Noel Arteche

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SUMMARY

I am a first-year **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 Lund, Sweden
PhD in Theoretical Computer Science 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 Amsterdam, The Netherlands
MSc in Logic (120 ECTS) 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 San Sebastián, Spain
BSc in Computer Science (240 ECTS) 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]).

RESEARCH VISITS

Simons Institute for the Theory of Computing, UC Berkeley Berkeley, United States
Visiting Graduate Student January 2023 – May 2023

- Visitin Graduate Student for the semester-long Meta-Complexity program and the Satisfiability: Theory, Practice and Beyond reunion program.
- Stay funded by the Wallenberg AI, Autonomous Systems and Software (WASP) program.

Summer Schools

EPIT Summer School 2023: Le Kaléidoscope de la Complexité Île d'Oléron, France
French National Centre for Scientific Research (CNRS) June 2023

Hilbert-Bernays Summer School on Logic and Computation Göttingen, Germany
University of Göttingen October 2020

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.

Teaching Experience

- **Teaching Assistant** at the University of Amsterdam Spring 2022
  Computational Complexity (6 ECTS · MSc course) – Lecturers: Ronald de Haan and Jan Maly
- **Teaching Assistant** at Lund University Fall 2022
  Constraint Programming (7.5 ECTS · MSc course) – Lecturer: Per Andersson
- **Teaching Assistant** at Lund University Spring 2023
  Advanced Algorithms (7.5 ECTS · MSc course) – Lecturer: Susanna F. de Rezende

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

Previous 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

Languages

Spanish (native speaker), **Basque** (native speaker), **English** (fluent, C2 level), **French** (fluent, C2 level).