

# NataliiaStulova

## contact

nata.stulova@pm.me

## links

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

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

## education

### PhD in Software, Systems and Computing cum laude

2014–2018

Technical University of Madrid (UPM)

### MSc in Artificial Intelligence

2012–2013

Technical University of Madrid (UPM)

### BSc in Systems Analysis

2008–2012

National Technical University of Ukraine "Kyiv Polytechnic Institute" (NTUU "KPI")

## development

Java, C++

Prolog

♥ bash, git

GitLab, Phabricator

Trello

LaTeX

WordPress

## languages

native

Ukrainian

Russian

proficient

English

Spanish

intermediate

German

beginner

French

Hebrew

## summary

I am a software engineering researcher developing tools to keep software and its specifications aligned. I am working with: requirement documents • code comments • formal specifications.

## experience

### Senior Researcher | University of Bern | 2020-2021

Switzerland, remote

**requirements engineering** > working on tool support for the RE tasks in agile software development:

- managed two projects in a team of four working on tool development
- co-authored several publications:
  - *Interactive Behavior-driven Development: a Low-code Perspective* (LowCode'21)
  - *Towards Agile Artifact Construction* (under submission)

**software documentation** > working on quality analysis and inconsistency detection:

- established a project collaboration between four research institutions
- worked with 4 different distributed R&D teams as team leader, manager, and engineer
- co-authored several publications:
  - *A Decade of Code Comment Quality Assessment: A Systematic Literature Review* (under review)
  - *Do Comments follow Commenting Conventions? A Case Study in Java and Python* (SCAM'21)
  - *RepliComment: Identifying Clones in Code Comments* (JSS volume 182)

**teaching** > at BSc and MSc levels at the university:

- developed from zero a series of practical algorithms and data structures lectures within the Software Skills Lab course (lecture slides and videos, assignments with solutions, exam)
- co-supervised several MSc and BSc theses
- gave guest lectures on programming languages, software verification, and UI design

### Scientist | Swiss Federal Institute of Technology in Lausanne (EPFL) | 2019-2020

Switzerland

**source code analysis** > worked on formal languages-based techniques for source code automatic documentation and summarization, exploring the potential of approaches based on natural language processing (NLP) to software documentation analysis:

- established a project collaboration between three research institutions
- co-authored the first project publication:
  - *Towards Detecting Inconsistent Comments in Java Source Code Automatically* (SCAM'20)

### Research Assistant | IMDEA Software Institute | 2014-2018

Spain

**software verification** > worked on program specification languages and tools for specification-based software verification: how to write formal specifications of program behavior properties, how to check them at run time, and how to do this efficiently

- developed experimental extensions for the testing and verification frameworks of the Ciao programming language
- co-organized and ran the 15th International Colloquium on Implementation of Constraint and Logic Programming Systems (CICLOPS'17)
- co-authored several publications:
  - *Static Performance Guarantees for Programs with Run-time Checks* (PPDP'18)
  - *Exploiting Term Hiding to Reduce Run-time Checking Overhead* (PADL'18)
  - *Some Trade-offs in Reducing the Overhead of Assertion Run-time Checks via Static Analysis* (SCP volume 155)
  - *Practical Run-time Checking via Unobtrusive Property Caching* (ICLP'15)
  - *Assertion-based Debugging of Higher-Order (C)LP Programs* (PPDP'14)

### Research Intern | Technical University of Madrid (UPM) | 2012-2013

Spain

Designed and developed the initial graphical UI for a multi-agent airspace simulation system.

## other qualifications

### Development Volunteer, Webmaster | Ksi Prostir | 2020-now

Ukraine, remote

**digital transformation** > developing a website for a Dnipro-based cultural space KsiProstir. Initially I have worked on the initial requirements analysis, later I have switched to the no-code web development and maintenance.