

# Daniel Acevedo Feliz

## Curriculum Vitae

Department of Computer Science, Brown University, USA  
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### Education

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- Ph.D.** Computer Science, Brown University, October 2007.  
Thesis: *A Framework for the Perceptual Optimization of Multivalued Multilayered 2D Scientific Visualization Methods.*  
Advisor: David H. Laidlaw
- Sc.M.** Computer Science, Brown University, 2001.  
Thesis: *ARCHAVE: A Virtual Reality Environment for Archaeological Research.*  
Advisor: David H. Laidlaw
- B.S.** Civil Engineering, University of A Coruña, Spain, 1997.

### Professional Experience

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- 1998-Present **Graduate Research Assistant**, Visualization Research Lab, Brown University.  
Worked as leader and collaborator in many research projects on Scientific Visualization applications, Virtual Reality applications and interfaces, Human-Computer Interaction, Perception, Visual Design and Art, and Experimental Design. This work included writing research grant proposals for the National Science Foundation and mentoring undergraduates during their internships in our lab.
- 1995-1998 **Research Assistant**, Engineering and Urban Design Visualization Group (VideaLAB), University of A Coruña, Spain.  
Worked on several projects involving 3D modeling, animation and rendering of large models for bridges, highway projects and urban developments. Led the project to recreate the new university campus in 3D through computer animation. This constituted my **Honors Thesis** for which I received an grade of *A with honors*.
- 1995-1998 **Research Assistant**, Structural Engineering Department, University of A Coruña, Spain.  
Developed advanced finite element models for the analysis of the elasto-thermic behavior of arch dams. Collaborated on several projects related to dam safety analysis as well the calculation of bridge structures, along with their visualization in 3D.

### Teaching Experience

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- Fall 2003-2006 **Graduate Teaching Assistant**, Visualization Research Lab, Brown University.  
Helped develop the curriculum as well as support software and logistics for two courses:
- *Virtual Reality Design for Science*. This is a cross-registered class between the CS Department at Brown and the Rhode Island School of Design. It combines design students and CS students to form interdisciplinary groups to design and implement a new scientific visualization application, based on a driving problem from one of our many scientific collaborators.
  - *Interdisciplinary Scientific Visualization*. This graduate-level class leads CS students through the process of writing a research grant proposal, getting it funded and developing the proposed application. Each student must propose a project in collaboration with an expert from outside CS. Groups are formed to complete the work on the few funded proposals.
- 1997-1998 **Instructor of 3D Modeling, Realism, and Animation courses**, Galician Institute for Economic Promotion (IGAPE), Ferrol, Spain.  
Taught two introductory courses on 3D graphics (over 100 hours total) to professionals and free-lancers.

## Journal Papers

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### **Subjective Quantification of Perceptual Interactions among Some 2D Scientific Visualization Methods.**

Daniel Acevedo and David Laidlaw.

IEEE Transactions on Visualization and Computer Graphics, 12(5), September-October 2006.

Proceedings of IEEE Visualization/Information Visualization.

### **Discovering Petra: Archaeological Analysis in VR.**

Eileen Louise Vote, Daniel Acevedo Feliz, David H. Laidlaw, and Martha S. Joukowsky.

IEEE Computer Graphics and Applications. 22(5), 38-50, September/October 2002.

## Peer-Reviewed Conference Papers

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### **Pop Through Buttons for Virtual Environment Navigation and Interaction.**

Robert Zeleznik, Joseph LaViola, Daniel Acevedo, and Daniel Keefe.

Proceedings of IEEE Virtual Reality 2002, March 2002.

### **Archaeological Data Visualization in VR: Analysis of Lamp Finds at the Great Temple of Petra, a Case Study.**

Daniel Acevedo, Eileen Vote, David H. Laidlaw and Martha S. Joukowsky.

Proceedings of IEEE Visualization 2001. San Diego, California. October 2001.

*BEST CASE STUDY AWARD.*

### **CavePainting: A Fully Immersive 3D Artistic Medium and Interactive Experience.**

Daniel Keefe, Daniel Acevedo Feliz, Tomer Moscovich, David Laidlaw and Joseph LaViola.

Proceedings of ACM SIGGRAPH's I3D 2001, Symposium on Interactive 3D Graphics.

North Carolina, March 2001.

### **Hands-Free Multi-Scale Navigation in Virtual Environments.**

Joseph LaViola, Daniel Acevedo Feliz, Daniel Keefe and Robert Zeleznick.

Proceedings of ACM SIGGRAPH's I3D 2001, Symposium on Interactive 3D Graphics.

North Carolina, March 2001.

### **Virtual Reality and Scientific Visualization in Archaeological Research.**

Eileen Vote, Daniel Acevedo, Martha S. Joukowsky and David Laidlaw.

VAST 2000: Virtual Archaeology between Scientific Research and Territorial Marketing.

Arezzo, Italy. November 2000.

### **ARCHAVE - A Three Dimensional GIS for a CAVE Environment.**

Eileen Vote, Daniel Acevedo, Martha S. Joukowsky, and David H. Laidlaw.

Proceedings of CAA 2000: Computing Archaeology for Understanding the Past.

Ljubljana, Slovenia; April, 2000.

### **Structural Models in Static and Dynamic State with Linear and Non-linear Materials.**

L.E. Romera, J.A. Jurado, J.C. Perezan, S. Hernandez, D. Acevedo, J. Lamora, and A. Mosquera.

1st Annual Conference of Cosmos/m Users for Spain and Portugal.

Bilbao, Spain, June 1998.

## Peer-Reviewed Conference Abstracts, Posters, and Workshops

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### **Modeling Perceptual Dominance Among Visual Cues in Multilayered Icon-based Scientific Visualizations**

Daniel Acevedo, Jian Chen, and David Laidlaw.

Poster at IEEE Visualization 2007. Sacramento, California, October-November 2007.

**Using Visual Design Expertise to Characterize the Effectiveness of 2D Scientific Visualization Methods.**

Daniel Acevedo, Cullen Jackson, David Laidlaw, and Fritz Drury.  
Poster at IEEE Visualization 2005. Minneapolis, Minnesota, October 2005.  
*BEST POSTER AWARD.*

**Color Rapid Prototyping for Diffusion Tensor MRI Visualization.**

Daniel Acevedo, Song Zhang, David H. Laidlaw, and Chris Bull.  
Short Paper on the 7th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI). St. Malo, France, September 2004.

**Case Studies in Building Custom Input Devices for Virtual Environment Interaction.**

Joseph LaViola, Daniel Keefe, Robert Zeleznik, and Daniel Acevedo.  
IEEE VR 2004 Workshop: Beyond Glove and Wand Based Interaction.  
Chicago, Illinois, March 2004.

**Designer-critiqued Comparison of 2D Vector Visualization Methods: A Pilot Study.**

Cullen Jackson, Daniel Acevedo, David H. Laidlaw, Fritz Drury, Eileen Vote, Daniel Keefe.  
ACM SIGGRAPH 2003. Sketches and Applications Proceedings. San Diego, CA. August 2003.

**Design-by-Example: A Schema for Designing Visualizations Using Examples from Art.**

Eileen Vote, Daniel Acevedo, Cullen Jackson, Jason Sobel, David H. Laidlaw.  
ACM SIGGRAPH 2003 Sketches and Applications Proceedings. San Diego, CA. August 2003.

**ARCHAVE: A Virtual Environment for Archaeological Research.**

Daniel Acevedo, Eileen Vote, David H. Laidlaw and Martha S. Joukowsky.  
IEEE Visualization 2000, Work in Progress. Salt Lake City, Utah. October 2000.

**Structural Identification of an Arch Dam Model with Linear and Non-linear Material Models.**

L.E. Romera, J.A. Jurado, J.C. Perezan, S. Hernandez, and D. Acevedo.  
International Symposium on New Trends and Guidelines on Dam Safety.  
Barcelona, Spain, June 1998.

Technical Reports

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**Seismic and Elasto-thermic Analysis of Zorita Dam.**

S. Hernandez, L.E. Romera, J.A. Jurado, J.C. Perezan, D. Acevedo, and J. Lamora.  
School of Civil Engineering, University of A Coruña. 1998.

Invited Talks and Panels

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**Building the Future of and a Career in VR.**

Student Panel. IEEE VR 2007. Charlotte, North Carolina, March 2007.

**Graphic Design, Art, and Scientific Visualization.**

Invited talk. Cartoon Future Master. European Association of Animation Film.  
A Coruña, Spain, April 2004.

## Honors and Service

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### Awards and Fellowships

- . **Paris Kanellakis Fellowship.** Computer Science Department, Brown University, 2007.
- . **Best Poster Award.** IEEE Visualization 2005 Conference. Minneapolis, MN. October 2005.
- . **Best Case Study Award.** IEEE Visualization 2001 Conference. San Diego, CA. October 2001.
- . **Marcelino Botin Foundation Fellowship,** Santander, Spain, for continuing graduate level education at Brown University, Providence RI. 2000-2001 and 2002-2003.
- . **Pedro Barrie de la Maza Foundation Fellowship,** A Coruña, Spain, for continuing graduate level education at Brown University, Providence RI, 1998-2000.

### Professional Service

**Reviewer for:** *IEEE Transactions on Visualization and Computer Graphics, IEEE/ACM Transactions on Computational Biology and Bioinformatics. IEEE VR 2007, and IEEE Visualization (since 2005.)*

**Co-chair of** Research Demonstrations for *IEEE VR 2008.*

### University Service

- . In charge of **IRB protocol** renewals for the Visualization Research Lab.
- . Leader, collaborator, and consultant on more than six **NSF grants proposals** for the Visualization Research Lab.
- . Leader and webmaster for the Visualization Research Lab's website (<http://vis.cs.brown.edu>).  
It includes the updating of publication and bibliography records for the lab. It contains many fully interconnected sections to facilitate its use as a research tool, as well as being the public image of the lab.
- . 2003-2004 Computer Science Department **Graduate Student Council Representative.**
- . 2003-present Computer Science Department **Programming and Research Comps Czar.**

## Miscellaneous

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### Languages

- . Native **Spanish.**
- . Native **Galician** (a Spanish dialect very similar to Portuguese.)
- . Fluent **English.**
- . High level **Portuguese.**