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*

- Research: collaborate with peers inside and outside the university, and publish results in scientific venues.
- Teaching: prepare courses and activities, and deliver lectures.
- Co-supervision of master and PhD students.

Research Assistant *(Full-time fixed-term)* — Mar 2020 – Nov 2020
Faculty of Science and Technology, Free University of Bozen-Bolzano — *Bozen-Bolzano, Italy*

- Research: collaborate with peers inside and outside the university, and publish results in scientific venues.

Academic Visitor *(Full-time internship)* — Apr 2018 – Jan 2019
Information Management Group, University of Manchester — *Manchester, UK*

- Research: collaborate within the group on empirical aspects and implementations of Ontology Repair.
- 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*

- Maintenance and development of 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

MISCELLANEOUS

Event Organisation:

- Publicity co-chair of the DL 2023 (international workshop)
- Co-organiser of the AIB 2022 (research school)

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

Teaching:

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

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

Code Projects:

OWL2DL-Change: Modularisation: Implementation of Belief Change algorithms over OWL 2 DL ontologies using OWL. The code is instrumented with JMH for measuring the impact of ontology modularisation on computational performance.

OWL2DL-CCC: Uses OWL API to create ontology datasets by modifying OWL ontologies according to specification given as JSON. Creates test cases for non-standard reasoning tasks.

IBM Data Science Specialization Capstone Project: Developed as task for attaining the certification. Employs a wide range of skills and tools in Data Science (Pandas, SQL, Dash, Scikit-learn) to investigate the recovery rate of stage 1 rockets in SpaceX's Falcon 9 launches.