

# Nataliia Stulova

## contact

nata.stulova@pm.me

## links

web:// [s0nata.github.io](https://s0nata.github.io)

LinkedIn:// [nata-stulova](#)

## programming

Prolog  
C++, Java  
L<sup>A</sup>T<sub>E</sub>X  
bash

## languages

**native**  
Ukrainian  
Russian  
**proficient**  
English  
Spanish  
German  
**beginner**  
Hebrew  
French

## interests

- > program specification languages
- > specification-based software verification and synthesis
- > natural language processing
- > software engineering
- > general artificial intelligence
- > computational linguistics
- > knowledge representation and reasoning

## experience

- 2019 – now **EPFL (École polytechnique fédérale de Lausanne) | Postdoc** Lausanne, Switzerland  
I am currently working on applying natural language processing (NLP) techniques in the area of software development, in particular within the task of code summarization.
- 2014 – 2018 **IMDEA Software Institute | Research Assistant** Madrid, Spain  
My research focus has been specification-based software verification: how to write specifications of program behavior, how to introduce non-trivial properties of programs, how to check them thoroughly, and how to do this efficiently.
- 2012 – 2013 **Intelligent Systems and Knowledge Engineering Group | Research Intern** Madrid, Spain  
**Technical University of Madrid (UPM)**  
I have been designing and implementing a graphical user interface (GUI) for a multi-agent airspace simulation system.

## education

- 2014–2018 **PhD** in Software, Systems and Computing cum laude Technical University of Madrid (UPM)
- 2012–2013 **MSc** in Artificial Intelligence Technical University of Madrid (UPM)
- 2008–2012 **BSc** in System Analysis National Technical University of Ukraine  
"Kyiv Polytechnic Institute" (NTUU "KPI")

## research

- PPDP'18 Static Performance Guarantees for Programs with Run-time Checks  
*M. Klemen, N. Stulova, P. Lopez-Garcia, J. F. Morales, M. Hermenegildo*  
20th International ACM SIGPLAN Symposium on Principles and Practice of Declarative Programming  
resource usage analysis • assertions • declarative programming • run-time checking
- PADL'18 Exploiting Term Hiding to Reduce Run-time Checking Overhead  
*N. Stulova, J. F. Morales, M. Hermenegildo*  
20th International Symposium on Practical Aspects of Declarative Languages  
declarative programming • module systems • assertions • abstract interpretation • run-time checking
- SCP'17 Some Trade-offs in Reducing the Overhead of Assertion Run-time Checks via Static Analysis  
*N. Stulova, J. F. Morales, M. Hermenegildo*  
Science of Computer Programming, 18th International ACM SIGPLAN Symposium on Principles and Practice of Declarative Programming (PPDP'16) Special Issue  
abstract interpretation • assertions • run-time checking • logic programming • horn clauses
- ICLP'15 Practical Run-time Checking via Unobtrusive Property Caching  
*N. Stulova, J. F. Morales, M. Hermenegildo*  
Theory and Practice of Logic Programming, 31st International Conference on Logic Programming Special Issue  
assertions • property caching • memoization • run-time checking
- PPDP'14 Assertion-based Debugging of Higher-Order (C)LP Programs  
*N. Stulova, J. F. Morales, M. Hermenegildo*  
16th International ACM SIGPLAN Symposium on Principles and Practice of Declarative Programming  
higher-order • assertions • run-time checking • declarative programming

## other qualifications

- 2017 **Workshop Chair | Organizer** web presence • talk scheduling • submission review  
Co-organized CICLOPS'17 – 15th International Colloquium on Implementation of Constraint and LOGic Programming Systems, co-located with ICLP'17 / CP'17 / SAT'17.