

## EDUCATION

- 2016 - Present **Syracuse University (SU)**, Syracuse, NY  
Ph.D., Information Science and Technology (IST)  
Research areas: Human—Computer Interaction; Privacy; Security; Ubiquitous Computing; Accessibility; Machine Learning.  
*Advisor:* Prof. Yang Wang
- 2012 - 2015 **Catholic University**, Santa Catarina, Joinville, Brazil  
B.S., Information Systems  
*Exchange student at Syracuse University (2013-2014)*  
GPA: 9.37/10

## RESEARCH & WORK EXPERIENCE

- Aug 2016 – Present **Graduate Research Assistant**, Syracuse University, Syracuse, NY  
Social Computing Systems Lab (SALT)
  - *Designing and evaluating People-Nearby Applications (Prof. Yun Huang)*
  - *Designing and evaluating data-driven privacy mechanisms (Prof. Yang Wang)*
- May 2017 – Aug 2017 **Research Intern**, Syracuse University, Syracuse, NY  
Social Computing Systems Lab (SALT), Prof. Yang Wang
  - *Designed a web browsing system for visually impaired users powered by machine learning and crowdsourcing*
  - *Conducted machine learning experiments with supervised learning*
  - *Conducted online crowdsourcing experiments and designed user studies*
  - *Conducted user study sessions*
- May 2014 – Aug 2016 **Undergraduate Research Assistant**, Syracuse University, Syracuse, NY  
Social Computing Systems Lab (SALT)
  - *Designed and evaluated ubiquitous computing authentication systems for visually impaired users*
- Mar 2013 – Jun 2013 **User Experience Research Intern**, ITE Innovation Lab, Singapore
  - *Designed and evaluated 3D virtual reality app for the floristry program*
- Feb 2011 – Mar 2013 **Software Engineer**, NeoGrid Software, Joinville, Brazil
  - *Led the upgrade of front-end stack used by 10-15 apps*
  - *Developed cross-app Single-Sign-On authentication*
  - *Designed core system features such as print-friendly pages, user authorization, and recipe interpreter for PLM platform*

## TECHNICAL SKILLS

- Programming Languages** Proficient in Java, JavaScript, ES6, and Swift. Experience with Python, R, C#, C++, PHP, and C.
- Technologies** HTML5; Web APIs; SQL; MongoDB; Android Studio; XCode; Node.js; scikit-learn; Git; Docker; REST APIs; Keras.
- Areas of Expertise** Human—Computer Interaction; User Studies; Web stack; Security; Privacy; Authentication; Accessibility; Mobile Development; Machine Learning.

## PATENT APPLICATIONS

- 2016 Website authentication using an internet-connected device  
**Natā M. Barbosa**, Yang Wang  
U.S. provisional patent application (PCT/US2016/025783)

## PUBLICATIONS

### *Peer-reviewed Conferences*

**Barbosa, N. M.**, Hayes, J., & Wang, Y. (2016). UniPass: Design and Evaluation of a Smart Device-Based Password Manager for Visually Impaired Users. In *Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2016)*.

Huang, Y., Dobreski, B., Deo, B. B., Xin, J., **Barbosa, N. M.**, Wang, Y., & Bigham, J. P. (2015). CAN: Composable Accessibility Infrastructure via Data-Driven Crowdsourcing. In *Proceedings of the 12th Web for All Conference (W4A 2015)*.

**Barbosa, N. M.** (2014). Strategies: An Inclusive Authentication Framework. In *Proceedings of the 16th International ACM SIGACCESS Conference on Computers & accessibility (ASSETS 2014)*.

### *Workshops*

**Barbosa, N. M.** and Wang, Y. (2017). Designing Task-Oriented Text Commands for Screen Readers and Screen Magnifiers. In *2017 SIGCHI Conference on Human Factors in Computing Systems (CHI 2017)*.

**Barbosa, N. M.** and Wang, Y. (2016). Lessons Learned from Designing and Evaluating Smart Device-based Authentication for Visually Impaired Users. In *Twelfth Symposium on Usable Privacy and Security (SOUPS 2016)*.

## INVITED TALKS & PRESENTATIONS

- 2017 Poster presentation: Great Lakes Security Day, Rochester, NY
- 2017 Workshop on Ubiquitous Text Interaction at CHI 2017, Denver, CO
- 2016 IST 101, undergraduate research experience, Syracuse University
- 2016 Paper presentation, UbiComp 2016, Heidelberg, Germany
- 2014 Student research competition at ASSETS 2014, Rochester, NY
- 2014 United Nations ECOSOC panel on youth empowerment, New York
- 2012 Workshop speaker at web design competition, Bogota, Colombia

## HONORS & AWARDS

- 2017 Summer Research Award, iSchool, Syracuse University (\$6,500)
- 2014 Silver medal, Student Research Competition (ASSETS 2014)
- 2014 RvD IDEA Awards, \$3,500 seed funding for travel app
- 2013 Science Without Borders Full Tuition Study Abroad Scholarship
- 2012 SENAI WorldSkills Full Tuition Undergraduate Scholarship
- 2011 Gold medal, WorldSkills London (Web Design)
- 2010 Gold medal, Olimpíada do Conhecimento National (Web Design)
- 2009 Gold medal, Olimpíada do Conhecimento State (Web Design)

## PROJECTS & ACTIVITIES

### *Software Projects (Core Contributor)*

- 2017 CrowdIntent: a system for task-oriented browsing powered by machine learning
- 2017 Transparent smartphone authentication for visually impaired users
- 2017 Network analysis of app permissions on Google Play
- 2016 Classification of authentication-related hyperlinks on the web
- 2016 WebCommands, an intelligent personal assistant for the web
- 2016 Elefante Letrado, a reading platform for young students on iOS
- 2016 Multimodal mobile device pairing for visually impaired users
- 2015 UniPass: a smart device-based password manager
- 2015 ParkAmigo: a mobile app for parking based on driveway sharing
- 2014 196sense: a mobile app for personalized travel tips

### *Activities*

- 2015 Hackathon organizer: WorldSkills Digital Challenge 2015
- 2014 Student startup incubator, Syracuse Student Sandbox
- 2014 Spring Break in Silicon Valley Program, School of Information Studies, SU

## **SERVICE & VOLUNTEERING**

- 2017 Student Service: iSchool's Doctoral Committee 2017-2018
- 2017 Reviewer, ACM Conference on Human Factors in Computer Systems (CHI 2018)
- 2017 Reviewer, ACM Conference on Supporting Group Work (Group 2018)
- 2017 Reviewer, Hawaii International Conference on System Sciences (HICSS 2018)
- 2017 Reviewer, Symposium on Usable Privacy and Security (SOUPS 2017)
- 2017 Reviewer, ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2018)
- 2017 Reviewer, International Conference on Human—Computer Interaction with Mobile Devices and Services (MobileHCI 2017)
- 2017 Reviewer, ACM Conference on Human Factors in Computer Systems (CHI 2017)
- 2017, 2016 External reviewer, iConference
- 2014 Program committee, Web for All Conference (W4A 2014)
- 2014 Youth forum moderator, Champions Forum, Lucerne, Switzerland
- 2013 Social media assistant, WorldSkills Leipzig 2013

## **TEACHING EXPERIENCE**

- Fall 2017 Designed lecture and Syllabus for Privacy Policy, Law, and Tech. course (IST 800)
- Spring 2017 Designed a lecture about privacy in ubiquitous computing (course design)
- Fall 2016 Lecture on Triggers, Functions, and Stored Procedures (IST 659)
- Fall 2015 Introduction to programming and robotics for high school students
- 2012 - 2015 Mentor of competitors in international web development competitions

## **RELEVANT COURSEWORK**

- CIS 731 Artificial Neural Networks
- CSE 674 Advanced Data Structures and Algorithms
- CIS 700 Machine Learning Methods in Security
- IST 800 Social Network Theory and Analysis
- IST 664 Natural Language Processing
- IST 777 Statistical Methods