

# RNDr. Tomáš Balyo PhD

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## Education

### Charles University

*PhD, supervised by Roman Barták*

Topic: Modeling and Solving Problems Using SAT Techniques

**Prague**

2010–2014

### Charles University

*Msc., supervised by Pavel Surynek*

Topic: Solving Boolean Satisfiability Problems

**Prague**

2008–2010

## Work Experience

### Karlsruhe Institute of Technology

*Post-doctoral Researcher*

Research and development of Satisfiability solving techniques for massively parallel environments.

**Karlsruhe**

2014–Present

### Orchitech Solutions

*J2EE Developer*

Development of internal identity and access management systems for a telecommunication company.

**Prague**

2010

## Research Interests

**Satisfiability Solving and Applications:** also related problems such as MaxSAT, QBF, SMT

**Automated Planning:** for diverse A.I. applications such as robotics, logistics, virtual agents

## Selected Publications

**SAT Race 2015:** Tomas Balyo, Armin Biere, Markus Iser and Carsten Sinz, Artificial Intelligence vol. 241

**HordeSat – A Massively Parallel Portfolio SAT Solver:** T. Balyo, P. Sanders, C. Sinz, SAT 2015

**Accelerating SAT Based Planning with Incremental SAT :** Tomas Balyo, Stephan Gocht, ICAPS 2017

Full list of publications: <https://algo2.iti.kit.edu/balyo/index.php?page=Research>

## Skills and Languages

**Skills:** design of parallel optimization algorithms

**Programming:** C/C++, Java, C#, PHP, Javascript

**Languages:** English, Czech, Slovak, Hungarian - fluent, German - intermediate

## Miscellaneous

**Hobby developer of Computer Games:** regularly taking part in the Global Game Jam since 2015

**Organizing SAT Competitions:** co-organizer of the 2015, 2016, and 2017 SAT Competitions

**Teaching and Tutoring:** teaching “Practical SAT solving” and “Automated Planning and Scheduling”, supervising student Bsc/Msc theses