



Hanna Lachnitt

Ph.D. Student in Computer Science, admitted Autumn 2020

Bio

BIO

I am a fourth year PhD student advised by Clark Barrett and part of the CENTAUR lab at Stanford University. My research interests lie in automated reasoning and formal verification. I am currently working on proofs for SMT solvers.

Publications

PUBLICATIONS

- **IsaRARE: Automatic Verification of SMT Rewrites in Isabelle/HOL**
Lachnitt, H., Fleury, M., Aniva, L., Reynolds, A., Barbosa, H., Notzli, A., Barrett, C., Tinelli, C., Finkbeiner, B., Kovacs, L.
SPRINGER INTERNATIONAL PUBLISHING AG.2024: 311-330
- **Generating and Exploiting Automated Reasoning Proof Certificates** *COMMUNICATIONS OF THE ACM*
Barbosa, H., Barrett, C., Cook, B., Dutertre, B., Kremer, G., Lachnitt, H., Niemetz, A., Notzli, A., Ozdemir, A., Preiner, M., Reynolds, A., Tinelli, C., Zohar, et al
2023; 66 (10): 86-95
- **CARCARA: An Efficient Proof Checker and Elaborator for SMT Proofs in the Alethe Format**
Andreotti, B., Lachnitt, H., Barbosa, H., Sankaranarayanan, S., Sharygina, N.
SPRINGER INTERNATIONAL PUBLISHING AG.2023: 367-386
- **cvc5: A Versatile and Industrial-Strength SMT Solver**
Barbosa, H., Barrett, C., Brain, M., Kremer, G., Lachnitt, H., Mann, M., Mohamed, A., Mohamed, M., Niemetz, A., Notzli, A., Ozdemir, A., Preiner, M., Reynolds, et al
SPRINGER INTERNATIONAL PUBLISHING AG.2022: 415-442
- **Flexible Proof Production in an Industrial-Strength SMT Solver**
Barbosa, H., Reynolds, A., Kremer, G., Lachnitt, H., Niemetz, A., Notzli, A., Ozdemir, A., Preiner, M., Viswanathan, A., Viteri, S., Zohar, Y., Tinelli, C., Barrett, et al
SPRINGER INTERNATIONAL PUBLISHING AG.2022: 15-35
- **Axiomatic Hardware-Software Contracts for Security**
Mosier, N., Lachnitt, H., Nemati, H., Trippel, C., ACM
ASSOC COMPUTING MACHINERY.2022: 72-86
- **Certified Quantum Computation in Isabelle/HOL.** *Journal of automated reasoning*
Bordg, A., Lachnitt, H., He, Y.
2021; 65 (5): 691-709
- **Certified Quantum Computation in Isabelle/HOL** *JOURNAL OF AUTOMATED REASONING*
Bordg, A., Lachnitt, H., He, Y.
2020