

Luis Galárraga

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Education

- 2012 – 2016 **Doctoral Degree in Computer Science**
Thesis: Rule Mining in Knowledge Bases
Under the supervision of [Dr. Fabian M. Suchanek](#)
[Télécom ParisTech](#)
Paris, France
- 2009 - 2011 **Master Degree in Computer Science**
Overall grade: 1,3 (A-)
Thesis: Partout: A Distributed Approach Towards Scalable RDF Processing
supervised by [Dr. Katja Hose](#) and [Dr. Ralf Schenkel](#)
Saarland University ([UdS](#))
Saarbrücken, Germany
- 2003 – 2008 **Bachelor Degree in Computer Engineering**
GPA: 8.70/10 (Best student of Computer Engineering 2008-2009)
Thesis: Definition and evaluation of a [software development model](#) for FOSS (Free and Open Source Software).
Escuela Superior Politécnica del Litoral ([ESPOL](#))
Guayaquil, Ecuador

Work experience

- 2017 – present **Full-time Researcher**
[LACODAM](#) Team
Topics: Knowledge Graphs, Data Mining, eXplainable AI, DataVis
[Inria Research Center – Rennes Bretagne Atlantique](#)
Rennes, France
- 2016 – 2017 **Postdoctoral Researcher**
[Computer Science Department, Aalborg University](#)
Supervised by [Katja Hose](#)
Aalborg, Denmark
- Sep – Dec 2013 **Engineering Intern at Google Inc.**
Discovery of new entities from web extractions.
Supervised by [Jeremy Heitz](#)
Mountain View, California, USA
- 2008 – 2016 **Freelancer Developer**
Author and maintainer of J!Research, a [Joomla!](#) extension for management of research-related work
- 2010 – 2012 **Research Assistant**
Developer of the client-side module for [Radspeech](#), a semantic speech dialogue system for radiologists
German Research Center for Artificial Intelligence ([DFKI](#))
Saarbrücken, Germany

2004 – 2009

Teaching and Research Assistant, Web Developer

Teaching: Programming, Soft. Engineering, Differential Equations

Research: Development Models for Open Source Software

Escuela Superior Politécnica del Litoral and Information

Technologies Center ([CTI](#))

Guayaquil, Ecuador

Selected Publications

This is a selection of publications designed to give an overview of my research interests and competences. The full list can be found at <https://luisgalarraga.de/publications/>

CORE rankings for [conferences](#) and [journals](#): VLDB=A*, IDA=B, ECAI=A, CHI=A*, WSDM=A*, VLDBJ=A*, PAKDD=A

- 2025 J. Delaunay, L. Galárraga, C. Largouët, N. Van Berkel
Impact of Explanation Techniques and Representations on Users Comprehension and Confidence in Explainable AI
Full Paper at Conference on Computer-Supported Cooperative Work & Social Computing ([CSCW](#))
- 2024 R. Qureshi, E. Naïm, L. Galárraga, Y. Graham, M. Couceiro
REFINE-LM: Mitigating Language Model Stereotypes via Reinforcement Learning
Full Paper at European Conference on Artificial Intelligence ([ECAI](#))
- 2023 L. Galárraga
Effects of Locality and Rule Language on Explanations for Knowledge Graph Embeddings
Full Paper at Symposium on Intelligent Data Analysis ([IDA](#))
- 2022 D. Hernández, L. Galárraga, K. Hose
Computing How-Provenance for SPARQL Queries via Query Rewriting
Full Paper at Conference on Very Large Databases ([VLDB](#))
- 2021 G. Méndez, L. Galárraga, K. Chiluita.
Showing Academic Performance Predictions during Term Planning: Effects on Students' Decisions, Behaviors, and Preferences
Full Paper at ACM Conference on Human Factors in Computing Systems ([CHI](#))
- 2021 L. Galárraga, O. Pelgrin, A. Termier
HiPaR: Hierarchical Pattern-aided Regression
Full paper at Pacific-Asia Conference on Knowledge Discovery and Data Mining ([PAKDD](#))
- 2021 O. Pelgrin, L. Galárraga, K. Hose
Towards Fully-fledged Archiving for RDF Datasets
Paper at the Semantic Web Journal ([SWJ](#))
- 2017 L. Galárraga, S. Razniewski, A. Amarilli, F. Suchanek
Predicting Completeness in Knowledge Bases
Full Paper at Conference on Web Search and Data Mining ([WSDM](#))
- 2015 L. Galárraga, C. Teflioudi, K. Hose, F. Suchanek
Fast Rule Mining in Ontological Knowledge Bases with AMIE+
Paper at the Journal of Very Large Databases ([VLDBJ](#))

Supervision

The list includes the complete list of post-doctoral fellows and PhD students, and a selection of Masters and Bachelor students. For a complete list, please visit <https://luisgalarraga.de/about/#supervision>

PhD Students

- Sept 2023 - present [Isseïnie Sinouvassane](#) (ENS Rennes) co-supervised with [Alexandre Termier](#)
How-Provenance Polynomials for Efficient and Greener Rule Mining
University of Rennes
- Jan 2021 – present Olivier Gauriau co-supervised with François Brun, [Alexandre Termier](#) and David Makowski
Numerical Rule Mining for the Prediction of the Dynamics of Crop Diseases
University of Rennes
- 2020 – 2023 [Julien Delaunay](#) co-supervised with [Christine Largouët](#)
Explainability for Machine Learning Models: From Data Adaptability to User
University of Rennes
- 2019 – 2023 Olivier Pelgrin co-supervised with [Katja Hose](#)
A Holistic Architecture for Metadata Management in RDF Datasets
Aalborg University

Post-doctoral Fellows

- 2020 – 2022 Mohit Mittal co-supervised with Philippe Preux
Debugging a VQA System through Explanations
Fellowship financed by the [HyAIAI Inria Project Lab](#)
- 2020 – 2022 Daniel Hernández co-supervised with Katja Hose
How-provenance for SPARQL Queries
Fellowship financed by the [RelWeb Project](#) led by Katja Hose

Masters and Bachelor Students

- Jun – Aug 2023 Anas Katim (University of Rouen, M1 level) co-supervised with Katja Hose
A [Demo](#) for Explaining Query Answers on SPARQL Endpoints
Published as [demo paper](#) at The Web Conference 2023
- Mar – Jul 2021 Rameez Qureshi (University of Lorraine, M2 level) co-supervised with Miguel Couceiro
Mitigating Unintended Bias in Masked Language Models
This work has been accepted as a [full paper](#) at ECAI 2024
- Sept 2019 – Jan 2020 Vaishnavi Bhargava (Birla Institute of Technology, L3 level) co-supervised with Romaric Gaudel
Automatic Neighborhood Design for Localized Model-interpretation
This work led to a [full paper](#) published at IDA 2022
- Apr – Aug 2018 Julien Delaunay (University of Rennes, L3 level)
Mining Intuitive Referring Expressions on Knowledge Bases
This work led to a [short paper](#) at EDBT 2020

Duties and Community Activities

- 2019 – present [AIMLAI](#) – **Workshop on Advances in Interpretable Machine Learning and AI**
Co-organizer of the workshop's yearly editions
- 2022 – 2024 **Special Issue: [Fair and Explainable Decision Support Systems](#)**
Co-guest editor (with Miguel Couceiro) of the EURO Journal of Decision Processes

(Selection of) Reviewing and PC Committees

- Conferences The Web Conference, Conference on Principles of Knowledge Representation and Reasoning (KR), AAAI International Conference on AI, International Joint Conference on AI (IJCAI), Conference on Web Search and Data Mining (WSDM), Extended Semantic Web Conference (ESWC), International Semantic Web Conference (ISWC), International Conference on Knowledge Management (CIKM), European Conference on AI (ECAI)
- Journals Information Systems, Semantic Web Journal, Information Processing and Management, Machine Learning, Journal on Very Large Databases

Languages

- Spanish Native proficiency
- English Full professional proficiency (C1 level)
- German Intermediate proficiency (B2 level)
- French Full professional proficiency (C1 level)
- Chinese Elementary proficiency (A1, learning in progress)

Selected Software Projects

[AMIE](#) AMIE is a system designed to mine logical Horn rules on large knowledge graphs/bases. The latest version, [AMIE 3](#), was released in 2020 and features several runtime improvements that allow it to scale to hundreds of millions of statements and thousands of predicates.

[HiPaR](#) Hierarchical Pattern-aided Regression is a [method](#) to learn regression rules on tabular data. Our extensive experimental evaluation suggests that HiPaR outperforms classical linear regression and other pattern-based regression methods such as regression and model trees, in terms of prediction accuracy.

Awards, Scholarships, Grants

- 2019 **ANR JCJC Research Grant**
FabLe: Framework for Automatic Interpretability in Machine Learning
Grant no. ANR-19-CE23-0019-01 – financed the Phd of Julien Delaunay
- 2018 **ACM SIGMOD Jim Gray Dissertation Honorable Mention**
For my dissertation “Rule Mining in Knowledge Graphs”

2013

Best Student Paper Award

In 22nd International World Wide Web Conference, Rio de Janeiro

2012

International Max Planck Research School

Scholarship of the Max Planck Society for PhD students in Computer Science
Saarbrücken, Germany