

NataStulova

contact

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links

web:// stulova.me

LinkedIn:// [nata-stulova](https://www.linkedin.com/company/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, Notion

LaTeX

WordPress

languages

native

Ukrainian

proficient

English

Spanish

intermediate

German

beginner

French

Hebrew

summary

I am a research software engineer 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

remote / Bern, Switzerland

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)
 - *First-class Artifacts as Building Blocks for Live in-IDE Documentation* (SANER'22)

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

Lausanne, 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 Engineer Assistant | IMDEA Software Institute | 2014-2018

Madrid, Spain

software verification > worked on program specification languages and tools for specification-based software verification: how to write formal specifications of program behavior, how to instrument them into source code to check the specifications at run time, and how reduce the run-time overhead of these checks:

- 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)

other qualifications

Development Volunteer, Business analyst, Project manager | Ksi Prostir | 2020-2021

remote/ Dnipro, Ukraine

digital transformation > developing a website for a Dnipro-based cultural space KsiProstir. I have worked on the initial requirements analysis, after which I had collaborated in the no-code web development and maintenance.