSHIPS AT UNIVERSITY OF ILLINOIS AT CHICAGO (2000 - 2004)

Department of Computer Science**2003 - 2004**

Designed and fully produced 12-page full color department recruitment brochure and poster. Established design standards for the department's visual identity.

College of Architecture and the Arts**Summer 2002**

Developed the college web site, navigation layout, template design for database-driven site using ASP, Java scripts and multimedia tools.

City Design Center**Summer 2000**

Web site implementation and data base development for Design Matters, the nation's first Internet catalog of exemplary housing for people with limited incomes.

Office of Space Analysis and Allocation**Spring 1999 - Autumn 2000**

Design of database templates to access space and building information for the entire UIC campus; implemented the UIC color map for web interactivity and printed media (Flash, PDF and HTML).

Office of Access and Equity**Summer 1999**

Conducted a field survey of all campus buildings; designed and produced a full color map based on field data and AutoCAD plans to illustrate UIC's compliance with federal ADA standards for accessibility; designed a web site following W3 accessibility standards.

PROFESSIONAL**Guest Lecturer****Spring 2003**

College of Architecture and the Arts, University Of Illinois at Chicago
Taught principles of animation and modeling using Maya to undergraduate students.

Web Developer**Autumn 1998**

UNESCO, Mexico City, Mexico
Developed, designed and maintained website for the Instituto Virtual de Estudios Para la Paz en América Latina y el Caribe (IVEPAZ).

3D Animator/Modeler**Autumn 1997 – Summer 1998**

Audio y Material, Mexico City, Mexico
3D animation and modeling; design of virtual sets and non-linear video editing for television broadcast, edited video for post-production.

Consultant**Summer 1997**

Adobe Systems, Inc., Mexico City, Mexico
Taught commercial software courses to Adobe Inc. clients and gave hands-on demonstrations of Adobe's software during tradeshows.

Guest Lecturer**Spring 1997**

Autonomous Metropolitan University, Mexico City, Mexico
Taught digital media and visual design using design software to undergraduate students from the College of Science and Arts for Design.

PUBLICATIONS

Shipley, E., Silva, B. L., Daly, S., Wischow, E., Moher, T., & Pellegrino, J., "Using construct-centered design to revise instruction and assessment in a nanoscale self-assembly design activity: A case study." In Members of the NCLT, "Using Construct-Centered Design to Align Curriculum, Instruction, and Assessment Development in Emerging Science," Proceedings International Conference of the Learning Sciences. Utrecht, the Netherlands. June 2008.

Moher, T., Uphoff, B., Bhatt, D., Lopez Silva, B., and Malcolm, P. (2008). WallCology: Designing Interaction Affordances for Learner Engagement in Authentic Science Inquiry. Proceedings ACM Conference on Human Factors in Computing Systems (CHI 2008), (April 2008, Florence, Italy), 163-172.

Lopez Silva, B., Anggoro, F., Bernasconi, M., and Moher, T. (2008). How to 'Catch' a Virus: Representational Affordances in a Middle-School Introduction to Nanoscale Self-Assembly. Paper presented at the Annual Conference of the American Educational Research Association (March 2008, New York, NY).

Shiple, E., Moher, T., and Lopez-Silva, B. (2008). Instructional Framing for Nanoscale Self-Assembly Design in Middle School: A Pilot Study. Paper presented at the Annual Conference of the American Educational Research Association (March 2008, New York, NY).

Uphoff, B., Bhatt, D., Lopez, B., Frack, Malcolm, P., Cain, V., and Moher, T. (2008). WallCology: Studying Ecology using a Distributed, Persistent Virtual Ecosystem in the Classroom. Paper presented at the Annual Conference of the American Educational Research Association (March 2008, New York, NY).

Lopez Silva, B., Renambot, L., CytoViz: an Artistic Mapping of Network Measurements as Living Organisms in a VR Application, IS&T / SPIE Electronic Imaging 2007 Conference Proceedings.

RECENT DEMONSTRATIONS/PRESENTATIONS

<i>APS, University-Science Center Partnerships</i> , Philadelphia, PA	05.2008
<i>NISE, Nanoscale Informal Science Education network</i> , San Francisco, CA	11.2007
<i>NEO Workshop, Nanotechnology Education Outreach</i> , San Francisco, CA	08.2007
IS&T/SPIE International Symposium 2007 , CytoViz: an Artistic Mapping of Network Measurements as Living Organisms in a VR Application, Chicago, IL	08.2007
<i>American Physics Society meeting, From universities to the public</i> , Washington, D.C.	03.2006
iGrid 2005 , CytoViz: Real-time data visualization of SAGE network traffic, San Diego, CA	09.2005
<i>Transitive MFA final thesis show, Visualizing Real-Time Network Transfers</i> , Chicago, IL	04.2004
<i>Version>03 Digital Arts Convergence</i> , Museum of Contemporary Art, Chicago, IL	03.2003
SC 05 , CytoViz: Real-time visualization of network traffic and Bluetooth devices, Seattle, WA	11.2005

OS/SOFTWARE KNOWLEDGE

Windows, Linux and Macintosh; HTML, CSS, PHP, Lua, Knowledge of C++, multimedia tools like DreamWeaver, Flash, Maya, InDesign, Adobe Photoshop and Illustrator. Quickly adapt to new software and programming environments.