RICARDO FERREIRA GUIMARÃES

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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, LaTeX, 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 "Mining $\mathcal{EL}^{\perp}$ Bases with Adaptable Role Depth". In: AAAI, 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: AAAI, 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, AAAI 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