

# JULIEN CORMAN

## PHD IN COMPUTER SCIENCE

*Born in Suresnes (92150, France), 20 February 1979*

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## RESEARCH INTERESTS

Knowledge representation  
Knowledge base extraction (ontology learning) and debugging  
Description logics  
Belief change  
Natural language processing (NLP), distributional semantics, machine learning for NLP

## PUBLICATIONS

- 2015 Knowledge base ontological debugging guided by linguistic evidence.  
Corman J. *PhD Thesis, University of Toulouse*
- 2015 Prioritized base debugging in description logics.  
Corman J., Aussenac-Gilles N. and Vieu L. *Ontochange proceedings (IJCAI workshop)*, Buenos Aires
- 2015 Distributional semantics for ontology verification.  
Corman J., Aussenac-Gilles N. and Vieu L. *\*Sem proceedings*, Denver
- 2015 Trimming a consistent OWL knowledge base, relying on linguistic evidence.  
Corman J., Aussenac-Gilles N. and Vieu L. *LangAndOnto proceedings (IWCS workshop)*, London
- 2015 Ontological analysis for description logics knowledge base debugging.  
Corman J., Aussenac-Gilles N. and Vieu L. *CommonSense proceedings*, Stanford
- 2013 Explorer les théorèmes d'une TBox.  
Corman J. *Ingénierie des connaissances (IC) proceedings*, Lille

## SUBMITTED ARTICLES (UNDER REVIEW)

- submitted in 2016* Prioritized base debugging in description logics(extended version).  
Corman J. *Annals of Mathematics and AI*

## RESEARCH EXPERIENCE

- March 2016* Consultant/programming for Synapse Development, Toulouse.  
Topic: natural language processing.
- Oct 2012 - Dec 2015* PhD student (allocataire moniteur, Oct 2012 - Aug 2015) and assistant researcher (Sept 2015 - Dec 2015) for the University of Toulouse, within the IRIT research institute, MELODI research team.  
Topics: knowledge representation, knowledge base debugging/revision, description logics, natural language processing.

*Jun - Aug 2012* Assistant researcher for the University of Grenoble, within the LIDILEM research team.  
Topic: natural language processing.

*Jun - Aug 2011* Internship in the LIDILEM research team, University of Grenoble.  
Topic: natural language processing.

#### OTHER PROFESSIONAL EXPERIENCES

*2012-2015* Teaching assistant for the University of Toulouse.  
License and Master courses in:

- Algorithmics and imperative programming
- Relational databases (relational algebra and SQL, ER modeling, ...)
- Web engineering

*2003-2010* Assistant for documentation centers and libraries/library networks.  
Employers: French Ministry of Agriculture (2003-2006), Departmental Council of the Aisne (2006-2009), Community of Greater Annecy (2009-2010).

#### RESEARCH STAYS

*nov 2014* IMI, University of São Paulo (USP).  
supervisor: Renata WASSERMANN

*sept - oct 2014* NEMO research group, University of Espirito Santo (UFES).  
supervisor: Giancarlo GUIZZARDI

#### SUMMER SCHOOLS

*sept 2014* IAOA summer school, Vitoria

*aug 2013* European Summer School in Logic, Language and Information (ESSLI),  
Düsseldorf

*aug 2012* IAOA summer school, Trento

#### REVIEWS

*2016* Subreviewer for FOIS 2016 and ISWC 2016 (main conferences)

*2014* Subreviewer for ISWC 2014 (main conference)

#### SEMINARS

*feb 2016* Free University of Bozen-Bolzano

*feb 2016* Laboratory of applied ontology, Trento

*oct 2014* University of São Paulo (USP)

*sept 2014* University of Espirito Santo (UFES)

*2012-2014* Melodi research team seminars, University of Toulouse

#### SCHOLARSHIPS / GRANTS

*sept - dec 2015* CIMI research grant from the University of Toulouse

*sept - nov 2014* ATUPS and IDEX travel grants for a research stay in Brazil

oct 2012 -  
sept 2015

PhD scholarship, Ministry of Higher Education and Research

#### EDUCATION

<i>PhD in computer science</i>	2012-Present	IRIT - University of Toulouse	Topic: NLP and ontological analysis for knowledge base debugging/revision Supervisors: Laure VIEU & Nathalie AUSSENAC-GILLES
<i>Master's degree in computational linguistics</i>	2010-2012	University of Grenoble	Thesis: <i>Extracting multiword expressions from syntactically analyzed corpora</i> Supervisors: Agnès TUTIN & Olivier KRAIF

#### SKILLS

<i>Programming Languages</i>	<i>Java, R, Python, Perl, PHP, Prolog, Javascript/Ajax, VB.Net, ...</i>
	English (TOEIC listening and reading: CEFR level C1) , French (native language)

#### INTEREST IN THE POSITION

My research activity for the last 3 years (as a PhD student) has been centered on logic-based knowledge representation systems, in particular the ones relying on Description Logics, around which also revolves an important part of the activity of the KRDB.

My work is both applied and theoretical, with an emphasis on algorithmic considerations (exemplified in particular by the IJCAI workshop article above, as well as Chapters 6 and 8 of my PhD thesis). The main practical objective was the detection and repair of incoherences in knowledge bases, an originality here being the incorporation to the process of linguistic evidence automatically gathered from web pages. These incoherences tend to appear in practice when knowledge from multiple sources is either aggregated as or accessed through a set of logical statements, therefore this problematic may be of direct interest for applications based on the OBDA framework. Repairing these incoherences also borrows from belief change or axiom pinpointing, and as such is closely related to the work in these domains of some current and former members of the KRDB team (E. Kharmalov, R. Peñaloza).

Different proposals were evaluated on moderately large datasets, but one of my current objectives is the development of more scalable algorithms, and tractable Description Logics such as the DL-Lite family are a natural line of investigation in this perspective.

But I would also be happy to contribute more directly to projects and applications relying on OBDA (Optique, Ontop ..), or possibly help introducing a data quality dimension to such framework, i.e. evaluate not only the performance of query answering through ontology based data access, but also the reliability of the answers.

