

Miguel Ballesteros. PhD - Curriculum Vitae

Principal Applied Scientist - Amazon Web Services.

7 West 34th Street, New York, NY 10001

Personal Email: miguelballesteros1@gmail.com

Homepage: miguelballesteros.github.io

EMPLOYMENT

Principal Applied Scientist. Amazon Web Services. New York City, New York, United States.
October 2021 - currently

Senior Applied Scientist. Amazon Web Services. New York City, New York, United States.
July 2019 - October 2021

Research Scientist/Research Staff Member- IBM Research, Yorktown Heights New York, United States.
October 2016 - July 2019

Postdoctoral researcher - Visiting Professor - Department of Information and Communication Technologies, at Pompeu Fabra University, in Barcelona. Spain.
January 2013 - October 2016

Visiting Postdoctoral researcher and adjunct instructor/lecturer at the Language Technologies Institute. Carnegie Mellon University. Pittsburgh, U.S.
March 2015 - April 2016

PhD Student. Researcher. NIL research group (nil.fdi.ucm.es). Department of Software Engineering and Artificial Intelligence. Complutense University of Madrid. Spain. September 2010-December 2012.

Scholarship grant. University Consortium Collaboration Grant: UNED, UCM, UC3M. Spain. May 2010-September 2010.

Scholarship grant. Department of Informatic Systems and Computation. Complutense University of Madrid, Spain. Granted by the Spanish Ministry of Education and Science. January 2009 - June 2009.

QUALIFICATIONS

PhD in Computational Linguistics (Computer Science), Complutense University of Madrid, Spain.

Thesis title: Analyzing, enhancing, optimizing and applying dependency analysis

December 2012.

This is an European doctoral program. The thesis needs to pass an international evaluation procedure by field experts who have never worked with the candidate. This program also required a research stay in a different European country; I did mine in Sweden, Uppsala University (see Research Stays section).

Master of Science (60 ECTS). Research in Computer Science, NLP Project, Complutense University of Madrid, Spain.

Thesis title: Mejora de la precisión para el análisis de dependencias usando maltparser para el castellano

June 2010.

This may be considered as the first year of the PhD studies.

Computer Science Engineering. Complutense University of Madrid, Spain.

Thesis title: TALFi: una herramienta para teoría de autómatas y lenguajes formales.

June 2009.

This is a 5 year degree (350 ECTS). In the American system it would be equivalent to Bachelor and a Master with a final project.

LANGUAGES

Spanish (native)
English (fluent)
Italian (basic)

INTERNATIONAL RESEARCH STAYS

2014. Carnegie Mellon University, Pittsburgh, U.S. Supervised by Noah A. Smith and Chris Dyer.
1st October 2014 - 9th November 2014.

2013. Singapore University of Technology and Design, Singapore. Supervised by Yue Zhang.
14th June 2013 - 25th July 2013.

2012. Uppsala University, Sweden. Supervised by Joakim Nivre. Phd Student.
19th March 2012 - 19th April 2012.

2011. Uppsala University, Sweden. Supervised by Joakim Nivre. Phd Student.
3rd October 2011 - 23rd December 2011.

RESEARCH INTERESTS

Syntax and parsing.
Neural Machine Translation.
Deep learning and neural network models for natural language processing.
Language Modeling
Summarization
Information Extraction
Document understanding

PUBLICATIONS

INTERNATIONAL JOURNAL PAPERS

Eliyahu Kiperwasser and **Miguel Ballesteros** 2018. Scheduled Multi-Task Learning: From Syntax to Translation. Transactions of the Associations for Computational Linguistics (TACL).

Miguel Ballesteros, Chris Dyer, Yoav Goldberg and Noah A. Smith 2016. Greedy Transition-based Dependency Parsing with Stack-LSTMs. Computational Linguistics. 43:2 MIT Press.

Waleed Ammar, George Mulcaire, **Miguel Ballesteros**, Chris Dyer and Noah Smith 2016. Many Languages, One Parser. Transactions of the Associations for Computational Linguistics (TACL).

Miguel Ballesteros, Bernd Bohnet, Simon Mille and Leo Wanner. 2015. Data-Driven Deep-Syntactic Dependency Parsing. Natural Language Engineering Journal. Cambridge University Press.

Miguel Ballesteros and Joakim Nivre. 2014. MaltOptimizer: Fast and Effective Parser Optimization. Natural Language Engineering Journal. Cambridge University Press.

Miguel Ballesteros and Joakim Nivre. 2013. Going to the Roots of Dependency Parsing. Computational Linguistics 39:1

INTERNATIONAL CONFERENCE PROCEEDINGS (REFEREED)

2022

Vishakh Padmakumar, Leonard Lausen, **Miguel Ballesteros**, Sheng Zha, He He, George Karypis. Exploring the Role of Task Transferability in Large-Scale Multi-Task Learning. In Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL 2022). Seattle, USA.

Jie Ma, **Miguel Ballesteros**, Srikanth Doss, Rishita Anubhai, Sunil Mallya, Yaser Al-Onaizan, Dan Roth. Exploring the Role of Task Transferability in Large-Scale Multi-Task Learning. In Proceedings of the North American Chapter of the Association for Computational Linguistics - Findings (ACL 2022). Dublin, Ireland.

2021

Muhammad Khalifa, **Miguel Ballesteros**, Kathleen McKeown. A Bag of Tricks for Dialogue Summarization. In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2021). Punta Cana, Dominican Republic.

Laura Pérez-Mayos, **Miguel Ballesteros**, Leo Wanner. How much pertaining data do language models need to learn syntax?. In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2021). Punta Cana, Dominican Republic.

Emily Allaway, Shuai Wang, **Miguel Ballesteros**. Sequential Cross-Document Coreference Resolution. In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2021). Punta Cana, Dominican Republic.

Laura Pérez-Mayos, Roberto Carlini, **Miguel Ballesteros**, Leo Wanner. On the Evolution of Syntactic Information Encoded by BERT's Contextualized Representations. In *Proceedings of the European Chapter of the Association for Computational Linguistics (EACL 2021). Virtual Conference.*

Kailash Saravanakumar, **Miguel Ballesteros**, Muthu Kumar Chandrasekaran, Kathleen McKeown. *Event-Driven News Stream Clustering using Entity-Aware Contextual Embeddings.* In *Proceedings of the European Chapter of the Association for Computational Linguistics (EACL 2021). Virtual Conference.*

Yogarshi Vyas, **Miguel Ballesteros**. *Linking Entities to Unseen Knowledge Bases with Arbitrary Schemas.* In *Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT 2021). Virtual Conference.*

2020

Jie Ma, Shuai Wang, Rishita Anubhai, **Miguel Ballesteros**, Yaser Al-Onaizan. *Resource-Enhanced Neural Model for Event Argument Extraction.* In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP-Findings 2020). Virtual Conference.

Miguel Ballesteros, Rishita Anubhai, Shuai Wang, Nima Pourdamghani, Yogarshi Vyas, Jie Ma, Parminder Bhatia, Kathleen McKeown, Yaser Al-Onaizan. *Severing the Edge Between Before and After: Neural Architectures for Temporal Ordering of Events.* In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2020). Virtual Conference.

Kasturi Bhattacharjee, **Miguel Ballesteros**, Rishita Anubhai, Smaranda Muresan, Jie Ma, Faisal Ladhak, Yaser Al-Onaizan. *To BERT or Not to BERT: Comparing Task-specific and Task-agnostic Semi-supervised Approaches for Sequence Tagging.* In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2020). Virtual Conference.

Ramón F Astudillo, **Miguel Ballesteros**, Tahira Naseem, Austin Blodgett, Radu Florian. *Transition-Based Parsing with Stack-Transformers*. In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP-Findings 2020). Virtual Conference.

Ethan Wilcox, Peng Qian, Richard Futrell, Ryosuke Kohita, Roger Levy, **Miguel Ballesteros**. *Structural Supervision Improves Few-Shot Learning and Syntactic Generalization in Neural Language Models*. In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2020). Virtual Conference.

2019

Tahira Naseem, Abhishek Shah, Hui Wan, Radu Florian, Salim Roukos and **Miguel Ballesteros**. *Rewarding Smatch: Transition-Based AMR Parsing with Reinforcement Learning*. In Proceedings of the Association for Computational Linguistics (ACL 2019). Florence, Italy

Richard Futrell, Ethan Wilcox, Takashi Morita, Peng Qian, **Miguel Ballesteros**, Roger Levy *Neural Language Models as Psycholinguistic Subjects: Representations of Syntactic State*. In Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT 2019). Minneapolis, US

Ethan Wilcox, Peng Qian, Richard Futrell, **Miguel Ballesteros**, Roger Levy *Structural Supervision Improves Learning of Non-Local Grammatical Dependencies*. In Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT 2019). Minneapolis, US

Miryam de Lhoneux, **Miguel Ballesteros**, Joakim Nivre *Recursive Subtree Composition in LSTM-Based Dependency Parsing*. In Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT 2019). Minneapolis, US

2018

Hui Wan, Tahira Naseem, Young-Suk Lee, Vittorio Castelli and **Miguel Ballesteros**. *IBM Research at the CoNLL 2018 Shared Task on Multilingual Parsing*. In Proceedings of the CoNLL 2018 Shared Task: Multilingual Parsing from Raw Text to Universal Dependencies. Brussels, Belgium

Graeme Blackwood, **Miguel Ballesteros**, Todd Ward *Multilingual Neural Machine Translation with Task-Specific Attention*. In Proceedings of the International Conference on Computational Linguistics. (COLING 2018). Santa Fe, New Mexico. US

Francesco Barbieri, Jose Camacho-Collados, Francesco Ronzano, Luis Espinosa Anke, **Miguel Ballesteros**, Valerio Basile, Viviana Patti and Horacio Saggion *SemEval 2018 Task 2: Multilingual Emoji Prediction*. In Proceedings of The 12th International Workshop on Semantic Evaluation. 2018. Melbourne, Australia

Jerry Quinn and **Miguel Ballesteros**

Pieces of Eight: 8-bit Neural Machine Translation. In proceedings of the North American Chapter of the Association for Computational Linguistics- Industrial Track (NAACL-HLT 2018). New Orleans, US

Francesco Barbieri; **Miguel Ballesteros**, Francesco Ronzano and Horacio Saggion *Multimodal Emoji Prediction*. In proceedings of the Short Papers of the North American Chapter of the Association for Computational Linguistics- Human Language Technologies (NAACL-HLT 2018). New Orleans, US

2017

Miguel Ballesteros and Xavier Carreras. 2017. Arc-Standard Spinal Parsing with Stack-LSTMs. In Proceedings of the Conferences on Parsing Technologies. IWPT 2017. Pisa, Italy.

Miguel Ballesteros and Yaser Al-Onaizan. 2017. AMR Parsing Using Stack-LSTMs. In Proceedings of the Conference on Empirical Methods in Natural Language Processing. EMNLP 2017. Copenhagen, Denmark.

Francesco Barbieri, Luis Espinosa Anke, Joan Soler, **Miguel Ballesteros** and Horacio Saggion. Towards the understanding of gaming audiences by modeling Twitch emotes
Third Workshop on Noisy User-generated Text (W-NUT 2017 at EMNLP 2017).
Best paper award.

Adhiguna Kuncoro; **Miguel Ballesteros**; Lingpeng Kong; Chris Dyer; Graham Neubig; Noah A. Smith
What Do Recurrent Neural Network Grammars Learn About Syntax? In Proceedings of the European Chapter of the Association for Computational Linguistics. 2017.
Outstanding paper award.

Francesco Barbieri; **Miguel Ballesteros** and Horacio Saggion
Are Emojis Predictable? In Proceedings of the Short Papers for the European Chapter of the Association for Computational Linguistics. 2017.

2016

Jacob Buckman, **Miguel Ballesteros** and Chris Dyer. 2016. Transition-Based Dependency Parsing with Heuristic Backtracking. In Proceedings of the Conference on Empirical Methods in Natural Language Processing. 2016.

Miguel Ballesteros, Yoav Goldberg, Chris Dyer and Noah A. Smith. 2016. Training with Exploration Improves a Greedy Stack LSTMParser. In Proceedings of the Conference on Empirical Methods in Natural Language Processing. 2016.

Miguel Ballesteros and Leo Wanner. A Neural Network Architecture for Multilingual Punctuation Generation. In Proceedings of the Conference on Empirical Methods in Natural Language Processing. 2016.

Adhiguna Kuncoro, **Miguel Ballesteros**, Lingpeng Kong, Chris Dyer and Noah A. Smith. Distilling an Ensemble of Greedy Dependency Parsers into One MST Parser. In Proceedings of the Conference on Empirical Methods in Natural Language Processing. 2016.

Swabha Swayamdipta, **Miguel Ballesteros**, Chris Dyer and Noah A. Smith 2016. Greedy, Joint Syntactic-Semantic Parsing with Stack LSTMs. In proceedings of Conference of Natural Language Learning (CoNLL 2016). Berlin, Germany

Guillaume Lample, **Miguel Ballesteros**, Kazuya Kawakami, Sandeep Subramanian and Chris Dyer. 2016. Neural Architectures for Named Entity Recognition. In proceedings of the North American Chapter of the Association for Computational Linguistics- Human Language Technologies (NAACL-HLT 2016). San Diego, US

Chris Dyer, Adhiguna Kuncoro, **Miguel Ballesteros** and Noah Smith 2016. Recurrent Neural Network Grammars. In proceedings of the North American Chapter of the Association for Computational Linguistics- Human Language Technologies (NAACL-HLT 2016). San Diego, US

Luz Rello, **Miguel Ballesteros**, Abdullah Ali, Miquel Serra, Daniela Alarcón Sánchez and Jeffrey P. Bigham 2016. Dytective: Detecting Risk of Dyslexia with a Game. PervasiveHealth-2016

2015

Miguel Ballesteros, Chris Dyer and Noah Smith 2015. Improved Transition-Based Parsing by Modeling Characters instead of Words with LSTMs. In proceedings of the Empirical Methods for Natural Language Processing (EMNLP 2015). Lisbon, Portugal

Miguel Ballesteros and Xavier Carreras 2015. Transition-Based Spinal Parsing. In proceedings of Conference on Natural Language Learning (CoNLL 2015). Beijing, China

Luz Rello, **Miguel Ballesteros** and Jeff Bigham. 2015. A Spellchecker for Dyslexia. In proceedings of the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2015). Lisbon, Portugal

Chris Dyer, **Miguel Ballesteros**, Wang Ling, Austin Matthews and Noah Smith 2015. Transition-Based Dependency Parsing with Stack Long Short-Term Memory. In proceedings of Association for Computational Linguistics Conference (ACL-IJCNLP 2015). Beijing, China

Miguel Ballesteros, Bernd Bohnet, Simon Mille and Leo Wanner 2015. Data-driven sentence generation with non-isomorphic trees. In proceedings of the North American Chapter of the Association for Computational Linguistics- Human Language Technologies (NAACL - HLT 2015). Denver, US

Juan Soler-Company, **Miguel Ballesteros**, Bernd Bohnet, Simon Mille and Leo Wanner. 2015. Visualizing Deep-Syntactic Parser Output. In proceedings Demonstrations of the North American Chapter of the Association for Computational Linguistics- Human Language Technologies (NAACL HLT 2015). Denver, US

Luz Rello and **Miguel Ballesteros** 2015. Detecting Readers with Dyslexia Using Machine Learning with Eye Tracking Measures. In proceedings of Web4All Conference (W4A2015). Florence, Italy

2014

Miguel Ballesteros and Bernd Bohnet 2014. Automatic Feature Selection for Agenda-Based Dependency Parsing. In proceedings of International Conference on Computational Linguistics (COLING 2014). Dublin, Ireland

Miguel Ballesteros, Bernd Bohnet, Simon Mille and Leo Wanner 2014. Deep-Syntactic Parsing. In proceedings of the International Conference on Computational Linguistics (COLING 2014). Dublin, Ireland

Miguel Ballesteros, Simon Mille and Leo Wanner 2014. Classifiers for Data-Driven Deep Sentence Generation. In proceedings of International Conference of Natural Language Generation (INLG 2014). Philadelphia, US

2013

Miguel Ballesteros 2013. Effective Morphological Feature Selection with MaltOptimizer at the SPMRL 2013 Shared Task. In Proceedings of the EMNLP 2013 Workshop of Statistical Parsing of Morphologically-Rich Languages (SPMRL 2013), Seattle, US

Miguel Ballesteros and Roberto Carlini. 2013. MaltDiver: A Transition-Based Parser Visualizer. In Proceedings of the Demonstrations of the International Joint Conference on Natural Language Processing (IJCNLP 2013), Nagoya, Japan.

Muntsa Padró, **Miguel Ballesteros**, Hector Martínez and Bernd Bohnet. 2013. Finding dependency parsing limits over a large Spanish corpus. In proceedings of the short papers of the International Joint Conference on Natural Language Processing (IJCNLP 2013), Nagoya, Japan.

Miguel Ballesteros, Simon Mille and Alicia Burga. 2013. Exploring Morphosyntactic Annotation Over a Spanish Corpus for Dependency Parsing. In proceedings of the 2nd international conference on Dependency Linguistics (Depling 2013)

2012

Miguel Ballesteros and Joakim Nivre. 2012. MaltOptimizer: A System for MaltParser Optimization. In proceedings of the 8th international conference on Language Resources and Evaluation (LREC 2012)

Miguel Ballesteros and Joakim Nivre. 2012. MaltOptimizer: An Optimization Tool for MaltParser. In proceedings of the demonstrations of the 13th Conference of the European Chapter of the Association for computational Linguistics (EACL 2012). [This is the demo paper of the previous item.](#)

Miguel Ballesteros, Jesús Herrera, Virginia Francisco and Pablo Gervás. 2012. Inferring the Scope of Negation in Biomedical Documents. In proceedings of the 13th International Conference on Intelligent Text Processing and Computational Linguistics (CICLING 2012)

Jorge Carrillo de Albornoz, Laura Plaza, Alberto Díaz, **Miguel Ballesteros**. 2012. UCM-I: A Rule-based Syntactic Approach for Resolving the Scope of Negation. In proceedings of the the First Joint Conference on Lexical and Computational Semantics (*SEM 2012).

Alberto Díaz, **Miguel Ballesteros**, Jorge Carrillo de Albornoz and Laura Plaza. 2012. UCM at TREC-2012: Does negation influence the retrieval of medical reports?. Proceedings of the TREC 2012 Medical Records Track.

Miguel Ballesteros, Alberto Díaz, Virginia Francisco, Pablo Gervás, Laura Plaza, Jorge Carrillo de Albornoz. 2012. UCM-2: a Rule-Based Approach to Infer the Scope of Negation via Dependency Parsing. In proceedings of the the First Joint Conference on Lexical and Computational Semantics (*SEM 2012)

2011

Pablo Gervás and **Miguel Ballesteros**. 2011. A Proposal for a Spanish Surface Realization Shared Task Generation Challenges 2011 Session at 13th European Workshop on Natural Language Generation (ENLG 2011)

Miguel Ballesteros, Virginia Francisco, Alberto Díaz, Jesús Herrera, and Pablo Gervás. 2011. Inferring the Scope of Speculation Using Dependency Analysis In proceedings of the International Conference on Knowledge Discovery and Information Retrieval (KDIR 2011)

2010

Miguel Ballesteros, Susana Bautista and Pablo Gervás. 2010 Text Simplification Using Dependency Parsing for Spanish. In proceedings of the International Conference on Knowledge Discovery and Information Retrieval (KDIR 2010)

Miguel Ballesteros, Jesús Herrera, Virginia Francisco and Pablo Gervás. 2010. Giving Shape to an N-Version Dependency Parser. In proceedings of the International Conference on Knowledge Discovery and

Information Retrieval (KDIR 2010)

Miguel Ballesteros, Jesús Herrera, Virginia Francisco and Pablo Gervás. 2010. A Feasibility Study on Low Level Techniques for Improving Parsing Accuracy for Spanish Using Maltparser. In proceedings of the 6th Hellenic Conference on Artificial Intelligence (SETN 2010)

Miguel Ballesteros, Jesús Herrera, Virginia Francisco and Pablo Gervás. 2010 Towards an N-Version Dependency Parser. In proceedings of the 13th International Conference on Text, Speech and Dialogue (TSD 2010)

Miguel Ballesteros, Raúl Martín and Belén Díaz-Agudo. 2010. JADAWeb: A CBR System for Cooking Recipes. In proceedings of the 18th International Conference on Case-based Reasoning. Computer Cooking Contest Workshop (ICCB 2010). **Best Student paper award**

OTHER PUBLICATIONS (Spanish Journals, Spanish Conferences and ArXiv)

Graham Neubig, Chris Dyer, Yoav Goldberg, Austin Matthews, Waleed Ammar, Antonios Anastasopoulos, **Miguel Ballesteros**, David Chiang, Daniel Clothiaux, Trevor Cohn, Kevin Duh, Manaal Faruqi, Cynthia Gan, Dan Garrette, Yangfeng Ji, Lingpeng Kong, Adhiguna Kuncoro, Gaurav Kumar, Chaitanya Malaviya, Paul Michel, Yusuke Oda, Matthew Richardson, Naomi Saphra, Swabha Swayamdipta, Pengcheng Yin
DyNet: The Dynamic Neural Network Toolkit. ArXiv preprint arXiv:1701.03980

Bernd Bohnet, **Miguel Ballesteros**, Ryan McDonald and Joakim Nivre 2016. Static and Dynamic Feature Selection in Morphosyntactic Analyzers. Arxiv. ArXiv:1603.06503

Isabel Ortiz, **Miguel Ballesteros** and Yue Zhang 2014. ViZPar: A GUI for ZPar with Manual Feature Selection. Demonstrations of the 30th Spanish Conference on Natural Language Processing (SEPLN 2014). Girona, Spain

Miguel Ballesteros. 2013. Exploring Automatic Feature Selection for Transition-Based Dependency Parsing. Revista Española para el Procesamiento del Lenguaje Natural (SEPLN 2013) 51

Behrouz Bokharaeian, Alberto Díaz and **Miguel Ballesteros**. 2013. Extracting Drug-Drug interaction from Text using Negation Features. Revista Española para el Procesamiento del Lenguaje Natural (SEPLN 2013) 51

Miguel Ballesteros, Carlos Gómez-Rodríguez and Joakim Nivre. 2012. Optimizing Planar and 2-Planar Parsers with MaltOptimizer. Revista Española para el Procesamiento del Lenguaje Natural (SEPLN 2012) 49.

Miguel Ballesteros, Jesús Herrera, Virginia Francisco and Pablo Gervás. 2012. Are the existing training corpora unnecessarily large? Revista Española para el Procesamiento del Lenguaje Natural. 48.

Miguel Ballesteros, Jesús Herrera, Virginia Francisco and Pablo Gervás. 2012. Analyzing the CoNLL-X Shared Task from a Sentence Accuracy Perspective Revista Española para el Procesamiento del Lenguaje Natural. 48.

Miguel Ballesteros, Virginia Francisco, Alberto Díaz, Jesús Herrera, and Pablo Gervás. 2011. Inferring the Scope of Negation and Speculation Via Dependency Analysis XXVII Congreso de la Sociedad Española para el Procesamiento del Lenguaje Natural (SEPLN 2011). Demo

Miguel Ballesteros, Jesús Herrera, Virginia Francisco and Pablo Gervás. 2010. Improving Parsing Accuracy for Spanish using Maltparser Revista Española para el Procesamiento del Lenguaje Natural. 44.

ACADEMIC SUPERVISION

Post-graduate Supervision

Supervisor of **Laura Perez Mayos**' Doctoral Thesis (co-supervised with Leo Wanner). Phd Thesis. In-depth exploration of the syntactic capabilities of auto-encoding language modes for downstream applications. Universitat Pompeu Fabra, Barcelona, Spain. **2022**

Undergraduate Supervision

Supervisor of 3 final Degree Project of undergraduate students Pompeu Fabra University, in Barcelona, Spain. 2013-2015

INTERNS MENTORED

Supervisor of **Manuel Mager**'s summer internship (University of Stuttgart) at Amazon Web Services, New York. Summer of 2021

Supervisor of **Ling Liu**'s summer internship (University of Colorado, Boulder) at Amazon Web Services, New York. Summer of 2021

Supervisor of **Laura Perez-Mayos**' summer internship (University Pompeu Fabra) at Amazon Web Services, New York. Summer of 2021

Supervisor of **Yoshinari Fujinuma**'s summer internship (University of Colorado, Boulder) at Amazon Web Services, New York. Summer of 2018.

Supervisor of **Emily Allaway**'s summer internship (Columbia University) at Amazon Web Services, New York. Summer of 2018.

Supervisor of **Chao Zhao**'s (University of Carolina, Chapel Hill) summer internship at Amazon Web Services, New York. Summer of 2020.

Supervisor of **Muhammad Khalifa**'s summer internship (El Cairo University) at Amazon Web Services, New York. Summer of 2020.

Supervisor of **Miryam de Lhoneux**'s summer internship (Uppsala University) at IBM Research, New York. Summer of 2018.

Supervisor of **Eliyahu Kiperwasser**'s summer internship (Bar-Illan University) at IBM Research, New York. Summer of 2017.

TEACHING EXPERIENCE

Co-instructor of the Algorithms for Natural Language Processing Course 11711. Carnegie Mellon University. With Chris Dyer and Robert Frederking. Academic Year: 2015-2016

Instructor of (1) Discrete Mathematics and Graph Theory and main instructor of (2) Software Engineering for Web Applications. Computer Science Degree for the Department of Information and Communication Technologies, at Pompeu Fabra University, in Barcelona, Spain. Academic Year: 2014-2015

Instructor of (1) Discrete Mathematics and Graph Theory, main instructor of (2) Software Engineering for Web Applications, and instructor of (3) Databases. Computer Science Degree for the Department of Information and Communication Technologies, at Pompeu Fabra University, in Barcelona, Spain. Academic Year: 2013-2014

Instructor of (1) Discrete Mathematics and Graph Theory, main instructor of (2) Software Engineering for Web Applications, and instructor of (3) Databases. Computer Science Degree for the Department of Information and Communication Technologies, at Pompeu Fabra University, in Barcelona, Spain. Academic Year: 2012-2013

Teaching assistant in the Software Engineering subject (Ingeniería del Software) of the Computer Science Degree. Faculty of Computer Science. Complutense University of Madrid, Spain. Academic year: 2011-2012.

Online courses tutor for the Department of Software Engineering and Artificial Intelligence. Complutense University of Madrid, Spain. Academic year: 2011-2012.

SENIOR ACADEMIC SERVICES

Conferences

Senior Area Chair. Empirical Methods for Natural Language Processing (EMNLP 2022)

Senior Area Chair. North American Chapter of the Association for Computational Linguistics (NAACL 2022)

Tutorial Chair. North American Chapter of the Association for Computational Linguistics. (NAACL 2022)

Area chair of Tagging, Chunking, Syntax and Parsing of the Empirical Methods for Natural Language Processing Conference (EMNLP 2019).

Area chair. International Conference of Computational Linguistics (COLING 2018).

Area chair for ACL Rolling Review. 2021 - present.

Area chair of Tagging, Chunking, Syntax and Parsing of the International Association for Computational Linguistics Conference (ACL 2016).

Journals

Action Editor of Transactions for the Association for Computational Linguistics (TACL Journal). 2019 - present

Action Editor of Computational Linguistics Journal. 2020 - present

Committees

External Reviewer of Yiqing Zhang's Master Thesis. University of Melbourne, Australia. November 2018.

Member of Kepa Bengoetxea's PhD examination committee. [Dependency Parsing for Basque]. Basque Country University, San Sebastian, Spain. 16th December 2014.

Reviewer for Spanish National Projects. MICINN-ANEP research projects

Conference and Workshop Organization

Tutorial Chair. North American Chapter of the Association for Computational Linguistics (NAACL 2022)

Organizer. Workshop on the Relevance of Linguistic Structure in Natural Language Processing (ACL 2018)

AWARDS

Selected as one of the Best Reviewers (Best Reviewer Award).

Conference on Empirical Methods in Natural Language Processing. 2018.

Outstanding paper award.

What do Recurrent Neural Network Grammars Learn about Syntax?
European Chapter of the Association for Computational Linguistics. April 2017

Best paper award.

Towards the understanding of gaming audiences by modeling Twitch emotes
Third Workshop on Noisy User-generated Text (W-NUT 2017 at EMNLP 2017). September 2017

Semi-Finalist of the international category of the Robotics for Good Awards www.roboticsforgood.ae with the team Change Dyslexia - Dyetective: Detecting Risk of Dyslexia with a Game: <https://www.roboticsforgood.ae/finals/game-detect-dyslexia-scale>

JADAWeb: A CBR System for Cooking Recipes. In Proceedings of the Computer Cooking Contest Workshop at the 18th International Conference on Case-based Reasoning. **Best Student Paper Award.** (CCC-ICCBR 2010).

PARTICIPATION IN EUROPEAN PROJECTS

MULTISENSOR: Mining and Understanding of multilingual content for intelligent sentiment enriched context and social oriented interpretation. (Program: FP7-ICT-610411. European Union)

KRISTINA: A knowledge based information agent with social competence and human interaction capabilities. (Program: H2020-645012-RIA. European Union)

PARTICIPATION IN MIT-IBM AI LAB PROJECTS

Co-Pi of Hierarchically structured symbolic architectures with neural control for robust and human-like natural language parsing with Prof. Roger Levy. Exploratory Proposal. Funded.

INVITED TALKS

Research Seminar at Spain AI, Spain (Virtual). January 2022.

Research Seminar at Uppsala University, Sweden (Virtual). September 2021.

Research Seminar at University Politecnica de Catalunya, Spain (Virtual). September 2020.

Research Seminar at Xerox Research Centre, France. Host: Xavier Carreras. September 2016.
Topic: Transition-based Natural Language Processing.

UPF-DTIC Research Seminar (Universitat Pompeu Fabra, Barcelona, Spain). Host: Leo Wanner. May 2016.
Topic: Deep Learning for Transition-based Natural Language Processing.

Research Seminar at IBM Watson. Host: Yaser Al-onazian. April 2016.
Topic: Transition-based Natural Language Processing.

Research Seminar at IBM Almaden. Host: Laura Chiticariu. March 2016. Topic: Transition-based Natural Language Processing.

Research Seminar at Google New York. Host: Slav Petrov. March 2016.
Topic: Transition-based Natural Language Processing.

Research Seminar at Carnegie Mellon University. Host: Alan Black. March 2016.
Topic: Transition-based Natural Language Processing.

Research Seminar at Microsoft Research Redmond. Host: Chris Quirk. March 2016. Topic: Greedy Transition-based Dependency Parsing with Stack-LSTMs.

Research Seminar at Microsoft Research Redmond. Host: Chris Quirk. October 2015. Topic: Greedy Transition-based Dependency Parsing with Stack-LSTMs.

Seminar at the University of Washington. Host: Noah Smith. October 2015. Topic: Greedy Transition-based Dependency Parsing with Stack-LSTMs.

CLSP student seminar. Johns Hopkins University. Host: Jason Eisner. September 2015. Topic: Greedy Transition-based Dependency Parsing with Stack-LSTMs.

Seminars of the IXA Research Group. Basque Country University, Spain. Host: Koldo Gojenola. December 2014. Topic: Going to the Roots of Dependency Parsing.

Machine Learning Lunch Seminars. Carnegie Mellon University. Host: Noah A. Smith. October 2014. Topic: Going to the Roots of Dependency Parsing.

Seminars of the TALP Research Group. Universitat Politècnica de Catalunya, Spain. Host: Xavier Carreras. April 2014. Topic: Going to the Roots of Dependency Parsing.

Seminars at the Singapore University of Technology and Design, Singapore. Host: Yue Zhang. July 2013. Topic: Deep-Syntacting Parsing [Parsing into Deeper Syntactic Dependencies].

Seminars of the Department of Linguistics and Philology, Uppsala University, Sweden. Host: Joakim Nivre. March 2012. Topic: MaltOptimizer: A System for MaltParser Optimization.

Department of Computer Science, Stockholm University, Kista, Sweden. Host: Hercules Dalianis. October 2011. Topic: Enhancing and Applying Dependency Analysis in Different Topics: Negation, Speculation and Text Simplification.

Seminars of the Department of Linguistics and Philology, Uppsala University, Sweden. Host: Joakim Nivre. October 2011. Topic: Enhancing and Applying Dependency Analysis in Different Topics.

UCNLG+Eval - The 4th UCNLG Workshop: Language Generation and Evaluation at EMNLP 2011, Edinburgh, United Kingdom. Host: Anja Belz. July 2011.

Talk Title: A Proposal for a Spanish Surface Realization Shared Task. (UCNLG+Eval - EMNLP 2011)

PRESS RELEASES

MIT News Press Release

<http://news.mit.edu/2019/teaching-language-models-grammar-makes-them-smarter-0529>

Venturebeat

<https://venturebeat.com/2019/05/24/ibms-ai-uses-grammar-rules-to-catch-linguistic-nuances-of-u-s-english/>

El Periodico. Spanish newspaper.

<http://www.elperiodico.com/es/noticias/sociedad/crean-inteligencia-artificial-predice-los-emoticonos-mas-adecuados-texto-5967777>

El Economista. Spanish newspaper.

<http://ecoaula.eleconomista.es/campus/noticias/8287365/04/17/-Ya-es-posible-hacer-una-prediccion-de-los-Emoji-que-le-corresponden-a-un-texto.html>

EL PAIS. Spanish newspaper.

http://elpais.com/elpais/2015/12/30/ciencia/1451479191_791338.html

ABC. Spanish newspaper.

http://www.abc.es/sociedad/abci-empresa-barcelona-crea-detector-dislexia-para-frenar-abandono-escolar-201606232154_noticia.html