Anamary Leal

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Objective: Designing technology to empower others to craft, make and build. Building a career that will leverage my research skills in human-computer interaction, DIY/Maker 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 2017*
   - **NSF Graduate Fellowship:** $30,000 stipend/year, tuition wavier 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

Design of Technology to support Craft Knowledge   *Fall 2017 - current*
- Exploring how to design technologies that support novice crafters seeking tangible craft knowledge
- Currently studying the strengths and limitations of current technology to support novice crafting communities, such as the interdisciplinary communities of cosplay, or costume play
- Led interdisciplinary teams of undergraduate students from sociology, computer science, etc

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
   Relevant Publication:

Leal, A., , Harrison, S. R., Luther, K., Tanenbaum, J., Stein, J., and Knapp, K. "Negotiating Material Description Through Technology". PhD Thesis

Professional Experiences

Assistant Professor, Computer Science Department, Sonoma State University   Fall 2017- current
- Dream, Make, Innovate**:** SCI 220: Sophomore level, 24-48 students. General education, lower-division service learning course. Teaching design, inquiry, craft and maker techniques, applied to a local non-for-profit community organizations
- Introduction to Programming: Taught classes of 120 students, the first introductory class in Computer Science major
- Senior Design class: senior-level capstone course for significant software team projects
- Introduction to HCI: Writing intensive course on designing technology for people

Instructor, Computer Science Department, Virginia Tech   Fall 2015, Sum II & Fall 2016
- Taught classes of 35-90 students, the first introductory class in Computer Science major
- Taught introductory object-oriented programming, problem solving, Java, with 5 programming assignments 10 homeworks and 11 labs, to Computer Science majors-minors and out-of-majors
- Led a group of graduate and undergraduate teaching assistants
- Received excellent reviews by faculty assessment of teaching

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