

# Natalie Parde

University of North Texas  
Department of Computer Science and Engineering  
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## Education      **Ph.D., Computer Science and Engineering**

University of North Texas, 2018. 4.0/4.0.

## **M.S., Computer Science**

University of North Texas, 2016. 4.0/4.0.

## **B.S., Computer Science**

University of North Texas, 2013. *Summa Cum Laude*.

## Research

### **Human Intelligence and Language Technologies Laboratory**

Department of Computer Science and Engineering, University of North Texas

*Research Assistant*, June 2013 – May 2015

*Research Fellow*, May 2015 – Present

### **Human Movement Performance Laboratory**

Department of Physical Therapy, University of North Texas Health Science Center

*Programmer*, June 2018 – Present

### **Software and Knowledge Engineering Laboratory**

Institute of Informatics and Telecommunications, N.C.S.R. Demokritos, Greece

*Visiting Researcher*, July 2014

### **Reconfigurable Computing Laboratory**

Department of Electrical Engineering, University of North Texas

*Research Assistant*, August 2012 – May 2013

### **Summer Undergraduate Program in Engineering Research (SUPER)**

College of Engineering, University of North Texas

*Research Assistant*, June 2012 – August 2012

## Research Grants

### **National Science Foundation Graduate Research Fellowship**

National Science Foundation, 2014

## Awards

**Outstanding Ph.D. Student**, Department of Computer Science and Engineering,  
University of North Texas, 2018

**Dr. Hermann Zemlicka Award for Most Visionary Paper**, Gmunden Retreat on NeuroIS, 2017  
**Golden Eagle Award**, University of North Texas, 2016  
**First Place Project**, International Research-centered Summer School in Cognitive Systems and Interactive Robotics, Data and Content Analysis (IRSS), 2014  
**People's Choice Project**, IRSS, 2014  
**Honors Scholar Award**, UNT Honors College, 2013

## Travel Grants

**Connections in Smart Health Workshop Travel Award**, National Science Foundation, 2018  
**SemBEaR Student Travel Grant**, NAACL Workshop on Computational Semantics Beyond Events and Roles/National Science Foundation, 2018  
**AAAI Doctoral Consortium Travel Grant**, Association for the Advancement of Artificial Intelligence, 2018  
**Grace Hopper Scholarship**, Google, 2017  
**EMNLP Student Scholarship**, Special Interest Group on Linguistic Data and Corpus-based Approaches to NLP, 2017  
**Toulouse Graduate School Travel Grant**, University of North Texas, 2018, 2017  
**College of Engineering Travel Grant**, University of North Texas, 2018, 2017, 2014  
**Departmental Travel Award**, Department of Computer Science and Engineering, University of North Texas, 2018, 2016, 2015, 2013  
**IJCAI Doctoral Consortium Travel Grant**, International Joint Conference on Artificial Intelligence/National Science Foundation, 2015  
**CRA-W Workshop and Travel Scholarship**, CRA Committee on the Status of Women in Computing, 2016, 2015, 2014

## Scholarships

**Graduate Assistantship Tuition Scholarship**, University of North Texas, 2013  
**Academic Achievement Scholarship**, University of North Texas, 2013  
**Engineering Ambassador Scholarship**, College of Engineering, University of North Texas, 2012  
**C.J. Davidson Honors Scholarship**, Honors College, University of North Texas, 2011  
**Achievement Scholarship**, University of North Texas, 2009  
**Board of Regents' Excellence Scholarship**, University of North Texas, 2009-2013

## Publications

N. Parde and R. D. Nielsen. Reading with Robots: Promoting Cognitive Exercise in Elderly Populations through Embodied Conversational Dialogue. To appear in the *Proceedings of the 2018 Connections in Smart Health Workshop*. Arlington, Virginia, September 24-26, 2018.

N. Parde and R. D. Nielsen. Detecting Sarcasm is Extremely Easy ;-). In *Proceedings of the NAACL 2018 Workshop on Computational Semantics Beyond Events and Roles (SemBEaR 2018)*. New Orleans, Louisiana, June 5, 2018.

N. Parde and R. D. Nielsen. A Corpus of Metaphor Novelty Scores for Syntactically-Related Word Pairs. In *Proceedings of the 11th International Conference on Language Resources and Evaluation (LREC 2018)*. Miyazaki, Japan, May 7-12, 2018.

N. Parde and R. D. Nielsen. Exploring the Terrain of Metaphor Novelty: A Regression-based Approach for Automatically Scoring Metaphors. In *Proceedings of the Thirty-Second AAAI Conference on Artificial Intelligence (AAAI-18)*. New Orleans, Louisiana, February 2-7, 2018.

N. Parde. Reading with Robots: Towards a Human-Robot Book Discussion System for Elderly Adults. In *Proceedings of the Thirty-Second AAAI Conference on Artificial Intelligence (AAAI-18) Doctoral Consortium*. New Orleans, Louisiana, February 2-7, 2018.

N. Parde and R. D. Nielsen. Finding Patterns in Noisy Crowds: Regression-based Annotation Aggregation for Crowdsourced Data. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2017)*. Copenhagen, Denmark, September 7-11, 2017.

N. Salma, B. Mai, K. Namuduri, R. Mamun, Y. Hashem, H. Takabi, N. Parde, and R. Nielsen. Using EEG Signal to Analyze IS Decision Making Cognitive Processes. In *Information Systems and Neuroscience, Lecture Notes in Information Systems and Organisation*.

M. Narouei, H. Khanpour, H. Takabi, R. Nielsen and N. Parde. Towards a Top-down Policy Engineering Framework for Attribute-based Access Control. In *Proceedings of the 22nd ACM Symposium on Access Control Models and Technologies*. Indianapolis, Indiana, June 21-23, 2017.

N. Parde and R. D. Nielsen. #SarcasmDetection is soooo general! Towards a Domain-Independent Approach for Detecting Sarcasm. In *Proceedings of the 30th International FLAIRS Conference*. Marco Island, Florida, May 22-24, 2017.

N. Parde, A. Hair, M. Papakostas, K. Tsiakas, M. Dagioglou, V. Karkaletsis, and R. D. Nielsen. Grounding the Meaning of Words through Vision and Interactive Gameplay. In *Proceedings of the 2015 International Joint Conference on Artificial Intelligence (IJCAI 2015)*, Buenos Aires, Argentina, July 25-31, 2015.

M. Papakostas, K. Tsiakas, N. Parde, V. Karkaletsis, and F. Makedon. An Interactive Framework for Learning User-Object Associations through Human-Robot Interaction. In *Proceedings of the 8th International Conference on Pervasive Technologies Related to Assistive Environments*, Corfu, Greece, July 1-3, 2015.

N. Parde, M. Papakostas, K. Tsiakas, and R. D. Nielsen. "Is It Rectangular?" Using I Spy as an Interactive, Game-Based Approach to Multimodal Robot Learning. In *Proceedings of the AAAI-15 Conference on Artificial Intelligence Student Program*, Austin, Texas, January 25-30, 2015.

N. Parde, M. Papakostas, K. Tsiakas, M. Dagioglou, V. Karkaletsis, and R. D. Nielsen. I Spy: An Interactive Game-Based Approach to Multimodal Robot Learning. In *Proceedings of the AAAI-15 Workshop on Knowledge, Skill, and Behavior Transfer in Autonomous Robots*, Austin, Texas, January 25, 2015.

N. Parde and R. D. Nielsen. Design Challenges and Recommendations for Multi-Agent Learning Systems Featuring Teachable Agents. In *Proceedings of the 2nd Annual GIFT Users Symposium (GIFTSym2)*. Pittsburgh, Pennsylvania, June 12-13, 2014

G. Mehta, K. K. Patel, N. Parde, and N.S. Pollard. "Data-driven mapping using local patterns." *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* 32.11 (2013): 1668-1681.

G. Mehta, C. Crawford, X. Luo, N. Parde, K. Patel, B. Rodgers, A. Sistla, A. Yadav, and M. Reisner. (2013). UNTANGLED – A game environment for discovery of creative mapping strategies. In *ACM Transactions on Reconfigurable Technology and Systems*, Vol. 6, No.3

G. Mehta, X. Luo, N. Parde, K. Patel, B. Rodgers, and A. K. Sistla. UNTANGLED - An interactive mapping game for engineering education. In *Proceedings of 2013 IEEE International Conference on Microelectronic Systems Education (MSE)*, Austin, Texas, 2013.

A. Sistla, N. Parde, K. Patel, and G. Mehta. Cross-architectural study of custom reconfigurable devices using crowdsourcing. In *Proceedings of the 2013 IEEE 27th International Symposium on Parallel and Distributed Processing Workshops and PhD Forum (IPDPSW '13)*, Boston, Massachusetts, May 20-24, 2013.

## Additional Talks

N. Parde and R. D. Nielsen. Reading with Robots: Towards an Intelligent Reading Companion that Promotes Cognitive Exercise in Older Adults. Poster at the *2017 Dallas Aging and Cognition Conference*. Dallas, Texas, January 29-30, 2017.

R. D. Nielsen and N. Parde. Perceptive Emotive Spoken-Dialogue Companion Robots. Presentation at the *2016 IEEE MetroCon Conference*. Arlington, Texas, October 26, 2016.

N. Parde and R. D. Nielsen. Getting to the Heart of Metaphors: Dependency-based Detection of Metaphoric Juxtapositions. Poster at the *2016 CRA-Women Graduate Cohort Workshop*. San Diego, California, April 15-16, 2016.

N. Parde and R. D. Nielsen. An Exploration in Teaching Robots through “I Spy” Gameplay. Poster at the *2015 CRA-Women Graduate Cohort Workshop*. San Francisco, California, April 10-11, 2015.

N. Parde and R. D. Nielsen. Improving Cognition in the Elderly via Dialogue-Based Games with Teachable Robot Agents. Poster at the *2014 CRA-Women Graduate Cohort Workshop*. Santa Clara, California, April 11-12, 2014.

## Teaching

**Guest Lecturer**, UNT (Frisco) CSCE 5300  
March 2018: Introduction to Big Data and Data Science

**Guest Lecturer**, UNT CSCE 4310/5210  
May 2018: Grounded Language Learning  
February 2018: Figurative Language Processing + AAAI 2018 Highlights  
March 2017: Natural Language Processing

**Guest Lecturer**, UNT CSCE 1010  
Nov. 2015, April 2015, Nov. 2014, April 2014: Introduction to Robotics with NAO

## Service

**Activity Leader**, STEM Academy Middle School Summer Camp  
July 2018, July 2017, July 2016

**Site Facilitator**  
North American Computational Linguistics Olympiad  
2018, 2017, 2016, 2014

**Application Reviewer**  
NCWIT Aspirations in Computing Award  
2017, 2015

**Activity Instructor**, Design Your World STEM Conference for Girls  
November 2017, April 2016, March 2015

**Volunteer**, EMNLP Conference  
September 2017

**Student Group Leader**, Design Your World STEM Conference for Girls

**Panelist**, NCWIT Aspirations in Computing Ceremony  
February 2016

**Volunteer, IJCAI Conference**  
July 2015

**Judge**, UNT Showcase of Undergraduate Research in Engineering  
September 2013

Affiliations     **President**, UNT Women in Computing  
**Member**, Association for Computing Machinery  
**Member**, Association for Computational Linguistics  
**Member**, Association for the Advancement of Artificial Intelligence

Mentoring

<b>Keerat Baweja</b> , Texas Academy of Mathematics and Science (TAMS) student, 2013-2015
<b>Adam Hair</b> , University of North Texas (UNT) student, 2014-2015
<b>Jacob Brunson</b> , TAMS student, 2015-2016
<b>Sara Adams</b> , TAMS student, 2015-2016
<b>Noelle Davis</b> , TAMS student, 2015-2016
<b>Zhaochen Gu</b> , UNT student, 2015-2016
<b>Shelby Hobohm</b> , TAMS student, 2016-2017
<b>Leanne Joseph</b> , TAMS student, 2016-2017
<b>Yuri Castro</b> , TAMS student, 2016
<b>Soujanya Geddam</b> , TAMS student, 2016-2017
<b>Zaine Khoja</b> , TAMS student, 2016
<b>Ryan Peterson</b> , TAMS student, 2017-Present
<b>Huram-Abi Yotchoum Nzia</b> , TAMS student, 2017-Present
<b>John Long</b> , TAMS student, 2018-Present
<b>Skylar Werner</b> , UNT student, 2018-Present
<b>Philip Zeng</b> , TAMS student, 2018-Present
<b>Henry Nguyen</b> , TAMS student, 2018-Present