

## Pablo Diaz-Gutierrez

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**OBJECTIVE** To apply my skills in an internship or part time job contributing research and development on an area related to: Geometric Processing, Data Disk Layouts, Data Compression, or Fundamental Data Structures and Algorithms.

**EDUCATION** *B.S. Computer Science*  
Universidad de Granada, Granada (SPAIN) – June 2002  
*M.S. Computer Science* (concentration on Visual Computing)  
University of California, Irvine – March 2005  
*Ph.D. Computer Science*  
University of California, Irvine. (Exp. Dec. 07)  
Current GPA: 3.912

**TECHNICAL SKILLS**

- *Programming:* C/C++ (expert), Java, Python/Perl/Shell scripting (reasonably skilled).
- *Software Development:* Unix (Emacs/gcc/make) and MSVC development, Rational ClearCase, CVS, etc.
- *Software Packages:* CGAL, GSL, LEDA, STL, Qt/Kdevelop.
- *Computer Graphics:* Main area of expertise. OpenGL. Mesh processing. Surface sampling and reconstruction. Wrote complete photon-mapping raytracer.
- *Operating Systems:* Solaris, GNU/Linux, MS-Windows.
- *General:* Excellent problem solving skills. Good team and individual worker.

**INDUSTRY EXPERIENCE** *Research Intern* Jun 2006 - Sep 2006  
IBM Almaden Research Center - San Jose, CA

- Performed important contributions to novel database compression method under memory constraints.
- Ongoing work towards academic paper and patent application.

*Software Engineer* Oct 2002 - Jul 2003  
Visual Systems Group - ESPELSA, Madrid (SPAIN)

- Designed and developed map cache for in-house GIS.
- Reverse-engineered competitor's proprietary map format.
- Achieved significant improvements on in-house software, giving ESPELSA competitive edge in Eurofighter contract.

**ACADEMIC EXPERIENCE** *Research Assistant* Fall'03 – today  
Computer Graphics Lab, UC Irvine, under advice of Prof. M. Gopi

- Mesh stripification, simplification, compression, etc.
- Image and sketch-based modeling
- Surface sampling and reconstruction
- Mesh layouts for interactive processing
- Geometric data compression
- Published several papers in major conferences and journals.

*Teaching Assistant* Fall'03 – today (several quarters)  
School of Information and Computer Science, UC Irvine

- Winter 04: Fundamental Data Structures (reader)
- Spring 04: Advanced Project in Computer Graphics
- Fall 05/06: Videogame Development
- Fall 04, Winter 05/06: Introduction to Computer Graphics
- Some student review comments: “Extremely knowledgeable”, “very helpful and always available”, “the course was great because of Pablo”, “the best TA that ever breathed”.

**AWARDS AND MERITS**

- Emulex/Cal(IT)<sup>2</sup> 2006/07 fellowship recipient.
- Eurographics 2005 2nd best paper award.
- UCI graduate student fellowship, 2003/04.
- UC's Education Abroad Program reciprocity fellowship, UCI 2001/02.
- Several merit-based tuition redemptions, University of Granada, 1997/2001.
- Silver medal in Chemistry Olympics, national phase, 1997.

**OTHER INFORMATION**

*Availability:* June 2007.  
*Visa status:* F1 student visa with OPT/CPT options.  
*Foreign languages:* Native Spanish speaker; Intermediate Mandarin.

**SELECTED PUBLICATIONS**

P. Diaz-Gutierrez, D. Eppstein and M. Gopi, “*Single Triangle Strip and Loop on Manifolds with Boundaries*”, SIBGRAPI 2006.

P. Diaz-Gutierrez, A. Bhushan, M. Gopi, and R. Pajarola, “*Single-Strips for Fast Interactive Rendering*”, The Visual Computer, 2006.

P Diaz-Gutierrez, M. Gopi, R Pajarola, “*Hierarchyless Simplification, Stripification and Compression of Triangulated Two-Manifolds*”, Computer Graphics Forum (Eurographics), 2005 (2nd best paper award).

Pablo Diaz-Gutierrez and M.Gopi “*Quadrilateral and Tetrahedral Mesh Stripification Using 2-Factor Partitioning of the Dual Graph*”, The Visual Computer, 2005.

P. Diaz-Gutierrez, A. Bhushan, M. Gopi, and R. Pajarola, “*Constrained strip generation and management for efficient interactive 3D rendering*”, Computer Graphics International, 2005.

Koel Das, Pablo Diaz-Gutierrez and M.Gopi “*Sketching Free-form Surfaces Using Network of Curves*”, in Eurographics Workshop on Sketch Based Interfaces and Modeling, 2005.

Oliver Le, Anusheel Bhushan, Pablo Diaz-Gutierrez and M. Gopi “*Capturing and View-Dependent Rendering of Billboard Models*”, in International Symposium on Visual Computing, 2005.

**REFERENCES**

Academic and industrial references provided on request.