

# RICARDO FERREIRA GUIMARÃES

+47 48 48 03 81 ◇ Bergen, Norway  
rfguimaraes0@gmail.com ◇ rfguimaraes.github.io

## OBJECTIVE

---

Computer Scientist with experience in Knowledge Representation, seeking full-time research or development roles.

## EXPERIENCE

---

### Postdoctoral Research Fellow (*Full-time fixed-term*)

Dec 2020 – Present

Department of Informatics, University of Bergen

*Bergen, Norway*

- Published results on high-quality venues on Artificial Intelligence (AAAI 2023, NLDL 2023, JAIR (to appear)).
- Communicated results on international workshops.
- Planned, created material for, and delivered two courses.
- Co-supervised 2 master students and 2 PhD students.
- Co-organised a research school on Artificial Intelligence.

### Research Assistant (*Full-time fixed-term*)

Mar 2020 – Nov 2020

Faculty of Science and Technology, Free University of Bozen-Bolzano

*Bozen-Bolzano, Italy*

- Collaborated with international colleagues and presented research results at AAAI 2021.

### Academic Visitor (*Full-time internship*)

Apr 2018 – Jan 2019

Information Management Group, University of Manchester

*Manchester, UK*

- Published results of the collaboration in an international workshop on Ontology Modularity (WOMoCoE 2018).
- Funded by São Paulo Research Agency (FAPESP).

### System Administrator (*Part-time internship*)

Mar 2013 – Feb 2015

Rede Linux, Institute of Mathematics and Statistics, University of São Paulo

*São Paulo, Brazil*

- Maintained and developed the computer network that supports the institute's undergraduate students.

## EDUCATION

---

### PhD in Computer Science

Mar 2015 – Jan 2020

Institute of Mathematics and Statistics, University of São Paulo

*São Paulo, Brazil*

Thesis: Modularity in Belief Change of Description Logic Bases

Relevant Coursework: Artificial Intelligence Lab, Reasoning About Knowledge, Machine Learning

### BSc in Computer Science (*Honourable Mention*)

Feb 2011 – Dec 2014

Institute of Mathematics and Statistics, University of São Paulo

*São Paulo, Brazil*

Bachelor Project: Extensions to the AML Ontology Aligner

Relevant Coursework: Algorithm Analysis, Database Systems, Extreme Programming Lab, Numerical Linear Algebra

## SKILLS

---

**Technical:** Python, Java, C, SQL, GNU/Linux, Git, L<sup>A</sup>T<sub>E</sub>X, Knowledge Graphs, Ontologies, OWL, RDF, SPARQL, Protégé, Data Science (IBM Specialization), Extreme Programming (Agile)

**Soft:** Problem-solving, Adaptability, Time Management, Scientific Method/Research, Academic Writing

**Languages:** English (proficient), Norwegian (basic), Portuguese (native)

## SELECTED PUBLICATIONS

---

- Guimarães, Ozaki, and S. Ribeiro “Finite Based Contraction and Expansion via Models”. In: AAI, 2023
- Persia and Guimarães “RIDDLE: Rule Induction with Deep Learning”. In: NLDL, 2023
- Guimarães and Ozaki “Reasoning in Knowledge Graphs (Invited Paper)”. In: AIB, 2022
- Jøsang, Guimarães, and Ozaki “On the Effectiveness of Knowledge Graph Embeddings: a Rule Mining Approach”. In: KR4HI, 2022
- Guimarães et al. “Mining EL Bases with Adaptable Role Depth”. In: AAI, 2021
- Matos et al. “Pseudo-contractions as Gentle Repairs”. In: Description Logic, Theory Combination, and All That, 2019

## CODE PROJECTS

---

**OWL2DL-Change: Modularisation:** Implemented of Belief Change algorithms for OWL 2 DL ontologies using OWL API (Java). The code is instrumented with JMH for benchmarking.

**OWL2DL-CCC:** Created a tool that generates test cases for non-standard reasoning tasks (e.g. repair). It uses OWL API to handle the source ontologies and JSON to specify the types of test cases generated.

**Data Science Capstone Project:** Developed as a simple task for attaining the certification. Employs skills and tools in Data Science (SQL, Scikit-learn) to investigate the recovery rate of the stage 1 in Falcon 9 launches.

## TEACHING

---

**INF207-22H:** Social Networks Theory (Bachelor/Master level)

**INF367-21H:** Selected Topics in Artificial Intelligence: Ontologies and Knowledge Graphs (Master level)

## NOTABLE ROLES

---

**Co-organiser:** AIB 2022 (research school)

**Publicity co-chair:** DL 2023 (international workshop)

**PC member:** DL 2023, AAI 2023, DL2022, KR2022

**Reviewer:** Information and Computation Journal, Artificial Intelligence Journal (AIJ)

## INVITED TALKS

---

- Belief Change with Models as Input: Adapting Expansion and Contraction. IRL 2022
- Reasoning in Knowledge Graphs. AIB 2022
- Learning and Reasoning with Knowledge Graphs and Ontologies. CEDAS Networking Event 2022