Noel Arteche

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Summary

Since October 2022, I am a **PhD student** in theoretical computer science at **Lund University**, under the supervision of **Susanna de Rezende** and **Jakob Nordström**. Before that, I graduated *cum laude* from the Master of Logic at the University of Amsterdam and obtained a BSc in Computer Science from the University of the Basque Country.

Research Interests

- computational complexity theory

- theoretical computer science

- logic

- philosophy of mathematics & mathematical practice

Education

Lund University
PhD in Theoretical Computer Science

Lund, Sweden
2022 –

- Supervised by Susanna de Rezende and Jakob Nordström, as part of the Mathematical Insights into Algorithms for Optimization (MIAO) research group.
- Research funded by the Wallenberg AI Autonomous Systems and Software (WASP) program.
- Expected graduation date: 2027.

University of Amsterdam
MSc in Logic (120 ECTS)

Amsterdam, The Netherlands
2020 – 2022

- Two-year master's program at the Institute for Logic, Language and Computation (ILLC).
  Courses in logic, theoretical computer science, mathematics and philosophy.
- Graduated *cum laude*.
- Partially funded by the E. W. Beth Scholarship.
- Thesis: *Parameterized Compilability*
  Supervisors: Ronald de Haan (ILLC, University of Amsterdam) and Hubie Chen (King's College London).

University of the Basque Country
BSc in Computer Science (240 ECTS)

San Sebastián, Spain
2016 – 2020

- Graduated first of my year, GPA: 9.43 (out of 10)
- Erasmus+ exchange at the KU Leuven (Belgium), during the academic year 2019-20.
  Completed 60 ECTS on master's level courses and wrote my thesis.
- Thesis: *A Formal Language and Tool for QBF Family Definitions*
  Supervisors: Marc Denecker (KU Leuven), Matthias van der Hallen (KU Leuven), Montserrat Hermo (University of the Basque Country).
  Results presented at the QBF Workshop of the SAT 2020 conference (see [2]).

Summer Schools

University of Göttingen
Hilbert-Bernays Summer School on Logic and Computation

Göttingen, Germany
October 2020

Teaching

- **Teaching Assistant** at the University of Amsterdam   Spring 2022
  Computational Complexity (6 ECTS · MSc course · 5314COCO6Y)
  Lecturers: Ronald de Haan and Jan Maly

Scholarships and Awards

- **Evert Willem Beth Scholarship**   2021 – 2022
  Granted the E. W. Beth scholarship for my master's in logic at the University of Amsterdam

- **Extraordinary BSc Degree Award**   2020
  Best Computer Science student at the University of the Basque Country

- **Kutxa Fundazioa Award**   2020
  Best Computer Science Student

Research Experience

University of the Basque Country   San Sebastián, Spain
Logic & Reasoning Group (LoRea), Faculty of Computer Science

- Predoctoral researcher   May 2021 – December 2021
  * Topic: The complexity of realizability for temporal logics
  * Supervisor: Montserrat Hermo
- Research internship   June 2019 – August 2019
  * Topic: Empirical proof complexity of quantified Boolean formulas
  * Supervisor: Montserrat Hermo

Research Papers

[1] **N. Arteche** and M. Hermo, "Prime Implicant Enumeration via QBF Solvers", in *QBF Workshop at the 24th International Conference on Theory and Applications of Satisfiability Testing*, 2021.

[2] **N. Arteche** and M. van der Hallen, "A Formal Language for QBF Family Definitions", in *QBF Workshop at the 23rd International Conference on Theory and Applications of Satisfiability Testing*, 2020.

Languages

- **Spanish:** native speaker
- **Basque:** native speaker, C1 certificate (EGA)
- **English:** fluent, C2 level (Cambridge Certificate of Proficiency in English)
- **French:** fluent, C2 level (DALF C2)

Extracurricular Activities

- Co-organiser of the Φ-Math reading group at the University of Amsterdam   2020 – 2021
  Co-founded a reading group on the philosophy of mathematics at the Institute for Logic, Language and Computation.

- Cultural critique on video games   2016 – 2020
  I was an editor at the Spanish online video game magazine Start, *where I wrote about video games regarding narrative, language, medium essentialism and artificial intelligence. I was also an editor* ZehnGames *and I was invited to write a piece for the third issue of the Spanish video games essay compilation* Deus Ex Machina. *A complete list of my (academic and non-academic) texts is available on my personal site.*