

Adrian Mayorga

University of Wisconsin-Madison

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Research Interests

Animation
Computer Graphics

Human-Computer Interaction
Machine Learning and Data Mining

Education

- 2009 – 2014
(Projected) **PhD in Computer Science, University of Wisconsin-Madison.**
- Studying computer graphics and visualization under Professor Michael Gleicher.
- Conducting research on perceptually-motivated design for scalable data visualization.
- Also working on sketch based techniques for animation and modeling.
- 2009 – 2011 **Masters of Science in Computer Science, University of Wisconsin-Madison.**
- GPA: 3.4/4.00.
- 2004 – 2008 **Bachelors of Science in Computer Science, University of Texas at Austin.**
- Special Departmental Honors: Turing Scholars Honors Program
- Undergraduate Thesis: "A Combined Approach to Subsurface Scattering."
- Supervised by Don Fussell.
- ftp://ftp.cs.utexas.edu/pub/techreports/honor_theses/cs-08-03-mayorga.pdf
- GPA: 3.59/4.00.

Experience

Academia

- 2010 – Present **Graduate Researcher, CIBM Training Program, University of Wisconsin-Madison.**
- Conducting research in data visualization and animation under a program sponsored by the National Library of Medicine.
- Research focuses include designing perceptually-motivated abstraction techniques large amounts of scatter plot data and using sketch based techniques for animation and modeling, making it easier to create high quality animations.
- 2009 – 2010 **Graduate Researcher, AOF Program, University of Wisconsin-Madison.**
- Developed a new technique for computing the solvent excluded surface of a protein based on level set methods.

Industry

- 2008 – 2009 **Software Developer, Schlumberger Information Solutions, Houston, TX.**
- One of three developers in a team creating a domain specific database administration tool.
- Responsible for some UI and business logic layer features.
- Summer 2007 **Software Development Intern, IBM, Austin, TX.**
- Maintained and added functionality to demo programs.
- Created documentation for development framework.

- 2005 – 2007 **Help Desk Consultant**, *University of Texas, Information Technology Services, Austin, TX.*
- Provided customer software support and general computer troubleshooting.
 - Assisted customers with University of Texas applications.

Publications

Adrian Mayorga, Supervised by Donald Fussell. "A Combined Approach to Subsurface Scattering.", Department of Computer Sciences, University of Texas at Austin, June 2008.

Graduate Research and projects

- Fall 2011 – **Sketch-A-Toon.**
Present
 - Animates hand drawn characters, incorporating information from multiple views.
 - Uses 3D motion capture to animate characters, while retaining the 2D style.
- Spring 2010 – **Splatterplots.**
Present
 - Uses perceptual and abstraction techniques to allow the visualization of massive multidimensional datasets.
 - Abstraction is performed in visual space instead of data space. Allows for management of visual clutter in scatter plots.
- Spring 2011 **Harmonious.**
 - Uses harmonious color templates and optimization techniques to automatically create sets of colors that work well together but are as perceptually different as possible.
 - <http://pages.cs.wisc.edu/~adrm/Harmonious/applet/>
- Fall 2010 **HOT CoCo.**
 - Hierarchical Focus + Context Code Coverage Visualizer. Uses the intrinsic hierarchical nature of code to automatically group the code into a hierarchy.
 - Code coverage information is shown at each level, with visual pointers to sibling and parent levels to keep the context.
- Fall 2009 **Volumetric Calculation of Solvent Excluded Surfaces.**
 - Computes the solvent excluded surface of a molecule using a signed distance transform and morphological operations.
 - Slower than current methods, but more robust and can handle larger molecules.

Computing Skills

Programming Languages:	Java, Python, C, C#, C++, SQL, XML, HTML, Haskell, Scheme	Operating Systems:	Linux, Windows, Mac OS X
		Scientific Languages:	Matlab, R

Honors and Awards

CIBM Trainee
Advanced Opportunity Fellow

Departmental Honors: Turing Scholar, UT-Austin