# Franco Salvador, Marc



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#### Personal information

Nationality | Spanish

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Websites | LinkedIn · Google Scholar

#### Vocational area

R&D in Multilingual Data Science, Analytics, and Mining  $\cdot$  Machine and Deep Learning  $\cdot$  Information Retrieval  $\cdot$  Natural Language Processing

#### Education

2013–2017 Doctor of Philosophy (PhD), Computer Science, Universitat Politècnica de València, Spain

Final score: Excellent with cum laude distinction

PhD thesis: A Cross-domain and Cross-language Knowledge-based Representation of Text and its

Meaning

Advisor: Paolo Rosso

2011–2013 Master of Science (MSc), Artificial Intelligence, Pattern Recognition

and Digital Image, Universitat Politècnica de València, Spain

Avg. score: 8.7/10

MSc thesis: Cross-Language Plagiarism Detection using a Multilingual Semantic Network

Score: 10/10 - Cum laude Advisor: Paolo Rosso

2006–2011 Bachelor of Science (BSc), Computer Science Engineering (5-year de-

gree), specialization in Artificial Intelligence, Universitat Politècnica de València, Spain

Avg. score: 7/10

BSc final project: Voice-based web surfing

Score: 10/10

Advisor: Carlos D. Martínez Hinarejos

## Professional Experience

Since May 2018	Principal Research Scientist at Symanto, Valencia (Spain), https://www.symanto.net/
Apr. 2017 –	Reference: Dr. Yassine Benajiba, Chief Scientist - e-mail: yassine.benajiba@symanto.net  Innovation Lead at Symanto Group, Valencia (Spain), https://www.symanto.
Apr. 2018	net/
Dec. 2016 – Apr. 2017	Reference: Dr. Yassine Benajiba, Director of Innovation - e-mail: yassine.benajiba@symanto.net  Data scientist at Symanto Group, Valencia (Spain), https://www.symanto.net/
Sep. 2016 – Nov. 2016	Reference: Dr. Yassine Benajiba, Director of Innovation - e-mail: yassine.benajiba@symanto.net  Research fellow at Data and Web Science Group, Universität Mannheim,  Mannheim (Germany), http://dws.informatik.uni-mannheim.de/en/home/
	Funded by DAAD (German Academic Exchange Service) in accordance with the DAAD scholarship program "STIBET-Doktoranden".
June 2016 – Aug. 2016	Reference: Dr. Simone Paolo Ponzetto, Full Professor - e-mail: simone@informatik.uni-mannheim.de  Data scientist at Symanto Group, Nuremberg (Germany), https://www.
Aug. 2010	symanto.net/ Reference: Dr. Yassine Benajiba, Director of Research - e-mail: yassine.benajiba@symanto.net
July 2014 – May 2016	Senior technician at Pattern Recognition and Human Language Technology (PRHLT) Research Center - Universitat Politècnica de València, Valencia (Spain),
	http://www.prhlt.upv.es/
	Funded by:
	The Spanish Ministry of Economy and Competitiveness 3-year R&D project (TIN2015-71147-C2-1-P) SOMEMBED - SOcial Media language understanding - EMBEDing contexts.
	The Spanish Ministry of Economy and Competitiveness 3-year R&D project (MEC TIN2012-38603-C02-01) DIANA-APPLICATIONS - Finding Hidden Knowledge in Text.
	Reference: Dr. Paolo Rosso, Associate Professor - Phone: $(+34)$ 96 387 7007 Ext.73571 - e-mail: prosso@dsic.upv.es URL: users.dsic.upv.es/ $\sim$ prosso/
Apr. 2014 –	<b>Technical specialist</b> at Itálica Research Group - Universidad de Sevilla, Seville
June 2014	(Spain), http://www.lsi.us.es/italica/
	Funded by the Spanish Ministry of Economy and Competitiveness 3.5-year R&D project (TIN2011-14726-E) Destilado de opiniones desde contenidos generados por usuarios.
	Reference: Dr. José Antonio Troyano Jímenez, Associate Professor - Phone: $(+34)$ 95 45 52777 - e-mail: troyano@us.es URL: www.lsi.us.es/ $\sim$ troyano/
Apr. 2013 –	Research fellow at Linguistic Computing Laboratory, Computer Science De-
Mar. 2014	partment, Sapienza University of Rome, Rome (Italy), http://lcl.uniroma1.
	it/index.html
	Funded by the 5-year ERC Starting Grant No. 259234 MultiJEDI: Multilingual Joint word sEnse DIsambiguation.
	Reference: Dr. Roberto Navigli, Associate Professor - Phone: $(+39)$ 064 925 51 61 - e-mail: navigli@di.uniroma1.it URL: www.users.di.uniroma1.it/ $\sim$ navigli/
Aug. 2012 –	Senior technician at Natural Language Engineering Lab, Department of In-
Dec. 2012	formation Systems and Computing, Universitat Politècnica de València, Valencia
	(Spain), http://users.dsic.upv.es/grupos/nle/
	Funded by the Spanish Ministry of Education and Science 4-year R&D project (CICYT TIN2009-13391-C04-03) TEXT-ENTERPRISE 2.0: Text comprehension techniques applied to the needs of the Enterprise 2.0.
	Reference: Dr. Paolo Rosso, Associate Professor - Phone: (+34) 96 387 7007 Ext.73571 - e-mail: prosso@dsic.upv.es

#### Languages

Spanish Mother tongue Catalan Mother tongue

English | Professional working proficiency

Italian Basic competence

#### Achievements and Awards

2018 PhD thesis award for the best dissertation in the field of Information Retrieval.

Awarded by the 5th Spanish Conference in Information Retrieval (CERI 2018).

2017 Cum laude PhD thesis: A Cross-domain and Cross-language Knowledge-based Representation of Text and its Meaning.

First position in the International Workshop on Semantic Evaluation (SemEval) 2016, task 3: community question answering - subtask B: question-question similarity.

Winner of the MAVIR 2013 national prize to the best M.Sc. thesis on Language Technologies applied to Intelligent Systems of Access to the Multilingual and Multimedia Information.

Awarded by MAVIR Consortium. Ssponsored by Córex and DAEDALUS.

2013 Cum laude MSc thesis: Cross-language Plagiarism Detection using a Multilingual Semantic Network.

2013 Third prize winner in the poster session of PROMISE Winter School 2013.

## Research Internships

2015 National Institute of Astrophysics, Optics and Electronics (INAOE), Puebla, Mexico

Mentor: Dr. Manuel Montes-y-Gómez

Funded by the Web Information Quality Evaluation Initiative (WIQ-EI) IRSES 4-year project (grant no. 269180) within the FP 7 Marie Curie People Framework.

Date: Feb. - Mar. 2015

2014 International Institute of Information Technology (IIIT), Hyderabad, India

\*During this internship I have been also research intern at Veooz - URL: www.veooz.com

Mentor: Prof. Dr. Vasudeva Varma

Funded by the Web Information Quality Evaluation Initiative (WIQ-EI) IRSES 4-year project (grant no. 269180) within the FP 7 Marie Curie People Framework.

Date: Oct - Dec. 2014

2012 Computational Research Center (CIC), Mexico D.F., Mexico & National Institute of Astrophysics, Optics and Electronics (INAOE), Puebla, Mexico

Mentor: Prof. Dr. Grigori Sidorov & Dr. Manuel Montes-y-Gómez

Funded by the Web Information Quality Evaluation Initiative (WIQ-EI) IRSES 4-year project (grant no. 269180) within the FP 7 Marie Curie People Framework.

Date: Nov - Dec. 2012

#### **Tutorials**

Dec. 2014 | Knowledge Graph-based Natural Language Processing.

International Workshop on Data and Text Analytics (DATA 2014), New Delhi, India

#### Invited talks

Jan. 2016	Knowledge Graph-based Cross-language and Domain Natural Language Processing.  Symanto Group, Nuremberg, Germany.
Feb. 2015	Semantic Relatedness using Word Representations in Vector Space.  National Institute of Astrophysics, Optics and Electronics (INAOE). Puebla, Mexico.
Jan. 2015	Learning text and word representation models.  Language and Computation Center (CLiC), Universitat de Barcelona (UB), Barcelona, Spain
Nov. 2014	Using Knowledge graphs for Natural Language Processing.  International Institute of Information Technology (IIIT), Hyderabad, India
Oct. 2014	Knowledge-based Cross-language Natural Language Processing. South Asian University (SAU). New Delhi, India.
Nov. 2012	Graph-based Similarity Analysis: A New Approach to Cross-Language Plagiarism Detection.  Computational Research Center (CIC). National Polytechnic Institute. Mexico D.F., Mexico.
Dec. 2012	Cross-language Plagiarism Detection using a Multilingual Semantic Network.  National Institute of Astrophysics, Optics and Electronics (INAOE). Puebla, Mexico.

#### **Doctoral Consortium**

June 2014 | Knowledge-based Cross-language Natural Language Processing.

Presented at V Jornadas de la Red Temática en Tratamiento de la Información Multilingüe y Multimodal (TIMM), Cazalla de la Sierra (Sevilla), Spain

## Editorial Services to Scholarly Publications

Reviewer for several journals including: Artificial Intelligence; Information Sciences; Expert Systems With Applications; Journal of Intelligent and Fuzzy Systems; Language Resources and Evaluation; Natural Language Engineering.

## Organising Committees

I have been member of the following Organising committees: Publication Co-Chair at \*SEM 2015 (Joint Conference on Lexical and Computational Semantics).

## **Program Committees**

I served as member of the following program and scientific committees: ACL 2018 (Annual Meeting of the Association for Computational Linguistics), ACL 2017, IberEval@SEPLN 2018, TextGraphs@ACL 2017, KES 2017 (International Conference on Knowledge-Based and Intelligent Information & Engineering Systems), SemEval 2016 Task 3 - Community Question Answering (International Workshop

on Semantic Evaluation 2016), TIR@DEXA 2017 (International Workshop on Text-based Information Retrieval), TIR@DEXA 2016, TIR@DEXA 2015, TIR@DEXA 2014, DATA-CCIP 2015 (Special Session on DATA in International Conference on Cognitive Computing and Information Processing), SEPLN 2015 (International Workshop on Embeddings and Semantics at Spanish Conference on NLP 2015), DATA 2014 (International Workshop on Data and Text Analytics) .

#### Courses

Feb. 2013	PROMISE Winter School 2013 - Bridging between Information Retrieval and
	Databases.
	Bressanone, Italy. http://www.promise-noe.eu/events/winter-school-2013/
Jul. 2009	UIMP English Language Immersion Course - Intensive English Course with Native Teachers and Monitors.
	Barcelona, Spain. http://www.uimp.es/inmersion/inmersion.html

### Certifications

Jan. 2016	Cambridge First Certificate in English (FCE) - B2 level of the Common European
	Framework of Reference for Languages (CEFR)
	University of Cambridge
Jan. 2016	Elemental Grade in Valencian - B1 level of the Common European Framework of Reference for Languages (CEFR)
	Generalitat Valenciana
Dec. 2015	Occupational safety: laboratory researcher profile (register number: $15/45480$ )
	Universitat Politècnica de València

## Competences

Artificial Intelligence	Machine learning, deep learning, data mining, natural language processing, information retrieval, machine translation
Data Mining & Machine Learning	Weka, Gensim, TensorFlow, Deeplearning4j, Theano, Keras
Programming Languages	C, C++, Java, Python, Bash, Haskell, Prolog
Software Development	Eclipse, Visual Studio, Maven, Git, Subversion
Big Data, DB	Spark, SQL, Oracle

#### **Publications**

- 2018 M. Franco-Salvador, and Luis A. Leiva. Multilingual phrase sampling for text entry evaluations. In *International Journal of Human-Computer Studies*, vol. 113, pp. 15-31. DOI: 10.1016/j.ijhcs.2018.01.006 (Impact Factor: 2.13)
- 2018 R. M. Giménez-Pérez, M. Franco-Salvador, and P. Rosso. String Kernels for Polarity Classification: A Study across Different Languages. In Proc. of the 23rd International Conference on Natural Language & Information Systems (NLDB 2018), Paris, France, 13-15 June, 2018, pp. 489–493. (CORE C)
- M. A. Álvarez Carmona, M. Franco-Salvador, M. Montes-Y-Gómez, P. Rosso, L. Villaseñor-Pineda, and E. Villatoro Tello. Semantically-informed Distance and Similarity Measures for Paraphrase Plagiarism Identification. In Journal of Intelligent and Fuzzy Systems, Special Issue 4th Int. Symposium on Language & Knowledge Engineering, vol. 34, pp. 2983–2990. DOI: 10.3233/JIFS-169483 (Impact Factor: 1.26)
- 2018 S. Štajner, M. Franco-Salvador, P. Rosso, and S. P. Ponzetto. **CATS: A Tool for Customised Alignment of Text Simplification Corpora.** In *Proc. 11th Int. Conf. on Language Resources and Evaluation (LREC 2018)*, Miyazaki, Japan, May 7-12. (**CORE C**)
- 2017 G. Glavaš, M. Franco-Salvador, S. P. Ponzetto, and P. Rosso. A Resource-light Method for Cross-lingual Semantic Textual Similarity. In *Knowledge-Based Systems*, vol. 143, pp. 1-9. DOI: 10.1016/j.knosys.2017.11.041 (Impact Factor: 4.53)
- S. Štajner, M. Franco-Salvador, S. P. Ponzetto, P. Rosso, and H. Stuckenschmidt. Sentence Alignment Methods for Improving Text Simplification Systems. In Proc. of the 55th Annual Meeting of the Association for Computational Linguistics (ACL 2017), Vancouver, Canada, July 30th through August 4th, 2017, pp. 97–102. (CORE A)
- M. Franco-Salvador. A Cross-domain and Cross-language Knowledge-based Representation of Text and its Meaning. In *PhD Thesis*, *Universitat Politècnica de València*. http://hdl.handle.net/10251/84285
- 2017 M. Franco-Salvador, N. Plotnikova, N. Pawar, and Y. Benajiba. Subword-based Deep Averaging Networks for Author Profiling in Social Media - Notebook for PAN at CLEF 2017. In CLEF 2017 Labs and Workshops, Notebook Papers. CEUR-WS.org, http://ceur-ws.org/Vol-1866/
- M. Franco-Salvador, Greg Kondrak, and P. Rosso. Bridging the Native Language and Language Variety Identification Tasks. In Proc. of the 21st International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES 2017), Marseille, France, 6-8 September, 2017, pp. 1554–1561. DOI: 10.1016/j.procs.2017.08.06 (CORE B)
- R. M. Giménez-Pérez, M. Franco-Salvador, and P. Rosso. Single and Cross-domain Polarity Classification using String Kernels. In Proc. of the 15th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2017), Valencia, Spain, 3-7 April, 2017, pp. 558-563. (CORE A)
- M. Franco-Salvador, P. Gupta, P. Rosso, and R. E. Banchs. Cross-language Plagiarism Detection Over Continuous-space- and Knowledge Graph-based Representations of Language. In *Knowledge-Based Systems*, vol. 111, pp. 87–99. DOI: 10.1016/j.knosys.2016.08.004 (Impact Factor: 4.53)

- M. Franco-Salvador, P. Rosso, and M. Montes-y-Gómez. A Systematic Study of Knowledge Graph Analysis for Cross-language Plagiarism Detection. In *Information Processing & Management*, vol. 52(4), pp. 550–570. DOI: 10.1016/j.ipm.2015.12.004 (Impact Factor: 2.39)
- 2016 M. Franco-Salvador, S. Kar, T. Solorio, and P. Rosso. UH-PRHLT at SemEval-2016 Task 3: Combining Lexical and Semantic-based Features for Community Question Answering. In Proc. of the 10th International Workshop on Semantic Evaluation, SemEval '16, San Diego, California. Association for Computational Linguistics.
- F. Rangel, M. Franco-Salvador, and P. Rosso. A Low Dimensionality Representation for Language Variety Identification. In Proc. of the 17th International Conference on Computational Linguistics and Intelligent Text Processing (CICLing 2016), Springer-Verlag, LNCS(n/a), pp. n/a.
- M. Franco-Salvador, F. L. Cruz, J. A. Troyano, and P. Rosso. Cross-domain Polarity Classification using a Knowledge-enhanced Meta-classifier. In Knowledge-Based Systems, vol. 86, pp. 46–56. DOI: 10.1016/j.knosys.2015.05.020 (Impact Factor: 4.53)
- 2015 M. Franco-Salvador, F. Rangel, P. Rosso, M. Taulé, and A. Martí. Language Variety Identification using Distributed Representations of Words and Documents. In 6th International Conference of CLEF on Experimental IR meets Multilinguality, Multimodality, and Interaction (CLEF 2015), Springer-Verlag, LNCS(9283), pp. 28–40.
- M. Franco-Salvador, I. Bensalem, E. Flores, P. Gupta, and P. Rosso. **PAN 2015**Shared Task on Plagiarism Detection: Evaluation of Corpora for Text
  Alignment. In *CLEF 2015 Labs and Workshops, Notebook Papers*. CEUR-WS.org, http://ceur-ws.org/Vol-1391/
- 2015 M. Franco-Salvador, P. Rosso, and F. Rangel. **Distributed Representations of Words and Documents for Discriminating Similar Languages.** In *Proc. of the RANLP Joint Workshop on Language Technology for Closely Related Languages, Varieties and Dialects (LT4VarDial).*
- M. Franco-Salvador, P. Rosso, and R. Navigli. A Knowledge-based Representation for Cross-Language Document Retrieval and Categorization.

  In Proc. of the 14th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2014), Gothenburg, Sweden, 26-30 April, 2014, pp. 414–423. (CORE A)
- M. Franco-Salvador, P. Gupta and P. Rosso. Knowledge Graphs as Context Models: Improving the Detection of Cross-Language Plagiarism with Paraphrasing. In Revised Papers PROMISE Winter School 2013, Springer-Verlag, LNCS(8173), pp. 227–236.
- M. Franco-Salvador, P. Gupta and P. Rosso. **Graph-Based Similarity Analysis: A New Approach to Cross-Language Plagiarism Detection.** In Sociedad Española de Procesamiento del Languaje Natural (SEPLN), num. 50, pp. 21–28.
- M. Franco-Salvador, P. Gupta and P. Rosso. Cross-Language Plagiarism Detection using a Multilingual Semantic Network. In Proc. of the 35th European Conference on Information Retrieval (ECIR 2013), Moscow, Russia, 24-27 March, 2013, Springer-Verlag, LNCS(7814), pp. 710-713. (CORE B)

2012 M. Franco-Salvador, P. Gupta and P. Rosso. **Cross-language Plagiarism Detection Using BabelNet's Statistical Dictionary.** In *Computación y Sistemas, Revista Iberoamericana de Computación*, ISSN 1405-5546, vol. 16, num. 4, pp. 383–390.