NataStulova

contact

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links

web:// **stulova.me**
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")

developement

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 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 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 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)

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.