Tamás Szabó

PhD Student, Programming Languages Research Group, JGU Mainz
Software Engineer, itemis AG
e-mail: tamas.szabo@itemis.de, web: https://szabta89.github.io

RESEARCH INTERESTS

Programming Languages, Program Analysis, Incremental Computations

EDUCATION

PhD student in Computer Science, May 2015 - present

- JGU Mainz, Germany, May 2019 - present
- TU Delft, Netherlands, May 2016 - Apr 2019
- TU Darmstadt, Germany, May 2015 - Apr 2016

Topic: *Incrementalization Techniques for Static Program Analyses*
Advisors: Sebastian Erdweg and Markus Völter

M.Sc. in Computer Science, February 2011 - February 2013
Budapest University of Technology and Economics, Hungary
Thesis: *Transitive Reachability for Efficient Event-Driven Model Transformations*
Advisors: István Ráth and Gábor Bergmann

B.Sc. in Computer Science, September 2007 - January 2011
Budapest University of Technology and Economics, Hungary
Thesis: *Heuristic Support for Model Checking of Asynchronous Systems*
Advisors: András Vörös

SELECT PUBLICATIONS

For a complete list see https://szabta89.github.io/publications.html.

Incrementalizing Lattice-Based Program Analyses in Datalog
T. Szabó, G. Bergmann, S. Erdweg, and M. Völter
OOPSLA 2018

Incremental Overload Resolution in Object-Oriented Programming Languages
T. Szabó, E. Kuci, M. Bijman, M. Mezini, and S. Erdweg
FTfJP 2018

Lessons learned from developing mbeddr: a case study in language engineering with MPS

M. Voelter, B. Kolb, T. Szabó, D. Ratiu, A. van Duersen
SOSYM 2016

Efficient Development of Consistent Projectional Editors using Grammar Cells
M. Voelter, T. Szabó, S. Lisson, B. Kolb, S. Erdweg, T. Berger
SLE 2016

IncA: A DSL for the Definition of Incremental Program Analyses
T. Szabó, S. Erdweg, M. Voelter
ASE 2016

EMPLOYMENT

Software Engineer — *itemis AG*
Stuttgart, Germany — *March 2013 - present*

As a member of the Language Engineering team, I work on customer projects based on domain-specific languages and language workbenches. I am also one of the main contributors of the open-source mbeddr project.

Software Engineer — *Healthcare Technologies Knowledge Centre, Budapest University of Technology and Economics*
Budapest, Hungary — *June 2009 - January 2013*

I had various software engineering and research tasks in the domain of biomedical systems, including projects based on intelligent home environments, medical devices, and sensor networks.

SERVICE

I have served on the program committee of the following workshops: MODELS'19 Tools and Demos, MDETools'18, MDETools'17, LWC@SLE'16.

I am also active in peer reviewing: I have reviewed papers for TOPLAS, and I have been a co-reviewer for OOPSLA, GPCE, and ASE papers.

SOFTWARE

IncA: a framework for incremental evaluation of static program analyses - https://github.com/szabta89/IncA

mbeddr: an extensible set of integrated languages for embedded software development - http//www.mbeddr.com

MPS-DF: an extensible framework for variable-precision data-flow analyses - https://szabta89.github.io/projects/df.html

EMF-IncQuery: an efficient incremental query engine for EMF models - https://www.eclipse.org/incquery

REFERENCES Dr. Sebastian Erdweg, JGU Mainz
Dr. Markus Völter, independent / itemis AG
Dr. István Ráth, Budapest University of Technology and Economics