Luca Di Grazia

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Major Achievements and Selected Awards

○ **Until now:** Innovative research in Software Engineering and Generative AI at prestigious universities (Top-20 in CSRankings for Software Engineering) and a tech giant (Market Cap > $100B) across multiple countries.
○ **2024:** Successufully defended my PhD with *Summa cum laude* (the highest grade in the German system).
○ **2023:** Won *GenAI Uber's competition* with my internship project on using generative AI to boost developer productivity for fixing bugs, beating 103 teams, and presenting as winners to the Uber's CEO and ELT.
○ **2022:** Recipient of the *ACM SIGSOFT Distinguished Paper Award* at ESEC/FSE 2022 (see below).
○ **2022:** Second winner at *ACM Student Research Competition* at ICSE 2022 for my project: *Efficiently and Precisely Searching for Code Changes with DiffSearch* ($300).
○ **2020:** Gnome Challenge 2020 winner (1st phase) to *Reach a new generation of open-source coders* ($1,000).
○ **2016-2018:** Awarded national scholarship to study computer engineering at Polytechnic of Turin (€ 3,000/year).
○ Reviewer for *IEEE TSE*, *ACM TOSEM*, Hiring Evaluator for the Max Planck Research School (IMPRS) for Intelligent Systems (IS) and the European Laboratory for Learning and Intelligent Systems Systems (ELLIS).

Selected Positions and Experience

From 02/2024	**University of Lugano (USI)**, *Switzerland* 🇨🇭 *Role:* Postdoctoral Researcher. Supervisor: Prof. Dr. Mauro Pezzè. *Tasks:* Researcher on testing software in production using large language models and dynamic analysis.
09/2019 – 02/2024	**University of Stuttgart**, *Germany* 🇩🇪 *Role:* Research and Teaching Assistant. Supervisor: Prof. Dr. Michael Pradel. *Tasks:* Research in software evolution, focusing on type systems and programming languages. Teaching assistant for Programming Paradigms, Machine Learning for Programming and Program Analysis.
05/2023 – 09/2023	**Uber**, *Amsterdam*, Netherlands 🇳🇱 *Role:* Research intern (PhD) in Generative AI and AI Prompt Engineering. Supervisor: Dr. Raj Barik. *Tasks:* Design and work on a genAI research project based on the usage of large language models to automatically fix bugs in the Uber source code revealed by static analysis tools.

Education

09/2019 – 02/2024	**University of Stuttgart**, *Germany* 🇩🇪 *Degree:* Ph.D. in Computer Science, advisor Prof. Dr. Michael Pradel. *Thesis:* "Supporting Software Evolution with Search and Predictions". *Committee:* Prof. Dr. Michael Pradel, Prof. Dr. Georgios Gousios and Prof. Dr. Kathryn T. Stolee.
09/2013 – 07/2019	**Polytechnic of Turin**, *Italy* 🇮🇹 *Degrees:* Bachelor's <u>and</u> Master's Degree in Computer Engineering. Specialization in Embedded Systems. Thesis: "Protein classification using geometrical features for 3D face analysis." (Published in *PROTEIN*) *Supervisors:* Prof. Dr. Federica Marcolin and Prof. Dr. Jack A. Tuszynski.

Selected Peer-reviewed Conference and Journal Publications

Note: All publications listed below have been featured in A* core venues.

ICSE 2024	**PyTy: Repairing Static Type Errors in Python** Chow, Y.; <u>Di Grazia, L.</u>; Pradel, M. *International Conference on Software Engineering*.
FSE 2022 *Paper Award*	**The Evolution of Type Annotations in Python: An Empirical Study** <u>Di Grazia, L.</u>; Pradel, M. *Symposium on the Foundations of Software Engineering*.
TSE 2022	**DiffSearch: A Scalable and Precise Search Engine for Code Changes** <u>Di Grazia, L.</u>; Bredl P.; Pradel, M. *IEEE Transactions on Software Engineering*.
CSUR 2022	**Code Search: A Survey of Techniques for Finding Code** <u>Di Grazia, L.</u>; Pradel, M. *ACM Computing Surveys*.

February 27, 2024. *References and certificates on request.*

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