

# Alberto Poncelas Rodriguez

✉ aponcelas2@hotmail.com

🌐 <https://alberto-poncelas.github.io>

🌐 <https://ie.linkedin.com/in/albertoponcelas/en>



## Work Experience

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- Oct 2019 – Present • **Postdoctoral Researcher** in ADAPT Centre, Ireland.  
Research is in the area of Machine Translation and Natural Language Processing. Investigation of indirect translation and sentiment classification. Technologies: Python, Pandas, Numpy, Spacy, Keras.
- Oct 2015 – Sep 2019 • **PhD Researcher** in ADAPT Centre, Ireland.  
Research is in the area of Machine Translation and Natural Language Processing. Use of data-selection techniques and synthetic data generation for improving machine-translation. Technologies: OpenNMT, Python, Scala, C language.
- Aug 2013 – Sep 2015 • **Big Data Engineer** in BEEVA.  
Projects involved: (i) Development of a tool for calculating the risks involved in the granting of loans; (ii) Data exploration using Spark and Scala; (iii) A client segmentation analysis using data mining techniques. Technologies: R and Hive; and (iv) Development of a tool based in intelligent agent ecosystem. Technologies: node.js and Neo4j.
- Jun 2012 – Jul 2012 • **Software Developer** in LKS.  
Use of Oracle PL/SQL, Oracle Forms and Oracle Reports technologies
- May 2011 – Aug 2011 • **Web Developer** in Sectoro4 Consultoría Y Soluciones Informáticas S.L.  
Web application development using the following technologies: PHP (CodeIgniter framework), HTML, jQuery, AJAX, CSS, MySQL

## Education

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- 2015 – 2019 • **Ph.D., Machine Translation** in Dublin City University, Ireland.  
Research in the area of Machine Translation.  
Thesis title: *Improving Transductive Data Selection Algorithms for Machine Translation*
- 2012 – 2013 • **M.Sc., Machine Learning** in University of the Basque Country, Spain.  
Thesis title: *Preprocess and data analysis techniques for affymetrix DNA microarrays using bioconductor: a case study in Alzheimer disease*
- 2009 – 2010 • **Erasmus study year** in École pour l'informatique et les techniques avancées (EPITA), France
- 2004 – 2011 • **B.Sc. Computer Science** in University of the Basque Country, Spain.

## Certificates and Courses

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2016 • **Machine learning** Coursera  
<https://www.coursera.org/account/accomplishments/certificate/5XKFZ85CN8U8>

2014 • **Data Science Specialization** Coursera  
<https://www.coursera.org/account/accomplishments/specialization/3QE0AonkEe>

## Teaching Experience

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- 2020 • **Teaching** in Dublin City University.  
Machine Learning  
Statistical Machine Translation
- **Teaching** in Trinity College Dublin.  
Interlingual Technologies: Machine Translation lecture.
- 2019 • **Teaching Assistant** in Dublin City University.  
Statistical Machine Translation: teaching, coding/evaluation of lab exercises and grading.
- 2006 • **Teaching Assistant** in University of the Basque Country.  
Data Structures and Algorithms: teaching, coding/evaluation of lab exercises and grading.
- 2005–2008 • **Teaching Assistant** in University of the Basque Country.  
Programming I: teaching, coding/evaluation of lab exercises and grading.

## Research Publications

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- 1 **Poncelas, A.**, Aboomar, M., Buts, J., Hadley, J., & Way, A. (2020). A Tool for Facilitating OCR Postediting in Historical Documents. In *Workshop on Language Technologies for Historical and Ancient Languages, LT4HALA* (pp. 47–51). Marseille, France.
- 2 **Poncelas, A.**, Buts, J., Hadley, J., & Way, A. (2020). Using Multiple Subwords for Improving English–Esperanto Automated Literary Translation Quality. In *Proceedings of the 3rd Workshop on Technologies for MT of Low Resource Languages (LoresMT)* (pp. 108–117). Suzhou, China.
- 3 **Poncelas, A.**, de Buy Wenniger, G. M., & Way, A. (2020). Improved feature decay algorithms for statistical machine translation. *Natural Language Engineering*, 1–21.
- 4 **Poncelas, A.**, Lohar, P., Way, A., & Hadley, J. (2020). The Impact of Indirect Machine Translation on Sentiment Classification. In *Proceedings of the 14th Conference of the Association for Machine Translation in the Americas, AMTA* (pp. 78–88). Orlando, Florida.
- 5 **Poncelas, A.**, Pidchamook, W., Liu, C.-H., Hadley, J., & Way, A. (2020). Multiple Segmentations of Thai Sentences for Neural Machine Translation. In *Proceedings of The 1st Joint Spoken Language Technologies for Under-resourced languages and Collaboration and Computing for Under-Resourced Languages Workshop, SLTU-CCURL* (pp. 240–244). Marseille, France.
- 6 Popović, M. & **Poncelas, A.** (2020a). Extracting correctly aligned segments from unclean parallel data using character n-gram matching. In *Konferenca Jezikovne tehnologije in digitalna humanistika* (pp. 74–80). Ljubljana, Slovenia.

- 7 Popović, M. & **Poncelas, A.** (2020b). Neural Machine Translation between similar South-Slavic languages. In *Proceedings of the Fifth Conference on Machine Translation (WMT 2020)* (pp. 428–434).
- 8 Popović, M., **Poncelas, A.**, Way, A., & Bakarić, M. B. (2020). Neural Machine Translation for Translating into Croatian and Serbian. In *Proceedings of the Seventh Workshop on NLP for Similar Languages, Varieties and Dialects* (pp. 102–113). Barcelona, Spain.
- 9 Soto, X., Shterionov, D., **Poncelas, A.**, & Way, A. (2020). Selecting Backtranslated Data from Multiple Sources for Improved Neural Machine Translation. In *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics, ACL* (pp. 3898–3908). Seattle, USA.
- 10 Way, A., Haque, R., Xie, G., Gaspari, F., Popović, M., & **Poncelas, A.** (2020a). Facilitating Access to Multilingual COVID-19 Information via Neural Machine Translation. *arXiv preprint arXiv:2005.00283*.
- 11 Way, A., Haque, R., Xie, G., Gaspari, F., Popović, M., & **Poncelas, A.** (2020b). Rapid Development of Competitive Translation Engines for Access to Multilingual COVID-19 Information. *Informatics*, 7(2), 1–21.
- 12 **Poncelas, A.** (2019). *Improving transductive data selection algorithms for machine translation* (Doctoral dissertation, Dublin City University).
- 13 **Poncelas, A.**, de Buy Wenniger, G. M., & Way, A. (2019a). Adaptation of Machine Translation Models with Back-translated Data using Transductive Data Selection Methods. In *20th International Conference on Computational Linguistics and Intelligent Text Processing, CICLING*. La Rochelle, France.
- 14 **Poncelas, A.**, de Buy Wenniger, G. M., & Way, A. (2019b). Transductive Data-Selection Algorithms for Fine-Tuning Neural Machine Translation. In *Proceedings of The 8th Workshop on Patent and Scientific Literature Translation* (pp. 13–23). Dublin, Ireland.
- 15 **Poncelas, A.**, Popović, M., Shterionov, D., de Buy Wenniger, G. M., & Way, A. (2019). Combining SMT and NMT Back-translated Data for Efficient NMT. In *Proceedings of Recent Advances in Natural Language Processing (RANLP)* (pp. 922–931). Varna, Bulgaria.
- 16 **Poncelas, A.**, Sarasola, K., Dowling, M., Way, A., Labaka, G., & Alegria, I. (2019). Adapting NMT to caption translation in Wikimedia Commons for low-resource languages. *Procesamiento del Lenguaje Natural*, 63, 33–40.
- 17 **Poncelas, A.** & Way, A. (2019). Selecting Artificially-Generated Sentences for Fine-Tuning Neural Machine Translation. In *Proceedings of the 12th International Conference on Natural Language Generation, INLG* (pp. 219–228). Tokyo, Japan.
- 18 Vanmassenhove, E., Moryossef, A., **Poncelas, A.**, Way, A., & Shterionov, D. (2019). ABI Neural Ensemble Model for Gender Prediction Adapt Bar-Ilan Submission for the CLIN29 Shared Task on Gender Prediction. In *Computational Linguistics of the Netherlands CLIN29*. Groningen, The Netherlands.
- 19 Dowling, M., Lynn, T., **Poncelas, A.**, & Way, A. (2018). SMT versus NMT: Preliminary comparisons for Irish. In *Technologies for MT of Low Resource Languages (LoResMT 2018)* (pp. 12–20). Boston, USA.
- 20 **Poncelas, A.**, de Buy Wenniger, G. M., & Way, A. (2018). Data Selection with Feature Decay Algorithms Using an Approximated Target Side. In *The 15th International Workshop on Spoken Language Translation (IWSLT 2018)* (pp. 173–180). Bruges, Belgium.
- 21 **Poncelas, A.**, Maillette de Buy Wenniger, G., & Way, A. (2018). Feature Decay Algorithms for Neural Machine Translation. In *Proceedings of the 21st Annual Conference of the European Association for Machine Translation, EAMT* (pp. 239–248). Alicante, Spain.

- 22 **Poncelas, A.**, Shterionov, D., Way, A., de Buy Wenniger, G. M., & Passban, P. (2018). Investigating Backtranslation in Neural Machine Translation. In *Proceedings of the 21st Annual Conference of the European Association for Machine Translation, EAMT* (pp. 249–258). Alicante, Spain.
- 23 **Poncelas, A.**, Way, A., & Sarasola, K. (2018). The ADAPT System Description for the IWSLT 2018 Basque to English Translation Task. In *International Workshop on Spoken Language Translation (IWSLT)* (pp. 72–82). Bruges, Belgium.
- 24 Silva, C. C., Liu, C.-H., **Poncelas, A.**, & Way, A. (2018). Extracting In-domain Training Corpora for Neural Machine Translation Using Data Selection Methods. In *Proceedings of the Third Conference on Machine Translation: Research Papers, WMT* (pp. 224–231). Brussels, Belgium.
- 25 Dzendzik, D., **Poncelas, A.**, Vogel, C., & Liu, Q. (2017). ADAPT Centre Cone Team at IJCNLP-2017 Task 5: A Similarity-Based Logistic Regression Approach to Multi-choice Question Answering in an Examinations Shared Task. In *Proceedings of the IJCNLP 2017, Shared Tasks* (pp. 67–72). Taipei, Taiwan.
- 26 Liu, C.-H., Groves, D., Hayakawa, A., **Poncelas, A.**, & Liu, Q. (2017). Understanding Meanings in Multilingual Customer Feedback. In *Proceedings of First Workshop on Social Media and User Generated Content Machine Translation (Social MT 2017)*. Prague, Czech Republic.
- 27 Liu, C.-H., Moriya, Y., **Poncelas, A.**, & Groves, D. (2017). IJCNLP-2017 Task 4: Customer Feedback Analysis. In *Proceedings of the IJCNLP 2017, Shared Tasks* (pp. 26–33). Taipei, Taiwan.
- 28 **Poncelas, A.**, Maillette de Buy Wenniger, G., & Way, A. (2017). Applying N-gram Alignment Entropy to Improve Feature Decay Algorithms. *The Prague Bulletin of Mathematical Linguistics*, 108(1), 245–256.
- 29 **Poncelas, A.**, Way, A., & Toral, A. (2016). Extending Feature Decay Algorithms Using Alignment Entropy. In *International Workshop on Future and Emerging Trends in Language Technology, FETLT* (pp. 170–182). Springer. Seville, Spain.
- 30 **Poncelas, A.** (2013). *Preprocess and Data Analysis Techniques for Affymetrix DNA Microarrays using Bioconductor: a case study in Alzheimer disease* (Master's thesis, University of the Basque Country).

## Presentations

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LoResMT 2020	• <b>Using Multiple Subwords for Improving English-Esperanto Automated Literary Translation Quality Online</b>
AMTA 2020	• <b>The Impact of Indirect Machine Translation on Sentiment Classification Online</b>
Mots/Machines 2020	• <b>The sentiment classification on indirect translation</b> (in French) Brest, France
PSLT 2019	• <b>Transductive Data-Selection Algorithms for Fine-Tuning Neural Machine Translation</b> Dublin, Ireland
RANLP 2019	• <b>Combining SMT and NMT Back-Translated Data for Efficient NMT</b> Varna, Bulgaria
CICLING 2019	• <b>Adaptation of Machine Translation Models with Back-translated Data using Transductive Data Selection Methods</b> La Rochelle, France

## Presentations (continued)

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| SocialMT 2017 | • <b>Understanding Meanings in Multilingual Customer Feedback</b> Prague, Czech Republic  |
| IJCNLP 2017   | • <b>IJCNLP-2017 task 4: Customer feedback analysis Workshop presentation</b> Taipei, Taiwan  |
|               | • <b>A Similarity-Based Logistic Regression Approach to Multi-choice Question Answering in an Examinations Shared Task</b> Taipei, Taiwan |
| FETLT 2016    | • <b>Extending feature decay algorithms using alignment entropy</b> Sevilla, Spain  |

## Miscellaneous

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### Professional services

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| 2021 | • <b>European Chapter of the Association for Computational Linguistics (EACL)</b> Reviewer        |
| 2020 | • <b>LoResMT (AAACL 2010)</b> Reviewer  |
|      | • <b>Post-Editing in Modern-Day Translation (PEMDT1)</b> Reviewer                                 |
|      | • <b>Transactions on Asian and Low-Resource Language Information Processing (TALLIP)</b> Reviewer |
|      | • <b>Machine Translation journal</b> Reviewer   |
|      | • <b>ACL 2020</b> Reviewer  |
| 2019 | • <b>MTSummit 2019</b> PC member / Proceedings chair  |
|      | • <b>LoResMT (MTSummit 2019)</b> PC member / Reviewer   |
|      | • <b>RANLP 2019</b> PC member / Reviewer  |
|      | • <b>Language Resources and Evaluation (LREV)</b> Reviewer  |
| 2018 | • <b>LoResMT (AMTA 2018)</b> Reviewer   |
| 2017 | • <b>Cupral Workshop (IJCNLP 2017)</b> Reviewer   |
|      | • <b>Customer Feedback Analysis Shared Task (IJCNLP 2017)</b> Co-organizer / Reviewer             |
| 2015 | • <b>DL4MT Winter School: Deep Learning for Machine Translation</b> volunteer                     |

### Grants and Awards

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| 2018        | • President's Awards for Engagement (nominated).                                     |
| 2017        | • School of computing travel grant   |
|             | • "Multi-choice Question Answering in Examinations" (IJCNLP 2017) Shared task winner |
| 2015 – 2019 | • Science Foundation Ireland (SFI). PhD funded by SFI through the ADAPT Centre.      |
| 2009 – 2010 | • Erasmus Scholarship.   |

### Scientific outreach

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|------|---|
| 2010 | • <b>Rapid Development of Competitive Translation Engines for Access to Multilingual COVID-19 Information</b> |
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## Miscellaneous (continued)

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2017 – 2018 • My Thesis in 3 in French

2016 – 2019 • DCU Research Day

## Volunteering Experience

2017 – 2019 • **Coordinator** All Ireland Linguistics Olympiad (AILO) and International Linguistics Olympiad (2017)

2018 • **Spanish Teacher**

2016 • **Intercultural Ambassador.**

## Languages

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- Native: Spanish
- Proficiency level: English
- Intermediate level: French, Basque
- Basic level: Japanese, Serbian, German, Italian