

Anamary Leal

Email: leal@vt.edu, **Web:** www.anamary.net

Objective: Pursuing a career that will leverage my research skills in human-computer interaction, DIY culture, 3D user interfaces, physical computing, along with my leadership skills.

Education and Honors

Ph. D in Computer Science, Virginia Tech, GPA 3.81 *August 2009 to Sum 2016 [expected]*

- **NSF Graduate Fellowship:** \$30,000 stipend/year, tuition waiver for 3 years
- **GEM Doctoral Fellowship:** \$14,000 award, tuition waiver for 5 years, and summer internship from MITRE corporation
- **Google Hispanic Scholarship:** \$10,000 award (only awarded to 20 students per year)

B.S. in Computer Science, University of Central Florida, GPA 3.88 *August 2004 to May 2009*

- Graduated Magna Cum Laude with a minor in Engineering Leadership

Selected Research Experience

Negotiating Fabric Descriptors Using Technology *Sept 2014 to present*

- Exploring how to build technology to help describe fabrics with ambiguous and situated terms to better find fabric without feeling it directly and to generate new kinds of fabrics
- Conducted an exploratory study in how designers describe fabrics
- Designing with ambiguous languages and terms to communicate fabric without direct touch
- Presented at Tapia conference's doctoral consortium

3D Sketching Using Interactive Fabric *November 2009 to July 2014*

- Exploring the use of flexible input (fabric) as an improved way to design 3D surfaces
- Led team of 2 advisors and 2 undergraduate assistants
- Developed initial system, 2 experimental designs, 10 fabric prototypes, system design, research program for undergraduate assistants
 - *Taught undergraduate assistants C++, OpenGL, and VICON motion capture system*

Relevant Publication:

Leal, A., Schaefer, L., Bowman, D., Quek, F., and Stiles, C. *3D Sketching Using Interactive Fabric for Tangible and Bimanual Input.* In the proceedings of Graphics Interface 2011. May 2011. **(31% acceptance rate)**

Professional Experiences

User Experience Software Engineer, Intel Corporation *May 2013-August 2013*

- Researched how to design and develop a "hacker" or do-it-yourself camera array using commodity hardware and what kinds of experiences would be enriched by such a camera
 - *Learned & developed using Matlab, C++, OpenCV, computer vision and image processing*
- Led a successful multi-disciplinary team that started with major communication issues to delivering System demos, camera viewers and presentations to internal and external audiences
- Awarded top rating for performance, given to select interns for multi-disciplinary leadership

Costuming Assistant, Virginia Tech *August 2014-May 2015*

- Built costume pieces, accessories and more in 4 major department productions
- Taught and helped students hand sewing techniques, use various machines and help in their projects
- My full-build costumes have won Best Recreation, 1st place craftsmanship, judges award

Visiting Research Assistant, University of Southern California *May 2011 to August 2011*

- Researched improving user understanding of social network graphs through tangible approaches
 - *Developed using C#, WPF, the Microsoft Surface SDK, and the .NET Framework*
- Developed a full experimental system and conducted a user study for evaluation
 - *Analyzed user performance using open coding and SPSS.*

Usability Engineer, MITRE Corporation

May 2009 to July 2009

- Led a team of 3 in designing a multi-touch, multi-user document and image editor/annotator.
 - *Developed using C#, WPF, XNA, and the Microsoft Surface SDK*
- Results of project led MITRE to pursue further research in multi-touch, multi-user systems for synchronous collaboration in command centers.

Relevant Software Projects

Pixelbending: Using continuous 3D martial arts-like gestures for gaming input *February 2012 to present*

- Collaborated with a team of 2 to develop an innovative 3D interaction for a studio design class
 - *Learned Microsoft Kinect SDK, OpenNI, and Unreal Development Kit*
 - *Developed a custom gesture recognition UI with WPF and C#*
- Project video featured on KinectHacks.net and MSDN Channel9 Coding4Fun site

Leadership Experience

Association of Women in Computing at VT: Grace Hopper Co-Chair *September 2010 to May 2012*

- Managed funding for and led over 20 students (Virginia Tech's strongest ever presence) in a fully paid trip to the 2010 Grace Hopper Celebration of Women in Computing

IEEE Women in Engineering, UCF Student Chapter

January 2008 to May 2009

- Fundraised, organized, and assisted in fully funding 12 students to GHC

Additional Selected Publications

McMahan, R., Regan, E., **Leal, A.**, Beaton, B., and Bowman, D. "Considerations for the Use of Commercial Video Games in Controlled Experiments." Entertainment Computing, Volume 2, Issue 1, pg. 3-9, 2011.

Leal, A., Wingrave, C., and LaViola, J. "Initial Explorations into the User Experience of 3D File Browsing", Proceedings of HCI 2009, 339-344, September 2009.

Leal, A., and LaViola, J. "Exploring the Effectiveness of 3D File Browsing Techniques for File Searching Tasks". Undergraduate Thesis. University of Central Florida.

Skills

Maker/physical computing skills: soldering, microcontrollers, sensors

Costuming/garment skills: sewing, drafting patterns, building costumes and garments, costume crafts

Programming languages/SDK's: C/C++, C#, Python, Arduino (along with soldering), Kinect SDK, .NET, Java, PHP, OpenGL, WPF, XNA

Spoken languages: Proficiency in Spanish, familiar with Japanese