



Vazou Niki

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

I am an Assistant Research Professor at the IMDEA Software Institute in Madrid.

I obtained my PhD in 2016 from University of California, San Diego.

Before joining IMDEA in 2018, I held a postdoc position at the University of Maryland, College Park.

During my PhD, I interned at Awake Security and Microsoft Research Redmond and Cambridge.

My research interests are on functional programming, type systems, and automated verification.

My most influential project is Liquid Haskell, an extension to the Haskell programming language into a useful and usable theorem prover.

During my seven years of research activity I published 12 papers in highly prestigious conferences, including POPL, PLDI, ICFP, ESOP, VMCAI, and Haskell Symposium.

My h-index is 8 and I have 406 citations.

I have given keynotes to functional conferences, including Haskell eXchange and Zurihac, and invited talks at more than 10 universities. Further, I have participated in Working Groups, Dagstuhl and Shonan invitation only seminars.

I have been awarded the Microsoft Research Graduate Research Fellowship (for years 2014-2016) and won the UCSD CSE Gradual Award at 2015.

In 2018, I received a best paper award at OOPSLA for the paper Gradual Liquid Type Inference.

Scientific Service.

I am a member of the Haskell Symposium steering committee and the Haskell.Org committee.

I have chaired the Student Research Competition of POPL 2019 and the Haskell Impementor Workshop of ICFP 2019.

I have co-chaired the Programming Languages and Analysis for Security 2019, the Type-Driven Development Workshop and the Programming Languages Mentoring Workshop and ICFP 2018.

Since 2016, I have been a member of 18 committees, including POL 2019, ICFP 2018, and ESOP 2018.

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CURRÍCULUM VITAE NORMALIZADO

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Teaching and supervising. I have so taught 2 courses at University of Maryland and an one week workshop for Clubs of Science in Mexico. I have mentored 5 undergraduate and 2 graduate students.



General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

JCR articles, h Index

In my field, conference publications are the primary way of disseminating novel results. My conference publications include, among others:

- 6 papers with conferences CORE rank A * (flagship): 2 ICFP, 2 POPL, 1 PLDI and 1 OOSPLA.
- 2 papers with conferences CORE rank A (excellent): 2 ESOP.

CORE conference rankings are available at core.edu.au. I have published at the flagship conferences in functional programming (ICFP), programming language theory (POPL), and object-oriented programming (OOSPLA).

Key metrics according to Google Scholar

- h-index: 8
- Total number of citations: 406

Vazou Niki

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Personal web page: **<https://nikivazou.github.io>**

Current professional situation

Employing entity: FUNDACION IMDEA SOFTWARE
Professional category: Research Assistant Professor
Start date: 05/11/2018

Previous positions and activities

	Employing entity	Professional category	Start date
1	University of Maryland	Postdoctoral Researcher	10/01/2017
2	Awake Networks, Mountain View, USA.	Internship	15/06/2016
3	Microsoft Research, Redmond, USA.	Internship	15/06/2014
4	Microsoft Research, Cambridge, UK.	Internship	15/09/2013
5	Opa, Paris, French.	Internship	15/06/2012

- 1** **Employing entity:** University of Maryland
Professional category: Postdoctoral Researcher
Start-End date: 10/01/2017 - 02/11/2018
- 2** **Employing entity:** Awake Networks, Mountain View, USA.
Professional category: Internship
Start date: 15/06/2016 **Duration:** 3 months
- 3** **Employing entity:** Microsoft Research, Redmond, USA.
Professional category: Internship
Start date: 15/06/2014 **Duration:** 3 months
- 4** **Employing entity:** Microsoft Research, Cambridge, UK.
Professional category: Internship
Start date: 15/09/2013 **Duration:** 3 months

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CURRÍCULUM VITAE NORMALIZADO

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5**Employing entity:** Opa, Paris, French.**Professional category:** Internship**Start date:** 15/06/2012**Duration:** 3 months



Education

University education

Doctorates

Doctorate programme: Computer Science

Degree awarding entity: University of California, San Diego

Date of degree: 10/12/2016

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	C2	C2	C2	C2	C2
Greek, Modern (1453-)	C2	C2	C2	C2	C2

Teaching experience

Experience supervising doctoral thesis and/or final year projects

- 1 Project title:** Information Flow Security for Multi-Tier Web Applications
Entity: University of Maryland
Student: James Parker
Date of reading: 15/01/2019
- 2 Project title:** Verification of Algorithms using Liquid Haskell
Entity: National Technical University of Athens
Student: George Petrou
Date of reading: 20/07/2018
- 3 Project title:** Comparing Liquid Haskell with Coq
Entity: University of Maryland
Student: Will Kunkel
Date of reading: 15/01/2018
- 4 Project title:** Refinement Types for Ruby
Entity: University of Maryland
Student: Kazerounian
Date of reading: 01/09/2017

Teaching experience in courses and seminars for university teacher training

- 1** **Type of event:** Course
Name of the event: CMSC498V: Advanced Functional Programming Languages
Organising entity: University of Maryland
Teaching date: 22/01/2018
- 2** **Type of event:** Course
Name of the event: CMSC330: Organization of Programming Languages
Organising entity: University of Maryland **Type of entity:** University
Teaching date: 28/08/2017
- 3** **Type of event:** Seminar
Name of the event: Liquid Haskell: Refinement Types for Haskell
Organising entity: Shonan **Type of entity:** Technological Centre
Hours of teaching: 3
Teaching date: 15/05/2017
- 4** **Type of event:** Workshop
Name of the event: Haskell; Programming with Functions
Organising entity: Clubes De Ciencia **Type of entity:** Innovation and Technology Centres
Hours of teaching: 56
Teaching date: 17/08/2015

Scientific and technological activities

Scientific production

Works submitted to national or international conferences

- 1** **Title of the work:** Information Flow Security for Multi-Tier Web Applications
Name of the conference: Principles of Programming Languages
City of event: Lisbon, Portugal
Date of event: 2019
Organising entity: ACM SIGPLAN
James Parker; Niki Vazou; Michael Hicks.
- 2** **Title of the work:** Type-Level Computations for Ruby Libraries
Name of the conference: Programming Languages Design and Implementation
City of event: Arizona, United States of America
Date of event: 2019
Organising entity: ACM FCRC
Milod Kazerounian; Sankha Narayan Guria; Niki Vazou; Jeffrey Foster; David Van Horn.



- 3** **Title of the work:** Gradual Liquid Type Inference
Name of the conference: Object-Oriented Programming, Systems, Languages & Application
City of event: Boston, United States of America
Date of event: 2018
Organising entity: ACM PACMPL
Niki Vazou; Éric Tanter; David Van Horn.
- 4** **Title of the work:** Refinement Reflection: Complete Verification with SMT.
Name of the conference: Principles of Programming Languages
City of event: Los Angeles, United States of America
Date of event: 2018
Organising entity: ACM SIGPLAN
Niki Vazou; Anish Tondwalkar; Vikraman Choudhury; Ryan Scott; Ryan Newton; Philip Wadler; Ranjit Jhala.
- 5** **Title of the work:** Refinement Types for Ruby
Name of the conference: International Conference on Verification, Model Checking, and Abstract Interpretation
City of event: Los Angeles, United States of America
Date of event: 2018
Milod Kazerounian; Niki Vazou; Austin Bourgerie; Jeffrey S. Foster; Emina Torlak.
- 6** **Title of the work:** Theorem Proving for All
Name of the conference: Haskell Symposium
City of event: San Luis, United States of America
Date of event: 2018
Organising entity: ACM SIGPLAN
Niki Vazou; Joachim Breitner; Rose Kunkel; David Van Horn; Graham Hutton.
- 7** **Title of the work:** A Tale of Two Provers
Name of the conference: Haskell Symposium
City of event: Oxford, United Kingdom
Date of event: 2017
Organising entity: ACM SIGPLAN
Niki Vazou; Leonidas Lampropoulos; Jeff Polakow.
- 8** **Title of the work:** Bounded Refinement Types
Name of the conference: International Conference on Functional Programming
City of event: Florida, United States of America
Date of event: 2015
Organising entity: ACM SIGPLAN
Niki Vazou; Alexander Bakst; Ranjit Jhala.
- 9** **Title of the work:** Type Targeted Testing
Name of the conference: European Symposium on Programming
City of event: London, United Kingdom
Date of event: 2015
Eric Seidel; Niki Vazou; Ranjit Jhala.
- 10** **Title of the work:** Liquid Haskell: Refinement Types in the Real World
Name of the conference: Haskell Symposium
City of event: Gothenburg, Sweden



Date of event: 2014

Organising entity: ACM SIGPLAN

Niki Vazou; Eric Seidel; Ranjit Jhala.

11 Title of the work: Refinement Types for Haskell

Name of the conference: International Conference on Functional Programming

City of event: Gothenburg, Sweden

Date of event: 2014

Organising entity: ACM SIGPLAN

Niki Vazou; Eric Seidel; Ranjit Jhala; Dimitrios Vytiniotis; Simon Peyton-Jones.

12 Title of the work: Abstract Refinement Types

Name of the conference: European Symposium on Programming

City of event: Rome, Italy

Date of event: 2013

Niki Vazou; Patric Rondon; Ranjit Jhala.

13 Title of the work: Memory Safety and Race Freedom in Concurrent Programming with Linear Capabilities

Name of the conference: Federated Conference on Computer Science and Information Systems

City of event: Szczecin, Poland

Date of event: 2011

Niki Vazou; Michalis Papakryiakou; Nikolaos Papaspyrou.

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

1 Committee title: Principles of Programming Languages (POPL'19)

Start date: 2019

2 Committee title: European Symposium on Programming (ESOP'18)

Start date: 2018

3 Committee title: Haskell Symposium

Start date: 2018

4 Committee title: International Conference on Functional Programming (ICFP'18)

Start date: 2018

5 Committee title: Haskell in Leipzig

Start date: 2017

6 Committee title: ML-Family Workshop

Start date: 2017



- 7** **Committee title:** Scala Symposium
Start date: 2017
- 8** **Committee title:** Symposium on Practical Aspects of Declarative Languages
Start date: 2017
- 9** **Committee title:** Artifact Evaluation for PLDI
Start date: 2016
- 10** **Committee title:** Artifact Evaluation for POPL
Start date: 2016
- 11** **Committee title:** Haskell Implementors Workshop
Start date: 2016
- 12** **Committee title:** Haskell Symposium
Start date: 2016
- 13** **Committee title:** Haskell in Leipsin
Start date: 2016
- 14** **Committee title:** Scala Symposium
Start date: 2016
- 15** **Committee title:** Symposium on Practical Aspects on Declarative Languages
Start date: 2016
- 16** **Committee title:** Symposium on Trends in Functional Programming
Start date: 2016
- 17** **Committee title:** Workshop on Coalgebra, Horn Clause Logic Programming, and Types
Start date: 2016

Organization of R&D activities

- 1** **Title of the activity:** Haskell Implementor's Workshop
Type of activity: Workshop
Start date: 2019
- 2** **Title of the activity:** Programming Languages and Analysis for Security
Type of activity: Workshop
Geographical area: European Union
Convening entity: CCS
City convening entity: London,
Start date: 2019



- 3 Title of the activity:** Student Research Competition, POPL
Start date: 2019
- 4 Title of the activity:** Programming Languages Mentoring Workshop, ICFP, Missouri.
Start date: 2018
- 5 Title of the activity:** Workshop on Type-Driven Development, Missouri.
Start date: 2018
- 6 Title of the activity:** Co-organizer of Summer of Haskell.
Start date: 2017

R&D management

- 1 Name of the activity:** Member of The ACM SIGPLAN Haskell Symposium Steering Committee
Start date: 2017
- 2 Name of the activity:** Member of Haskell.org Committee.
Start date: 2016 **Duration:** 3 years

Other achievements

Prizes, mentions and distinctions

- 1 Description:** UMD Victor Basili Postdoctoral Fellowship.
Awarding entity: University of Maryland **Type of entity:** University
Conferral date: 01/12/2018
- 2 Description:** UCSD CSE Graduate Award for Research.
Awarding entity: University of California, San Diego
Conferral date: 10/12/2015
- 3 Description:** Microsoft Research Graduate Research Fellowship.
Awarding entity: Microsoft Research
Conferral date: 2014