

# Luz Rello. PhD

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**Research Interests:** Human-Computer Interaction, Accessibility Natural Language Processing, Linguistics, Dyslexia, eHealth Education, Mobile for Good.

## Current Activities

1. Systems Scientist. Human-Computer Interaction Institute at Carnegie Mellon University, Pittsburgh, USA. From October 2016.
2. Founder. Change Dyslexia, a non-for profit organization that brings research based solutions for people with dyslexia to eliminate school failure [www.changedyslexia.org](http://www.changedyslexia.org). From December 2015.
3. Founding member of Cookie Cloud, a working team focused on serious games for children <http://cookie-cloud.com/>. From March 2012.

## Education

1. **Post-Doctoral Fellow. Human-Computer Interaction Institute at Carnegie Mellon University, Pittsburgh.** October 2014 - September 2017.  
Employer: Jeffrey P. Bigham
2. **Ph.D. in Computer Science at the Department of Information and Communication Technologies. Univ. Pompeu Fabra.** June 2014. **Cum Laude.**  
Thesis title: *DysWebxia. A Text Accessibility Model for People with Dyslexia.*  
Advisors: Ricardo Baeza-Yates and Horacio Saggion  
Committee: Peter Gregor, Josep Blat and María Antonia Martí
3. **M.A. International Masters in Natural Language Processing and Human Language Technology. University of Wolverhampton and Univ. Autónoma of Barcelona.** 2010. Grade: 9.7/10. **First class with Distinction.**  
Thesis title: *Elliphant: A Machine Learning Method for Identifying Subject Ellipsis and Impersonal Constructions in Spanish.*  
Advisors: Ruslan Mitkov and Xavier Blanco.
4. **B.A. in Linguistics. Complutense University of Madrid.** 2008. Grade: 9.26/10. **First class with Distinction.**  
Thesis title: *CORAL: Construction of Objects Representational Applied to Language.*  
Advisor: Eduardo Basterrechea.  
Thesis title: *Spanish Color Terms: Semantic, Morphological and Lexicographic Analysis.*  
Advisor: Fernando Lázaro Mora.

## Honours and Awards

1. Princess of Girona Award for Social Good. National Award by the Spanish Royal Family to one individual per year. 2016.
2. New Researcher Award. International Dyslexia Association (IDA). 2016.
3. Ashoka Fellow. 2014.
4. MIT Technology Review Top 35 Innovators Under 35 Award. Spanish edition 2014.
5. Social Innovator of the Year by MIT Technology Review. Spanish edition 2014.
6. European Young Researchers' Award by the EuroScience non-profit foundation to one individual per year. 2013.
7. Third National Prize for Academic Excellence (first national records in B.A. Linguistics) awarded by the Spanish Ministry of Education. 2008.
8. Social Entrepreneurship Grant by Obra Social "la Caixa". 2016.
9. Semi-finalist at the International Competition de United Arab Emirates UAE AI and Robotics Award for Good (semi-finalist, 7th position among 664 entries) for the app Dydetective. 2016.
10. Solidarity Talent Award by Botin Foundation, first place teamed with Madrid for Dyslexia. 2015.
11. Best Demo Award for the app Dydetective in ACM ASSETS 2015 (top conference of computers and accessibility). 2015.
12. Delegates Award of the The Paciello Group Web Accessibility Challenge 2013, teamed with Cookie Cloud.
13. Best Paper Award, W4A 2013. Simplify or Help? Text Simplification Strategies for People with Dyslexia.
14. First prize of the Vodafone Foundation Mobile for Good Europe Awards 2013 (Education Category, 200 entries) for the application Dysegxia (Piruletras), teamed with Cookie Cloud.
15. Grant for Research Stays outside Catalonia (BE-DGR) by the Generalitat de Catalunya, 2012.
16. Finalist at the Vodafone Foundation Smart Accessibility Awards 2012 for the application IDEAL Group Reader teamed with Apps4Android.
17. Santander JPI Premium Scholar. Iberoamerican Scholarship for Young Researchers, 2012.
18. Google Scholar. Google Anita Borg Memorial Scholarship: Europe, Middle East and Africa, 2011.
19. Doctoral scholarship (FI-DGR) by the Generalitat de Catalunya, 2011 - 2014.
20. Second prize at IV MAVIR 2010 for Master Thesis on Language Technologies, by Corex, Daedalus, iSOCO and Foundation of the Universidad Europea de Madrid.
21. Best Master Student Award. International Masters in Natural Language Processing and Human Language Technology, 2008 - 2010.
22. La Caixa Scholar. La Caixa grant for Master Studies, 2008 - 2010.
23. Best B.S. Student Award. Universidad Complutense de Madrids B.S. Extraordinary Award, 2007.
24. Special Award Gesfor Group Information Technologies and Honorable Mention in the VI Arquimedes National Contest of Introduction to University Research, Spanish Ministry of Education and Science, 2007.

25. Collaboration Fellowship for Undergraduate Students, Uni. Complutense de Madrid, 2007 - 2008.
26. Academic Excellence Award, Community of Madrid, 2007 - 2008.

## Languages

- Spanish (native)
- English (proficient)
- German (intermediate)
- French (good comprehension)
- Catalan (good comprehension)
- Classical Latin (good reading comprehension)

## Professional Experience

1. Postdoctoral researcher at the Human Computer Interaction Institute. Carnegie Mellon University. Pittsburgh, U.S. (2014-)
2. CEO of Change Dyslexia. (2015-)
3. Visiting researcher at IDEIAS Lab in Departamento de Informtica da Pontifical Catholic University of Rio de Janeiro. Brazil. (2013)
4. Ph.D Student at Web Research Group, Universitat Pompeu Fabra, Barcelona. Spain. (2011-2014)
5. Master Student of the Research Group in Computational Linguistics, University of Wolverhampton, UK (2008-2010).
6. Part-time Linguistic Analyst at Startup Molino de Ideas, Madrid. (2009-2010)
7. Linguist at Daedalus (Data, Decisions and Language), Madrid. (2008)
8. Undergraduate Research Fellow in the Department of Linguistics, Romance and Slavic Philology, Universidad Complutense de Madrid. (2007)

## Publications

### INTERNATIONAL JOURNAL ARTICLES

1. **Rello, Luz** and Ricardo Baeza-Yates. 2016. The Effect of Font Type on Screen Readability by People with Dyslexia. *ACM Transactions on Accessible Computing (TACCESS)*. ACM New York, NY, USA.
2. **Rello, Luz**; Ricardo Baeza-Yates and Llisterri, Joaquim. 2016. A Resource of Errors Written in Spanish by People with Dyslexia and its Linguistic, Phonetic and Visual Analysis. *Language Resources and Evaluation*. Springer Netherlands.
3. **Rello, Luz** and Ricardo Baeza-Yates. 2015. How to Present more Readable Text for People with Dyslexia. An eye-tracking study on text colors, size and spacings. *Universal Access in the Information Society (UAIS)*. In press.
4. Saggion, H.; S. Štajner, S. Bott, S. Mille, **L. Rello**, B. Drndarevic. 2015. Making it Simplext: Implementation and Evaluation of a Text Simplification System for Spanish. *ACM Transactions on Accessible Computing (TACCESS)* 6 (4), 14.

5. Saggion, Horacio; Stefan Bott and **Luz Rello**. 2015. Simplifying Words in Context. Experiments with two Lexical Resources in Spanish. In *Computer Speech & Language*. In press.
6. **Rello, Luz** and Baeza-Yates, Ricardo. 2012. The Presence of English and Spanish Dyslexia in the Web. *New Review of Hypermedia and Multimedia*. 18(3) Taylor & Francis. pp. 131-158.
7. **Rello, Luz** and Llisterri, Joaquim. 2012. Prosodic Correlates of Pronoun Disambiguation in Spanish. *Estudios de Fonética Experimental*. XXI. pp. 195-214.

## REFEREED CONFERENCE PUBLICATIONS

1. **Rello, Luz**; Miguel Ballesteros; Abdullah Ali; Miquel Serra; Daniela Alarcn Snchez, and Jeffrey P. Bigham. 2016. Dyetective: Detecting Risk of Dyslexia with a Game. *Pervasive Health 2016: 10th EAI International Conference on Pervasive Computing Technologies for Healthcare*. Cancun, Mexico, May 1619.
2. **Rello, Luz**; Sergi Subirats and Jeffrey P. Bigham. 2016. An Online Chess Game Designed for People with Dyslexia. *W4A 2016: The 16th Web for All Conference*. Montreal, Canada, Abril 11-13.
3. Baeza-Yates, Ricardo; **Luz Rello** and Julia Dembowski. 2016. CASSAurus: A Resource of Simpler Spanish Synonyms. *LREC 2016: 10th edition of the Language Resources and Evaluation Conference*. 23-28 May 2016, Portorož, Slovenia.
4. Rauschenberger, Maria; **Luz Rello**; Silke Fuechsel Jörg Thomaschewski. 2016. A Language Resource of German Errors Written by Children with Dyslexia. *LREC 2016: 10th edition of the Language Resources and Evaluation Conference*. 23-28 May 2016, Portorož, Slovenia.
5. **Luz Rello**, Martin Pielot and Mari-Carmen Marcos. 2016. Make It Big! The Effect of Font Size and Line Spacing on Online Readability *CHI'16: ACM SIGCHI Conference on Human Factors in Computing Systems*. San Jose, CA, May 7-12.
6. **Rello, Luz**; Miguel Ballesteros and Jeffrey P. Bigham. 2015. A Spellchecker for Dyslexia. *ASSETS 2015: The 17th International ACM SIGACCESS Conference of Computers and Accessibility*. Lisbon, Portugal, 26-28 October.
7. Rauschenberger, Maria; Silke Fuechsel; Luz Rello; Clara Bayarri and Jörg Thomaschewski. Exercises for German-Speaking Children with Dyslexia. *INTERACT 2015: The 15th IFIP TC.13 International Conference on Human-Computer Interaction*. Bamberg, Germany, 14-18 September.
8. Baeza-Yates, Ricardo; **Rello, Luz** and Julia Dembowski. 2015. CASSA: A Context-Aware Synonym Simplification Algorithm. *NAACL HLT 2015: North American Chapter of the Association for Computational Linguistics, Human Language Technologies*. Denver, Colorado, USA May 31 - June 5.
9. **Rello, Luz** and Miguel Ballesteros. 2015. Detecting Readers with Dyslexia Using Machine Learning with Eye Tracking Measures. *W4A 2015: The 12th Web for All Conference*. Florence, Italy, May 18-20.
10. Lasecki, Walter S.; Luz Rello and Jeffrey P. Bigham. 2015. Measuring Text Simplification with the Crowd. *W4A 2015: The 12th Web for All Conference*. Florence, Italy, May 18-20.
11. **Rello, Luz**; Clara Bayarri; Yolanda Otal de la Torre and Martin Pielot. 2014. A Computer-Based Method to Improve the Spelling of Children with Dyslexia. *ASSETS 2014: The 16th International ACM SIGACCESS Conference of Computers and Accessibility*. Rochester, NY USA, 20-22 October.
12. **Rello, Luz**; Ricardo Baeza-Yates and Llisterri, Joaquim. 2014. DysList: An Annotated Resource of Dyslexic Errors. *LREC 2014: The 9th international conference on Language Resources and Evaluation*. Reykjavik, Iceland, 26-31, May

13. **Rello, Luz** and Ricardo Baeza-Yates. 2014. Evaluation of DysWebxia: A Reading App Designed for People with Dyslexia. *W4A 2014: The 10th International Cross Disciplinary Conference on Web Accessibility*. Seoul, Korea, 7-9 April.
14. **Rello, Luz** and Ricardo Baeza-Yates. 2013. Good Fonts for Dyslexia. *ASSETS 2013: The 15th International ACM SIGACCESS Conference of Computers and Accessibility*. Bellevue, Washington USA, 22-24 October.
15. **Rello, Luz**; Ricardo Baeza-Yates; Laura Dempere and Horacio Saggion. 2013. Frequent words improve readability and short words improve understandability for people with dyslexia. *INTERACT 2013: 14th IFIP TC13 Conference on Human-Computer Interaction*. Cape Town, South Africa, 2013.
16. **Rello, Luz**; Susana Bautista; Ricardo Baeza-Yates; Pablo Gervs, Raquel Hervs and Horacio Saggion. 2013. One half or 50%? An eye-tracking study of number representation readability. *INTERACT 2013: 14th IFIP TC13 Conference on Human-Computer Interaction*. Cape Town, South Africa, 2013.
17. **Rello, Luz**; Ricardo Baeza-Yates; Stefan Bott and Horacio Saggion. 2013. Simplify or Help? Text Simplification Strategies for People with Dyslexia. *W4A 2013: The 10th International Cross Disciplinary Conference on Web Accessibility*. May 13-15, 2013, Rio de Janeiro, Brazil.
18. **Rello, Luz**; Martin Pielot; Mari-Carmen Marcos and Roberto Carlini. 2013. Size Matters (Spacing not): 18 Points for a Dyslexic-friendly Wikipedia. *W4A 2013: The 10th International Cross Disciplinary Conference on Web Accessibility*. May 13-15, 2013, Rio de Janeiro, Brazil.
19. **Rello, Luz**; Ricardo Baeza-Yates and Horacio Saggion. 2013. The Impact of Lexical Simplification by Verbal Paraphrases for People with and without Dyslexia. *CICLing 2013: The 12th International Conference on Intelligent Text Processing and Computational Linguistics. Lecture Notes in Computer Science*. Samos, Greece, 24-30 March.
20. Horacio Saggion, Stefan Bott & **Luz Rello**. 2013. Comparing Resources for Spanish Lexical Simplification. *SLSP 2013: 1st International Conference on Statistical Language and Speech Processing*. July 29-31, 2013. Tarragona, Spain.
21. **Rello, Luz**; Clara Bayarri and Azuki Gorriz. 2013. Dysegxia o Piruletras: Ejercicios Lingüísticos para la Reeducción de la Dislexia en un Juego para Tableta (Dysegxia or Piruletras: Language Exercises for Rehabilitation of Dyslexia in a Game for Tablet). *TISE 2013: XVIII Congreso Internacional de Informática Educativa*. Porto Alegre, Brasil, 9-11 December, 2013.
22. Bott, Stefan; **Rello, Luz**; Drndarevic, Biljana and Saggion, Horacio. 2012. Can Spanish Be Simpler? LexSiS: Lexical Simplification for Spanish. *Coling 2012: The 24th International Conference on Computational Linguistics*. Mumbai, India, 8-15 December.4
23. **Rello, Luz** and Marcos, Mari-Carmen. 2012. An Eye Tracking Study on Text Customization for User Performance and Preference. *LA-WEB 2012: The 8th edition of the Latin American Web Congress*. Cartagena, Colombia, 25-27 October.
24. **Rello, Luz** and Llisterri, Joaquim. 2012. There are Phonetic Patterns in Vowel Substitution Errors in Texts Written by Persons with Dyslexia. *LDW 2012: The 21st Annual World Congress on Learning Disabilities*. Oviedo, Spain, 5-7 September.
25. **Rello, Luz** and Ricardo Baeza-Yates. 2012. Lexical Quality as a Measure for Textual Web Accessibility. *ICCHP 2012: The 13th International Conference on Computers Helping People with Special Needs*. Linz, Austria, July 11-13.
26. **Rello, Luz** and Gayo, Iria. 2012. A Portuguese-Spanish Corpus Annotated for Subject Realization and Referentiality. *LREC 2012: The 8th international conference on Language Resources and Evaluation*. Istanbul, Turkey, 16-17, May, p. 154-157.

27. **Rello, Luz**; Baeza-Yates, Ricardo. and Mitkov, Ruslan 2012. Elliphant: Improved Automatic Detection of Zero Subjects and Impersonal Constructions in Spanish. *EACL 2012: The 13th European chapter of the Association for Computational Linguistics*. Avignon, France, 23-27 April, p. 706-715.
28. **Rello, Luz**; Kanvinde, Gaurang and Baeza-Yates, Ricardo. 2012. Layout Guidelines for Web Text and a Web Service to Improve Accessibility for Dyslexics. *W4A 2012: The 9th International Cross Disciplinary Conference on Web Accessibility*. Lyon, France, 16-17 April.
29. **Rello, Luz** and Llisterri, Joaquim. 2011. Temporal Factors for Pronominal Anaphora Resolution in Spanish. *ICPhS XVII: The 17th International Congress of Phonetic Sciences*. Hong Kong, China, 17-21 August.
30. **Rello, Luz** and Basterrechea, Eduardo. 2011. Onoma: A Linguistically Motivated Conjugation System for Spanish Verbs. *CICLing 2011: The 12th International Conference on Intelligent Text Processing and Computational Linguistics, Lecture Notes in Computer Science*, 6608, p. 227-138. New York: Springer. Tokyo, Japan, 20-26 February.

## BOOK CHAPTERS

1. Saggion, Horacio and **Rello, Luz**. 2015. Technologies for persons with dyslexia. In J. Spector (Ed.), *The SAGE encyclopedia of educational technology*. (pp. 710-712). Thousand Oaks, CA: SAGE Publications, Inc.
2. Llisterri, Joaquim and **Rello, Luz**. 2012. La interfaz entre prosodia y discurso en la resolución de la anáfora pronominal en español. (The interface between prosody and discourse on pronominal anaphora resolution in Spanish) Chapter in Jiménez Juliá, Tomás; López Meirama, Belén; Vázquez Rozas, Victoria & Veiga Alexandre (coords). *Cum corde et in nova grammatica*. Estudios ofrecidos a Guillermo Rojo. Santiago de Compostela: Universidade de Santiago de Compostela. ISBN-13: 9788498879148. p. 465-475.

## REFEREED WORKSHOP AND LIGHTLY REVIEWED SHORT PUBLICATIONS

1. **Rello, Luz**; Kristin Williams; Abdullah Ali; Nancy Cushen White and Jeffrey P. Bigham. 2016. Towards a Multilingual Dyslexia Detection using Online Games. *W4A 2016: The 16th Web for All Conference*. Montreal, Canada, Abril 11-13.
2. **Rello, Luz**. 2015. Dyslexia and Web Accessibility: Synergies and Challenges. *W4A 2015: The 12th Web for All Conference*. Florence, Italy, May 18-20.
3. **Rello, Luz**; Roberto Carlini; Ricardo Baeza-Yates and Jeffrey P. Bigham. 2015. A Plug-in to Aid Online Reading in Spanish. *W4A 2015: The 12th Web for All Conference*. Florence, Italy, May 18-20.
4. **Rello, Luz**; Horacio Saggion and Ricardo Baeza-Yates. 2014. Highlighting Keywords Improves Comprehension of People with Dyslexia. *EACL Workshop PITR 2014: The 3rd Workshop on Predicting and Improving Text Readability for Target Reader Populations*. Gothenburg, Sweden, 27 April.
5. Yolanda Otal, Catalina Sintés and **Luz Rello**. 2013. Tecnología para la reeducación de los disléxicos. *Congreso Por el derecho a una educación de calidad*. Barcelona, Spain, 24-26 October, 2013.
6. **Rello, Luz**. 2013. Design of Word Exercises for Children with Dyslexia. *DSAI 2013: The 5th International Conference on Software Development for Enhancing Accessibility and Fighting Info-exclusion*. Vigo, Spain, 13-15 November.
7. **Rello, Luz** and Simone D. J. Barbosa. 2013. Do People with Dyslexia Need Special Reading Software?. *INTERACT 2013 Workshop on Rethinking Universal Accessibility: A broader approach considering the digital gap*. Cape Town, South Africa, 2013.

8. **Rello, Luz**; Clara Bayarri and Azuki Gorriz. 2013. Un juego educativo para niños con dislexia. *Interacción 2013 - XIV Congreso Internacional de Interacción Persona-Ordenador*. September 17-20, 2013, Madrid, Spain.
9. Marcos, Mari-Carmen and **Rello, Luz**. 2013. Order effect y presencia de erratas en estudios de usuarios con eye tracking. *Interacción 2013 - XIV Congreso Internacional de Interacción Persona-Ordenador*. September 17-20, 2013, Madrid, Spain.
10. **Rello, Luz**; Kanvinde, Gaurang and Baeza-Yates, Ricardo. 2012. A Mobile Application for Displaying More Accessible eBooks for People with Dyslexia. *DSAI 2012: The 4th International Conference on Software Development for Enhancing Accessibility and Fighting Info-exclusion*. Douro Region, Portugal, 19-22 July.
11. **Rello, Luz**; Ricardo Baeza-Yates, Horacio Saggion and Eduardo Graells. 2012. Graphical Schemes May Improve Readability but not Understandibility for People with Dyslexia. *PITR 2012: NAACL HLT 2012 Workshop Predicting and improving text readability for target reader populations*. Montreal, Canada, 7 June, p. 25-32.
12. **Rello, Luz**; Ricardo Baeza-Yates, Horacio Saggion and Jennifer Pedler. 2012. A First Approach to the Creation of a Spanish Corpus of Dyslexic Texts. *NLP4ITA 2012: LREC Workshop Natural Language Processing for Improving Textual Accessibility*. Istanbul, Turkey, 27 May, p. 22-26.
13. Baeza-Yates, Ricardo and **Rello, Luz**. 2012. On Measuring the Lexical Quality of the Web. *WICOW/AIRWeb: WWW Workshop on Web Quality*. Lyon, France, 17 April.
14. Baeza-Yates, Ricardo and **Rello, Luz**. 2011. How Bad Do You Spell?: The Lexical Quality of Social Media. *FOSW 2011: ICWSM Workshop the Future of the Social Web*. Barcelona, Spain, 21 July.
15. Baeza-Yates, Ricardo and **Rello, Luz**. 2011. Estimating Dyslexia in the Web. *W4A 2011: Proceedings of The 8th International Cross Disciplinary Conference on Web Accessibility*. Hyderabad, India, 28-29 March.
16. **Rello, Luz** and Basterrechea, Eduardo. 2010. Automatic Conjugation and Identification of Regular and Irregular Verb Neologisms in Spanish. *CALC 2010: NAACL HLT 2010 Second Workshop on Computational Approaches to Linguistic Creativity*. Los Angeles, USA, 5 June, p. 1-5.
17. Mitkov, Ruslan; HA, Le An; Varga, Andrea. and **Rello, Luz**. 2009. Semantic Similarity of Distractors in Multiple-Choice Tests: Extrinsic Evaluation. *GEMS 2009: EACL Workshop on GEometrical Models of Natural Language Semantics*. Athens, Greece, March 31, p. 49-56.
18. **Rello, Luz** and Ilisei, Iustina. 2009. A Rule-Based Approach to the Identification of Spanish Zero Pronouns. (pdf) *Student Workshop at RANLP 2009, Recent Advances in Natural Language Processing*. Borovets, Bulgaria, 14-15 September, p. 60-65.
19. **Rello, Luz**. and Ilisei, Iustina. 2009. A Comparative Study of Spanish Zero Pronoun Distribution. *ISMTCL: International Symposium on Data and Sense Mining, Machine Translation and Controlled Languages*, Besançon, France, July 1-3, 2009.

## REFEREED POSTERS, DEMONSTRATIONS, AND WORKS IN PROGRESS

1. **Rello, Luz**; Abdullah Ali and Jeffrey P. Bigham. 2015. Dyetective: Toward a Game to Detect Dyslexia. *ASSETS 2015: The 17th International ACM SIGACCESS Conference of Computers and Accessibility*. Lisbon, Portugal, 26-28 October.
2. Rauschenberger, Maria; Silke Fuechsel; **Luz Rello**; Clara Bayarri and Azuki Gorriz. 2015. A Game to Target the Spelling of German Children with Dyslexia. *ASSETS 2015: The 17th International ACM SIGACCESS Conference of Computers and Accessibility*. Lisbon, Portugal, 26-28 October.

3. Pielot, Martin and **Rello, Luz**. 2015. The Do Not Disturb Challenge A Day Without Notifications. *CHI EA'15: Extended abstracts on Human factors in Computing Systems*. 2015.
4. **Rello, Luz**; Ricardo Baeza-Yates, Horacio Saggion, Clara Bayarri and Simone D. J. Barbosa. 2013. An iOS Reader for People with Dyslexia. *ASSETS 2013: The 15th International ACM SIGACCESS Conference of Computers and Accessibility*. Bellevue, Washington USA, 22-24 October.
5. **Rello, Luz**; Ricardo Baeza-Yates; Horacio Saggion; Stefan Bott; Roberto Carlini; Clara Bayarri; Azuki Gorriz; Saurabh Gupta; Gaurang Kanvinde and Vasile Topac. 2013. DysWebxia 2.0! More Accessible Text for People with Dyslexia *W4A 2013 - The Paciello Accessibility Challenge: The 10th International Cross Disciplinary Conference on Web Accessibility*. May 13-15, 2013, Rio de Janeiro, Brazil.
6. **Rello, Luz**; Clara Bayarri and Azuki Gorriz. 2013. Dyslexia Exercises on my Tablet are more Fun. *W4A 2013 - The Paciello Accessibility Challenge: The 10th International Cross Disciplinary Conference on Web Accessibility*. May 13-15, 2013, Rio de Janeiro, Brazil.
7. Rello, Luz; Bayarri, Clara and Gorriz, Azuki. 2012. What is Wrong with this Word? Dysegxia: a Game for Children with Dyslexia. *ASSETS 2012: The 14th International ACM SIGACCESS Conference of Computers and Accessibility*. Boulder, USA, 22-24 October.
8. Kanvinde, Gaurang; **Rello, Luz** and Baeza-Yates, Ricardo. 2012. IDEAL: a Dyslexic-Friendly eBook Reader. *ASSETS 2012: The 14th International ACM SIGACCESS Conference of Computers and Accessibility*. Boulder, USA, 22-24 October.
9. **Rello, Luz** and Baeza-Yates, Ricardo. 2012. Social Media is not that bad! The Lexical Quality of Social Media. *ICWSM 2012: The 6th International AAAI Conference on Weblogs and Social Media*. Dublin, Ireland, 4-7 June.
10. **Rello, Luz** and Baeza-Yates, Ricardo. 2012. Lexical Quality as a Proxy for Web Text Understandability. *WWW 2012: The 21st International World Wide Web Conference*. Lyon, France, 16-20 April, p. 591-592.

## OTHER PUBLICATIONS

1. **Rello, Luz** and Baeza-Yates, Ricardo. 2012. Optimal Colors to Improve Readability for People with Dyslexia. *Text Customization for Readability, W3C WAI RDWG Online Symposium* November.
2. **Rello, Luz**, Ferraro, Gabriela and Gayo, Iria. 2012. A First Approach to the Automatic Detection of Zero Subjects and Impersonal Constructions in Portuguese. *Procesamiento del Lenguaje Natural*. 49. p. 163-170.
3. **Rello, Luz**. 2012. DysWebxia: A Model to Improve Accessibility of the Textual Web for Dyslexic Users. *Newsletter ACM SIGACCESS Accessibility and Computing*. January.
4. **Rello, Luz** and Baeza-Yates, Ricardo. 2011. Lexical Quality as a Measure for Textual Web Accessibility. *Website Accessibility Metrics, W3C WAI RDWG Online Symposium*. December.
5. **Rello, Luz**; Ferraro, Gabriela and Burga, Alicia. 2011. Error Analysis for the Improvement of Subject Ellipsis Detection. *Procesamiento del Lenguaje Natural*. 47, p. 223-230.
6. Barrios, María Auxiliadora and **Rello, Luz**. 2011. False paraphrase pairs in Spanish for verbs and verb+noun collocations. *Procesamiento del Lenguaje Natural*. 46, p. 107-112.
7. Gayo, Iria and **Rello, Luz**. 2011. El Fenmeno Pro-drop en Portugus Brasileño y Español Peninsular. (Pro-drop phenomenon in Brazilian Portuguese and Peninsular Spanish) *CILC 2011: III Congreso Internacional de Lingüística de Corpus*. Valencia, Spain, 7-9 Abril, 2011.



8. **Rello, Luz** and Gayo, Iria. 2011. Clasificacin y Anotacin de Clases de Sujetos en Portugus. (Classification and Annotation of Subject Ellipsis in Portuguese) *SEL 2011: XL Simposio Internacional y III Congreso de la Sociedad Espaola de Lingüística*. Madrid, Spain, 7-10 February, 2011.
9. **Rello, Luz** and Basterrechea, Eduardo. 2010. Onoma: un conjugador de verbos y neologismos verbales (Onoma: a Conjugator Tool for Verbs and Verb Neologisms) *Procesamiento del Lenguaje Natural*. 45, p. 129-137.
10. **Rello, Luz**. 2009. Términos de color en espaol: Semántica, morfología y análisis lexicográfico. Definiciones y matices semánticos de sus afijos. (Spanish Color Terms: Semantic, Morphological and Lexicographic Analysis). *Diálogo de la Lengua*. I, p. 90-164.
11. **Rello, Luz**. 2009. Una modelización sintáctica formal-funcional para el procesamiento del lenguaje natural. (A Syntactic Formal-Functional Model for Natural Language Processing). *Interlingüística*. 18, p. 920-929.

## BOOKS

1. Álvarez Mellado, Elena; Ayuso de Santos, Daniel; Basterrechea, Eduardo; Borsari, Elisa; Calvo Tello, José; Gutiérrez, César; Ortega, Miguel; de Pablos Lpez, Alejandro; Pérez Ramn, Rubén; **Rello, Luz**; and Ruiz, Aitor. 2012. *Aprende a conjugar el verbo en español (Learn how to conjugate Spanish Verbs)*. Madrid: Molino de Ideas. ISBN: 978-84-937706-1-7.

## Dissertations

1. **Rello, Luz**. 2014. Ph.D. Thesis. DysWebxia. A Text Accessibility Model for People with Dyslexia. Advisors: Ricardo Baeza-Yates and Horacio Saggion. Department of Information and Communication Technologies, Universitat Pompeu Fabra.
2. **Rello, Luz**. 2014. M.S. Thesis. Elliphant: A Machine Learning Method for Identifying Subject Ellipsis and Impersonal Constructions in Spanish. Advisors: Prof. Ruslan Mitkov and Prof. Xavier Blanco. Master Thesis. University of Wolverhampton and Universitat Autnoma de Barcelona.
3. **Rello, Luz**. 2014. B.A. Thesis. Términos de color en espaol: Semántica, morfología y análisis lexicográfico. Definiciones y matices semánticos de sus afijos. (Spanish Color Terms: Semantic, Morphological and Lexicographic Analysis). Advisor: Prof. Fernando Lázaro Mora. Complutense University of Madrid.

## Invited Talks

1. *ChangeDyslexia: Early Detection and Intervention at Large Scale*. DISFAM LatAm (Latin American Congres of Dyslexia), Buenos Aires (Argentina). September 2016.
2. *ChangeDyslexia: Early Detection and Intervention at Large Scale*. FLENI Buenos Aires (Argentina). September 2016.
3. *ChangeDyslexia: Early Detection and Intervention at Large Scale*. Fundacin Telefonica Madrid (Spain). May 2016.
4. *ChangeDyslexia: Early Detection and Intervention at Large Scale*. Carnegie Mellon University, PA (USA). April 2016.
5. *ChangeDyslexia: Early Detection and Intervention at Large Scale*. Universitat Pompeu Fabra, Barcelona (Spain). October 2015.
6. *ChangeDyslexia: Early Detection and Intervention at Large Scale*. University of Washington, WA, (USA). October 2015.

7. *ChangeDyslexia: Early Detection and Intervention at Large Scale*. Microsoft Research. Redmond, WA (USA). October 2015.
8. *Using Artificial Intelligence to Detect and Support Dyslexia*. Department of Education, Madrid (Spain). June 2016.
9. *Using Artificial Intelligence to Detect and Support Dyslexia*. Universidad Complutense de Madrid (Spain). June 2016.
10. *Using Artificial Intelligence to Detect and Support Dyslexia*. Univeristy of Almería, Almería (Spain). May 2016.
11. *Using Artificial Intelligence to Detect and Support Dyslexia*. Letamendi-Forns Foundation, Barcelona (Spain). May 2016.
12. *Using Artificial Intelligence to Detect and Support Dyslexia*. Calatan Association of Dyslexia, Barcelona (Spain). April 2016.
13. *Using Artificial Intelligence to Detect and Support Dyslexia*. DISFAM: Congress of Dyslexia And Family Mallorca (Spain). November 2016.
14. *New solutions for Dyslexia*. City of Arts and Sciences, Valencia (Spain), November 2014
15. *New solutions for Dyslexia. Q & A*. TEDxMadridSalon, Madrid (Spain), November 2013
16. *New solutions for Dyslexia*. TEDxMadrid (Spain), September 2013
17. *¿Qué puede hacer la tecnología digital por la dislexia?* Jornadas Difference, Barcelona, Spain. July 2014.
18. *¿Qué puede hacer la tecnología digital por la dislexia?* ACD (Calatan Asociation of Dyslexia), Barcelona (Spain). April 2014.
19. *¿Qué puede hacer la tecnología digital por la dislexia?* La Asociación Andaluza de Dislexia (ASANDIS) and University of Mágala. March 2014.
20. *¿Qué puede hacer la tecnología digital por la dislexia?* Agadix (Galician Association for Dyslexia), Lugo (Spain). Octubre 2013.
21. *Helping 10% of the people to read and write better*. Carnegie Mellon University, PA (USA). May 2014.
22. *Helping 10% of the people to read and write better*. Telefónica Research, Barcelona (Spain). April 2014.
23. *DysWebxia, a Web Accessibility Model for People with Dyslexia*. University of Cambridge (UK). April 2014.
24. *DysWebxia, a Web Accessibility Model for People with Dyslexia*. Universidad Nacional de Educación a Distancia, Madrid (Spain). September 2013.
25. *DysWebxia, a Web Accessibility Model for People with Dyslexia*. Pontificia Universidade Católica do Rio de Janeiro (Brazil). Abril 2013.
26. *Elliphant: A Machine Learning Method for Identifying Subject Ellipsis and Impersonal Constructions in Spanish*. Universitat Autònoma de Barcelona (Spain). February 2011.
27. *Elliphant: A Machine Learning Method for Identifying Subject Ellipsis and Impersonal Constructions in Spanish*. Universidad de Santiago de Compostela, Santiago de Compostela (Spain). December 2010.
28. *Elliphant: A Machine Learning Method for Identifying Subject Ellipsis and Impersonal Constructions in Spanish*. Universitat Pompeu Fabra, Barcelona (Spain). December 2010.

29. *Elliphant: A Machine Learning Method for Identifying Subject Ellipsis and Impersonal Constructions in Spanish*. Universidad Politécnica de Madrid (Spain). November 2010.
30. *Elliphant: A Machine Learning Method for Identifying Subject Ellipsis and Impersonal Constructions in Spanish*. Universidad Nacional de Educación a Distancia, Madrid (Spain). September 2010.
31. *Los secretos del español. La deconstrucción del verbo (The Secrets of Spanish. The verb Deconstruction)*, CosmoCaixa, Madrid (Spain). February 2010.

## Grants

1. Early Dyslexia Detection and Support at Scale to Help Students Succeed in School National Science Foundation Principal Investigator, June 2016, \$500,000 Co-Principal Investigator with Jeffrey P. Bigham (PI)
2. Change Dyslexia, seed-stage social entrepreneurship project. “Obra Social La Caixa”. Principal Investigator (PI), May 2016, \$25,000

## Tools

- **DyTECTIVE**. The first online detector for dyslexia and reading/writing difficulties for Spanish mixing computer games and artificial intelligence. Evaluated with more than **10.000 children** from more than 100 schools and specialized and medical centers of Chile, Colombia and Spain. Patent pending. Winner of the Best Demo Award in ASSETS 2015. Semi-finalist of the Internacional Competition de United Arab Emirates UAE AI & Robotics Award for Good (semi-finalist, 7th position among 664 entries). At Carnegie Mellon University w/ Jeffrey P. Bigham, Miguel Ballesteros, Abdullah Ali & Miquel Serra.
- **Piruletras** integrates research on linguistics, NLP and an evaluation with children. It is the first game the support the writing of children with dyslexia. Developed by the Cookie Cloud team (founding member). Adopted in the curriculum of specialized centers. Available for iOS in App Store with **33,000 downloads** in 70 countries. Delegates Award of The Paciello Group Web Accessibility Challenge and Winner of the first prize (Education Category) of the Vodafone Foundation Mobile for Good Europe Awards 2013. At Cookie Cloud w/ Clara Bayarri & Azuki Górriz.
- **DysWebxia**. The following applications integrate the results of my PhD thesis, a model called DysWebxia, to make texts more readable for people with dyslexia.
  1. **IDEAL eBook Reader** the first eBook reader with settings for people with dyslexia. Available for Android in Google Play with **35,000 downloads**. Developed by Accessible Systems India (Mumbai). Finalist Vodafone Foundation Smart Accessibility Awards. At Universitat Pompeu Fabra w/ Gaurang Kanvinde & Saurabh Gupta.
  2. **Text4All**, a web service that includes personalized settings for people with dyslexia. Finalist in The Paciello Group Web Accessibility Challenge. Developed by Vasile Topac ar University of Timisoara, Romania.
  3. **DysWebxia**, a plug-in Chrome. At Universitat Pompeu Fabra/Carnegie Mellon University w/ Roberto Carlini, Ricardo Baeza-Yates & Jeffrey P. Bigham.

## Language Resources

Language resources to study dyslexia (DysList) and to make more accessible texts (CASSA).

DysList, a list of dyslexic errors annotated with linguistic, phonetic and visual features

- Spanish: <http://goo.gl/R8i6em>

- German: <http://goo.gl/X16w6S>

CASSA is composed of lists of synonyms ranked by their complexity in Spanish. We used Spanish OpenThesaurus and Google Books Ngram Corpus to create CASSA resource.

- CASSA resource (synonyms within their context disambiguation): <http://goo.gl/IpDKuh>
- Simple CASSA: <http://goo.gl/HJHEKC>

I create an annotated two corpus with annotated Explicit Subjects, Zero-pronouns and Impersonal Constructions (ESZIC). Both corpora have texts from two genres: legal (laws) and health (psychiatric papers).

- Spanish <http://goo.gl/WsjVZ1>
- Brazilian Portuguese <http://goo.gl/SAUVab>

During my undergraduate I read the whole Spanish Royal Academy Dictionary (while I was doing an antdology for a company I used to work to) and extracted manually all the Spanish Color Names.

- A List of Spanish Color Names: <http://goo.gl/Z5j9sF>

## Selected Media

### 1. TV and videos

- TVE LA 2 -Second Spanish TV channel - Reportage about Dytective & Piruletras <http://goo.gl/OX4eRG>
- TVE La Noche Sexta - Most watched TV show at night time - Interview about dyslexia <http://goo.gl/vRaOPL>
- CNN - En Español - U.S and South America - 2016 <https://goo.gl/eQRwKr>
- TVE - Main Spanish TV channel - 2015 <https://goo.gl/iSzQEn>
- TEDxMadrid talk: New Solutions for Dyslexia - 2013 <https://goo.gl/Q2UZkG>
- TVE LA 2 -Second Spanish TV channel - Reportage about TedX <https://goo.gl/vXMGUU>
- TVE LA 2 -Second Spanish TV channel - Debate - 2013 <http://goo.gl/yPt8qz>
- TV3 - Main Catalan TV Channel - Reportage due to award by the European Union - 2013 <http://goo.gl/hXrtiZ>
- Vodafone video - Winner of the Vodafone Foundation Mobile for Good Awards - 2013 <http://goo.gl/iV6ZF5>

### 2. TV and videosPress

- ABC - National Spanish Newspaper - Article - 2016 <http://goo.gl/iXtRWx>
- EL PAIS - Main Spanish Newspaper - Article - 2015-16 <http://goo.gl/xopP21>
- EL PAIS - Main Spanish Newspaper - Article - 2013 <http://goo.gl/hsSDWR>
- Scientific American (in Spanish) - Article <http://goo.gl/wmzaW7>
- TNW - Article (English) - 2013 <http://goo.gl/QfwI0d>
- Materia - Main Science Outreach Journal in Spain - 2013 <http://goo.gl/83TFTj>
- EL PAIS - Main Spanish Newspaper - Article - 2015 <http://goo.gl/HoKx0G>
- La Vanguardia - Main Catalan Newspaper - 2013 <http://goo.gl/FmyfbC>
- 20Minutos - Spanish Nespaper - Article 2013 <http://goo.gl/7at5t2>
- El Mundo - Second Spanish Newspaper - Article 2013 <http://goo.gl/QgJzkg>

- Daisy.org - Article (English) 2013 <http://www.daisy.org/stories/luz-reлло>
- Diario Ara - Second Catalan Newspaper - Article 2012 <http://goo.gl/asn2jo>
- IBERIA Magazine - Main airline in Spain <http://goo.gl/xmTONK>
- La Vanguardia - Main Catalan Newspaper - 2013 <http://goo.gl/s5aHH4>

### 3. Radio

- Onda Cero - Spanish National Radio - 2013 <http://goo.gl/N9KQX1>
- Cadena Ser - Spanish National Radio - 2013 <http://goo.gl/JkPPJE>
- La Xarxa - Local Radio in Barcelona - 2012 <http://goo.gl/ZDKrr6>
- RNE - National and main Spanish Radio 2013 <http://goo.gl/dzVMYN>
- Onda Cero - Spanish National Radio - 2016 <http://http://goo.gl/hNmQt6>

## Professional Service

- Invited expert of the W3C Research and Development Working Group of the Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C) (2012-2015).
- Technical Advisor of Project Difference, a pilot project with schools in Catalonia to support reading and writing (2014-2015).
- Erasmus Mundus NLP HLT Master Course Representative (2011-2013).
- Founding Member and Associate Editor (2008-2012) of *Dilogo de la Lengua*, Journal of Linguistics.
- Founding Member and Secretary (2007) of the Association of Young Philology Researchers.

### 1. W4A

- Program Co-Chair 2015
- Demo Co-Chair 2014
- Google Student Scholarship Co-Chair 2013

### 2. ASSETS

- Program Committee 2015, 2016
- Student Research Competition Judge 2015

### 3. DigitalHealth

- Program Committee 2015, 2016

### 4. W3C

- Program Committee TC4R (Text Customization for Readability - W3C Symposium) 2012
- Program Committee E2R (Easy to Read on the Web - W3C Symposium) 2013
- Program Committee eLearning W3C Symposium 2013

### 5. IHC (Brazil)

- Program Committee 2013, 2014

### 6. Workshop Organizer

- NAACL 2013 Workshop on Natural Language Processing for Improving Textual Accessibility (NLP4ITA 2012) w/ Ricardo Baeza-Yates, Horacio Saggion
- LREC 2012 Workshop on Natural Language Processing for Improving Textual Accessibility (NLP4ITA 2012) w/ Ricardo Baeza-Yates, Paloma Moreda, Luz Rello, Horacio Saggion, Lucia Specia

7. Reviewer of Conference Publications (not on Program Committee)
  - CHI 2014, CHI 2015
  - IJCNLP 2013
  - ACL 2011
  - CICLing 2010, 2011, 2012, 2013
  - RANLP 2009, 2011, 2013
8. Student Volunteer
  - SPIRE 2010
9. Professional Memberships
  - ACM: Association for Computing Machinery (2010-)
10. Honorable Memberships
  - Honorable member of Coordinated Dyslexia and Learning Difficulties Associations of Spain. (2015-)
  - Honorable member the Association Dyslexia without Frontiers (2016-)

## Teaching Experience

1. **Usability, Design Interaction and User Experience Masters.** University Pompeu Fabra, School of Management. March 2015.
2. **Information Technologies.** University Pompeu Fabra, Computer Science. Spring 2014.
3. **Information Retrieval Applications.** University Pompeu Fabra, Computer Science. Spring 2014.
4. **Classical Latin.** Private and small groups. Virgen de Mirasierra School, Madrid (Spain) 2002 - 2004.

## Students

- Current Ph.D. Student
  - Maria Rauschenberger (co-advisor with Ricardo Baeza-Yates, Universitat Pompeu Fabra, 2015-)
- Undergraduate Research Assistant
  - Sergi Subirats (2015)
- College Students
  - Ona Hansá (2014)
  - Caroline Muela (2014)

## Volunteering Experience

1. South African School of English (SASE), Cape Town, South Africa, Sept. 2008.
2. YMCA Chaperone, Camp Jones Gulch, La Honda, California, USA, July 2007.

## Others

I wrote several pieces of creative writing and a theatre play (Snowwhite and rip out your eyes out) which was performed in Pablo Iglesias Theatre in Madrid (premiere on the 4th of December, 2005). In 2009 I worked as an art model and during college I was a member of the debate society. I also like designing ambigrams, painting (reproducing Mirós paintings), cooking and traveling to watch wild animals in their habitats.

Last updated: May 3, 2017