

# Miguel Ballesteros. PhD - Curriculum Vitae

## Research Scientist. IBM Research, U.S.

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## PROFESSIONAL EXPERIENCE

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

*Main lecturer and adjunct lecturer in 5 different subjects in undergraduate courses. Extensive involvement in European Projects (Horizon2020 and FP7). This period includes a one year leave in Carnegie Mellon University (see next item) and a 1.5 month research stay in Singapore University of Technology and Design (see Research Stays). During this period, I published 28 papers in international conferences and journals.*

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

*Co-instructor in one of the main subjects of the Language Technologies Institute, targeted to graduate (PhD and Master's level) students. Carnegie Mellon University is a leading institution in ranked 1<sup>st</sup> in Computer Science, and 2<sup>nd</sup> in Artificial Intelligence. <http://www.cmu.edu/about/rankings.html> During this period, I published 12 papers.*

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.  
*During this period I completed my PhD in Computer Science Research. During this period, I published 19 papers.*

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.

## INTERNATIONAL RESEARCH STAYS

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

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

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

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

## 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 requires a research stay in a different 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)

Catalan (good comprehension)

## RESEARCH INTERESTS

Syntax and parsing.

Dependency parsing.

Transition-based modeling for natural language processing.

Deep learning and neural network models for natural language processing.

## PUBLICATIONS

*The publications section is divided in international journal papers, international conference papers and other publications (national (Spanish) conferences and journals, tech reports and arXiv repository publications).*

*All the international and national publications are peer reviewed.*

### 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 PAPERS

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

**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.

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.*

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.

[EMNLP had an acceptance rate of 25% in 2015.](#)

**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

[CoNLL had an acceptance rate of 25% in 2015.](#)

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 (**24 citations**)  
[NAACL-HLT had an acceptance rate of 25% in 2015.](#)

Luz Rello, **Miguel Ballesteros**, Abdullah Ali, Miquel Serra, Daniela Alarcón Sánchez and Jeffrey P. Bigham 2016. Dyetective: Detecting Risk of Dyslexia with a Game. PervasiveHealth-2016 (**2 citations**)

**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 (**5 citations**)  
[CoNLL had an acceptance rate of 25% in 2015.](#)

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  
[ASSETS had an acceptance rate of 23% in 2015.](#)

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

**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 (**4 citations**)  
[INLG is the leading conference in Natural Language Generation](#)

**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)

**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)

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)

**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) (4 citations)

**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) (1 citation)

**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 (ICCBR 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 (2 citations)

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  
[SEPLN is the leading conference in Natural Language Processing in Spain.](#)

**Miguel Ballesteros**. 2013. Exploring Automatic Feature Selection for Transition-Based Dependency Parsing. Revista Española para el Procesamiento del Lenguaje Natural (SEPLN 2013) 51  
[SEPLN-Journal is the most important journal in Natural Language Processing in Spain.](#)

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.  
(1 citation)

**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.

## INVITED TALKS

UCNLG+Eval - The 4th UCNLG Workshop: Language Generation and Evaluation at EMNLP 2011, Edinburgh, United Kingdom. Host: Anja Belz. 31st July 2011.  
Talk Title: A Proposal for a Spanish Surface Realization Shared Task. (UCNLG+Eval - EMNLP 2011)  
See <http://www.nltg.brighton.ac.uk/ucnlg/ucnlg11/programme.html>

Seminars of the Department of Linguistics and Philology, Uppsala University, Sweden. Host: Joakim Nivre. 14th October 2011. Topic: Enhancing and Applying Dependency Analysis in Different Topics.

Department of Computer Science, Stockholm University, Kista, Sweden. Host: Hercules Dalianis. 20th October 2011. Topic: Enhancing and Applying Dependency Analysis in Different Topics: Negation, Speculation and Text Simplification.

See <http://dash.dsv.su.se/2011/10/20/it-for-health-seminar-miguel-ballesteros-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. 30th March 2012. Topic: MaltOptimizer: A System for MaltParser Optimization.

Seminars at the Singapore University of Technology and Design, Singapore. Host: Yue Zhang. 12th July 2013. Topic: Deep-Syntacting Parsing [Parsing into Deeper Syntactic Dependencies].

Seminars of the TALP Research Group. Universitat Politècnica de Catalunya, Spain. Host: Xavier Carreras. 25th April 2014. Topic: Going to the Roots of Dependency Parsing.

See <http://www.talp.upc.edu/index.php/news-rss/seminars/211-25-04-1014-miguel-ballesteros-going-to-the-roots-of-dependency-parsing>

Machine Learning Lunch Seminars. Carnegie Mellon University. Host: Noah A. Smith.

6th October 2014. Topic: Going to the Roots of Dependency Parsing.

See <http://www.cs.cmu.edu/~learning/>

Seminars of the IXA Research Group. Basque Country University, Spain. Host: Koldo Gojenola. 19th December 2014. Topic: Going to the Roots of Dependency Parsing.

CLSP student seminar. Johns Hopkins University. Host: Jason Eisner. 25th September 2015. Topic: Greedy Transition-based Dependency Parsing with Stack-LSTMs.

See [http://wiki.clsp.jhu.edu/view/Student\\_seminar](http://wiki.clsp.jhu.edu/view/Student_seminar)

Seminar at the University of Washington. Host: Noah Smith. 8th October 2015.

Topic: Greedy Transition-based Dependency Parsing with Stack-LSTMs.

Research Seminar at Microsoft Research Redmond. Host: Chris Quirk. 9th October 2015. Topic: Greedy Transition-based Dependency Parsing with Stack-LSTMs.

See <https://www.microsoft.com/en-us/research/video/greedy-transition-based-dependency-parsing-with-stack-lstms/>

Research Seminar at Microsoft Research Redmond. Host: Chris Quirk.

3rd March 2016. Topic: Greedy Transition-based Dependency Parsing with Stack-LSTMs.

Research Seminar at Carnegie Mellon University. Host: Alan Black.

10th March 2016.

Topic: Transition-based Natural Language Processing.

Research Seminar at Google New York. Host: Slav Petrov. 23rd March 2016.

Topic: Transition-based Natural Language Processing.

Research Seminar at IBM Almaden. Host: Laura Chiticariu.

28th March 2016. Topic: Transition-based Natural Language Processing.

Research Seminar at IBM Watson. Host: Yaser Al-onazian. 5th April 2016.

Topic: Transition-based Natural Language Processing.

UPF-DTIC Research Seminar (Universitat Pompeu Fabra, Barcelona, Spain). Host: Leo Wanner. 10th May 2016. Topic: Deep Learning for Transition-based Natural Language Processing.

See [http://www.dtic.upf.edu/~afaridi/DTIC\\_Seminars/Abstracts.html#May10](http://www.dtic.upf.edu/~afaridi/DTIC_Seminars/Abstracts.html#May10)

## SCIENTIFIC SOFTWARE

LSTM NER System - <https://github.com/clab/stack-lstm-ner> - We propose a system that uses stack long short-term memory for learning and character-based representations of words with LSTMs- (2016) - In collaboration with Chris Dyer, Guillaume Lample, Kazuya Kawakami and Sandeep Subramanian.

LSTM Dependency Parser with Character-based Embeddings  
lstm-parser/tree/char-based - We propose a parser that uses stack long short-term memory for learning and character-based representations of words with LSTMs- (2015) - In collaboration with Chris Dyer, and Noah A Smith.

LSTM Dependency Parser - <https://github.com/clab/lstm-parser> - We propose a parser that uses stack long short-term memory for learning - (2015) - In collaboration with Chris Dyer, Wang Ling, Austin Matthews, Noah A Smith.

Deep-Syntactic Generator - <https://github.com/talnsoftware/deepgenerator/wiki> - We propose a generator that starts from deep (mtt's) syntactic structures as input and generate sentences - (2015) - In collaboration with Bernd Bohnet, Simon Mille and Leo Wanner.

Deep-Syntactic Parser - <https://github.com/talnsoftware/deepsyntacticparsing/wiki> - We propose a parser that delivers deep-syntactic structures as output - (2014) - In collaboration with Bernd Bohnet, Simon Mille and Leo Wanner.

MaltOptimizer - <http://nil.fdi.ucm.es/maltoptimizer> - A freely available tool developed to facilitate parser optimization using the open-source system MaltParser, a data-driven parser-generator that can be used to train dependency parsers given treebank data - (2012) - In collaboration with Joakim Nivre.

MaltDiver - <http://taln.upf.edu/pages/MaltDiver/> - MaltDiver is a tool developed to visualize the transitions performed by the transition-based parsers included in MaltParser and to show how the parsers interact with the sentences and the data structures within - (2013) - In collaboration with Roberto Carlini

## AWARDS

### Outstanding paper award.

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

Semi-Finalist of the international category of the Robotics for Good Awards [www.roboticsforgood.ae](http://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)

## COLLABORATION WITH NON-FOR PROFIT ORGANIZATIONS

Change Dyslexia. (Registered in Spain-EU. B66670878).

The collaboration with Change Dyslexia ended up in 3 publications in international and multidisciplinary conferences (see publications), a **pending patent** (see patents) and two press releases in Spanish national newspapers.

## PATENTS

Detecting Dyslexia Using Human-Computer Interaction Measures Extracted via Computer Games and Machine Learning Techniques. **PENDING Carnegie Mellon University.**



The patent, which is still **pending**, is mainly about the paper Detecting Risk of Dyslexia with a Game. I claimed 20% of the intellectual property.

## PRESS RELEASES

**El Periodico. Spanish newspaper.**

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

The article described the short paper presented at the European Chapter of the Association for Computational Linguistics, in collaboration with researchers at Universitat Pompeu Fabra in Barcelona, Spain. El Periódico is the second newspaper by number of readers in Catalunya (an autonomous community in Spain)

**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>

The article described the short paper presented at the European Chapter of the Association for Computational Linguistics, in collaboration with researchers at Universitat Pompeu Fabra in Barcelona, Spain.

**EL PAIS. Spanish newspaper.**

[http://elpais.com/elpais/2015/12/30/ciencia/1451479191\\_791338.html](http://elpais.com/elpais/2015/12/30/ciencia/1451479191_791338.html)The article was about the team Dydetective and its participation in the Robotics for Good Competition (see awards). My name and a link to my website are explicitly mentioned and referred. This is the **MAIN newspaper** in Spain by number of readers.

**ABC. Spanish newspaper.**

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

The article described the work of Change Dyslexia. This is a non-profit startup I have collaborated with. My name is explicitly mentioned. This is the third newspaper, in Spain, by number of readers.

## ACADEMIC SERVICES

### SENIOR ACADEMIC SERVICES

Area chair. International Conference of Computational Linguistics. Coling 2018

Area chair of Tagging, Chunking, Syntax and Parsing of the International Association for Computational Linguistics Conference (ACL 2016). Member of the Program Committee. (<http://acl2016.org/>)

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

Current member of the Editorial Team of Transactions for the Association for Computational Linguistics. See <https://tacl2013.cs.columbia.edu/ojs/index.php/tacl/about/editorialTeam>)

Reviewer for Spanish National Projects. MICINN-ANEP research projects <http://www.mineco.gob.es/portal/site/mineco/>

### OTHER ACADEMIC SERVICES

Reviewer in the syntax, parsing and tagging track for ACL 2017, EACL 2017, EMNLP 2017, EMNLP 2016, NAACL 2016, ACL 2015, NAACL 2015, ACL 2014, COLING 2014.

Reviewer in the natural language learning track for EMNLP 2015.

Reviewer for CoNLL 2016.

Reviewer of LREC 2016, SPMRL 2015, IWPT 2015, DEPLING 2015, LREC 2014, Nodalida 2013, MICA 2013, CiCling'12, \*SEM 2012.

Reviewer of LREV. Language Resources and Evaluation journal.

Reviewer of JAIR. Journal of Artificial Intelligence Research.

Reviewer of NLE. Natural Language Engineering Journal.

Reviewer of CAI. Computing and Informatics Journal.

Member of the organization committee of the SEPLN 2013 - 29th Conference of the Spanish society for natural language processing.  
Member of the organization committee and the program committee of the SEPLN 2014 - 30th Conference of the Spanish society for natural language processing.

## MEMBERSHIP

Member of ACL, SEPLN, SIGNLL, SIGPARSE, SIGDAT.  
Member of the Universal Dependencies Consortium.

## TEACHING

Co-instructor of the Algorithms for Natural Language Processing Course 11711. Carnegie Mellon University. With Chris Dyer and Robert Frederking. Academic Year: 2015-2016 See [http://demo.clab.cs.cmu.edu/fa2015-11711/index.php/Main\\_Page](http://demo.clab.cs.cmu.edu/fa2015-11711/index.php/Main_Page) This is one of the most important courses of the Language Technologies institute.

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. I received a highly positive evaluation by students according to a questionnaire-based assessment. 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. I received a highly positive evaluation by students according to a questionnaire-based assessment. 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. I received a highly positive evaluation by students according to a questionnaire-based assessment. 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.

## SUPERVISION

Supervisor of the Final Degree Project of Ivan Latorre (co-supervised with Leo Wanner). Machine Translation through Deep-Syntactic Parsing. Student of the Computer Science Degree. Pompeu Fabra University, in Barcelona, Spain. Defense: July 2015.

Supervisor of the Final Degree Project of Isabel Ortiz. ViZPar: a GUI for ZPar with Manual Feature Selection. Student of the Computer Science Degree. Pompeu Fabra University, in Barcelona, Spain. Defense: July 2014.

Supervisor of the Final Degree Project of Oscar García. Student of the Computer Science Degree. Pompeu Fabra University, in Barcelona, Spain. Defense: July 2013.