

# THOMAS PANI

## Software | Liminality | Bricolage

I work on complex problems at the boundary of systems and technologies. Comfortable with ambiguity, I choose to address challenging tasks with attention to detail, creativity, and an emphasis on collaboration and excellent communication.

☎ +436803047150

📍 Vienna, AT

✉ [thomas.pani@gmail.com](mailto:thomas.pani@gmail.com)

🌐 [thpani.net](http://thpani.net)

## EXPERIENCE

**Research Engineer** 02/2022 – Ongoing  
**Informal Systems** Vienna, AT

- I work on tooling for modern specification languages, including our in-house language Quint and the Apache model checker for Quint and TLA+.
- I lead design and development of Apache Cloud, a cloud-based parallel batch execution engine leading to 10x speedup.
- I'm a regular contributor to audits and other security-focused efforts in the Cosmos blockchain ecosystem.

**Doctoral Researcher** 02/2014 – 08/2021  
**TU Wien & Wolfgang Pauli Institute** Vienna, AT

- Researched, designed and implemented automated verification techniques for concurrent shared-memory software.
- Developed *Verifolio*, a machine learning-enabled portfolio software verifier.
- Taught and assisted courses on programming languages, formal methods, software verification, information design.

**PhD SWE Intern** 05/2019 – 08/2019  
**Google Research** Mountain View, CA, USA

- Contributed to a Python library for authoring, executing, and testing complex machine-learning pipelines.
- Authored a pipeline for large-scale on-device evaluations for one of Google's mobile ML models.

**PhD SWE Intern** 05/2018 – 08/2018  
**Google Cloud** Sunnyvale, CA, USA

- Developed a tool for systematic inconsistency detection in large-scale machine health data, using formal methods.

**Research & Teaching Assistant** 10/2009 – 01/2014  
**TU Wien** Vienna, AT

- Created *Sloopy*, a data-flow analysis for heuristically predicting hardness of automated program analysis tasks.
- Teaching assistant for object-oriented programming: I designed exercises and supervised student groups.

Full résumé at [linkedin.com/in/thpani/](https://www.linkedin.com/in/thpani/)



## EDUCATION

**Dr.** Computer Science  
TU Wien, Austria 12/2021

**Dipl.-Ing.** Computer Science  
TU Wien, Austria 01/2014

## OTHER ACTIVITIES

**Vienna Science Ball**  
Member of the organizing committee

**Verein Conscious Brothers**  
Founding member,  
Mitglied d. Vorstands

## FURTHER TRAINING

**LEGO® SERIOUS PLAY®**  
**Facilitator Training** 06/2023  
Association of Master Trainers in the  
LEGO® SERIOUS PLAY® Method

**Patterns for Self-Organizing Teams**  
The Hum (online) 12/2022

**Coaching as a Management Tool**  
Gabriele Fischer 02/2022

**Voice & Body Language Skills**  
Kate Montague 06/2021

## LANGUAGES

German	Native	●●●●●
English	Proficient	●●●●○
Spanish	Beginner	●○○○○