

Ricardo Ferreira Guimarães

✉ rfguimaraes0@gmail.com • 📄 rfguimaraes.github.io

Education

PhD in Computer Science <i>Institute of Mathematics and Statistics - University of São Paulo</i> Supervisor: Professor Renata Wassermann Thesis: Modularity in Belief Change of Description Logic Bases	São Paulo-SP, Brazil 03/2015-01/2020
BSc in Computer Science <i>Institute of Mathematics and Statistics - University of São Paulo</i> <i>Honourable Mention</i> Bachelor Dissertation/Project: Extensions to the AML ontology aligner	São Paulo-SP, Brazil 2011–2014
Apprentice Maintenance Electrician <i>SENAI (National Service for Industrial Training) "Ary Torres"</i> <i>Honourable Mention</i>	São Paulo-SP, Brazil 2008–2009

Experience

Department of Informatics - University of Bergen <i>Postdoctoral Research Fellow</i> Project: Lossy Preprocessing (LOPRE)	Bergen, Norway 12/2020-Present
Faculty of Computer Science - Free University of Bozen-Bolzano <i>Research Assistant</i> Project: PAC Learning with Ontologies	Bolzano, Italy 03/2020-11/2020
School of Computer Science - University of Manchester <i>Academic Visitor</i> Program: Research Internship Abroad. Sponsor: São Paulo Research Foundation (FAPESP)	Manchester, UK 04/2018-12/2018
Institute of Mathematics and Statistics - University of São Paulo <i>Teaching Assistant</i> Course: Introduction to Logic and Program Verification.	São Paulo-SP, Brazil 2017
Institute of Mathematics and Statistics - University of São Paulo <i>Teaching Assistant</i> Course: Introduction to Computing for Exact Sciences and Technology.	São Paulo-SP, Brazil 2016
Institute of Mathematics and Statistics - University of São Paulo <i>Network Administrator of the Rede Linux</i>	São Paulo-SP, Brazil 2013–2014

Papers and Publications

- Johanna Jøsang, Ricardo Guimarães, Ana Ozaki. *On the Effectiveness of Knowledge Graph Embeddings: a Rule Mining Approach*. At the 1st International Workshop on Knowledge Representation for Hybrid intelligence (KR4HI 2022).
- Jandson S. Ribeiro, Ricardo Guimarães, Ana Ozaki. *Revising Ontologies via Models: The ACC-formula Case*. At the 34th International Workshop on Description Logics (DL 2021).

- Ricardo Guimarães, Ana Ozaki, Cosimo Persia, Baris Sertkaya. *Mining \mathcal{EL}^\perp Bases with Adaptable Role Depth*. At the 35th AAAI Conference (AAAI 2021).
- Vinícius Bitencourt Matos, Ricardo Guimarães, Yuri David Santos, Renata Wassermann. *Pseudo-contractions as Gentle Repairs*. In *Description Logic, Theory Combination, and All That* (Springer, 2019).
- Ricardo Guimarães, Uli Sattler and Renata Wassermann. *Ontology Stratification Methods: A Comparative Study*. At 3rd International Workshop on Ontology Modularity, Contextuality, and Evolution (WOMoCoE 2018).
- Ricardo Guimarães and Renata Wassermann. *Local Change in Ontologies with Atomic Decomposition*. At the Debugging and Evaluation Workshop, part of the 3rd Joint Ontology Workshops (DEW@JOWO 2017).

Teaching

Selected Topics in Artificial Intelligence (INF367)

Department of Informatics - University of Bergen

Topic: Ontologies and Knowledge Graphs: RDF, OWL, Description Logics, SPARQL, Statistical Relational Learning, Knowledge Graph Embeddings

Lecturer

08/2021–12/2021

Grants

Meltzer

43200.00 NOK, Travel Support

Grant

03/2022–03/2023

FAPESP

76477.47 BRL, Research Internship Abroad

Grant

04/2018–01/2019

FAPESP

91056.42 BRL

Scholarship

08/2017–01/2020

CAPES

49800.00 BRL

Scholarship

03/2015–07/2017

Selected Presentations and Guest Lectures

- Reasoning in Knowledge Graphs. Invited lecture at the Research School in Artificial Intelligence at Bergen, 2022.
- Research Topics in Knowledge-Based Systems. Guest lecture for the Knowledge-Based Systems course (MAC 444) at the Institute of Mathematics and Statistics of the University of São Paulo, 2021.
- Finite Base Change via Models. Invited presentation at the “Oberseminar” for the Semantic Web Group of the University of Koblenz-Landau, 2021.
- Mining EL Bases with Adaptable Role Depth. AAAI (paper presentation), 2021.

Other Roles

Supervision: 2 Master students (1 ongoing) and 2 PhD students (2 ongoing)

Examiner: External Sensor (University of Oslo, Semantic Technologies, 2021), Internal Sensor (University of Bergen, Project in Informatics, 2021-2022)

PC Member: KR 2022 (conference), DL 2022 (workshop), KR4HI 2022 (workshop)

Reviewer: Information and Computation Journal (2021), Artificial Intelligence Journal (2020)

Organiser: AIB 2022 (research school)

Languages

Portuguese: Mother-tongue

English: IELTS Academic (02/2018): Overall 8.0 (CEFR C1)

Reading: 9.0 - Listening: 9.0 - Writing: 7.5 - Speaking: 7.0

Research Interests

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|---------------------------|----------------------------|
| ○ Artificial Intelligence | ○ Knowledge Representation |
| ○ Description Logics | ○ Knowledge Graphs |
| ○ Belief Change | ○ Ontology Repair |
| ○ Representation Learning | ○ Explainable AI |

Computer skills

Programming Languages: Python, Java, C, Rust, Lua, Bash, Prolog

Tools: GNU/Linux, Git, SQL, \LaTeX , Protégé, RDF, OWL/OWL 2, SPARQL, Jupyter

Skills: Object-Orientation, Extreme Programming, MVC, Basic Linux System Administration, Office Software Suites