

Elena Gutiérrez Viedma



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| Age | 24 (November 10, 1993) | Address | IMDEA Software Institute |
| Place of birth | Madrid, Spain | | Office 342 |
| Nationality | Spanish | | Campus de Montegancedo s/n |
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About Me

I am a second-year PhD. student at the IMDEA Software Institute in Madrid, under the supervision of Prof. Pierre Ganty. Before, I studied a Double Degree in Mathematics and Computer Science at Universidad Autónoma de Madrid. During my summer breaks, I have enjoyed three research internships at IMDEA Software working with Ganty on formal verification of programs using Horn clauses.

Now, my research interests are mainly focused in the theory of formal languages and automata and its applications to the verification of software. I am also interested in Horn clause formal verification, logic programming and functional programming.

Research Experience

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| Sept. 2016 - present | IMDEA Software Institute PhD. in Software, Systems and Computing supervised by Prof. Pierre Ganty Universidad Politécnica de Madrid |
| Sept. 2015 - Feb. 2016 | IMDEA Software Institute Degree Thesis supervised by Prof. Pierre Ganty |
| 2013 - 2015 | IMDEA Software Institute Three-month research summer internships |

Education

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| 2011- 2016 | Double Degree in Mathematics and Computer Science Universidad Autónoma de Madrid Average Grade (out of 10) - 8.21 |
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Publications

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| 2017 | <i>Parikh Image of Pushdown Automata</i> P. Ganty and E. Gutiérrez. FCT 2017 |
| 2018 | <i>The Parikh Property for Weighted Context-Free Grammars</i> P. Ganty and E. Gutiérrez. To be accepted at FSTTCS 2018 |

Bachelor's Project

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| 2016 | <i>Linearisation of Index Bounded Sets of Horn Clauses.</i> Supervised by Prof. Pierre Ganty This thesis presents a Prolog algorithm that transforms non-linear logic programs into linear preserving their meaning Grade (out of 10) - 10 |
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Schools/Seminars Attended

- Microsoft Research PhD. Summer School. 4–8, July, 2016. Cambridge, UK.
- 2nd School on Formal Verification by The Hebrew University. 17–21, December, 2017. Jerusalem, Israel.

Conference/Public Talks

March, 2017 *Parikh Image of Pushdown Automata*
S3, Seminar Series at Imdea Software Institute. March 7th, 2017

Sept., 2017 *Parikh Image of Pushdown Automata*
Presentation at FCT 2017 in Bordeaux, France. September 11th, 2017

April, 2018 *Weighted Context-Free Grammars: Does Parikh's Theorem still hold?*
S3, Seminar Series at Imdea Software Institute. April 3rd, 2017

Languages

Spanish Native

English Fluent TOEFL iBT (Feb. 2016). Total (out of 120): 104

French Basic

Programing Languages

- Prolog, Haskell, C, Python, \LaTeX

Grants

2017- 2021 Predoctoral Contract for PhD. Training Grant (FPI)
Provided by the Spanish Ministry of Economy, Industry and Competitiveness

Additional Information

Teaching Experience Support classes for students at secondary education
Mathematics, English, Physics and Chemistry

Volunteer work International exchange organization AFS
Coordination of exchange activities for foreign students in Spain
Soñar Despierto Foundation
Support classes for students coming from marginalized backgrounds