Natalie Parde

Assistant Professor
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*, June 2012 – May 2013
Research Grants	**Google Cloud Platform Research Credits Grant** Google, December 2018 | Award Amount: $5000 **National Science Foundation Graduate Research Fellowship** National Science Foundation, April 2014 | Award Amount: $132,000

Awards	**Outstanding Reviewer**, North American Chapter of the Association for Computational Linguistics, 2019
	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[1] F. Di Palo* and <u>N. Parde</u>. Enriching Neural Models with Targeted Features for Dementia Detection. To appear in *Proceedings of the 2019 ACL Student Research Workshop (ACL SRW 2019)*. Florence, Italy, July 28-August 2, 2019.

<u>N. Parde</u> and R. D. Nielsen. AI Meets Austen: Towards Human-Robot Discussions of Literary Metaphor. In *Proceedings of the 20th International Conference on Artificial Intelligence in Education (AIED 2019)*. Chicago, Illinois, June 25-29, 2019.

Y. Modi* and <u>N. Parde</u>. The Steep Road to Happily Ever After: An Analysis of Current Visual Storytelling Models. In *Proceedings of the NAACL 2019 Workshop on Shortcomings in Vision and Language (SiVL 2019)*. Minneapolis, Minnesota, June 6, 2019.

S. Farzana* and <u>N. Parde</u>. Virtual-Interviewer: A Conversational Agent Designed to Facilitate Cognitive Health Screening in Older Adults. In *Proceedings of the IEEE-EMBS International Conference on Biomedical and Health Informatics: Extended Abstracts (BHI 2019)*. Chicago, Illinois, May 19-22, 2019.

<u>N. Parde</u> and R. D. Nielsen. User Perceptions of a Conversational Robot Interface. In *Proceedings of the CHI 2019 Workshop on Mapping Theoretical and Methodological Perspectives for Understanding Speech Interface Interactions (SpeechCHI 2019)*. Glasgow, United Kingdom, May 5, 2019.

<u>N. Parde</u> 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.

<u>N. Parde</u> 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.

<u>N. Parde</u> 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.

<u>N. Parde</u> 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.

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[1]An asterisk (*) indicates students who I advise.

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 (FLAIRS 2017)*. 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 (PETRA 2015)*, 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.

<u>N. Parde</u>, 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.

<u>N. Parde</u> 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, <u>N. Parde</u>, 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, <u>N. Parde</u>, 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, <u>N. Parde</u>, 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 2013)*, Austin, Texas, 2013.

A. Sistla, <u>N. Parde</u>, 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 2013)*, Boston, Massachusetts, May 20-24, 2013.

| Invited Talks | <u>N. Parde</u>. An Introduction to the Deliciously Simple (#sarcasm) World of Computational Figurative Language Processing. Invited presentation at the *UIC Cognitive Psychology Brown Bag Series*. Chicago, Illinois, April 3, 2019.

<u>N. Parde</u>. Writing a Successful Proposal — How I Did It. Invited presentation at the *2018 UNT Graduate Research Grant Assistance Workshop*. Denton, Texas, August 22-24, 2018.

| Additional Talks | Y. Modi and <u>N. Parde</u>. Visual Storytelling: Errors and Improvements. Presentation at the *2019 Midwest Speech and Language Days (MSLD 2019)*. Chicago, Illinois, May 3, 2019.

<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 *2017 Dallas Aging and Cognition Conference*. Dallas, Texas, January 29-30, 2017.

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

<u>N. Parde</u> 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.

<u>N. Parde</u> 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.

<u>N. Parde</u> 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

UIC CS 594: Language and Vision, Spring 2019
Course Evaluations:[2]
Class Size: 19 | Course Evaluation Responses: 17
Teaching Effectiveness: 4.82 ± 0.39 | *Overall Quality*: 4.71 ± 0.47
Difficulty: 3.41 ± 0.51 | *Workload*: 3.53 ± 0.51

Guest Lectures

UNT (Frisco) CSCE 5300: Introduction to Big Data and Data Science
March 2018: Big Data and Data Science Overview

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

UNT CSCE 1010: Discovering Computer Science
Nov. 2015, April 2015, Nov. 2014, April 2014: Introduction to Robotics with NAO

External Service

Session Chair, Midwest Speech and Language Days, 2019
Panelist, National Science Foundation, 2019

Program Committees
Major Conferences:
(EMNLP 2019) Conference on Empirical Methods in Natural Language Processing,
      Tracks: Sentence-Level Semantics; Speech, Vision, Robotics, Multimodal and
      Grounding

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[2]Scored using a Likert scale ranging from 1-5. For *Teaching Effectiveness* and *Overall Quality*, 1=Poor and 5=Excellent. For *Difficulty* and *Workload*, 1=Very Easy and 5=Very Hard.

(ACL 2019) Annual Meeting of the Association for Computational Linguistics, Tracks: Word-Level Semantics; Dialogue and Interactive Systems; Vision, Robotics, Multimodal Grounding, and Speech

(NAACL 2019) Conference of the North American Chapter of the Association for Computational Linguistics, Track: Semantics

(AAMAS 2019) International Conference on Autonomous Agents and Multiagent Systems

Targeted Conferences:

(CoRL 2019) Conference on Robot Learning

(LDK 2019) Conference on Language, Data and Knowledge

Workshops:

(SpLU-RoboNLP 2019) NAACL-HLT Combined Workshop on Spatial Language Understanding & Grounded Communication for Robotics

External Reviewer

(CHI 2019) ACM CHI Conference on Human Factors in Computing Systems

Ad-Hoc Journal Reviewer

Neurocomputing, 2019

Conference Volunteer

(EMNLP 2017) Empirical Methods in Natural Language Processing

(IJCAI 2015) International Joint Conference on Artificial Intelligence

Internal Service	## University of Illinois at Chicago

University of Illinois at Chicago

Ph.D. Advisor:

Shahla Farzana (Current), *University of Illinois at Chicago*

Usman Shahid (Current), *University of Illinois at Chicago*

M.S. Thesis Advisor:

Alberto Bellini (Current), *University of Illinois at Chicago* and *Politecnico di Milano*

Yatri Modi (Current), *University of Illinois at Chicago*

Flavio Di Palo (Current), *University of Illinois at Chicago* and *Politecnico di Milano*

Ph.D. Committees:

Krista Miller (Preliminary Exam: Forthcoming), *Psychology, University of Illinois at Chicago*

Itika Gupta (Preliminary Exam: Forthcoming), *Computer Science, University of Illinois at Chicago*

Mehrdad Alizadeh (Preliminary Exam: Spring 2019), *Computer Science, University of Illinois at Chicago*

Zainab Al-Qurashi (Preliminary Exam: Spring 2019), *Computer Science, University of Illinois at Chicago*

M.S. Thesis Committees:
Shoaib Khan (Spring 2019), *University of Illinois at Chicago*
Tejas Sarma (Spring 2019), *University of Illinois at Chicago*
Paolo Polimeno Camastra (Fall 2018), *University of Illinois at Chicago* and *Politecnico di Milano*

M.S. Project Committees:
Aldo Alvarez (Spring 2019), *University of Illinois at Chicago*
Ashwani Khemani (Spring 2019), *University of Illinois at Chicago*
Unaiza Faiz (Spring 2019), *University of Illinois at Chicago*

WCP Chair:[3]
Yingjie Li (Spring 2019), *University of Illinois at Chicago*

WCP Committees:
Neshat Mohammadi (Spring 2019), *University of Illinois at Chicago*

Additional Mentoring:
Yousef Ahmed (2019–Present), *University of Illinois at Urbana-Champaign*
Cade Gordon (2019–Present), *Adlai E. Stevenson High School*
Salma Kamni (2019–Present), *Amos Alonzo Stagg High School*

Computer Science Marshal, UIC Commencement Ceremony, Spring 2019
Interviewer, College of Engineering Women's Scholarship Program, Spring 2019
Proposal Reviewer, Discovery Partners Institute (DPI) Seed Funding Cycle 1 Program, Winter 2018/19

University of North Texas
Mentoring:
Ajata Reddy (2018–Present), *Texas Academy of Mathematics and Science (TAMS)*
Henry Nguyen (2018-2019), *TAMS*
John Long (2018), *TAMS*
Skylar Werner (2018), *University of North Texas (UNT)*
Philip Zeng (2018), *TAMS*
Ryan Peterson (2017-2018), *TAMS*
Huram-Abi Yotchoum Nzia (2017-2018), *TAMS*
Shelby Hobohm (2016-2017), *TAMS*
Leanne Joseph (2016-2017), *TAMS*
Soujanya Geddam (2016-2017), *TAMS*
Yuri Castro (2016), *TAMS*
Zaine Khoja (2016), *TAMS*

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[3]Written Critique and Presentation (WCP) is the formal name for UIC's Ph.D. qualifier examination. Advisors cannot serve as chairs for their own advisees, and at least one committee member must be from outside the student's primary research area.

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