

# José Luis Redondo García

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*“Only a proper contextualization process leveraging on semantic techniques, advanced learning algorithms and the vast knowledge available on the Web can enable machines to turn raw Data into valuable information”*

## About me

In 2016 I have obtained my PhD with the highest honors at the Data Science Department in EURECOM, France. During the last four years I have been involved in European and National projects such as LinkedTV or MediaMixer, and my research interests include Semantic Web, NPL, Knowledge Representation and Multimedia focusing on the annotation of News Stories.

I am truly convinced that the use of advanced information extraction and machine learning techniques, combined with prior knowledge available on the Web leveraged using semantic approaches, can drastically improve the way we exploit textual and multimedia data.

## Areas of Specialization

Semantic Web, Natural Language Processing, Ontology Modeling, Knowledge Representation, Multimedia, Linked Data, Information Extraction, Machine Learning

## Education

2012-2016 **Doctor of Philosophy**, *Computer Science and Multimedia*, EURECOM, Télécom ParisTech, Sophia Antipolis, Nice, France.

**Semantically Capturing and Representing Contextualized News Stories on the Web.** During my PhD I explored how to summarize into a single knowledge unit the contextual information necessary for making sense of the news stories being told, providing humans and machines with details that were not explicitly included in the original document. I have leveraged on various *Information Extraction* and *Machine Learning* techniques such as *Named Entity Recognition* and *Disambiguation* to unveil the hidden details inside unstructured documents. The clues found in those documents have been further refined and complemented by leveraging on the Web as a mine of real world objects and shared taxonomies. *Semantic* technologies and advanced *Knowledge Representation* methods allow to identify the relevant concepts of the story and shape the so-called *context* of a news item.

2011-2012 **MSc. in Computer Science**, *University of Extremadura*, Cáceres, Spain. (Avg. score: 9,60/10).

**Improving Linked Data Consuming Processes in OntoTV through the use of Ontology Alignment Techniques.** The process of integrating *Linked Data* sources in information systems involves high temporal costs and manual-based efforts to reconcile different data schemas, therefore attenuating the great advantages that LD can offer over conventional data retrieving methods. This research proposes the use of *Ontology Alignment* techniques in order to minimize the impact of these problems.

2010-2011 **MSc. in Research**, *University of Extremadura, Master MUI-TINC*, Cáceres, Spain. (Avg. score: 9,05/10).

**Applying Linked Data Methodologies in a Television Content Management System** Application of *Information Extraction* and *Linked Data* methodologies in the television domain in order to improve viewer's watching experience. As part of the implementation of the OntoTV television framework, we have developed different components for ingesting information from Linked Data sources. The reconciled and enriched information has been published according to the same Linked Data Principles so it becomes available in the Web of Data.

2010-2011 **BS in Computer Science and Systems**, *University of Extremadura*, Cáceres, Spain. (Avg. score: 8,32/10).

2008-2009 **BS in Computer Science for Business Processes**, *University of Extremadura*, Cáceres, Spain. (Avg. score: 8,35/10).

2003-2008 **Degree in Computer Science**, *University of Extremadura*, Cáceres, Spain. (Avg. score: 8,21/10).

**Multimedia Interactive Applications over Digital Terrestrial Television** Exploring new *Interactive Television* and *Digital Transmission* standards such as *DVB-T* in order to provide new services for both TV producers and consumers. In this project, a *Multimedia Home Platform (MHP)* based framework has been developed for probing the efficiency of this low-cost solution technologies in supporting viewers when consuming content.

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## Experience

2011-2012 **Research Assistant**, *Quercus Engineering Group*, University of Extremadura (UEX), Cáceres, Spain.

Development of an ontology-based management system for digital television that harmonizes content descriptions from various existing sources and represent them by using knowledge engineering. Search and recommendation operations over the collected data are offered in order to improve the viewers' experience.

2009-2011 **Software Developer**, *Quercus Engineering Group*, Cáceres, Spain.

Development of a Java application (WeAPoN) for designing administrative processes and converting them into RDF according to a domain specific ontology. The workflows are graphically specified by using Petri nets diagrams that are converted into an ontological representation. We leverage on the resulting graphs to automatically generate Web applications that implement the desired administrative workflow.

2007-2008 **Research Assistant**, *Group of Applied Telematics Engineering and Advanced Communications*, Cáceres, Spain.

Study of valid scenarios for developing interactive Multimedia Home Platform applications by using low-cost components, together with the implementation of different digital interactive applications for deploying e-learning services over DVB-T channels.

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## Projects

2015-2016 **Next Generation TV**, *Enriched content on interactive TV devices*, Fonds unique interministériel (FUI) Call 19, 3 academic and 2 industrial partners.

<http://nexgentv.fr/>



2015-2016 **3Cixty**, *Enabling Visitors to Explore a Smart City*, Knowledge and Innovation Community of the European Institute of Innovation and Technology, 10 academic and 5 industrial partners.

<https://www.3cixty.com/>



- 2011-2015 **LinkedTV**, *Television linked to the Web, FP7 IP Call 5*, Integrated and practical approach towards experiencing Networked Media in the Future Internet, 8 academic and 4 industrial partners.   
<http://www.linkedtv.eu/>
- 2012-2014 **MediaMixer**, *Community set-up and networking for the reMIXing of online MEDIA fragments, FP7 CSA Call 8*, 5 academic and 3 industrial partners.   
<http://mediamixer.eu/>
- 2011-2012 **PD10006**, *Regional Founding for Young Researchers*, Junta de Extremadura, Spain.
- 2009-2011 **TIN2008-02985**, *National Research Project*, Spanish Ministry of Education and Science, Spain.

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## Awards and Scholarships

- 2015 **Best Paper Award**, *K-CAP 2015 Conference*, Palisades, New York, U.S., October 7th - 10th.  
 The Concentric Nature of News Semantic Snapshots: Knowledge Extraction for Semantic Annotation of News Items
- 2015 **Semantic Web Challenge First Prize Winner**, *ISWC 2015 Conference*, Bethlehem, Pennsylvania, U.S., October 11th - 15th.  
 3cixty@Expo Milano 2015: Enabling Visitors to Explore a Smart City.
- 2010-2012 **3 year PhD scholarship**, *Spanish Ministry of Education and Science*, Cáceres, Extremadura, Spain, October 11th - 15th.  
 Consuming Information about Television Content from Linked Data Sources

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## Publications

- Google Scholar <https://scholar.google.es/citations?user=YY37C-4AAAAJ&hl=en>, *h-index=6 and i10-index=4*.
- DBLP [http://dblp.uni-trier.de/pers/hd/g/Garc=iacute=a:Jos=eacute=\\_Luis\\_Redondo](http://dblp.uni-trier.de/pers/hd/g/Garc=iacute=a:Jos=eacute=_Luis_Redondo).
- Research Gate [https://www.researchgate.net/profile/Jose\\_Garcia130](https://www.researchgate.net/profile/Jose_Garcia130).
- Key Publications** **Redondo Garcia J. L., Rizzo G., Troncy R.**, *Capturing News Stories Once, Retelling a Thousand Ways*, 8th International Conference on Knowledge Capture (K-CAP'15), Palisades, NY, USA, October 2015.  
 , *The Concentric Nature of News Semantic Snapshots: Knowledge Extraction for Semantic Annotation of News Items*, 8th International Conference on Knowledge Capture (K-CAP'15), Palisades, NY, USA, October 2015.
- Redondo Garcia J. L., Rizzo G., Romero L. P., Hildebrand M., Troncy R.**, *Generating Semantic Snapshots of Newscasts using Entity Expansion*, 15th International Conference on Web Engineering (ICWE'15), Rotterdam, the Netherlands, June 2015.
- Redondo Garcia J. L., Sabatino M., Lisena P., Troncy R.**, *Finding and sharing hot spots in Web Videos*, 13th International Semantic Web Conference (ISWC'14), Riva del Garda, Italy, October 2014.

**Redondo Garcia J. L., Hildebrand M., Perez Romero L., Troncy R.,** *Augmenting TV Newscasts via Entity Expansion*, 11th Extended Semantic Web Conference (ESWC'14), Riva del Garda, Italy, May 2014.

**Redondo Garcia J. L., De Vocht L., Troncy R., Mannens E., Van de Walle R.,** *Describing and Contextualizing Events in TV News Show*, (WWW'14) 2nd International Workshop on Social News on the Web (SNOW'14), Seoul, South Korea, April 2014.

**Apostolidis E., Mezaris V.; Sahuguet M., Huet B., Cervenková, B., Stein D., Eickeler S., Redondo Garcia J. L., Troncy R., Pikora L.,** *Automatic fine-grained hyperlinking of videos within a closed collection using scene segmentation*, (ACMMM'14) ACM International Conference on Multimedia, Orlando, US, November 2014.

**Milicic V., Rizzo G., Redondo Garcia J. L., Troncy R.,** *Live Topic Generation from Event Streams*, (WWW'13) 22Nd International Conference on World Wide Web, Rio de Janeiro, Brazil, May 2013.

**Yunjia L., Rizzo G., Redondo Garcia J. L., Troncy R., Wald M., Wills G.,** *Enriching media fragments with named entities for video classification*, (WWW'13) First Worldwide Web Workshop on Linked Media (LIME'13), Rio de Janeiro, Brazil, May 2013.

**Redondo Garcia J. L., Troncy R.,** *Television meets the web: a multimedia hyper-video experience*, (ISWC'13 12th International Semantic Web Conference) Doctoral Consortium, Sydney, Australia, October 2013.

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## Software Tools and Prototypes

- 2014 **HyperTED**, <http://linkedtv.eurecom.fr/Hyperted/>, An innovative way of consuming TED talks, Consuming particular chapters, key fragments highlighting, spotting relevant entities, and seamlessly jump to related resources on the Web like other chapters and educational courses.
- 2014 **LinkedTV News**, <http://linkedtv.project.cwi.nl/news/>, Expanding News with Named Entities, Helping the users to interpret international news via relevant entities playing a role in the depicted story.
- 2013 **MediaFinder**, <http://mediafinder.eurecom.fr>, What fresh media are you looking for?, Web framework which creates visual illustrations from media items shared by the crowd on social platforms.
- 2012-now **REST API Services**, Different prototypes for annotating and enriching multimedia content, Examples: News Expansion <http://linkedtv.eurecom.fr/entitycontext/api/>, TVEnricher <http://linkedtv.eurecom.fr/tvenricher/api/>, TVNewsEnricher <http://linkedtv.eurecom.fr/newsenricher/api/>, TV2RDF <http://linkedtv.eurecom.fr/tv2rdf/>, collaborator in NERD <http://linkedtv.eurecom.fr/tv2rdf/>.
- 2012 **Github/jluisred**, <https://github.com/jluisred>, Tools, services and apps implemented and under development for the different project mentioned above.

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## Other Activities

### PC Member

**WWW2016**, 25th International World Wide Web Conference, (Poster/Demo Track).

**SIMBig2015**, *2nd International Symposium on I. Management and Big Data*.  
**ISWC2015**, *14th International Semantic Web Conference*, (Poster/Demo Track).  
**ESWC2015**, *12th European Semantic Web Conference*, (Poster/Demo Track).  
**ISWC2014**, *13th International Semantic Web Conference*, (Poster/Demo Track).  
**ESWC2014**, *11th Extended Semantic Web Conference*, (Poster/Demo Track).  
**SIMBig2014**, *1st International Symposium on I. Management and Big Data*.  
**Subreviewer for HT2014**, *25th ACM Conference on Hypertext and Social Media*.

### MSc Students Supervision

- 2015 **Chaima Ben Rabah**, *Collecting microposts shared on social networks and reconstructing timelines of events*.
- 2014 **Mariella Sabatino and Pasquale Lisena**, *Searching and browsing through fragments of TED Talks and Developing a Media Fragment Server on Node.js*.
- 2014 **Phan Trung**, *Grab your Favourite TV Show and Share it*.

### Training & Courses

- 2004 **Junta de Extremadura**, *Development of Applications over Relational Databases*.
- 2005 **Extremadura University**, *Development of Java Applications*.
- 2009 **National Center for ITC's Implantation**, *Introduction to Open Source Software*.
- 2009 **International Center for Innovation on Linux Systems**, *Legal Aspects of Open Source Software*.
- 2010 **University of Extremadura**, *Development and Design of 3d Video Games using Panda and SDL*.

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## Languages

- Spanish **Native**.
- English **Full professional proficiency**.
- French **Professional working proficiency**.

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## Tools & Technologies

**Natural Language Processing**, *NERD API, Alchemy API, TextRazor API, DBpedia Spotlight, Wikimeta, Stanford NLP Tools*.

**Information Indexing and Search**, *Apache Lucene, Solr, ElasticSearch, Google CSE, Virtuoso OpenLink, SPARQL, LinkedData Fragments, Pubby, MongoDB, MySQL, PostgreSQL*.

**Knowledge Representation**, *RDF-OWL, Protegé, Protegé API, OWL API, Jena API, SWRL, Jess Rule Engine, Pellet, Media Fragments URI 1.0, Open Annotation Core Data Model, Ontology for Media Resources, Programmes Ontology, etc..*

**Machine Learning**, *WEKA (Classifiers), MALLET (Clustering and Topic Modeling), R language (basic usage in regressions, plotting, correlations)*.