

# Martín Rezk

*Ph.D.*

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## Education and Research Experience

- 2013– **Research Assistant**, *Free University Bozen-Bolzano, Italy*, Project Title: Optique: Scalable End-User Access to Big Data.  
Coordinator: Prof. Diego Calvanese
- 2012–2013 **Postdoctoral Fellow**, *Korea Advanced Institute of Science and Technology, South Korea*, Program BrainKorea (BK)21.  
Coordinator: Prof. Key-Sun Choi
- 2011–2012 **Research Assistant**, *Free University Bozen-Bolzano, Italy*, Project Title: KRDB Technologies for Rules and Ontologies.  
Coordinators: Prof. Werner Nutt and Prof. Diego Calvanese.
- 2008–2012 **Ph.D.**, *Free University of Bozen-Bolzano, Italy*, *Dissertation Title: Reasoning about Actions in Transaction Logic*.  
Advisors: Michael Kifer (Stony Brook University, USA) and Werner Nutt (Free University of Bozen-Bolzano, KRDB Centre , Italy).
- 2004–2007 **Licenciado en Ciencias de la Computación (Master)**, *Universidad Nacional de Córdoba, Argentina*, *Dissertation Title: Formal Models of Kinship Relations for Natural Language Generation via Inference*.  
Advisor: Laura Alonso Alemany (Universidad Nacional de Córdoba, Argentina)
- 2000–2004 **Analista en Computación (Bachelor)**, *Universidad Nacional de Córdoba, Argentina*.

## Research and Academic Activities

### Research Activities

- 2012 **Organization Comettee Member (Summer School )**, *Korea Advanced Institute of Science and Technology, South Korea*, International Asian Summer School on Linked Data.

### Peer-review Activities

- 2013 **Conference reviewer**, *Frontiers of Combining Systems, FroCos 2013, Nancy, France*.
- 2013 **Conference reviewer**, *OWL: Experience and Directions, OWLED 2013, Montpellier, France*.

- 2012 **Conference reviewer**, *The 24th International Conference on Computational Linguistics*, Coling 2012, Mumbai, India.
- 2012 **Conference reviewer**, *The Joint International Semantic Technology Conference*, JIST 2012, Nara, Japan.

### Teaching Experience

- 2007 **Teaching Assistant**, *Universidad Nacional de Córdoba*, Argentina.  
Subject: Logics
- 2007 **Teaching Assistant**, *Universidad Nacional de Córdoba*, Argentina.  
Seminar on Moodle

### Languages

Spanish	<b>Expert</b>	<i>Mother Tongue</i>
English	<b>Expert</b>	
Italian	<b>Intermediate</b>	
Korean	<b>Beginner</b>	

### Research Visits

- 2009–2011 **Internship**, *Stony Brook University*, New York, USA.  
Topic: Development of a full-fledged theory, Transaction Logic with Partially Defined Actions, for programming and reasoning about actions over states. Invited by Michael Kifer.

### Member of research projects

- 2013– **Optique**, *Scalable End-User Access to Big Data*), Industrial Partners Siemens, Statoil, Fluid Operations.  
Coordinator: Arild Waaler (University of Oslo)
- 2012–2013 **LOD2**, *Creating Knowledge out of Interlinked Data*), Industrial Partners: IBM, AUDI, ArcelorMittal, Ontoprise.  
Coordinator: Sören Auer (University of Leipzig)
- 2009–2011 **Ontorule**, *ONTOlogies meet business RULEs*, Industrial Partners: IBM, AUDI, ArcelorMittal, Ontoprise.  
Coordinator: Christian de Sainte Marie (IBM)

### Summer Schools

- 2009 , *European Summer School in Logic, Language and Information* , France.
- 2008 , *Bertinoro International Spring School* , Italy.
- 2008 , *European Summer School in Logic, Language and Information*, Germany.
- 2003 , *International Winter School on Semantics and Applications* , Uruguay.
- 2003 , *Rio IV Summer School* , Argentina.

### Software Development

- 2013– **Java Developer**, *–ontop–OBDA System*, Free University of Bolzano, Italy.

- 2012–2013 **Java Developer**, *Natural Language to RDF*, Korea Advanced Institute of Science and Technology, South Korea.
- 2004–2007 **PHP Developer**, *Several sites for the Faculty of Chemistry*, Universidad Nacional de Córdoba, Argentina.
- 2003 **Java Developer**, *Advertising project*, Gustavo Monti, Universidad Nacional de Córdoba, Argentina.
- 2002 **Web Designer**, *CIEM Research Center Homepage*, CIEM Research Center, Argentina.
- 2002 **Visual Fox Developer**, *Image Database*, Hospital Privado de Córdoba, Argentina.

## Networking experience

- 2004–2007 **Network Administration**, *GNU/Linux DHCP server, MySQL server, Postfix server, SpamAssassin, Apache, Firewalls*, Universidad Nacional de Córdoba, Argentina.

## Publications

### Journal Papers

- Martín Rezk and Michael Kifer, *Transaction Logic with Partially Defined Actions*. Journal on Data Semantics (2012), Volume 1, Issue 2, pp 99-131.
- Martín Rezk and Laura Alonso Alemany, *Designing Topic Shifts with Graphs*. Revista Iberoamericana de Inteligencia Artificial (2007), Volume 11, Number 36, 27-34.

### Conference Papers

- Martín Rezk, Jungyeul Park, Yoon Yongun, Kyungtae Lim, John Larsen, Young-Gyun Hahm, and Key-Sun Choi, *Korean Linked Data on the Web: Text to RDF*. To appear in the Joint International Semantic Technology Conference, 2012.
- Martín Rezk and Michael Kifer, *Formalizing Production Systems with Rule-based Ontologies*. In Proc. of the Seventh International Symposium on Foundations of Information and Knowledge Systems, LNCS, 332-351, Germany, March 5-9, 2012.
- Martín Rezk and Michael Kifer, *Reasoning with Actions in Transaction Logic*. In Proc. of the Fifth International Conference on Web Reasoning and Rule Systems, LNCS, 201-216, Ireland, August 29-30, 2011.
- Martín Rezk and Michael Kifer, *On the Equivalence Between the L1 Action Language and TR-PAD*. In Proc. of the Fifth International Conference on Web Reasoning and Rule Systems, LNCS, 185-200, Ireland, August 29-30, 2011.
- Martín Rezk and Werner Nutt, *Combining Production Systems and Ontologies*. In Proc. of the Fifth International Conference on Web Reasoning and Rule Systems, LNCS, 287-293, Ireland, August 29-30, 2011.

- Jos de Bruijn and Martín Rezk, *A Logic Based Approach to the Static Analysis of Production Systems*. In Proc. of the Third International Conference on Web Reasoning and Rule Systems, LNCS, 254-268, Chantilly, VA, USA, October 25-26, 2009.

### Project Deliverables

- D3.4, *Converged and optimized combinations of rules and ontologies*  
*Authors:* Thomas Eiter, Michael Kifer, Alessandro Mosca, Martin Rezk, Riccardo Rosati, Magdalena Ortiz Simkiene, Mantas Simkus, Trung-Kien Tran, Guohui Xiao
- D3.3, *Complexity and optimization of combinations of rules and ontologies*  
*Authors:* Cristina Feier , Hassan Ait-Kaci, Jurgen Angele , Jos de Bruijn , Hugues Citeau, Thomas Eiter, Adil El Ghali, Volha Kerhet, Eva Kiss, Roman Korf, Thomas Krekeler, Thomas Krennwallner, Stijn Heymans, Alessandro Mosca, Martín Rezk, Guohui Xiao.  
*URL:* <http://ontorule-project.eu/outcomes?func=finishdown&id=46>
- D3.2, *Initial combinations of rules and ontologies* Stijn Heymans, Jos de Bruijn, Martín Rezk, Hassan Ait-Kaci, Hugues Citeau, Roman Korf, Jorg Puhner, Cristina Feier, Thomas Eiter  
*URL:* <http://ontorule-project.eu/outcomes?func=fileinfo&id=18>

### Others

- **Programming languages and Environments:** Android SDK, Facebook SDK, Java, OnTop, XSB, Flora 2, Python, MySql, C, C++, Perl, Php, Delphi, HTML, Javascript, FireWorks, DreamWeaver, Flash.
- **Distinctions:** First place at stock market contest 2007.
- **Other Interests:** Kyokushin Karate (National Champion 2007), Brazilian Jiu Jitsu (3th Place in submissions only Long Island Tournament, 2010), diving (SSI certified), photography, playing guitar, literature.

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## Research Interests

June 8, 2013

My research interests are in the area of knowledge representation, reasoning, and databases. More in detail, I have provided the following research contributions:

- I have worked on representing and reasoning over domains that change over time in Transaction Logic. I extended Transaction Logic to model and reason with recursive, non-monotonic, and complex actions.
- I have provided the logical reconstruction of the semantics of Production systems in  $\mu$ -Calculus, Fix Point logic, and Transaction Logic. I also provided an operational semantics and model-theoretic semantics for the combination of production systems with description logic ontologies.
- I have developed methods to check domain independence of database queries using logical entailment. These methods are applicable when the query is expressed in a decidable logic.

Yours faithfully,

**Martín Rezk**

*Attached: curriculum vitæ*