Adrián Palacios Corella

Nationality: Spanish

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WORK EXPERIENCE

Applied Scientist
Amazon Web Services [10/2020 – Current]

Design and develop software based on Formal Methods as a member of the Automated Reasoning Group.
Supervised by Nathan Chong.

Software Development Engineer Intern
Amazon Web Services [04/2019 – 07/2019]

Address: Boston (United States)

Design and develop software based on Formal Methods as an intern of the Automated Reasoning Group.
Supervised by Kareem Khazem and Mark R. Tuttle.

Researcher
Universitat Politècnica de València [04/2015 – 31/03/2019]

Address: Valencia (Spain)

Study and research advanced topics in the fields of Formal Methods, Programming Languages and Software Engineering.

Visiting Researcher
Consiglio Nazionale delle Ricerche [09/2017 – 12/2017]

Address: Rome (Italy)

Develop research on the topic of Formal Methods for Program Verification.
Supervised by Prof. Maurizio Proietti.

Visiting Researcher
Nagoya University [09/2016 – 12/2016]

Address: Nagoya (Japan)

Develop research on the topic of Reversible Computation for Term Rewriting.
Supervised by Prof. Naoki Nishida.

EDUCATION AND TRAINING

PhD in Computer Science
Universitat Politècnica de València [04/2015 – 02/2020]

Address: Valencia (Spain)

Study and research advanced topics in the fields of Programming Languages, Software Engineering and Formal Methods.
Thesis Title: Formal Methods for Constraint-Based Testing and Reversible Debugging in Erlang. Thesis Advisor: Germán Vidal.

Master of Science in Artificial Intelligence, Pattern Recognition and Digital Imaging
Universitat Politècnica de València [2012 – 2014]

Address: Valencia (Spain)

Study and research the advanced topics in the fields of Pattern Recognition and Natural Language Processing.

Computer Science Engineer
Universitat Politècnica de València [2007 – 2012]

Address: Valencia (Spain)

Design solutions for Computer Science problems using a large variety of tools and methods.
Major in Programming Languages and Artificial Intelligence.

LANGUAGE SKILLS

Mother tongue(s): **Spanish** | **Catalan**

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

PUBLICATIONS

Publications

Publications:

- Causal-Consistent Replay Reversible Semantics for Message Passing Concurrent Programs (in Fundamenta Informaticae 2021)
- Property-Based Test Case Generators for Free (in Proc. of TAP 2019)
- Causal-Consistent Replay Debugging for Message Passing Programs (in Proc. of FORTE 2019)
- Bounded Symbolic Execution for Runtime Error Detection of Erlang Programs (in Proc. of HCVS 2018)
- Fallback Variable History NNLMs: Efficient NNLMs by precomputation and stochastic training (in PLoS One 2018)
- A Theory of Reversibility for Erlang (in Journal of Logical and Algebraic Methods in Programming 2018)
- CauDEr: A Causal-Consistent Reversible Debugger for Erlang (in Proc. of FLOPS 2018)
- Reversible Computation in Term Rewriting (in Journal of Logical and Algebraic Methods in Programming 2018)
- A Reversible Semantics for Erlang (in Proc. of LOPSTR 2016)
- Reversible Term Rewriting (in Proc. of FSCD 2016)
- Concolic Execution in Functional Programming by Program Instrumentation (in Proc. of LOPSTR 2015)
- Towards Modelling Actor-Based Concurrency in Term Rewriting (in Proc. of WPTE 2015)

CONFERENCES AND SEMINARS

Conferences

Oral presentations at the following conferences:

- 5th Workshop on Horn Clauses for Verification and Synthesis (HCVS'18)
- 14th International Symposium on Functional and Logic Programming (FLOPS'18)
- ACM PLDI 2017 Student Research Competition (ACM PLDI'17 SRC)
- 26th International Symposium on Logic-Based Program Synthesis and Transformation (LOPSTR'16)
- 1st International Conference on Formal Structures for Computation and Deduction (FSCD'16)
- 25th Int'l Symp. On Logic-Based Program Synthesis and Transformation (LOPSTR'15)
- 2nd International Workshop on Rewriting Techniques for Program Transformations and Evaluation (WPTE'15)

SERVICE

Service

- Artifact Evaluation Committee Member of PLDI 2022
- Artifact Evaluation Committee Member of PLDI 2021
- Reviewer of the Journal of Engineering Applications of Artificial Intelligence (2020)
- Program Committee Member of LPAR 2020
- Reviewer in other conferences (ICLP 2018, FSCD 2020, etc.)

HONOURS AND AWARDS

Honours and awards

- Fully-funded 4-year PhD scholarship from Spanish Govt.
- Cum Laude distinction for PhD degree
- Recognized with honors for his Bachelor's final year project
- Honorable Mention at the Southwestern Europe Regional Contest (SWERC) in 2010
- 3rd position at the Local Programming Contest in 2011

ORGANISATIONAL SKILLS

Organisational skills

- Simultaneous collaboration with different teams distributed across the globe
- Project planning for short-term and long-term research proposals

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills

- Project presentations in both academic and industrial environments
- Technical discussion during in-person and online meetings
- Experience in (non-technical) customer-facing jobs for 7 years

JOB-RELATED SKILLS

Job-related skills

- Expertise in advanced topics of Computer Science (Formal Methods, Programming Languages, etc.)
- Advanced knowledge of the C/C++, Python and Erlang programming languages
- Good knowledge of the Java, Haskell, Prolog and MATLAB programming languages and the SQL language
- Basic knowledge of other programming languages (Elixir, R, etc.)
- Intermediate user of CVS programs like git and subversion

COURSES

Courses

- ◦ SAT/SMT/AR Summer School 2018
- ◦ International Training School on Reversible Computation 2017
- ◦ ECOOP Summer School 2017
- ◦ International School on Rewriting 2015
- ◦ Erasmus IP TrabHCI 2012