

Natalie Parde

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Department of Computer Science
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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 **Natural Language Processing Laboratory**

Department of Computer Science, University of Illinois at Chicago
Co-Director, October 2018 – Present

Human Intelligence and Language Technologies Laboratory

Department of Computer Science and Engineering, University of North Texas
Research Assistant, June 2013 – May 2015
Research Fellow, June 2015 – September 2018

Human Movement Performance Laboratory

Department of Physical Therapy, University of North Texas Health Science Center
Programmer, June 2018 – September 2018

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 **Google Cloud Platform Research Credits Grant**

Grants Google, December 2018 | Award Amount: \$5000

National Science Foundation Graduate Research Fellowship

National Science Foundation, April 2014 | Award Amount: \$132,000

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, 2014

People's Choice Project, International Research-centered Summer School in Cognitive Systems and Interactive Robotics, Data and Content Analysis, 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. Automatically Generating Questions about Novel Metaphors in Literature. In *Proceedings of the 11th International Conference on Natural Language Generation (INLG 2018)*. Tilburg, The Netherlands, November 5-8, 2018.
- N. Parde and R. D. Nielsen. Reading with Robots: Promoting Cognitive Exercise in Elderly Populations through Embodied Conversational Dialogue. In *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.

	<p>A. Sistla, <u>N. Parde</u>, K. Patel, and G. Mehta. Cross-architectural study of custom reconfigurable devices using crowdsourcing. In <i>Proceedings of the 2013 IEEE 27th International Symposium on Parallel and Distributed Processing Workshops and PhD Forum (IPDPSW '13)</i>, Boston, Massachusetts, May 20-24, 2013.</p>
Additional Talks	<p><u>N. Parde</u>. Writing a Successful Proposal — How I Did It. Invited presentation at the <i>2018 UNT Graduate Research Grant Assistance Workshop</i>. Denton, Texas, August 22-24, 2018.</p> <p><u>N. Parde</u> and R. D. Nielsen. Reading with Robots: Towards an Intelligent Reading Companion that Promotes Cognitive Exercise in Older Adults. Poster at the <i>2017 Dallas Aging and Cognition Conference</i>. Dallas, Texas, January 29-30, 2017.</p> <p>R. D. Nielsen and <u>N. Parde</u>. Perceptive Emotive Spoken-Dialogue Companion Robots. Presentation at the <i>2016 IEEE MetroCon Conference</i>. Arlington, Texas, October 26, 2016.</p> <p><u>N. Parde</u> and R. D. Nielsen. Getting to the Heart of Metaphors: Dependency-based Detection of Metaphoric Juxtapositions. Poster at the <i>2016 CRA-Women Graduate Cohort Workshop</i>. San Diego, California, April 15-16, 2016.</p> <p><u>N. Parde</u> and R. D. Nielsen. An Exploration in Teaching Robots through “I Spy” Gameplay. Poster at the <i>2015 CRA-Women Graduate Cohort Workshop</i>. San Francisco, California, April 10-11, 2015.</p> <p><u>N. Parde</u> and R. D. Nielsen. Improving Cognition in the Elderly via Dialogue-Based Games with Teachable Robot Agents. Poster at the <i>2014 CRA-Women Graduate Cohort Workshop</i>. Santa Clara, California, April 11-12, 2014.</p>
Teaching	<p>UIC CS 594: Language and Vision Spring 2019</p>
Guest Lectures	<p>UNT (Frisco) CSCE 5300: Introduction to Big Data and Data Science March 2018: Big Data and Data Science Overview</p> <p>UNT CSCE 4310/5210: Introduction to Artificial Intelligence May 2018: Grounded Language Learning February 2018: Figurative Language Processing + AAAI 2018 Highlights March 2017: Natural Language Processing</p> <p>UNT CSCE 1010: Discovering Computer Science Nov. 2015, April 2015, Nov. 2014, April 2014: Introduction to Robotics with NAO</p>
External	<p>Program Committees:</p>

Service	NAACL-HLT Combined Workshop on Spatial Language Understanding (SpLU) & Grounded Communication for Robotics (RoboNLP)
	Conference of the North American Chapter of the Association for Computational Linguistics (NAACL 2019)
	Intl. Conference on Autonomous Agents and Multiagent Systems (AAMAS 2019)
	Second Conference on Language, Data and Knowledge (LDK 2019)
	External Reviewer: ACM CHI Conference on Human Factors in Computing Systems (CHI 2019)
Internal Service	Conference Volunteer: Empirical Methods in Natural Language Processing (EMNLP 2017) International Joint Conference on Artificial Intelligence (IJCAI 2015)
	University of Illinois at Chicago
	Ph.D. Advisor Shahla Farzana (Current), <i>University of Illinois at Chicago</i>
	M.S. Thesis Advisor: Yatri Modi (Current), <i>University of Illinois at Chicago</i> Flavio Di Palo (Current), <i>University of Illinois at Chicago</i> and <i>Politecnico di Milano</i>
	M.S. Thesis Committees: Paolo Polimeno Camastra (Fall 2018), <i>University of Illinois at Chicago</i> and <i>Politecnico di Milano</i>
	WCP Chair: ¹ Yingjie Li (Current), <i>University of Illinois at Chicago</i>
	Proposal Reviewer , Discovery Partners Institute (DPI) Seed Funding Cycle 1 Program, Winter 2018/19
	University of North Texas
	Mentoring: Henry Nguyen (2018–Present), <i>Texas Academy of Mathematics and Science (TAMS)</i> John Long (2018), <i>TAMS</i> Skylar Werner (2018), <i>University of North Texas (UNT)</i> Philip Zeng (2018), <i>TAMS</i> Ryan Peterson (2017-2018), <i>TAMS</i> Huram-Abi Yotchoum Nzia (2017-2018), <i>TAMS</i> Shelby Hobohm (2016-2017), <i>TAMS</i> Leanne Joseph (2016-2017), <i>TAMS</i> Soujanya Geddam (2016-2017), <i>TAMS</i>

¹Written Critique and Presentation (WCP) is the formal name for UIC’s Ph.D. qualifier examination.

Yuri Castro (2016), *TAMS*
Zaine Khoja (2016), *TAMS*
Jacob Brunson (2015-2016), *TAMS*
Sara Adams (2015-2016), *TAMS*
Noelle Davis (2015-2016), *TAMS*
Zhaochen Gu (2015-2016), *UNT*
Adam Hair (2014-2015), *UNT*
Keerat Baweja (2013-2015), *TAMS*

Judge, UNT Showcase of Undergraduate Research in Engineering, Fall 2013

Engineering Ambassador, UNT College of Engineering, 2012-2013

Outreach

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
Student Group Leader, Design Your World STEM Conference for Girls, April 2017
Panelist, NCWIT Aspirations in Computing Ceremony, February 2016
Activity Leader, UNT Engineering REAL Community, October 2015
Presenter, NCWIT Aspirations in Computing Ceremony, February 2015

Affiliations

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