

QINHEPING HU

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EMPLOYMENT

Amazon Inc. 2021-Present
Applied Scientist II @ Automated Reasoning Group (ARG)

EDUCATION

University of Wisconsin-Madison, Madison 2015-2021
Ph.D. Candidate in Computer Science, advised by Loris D'Antoni

Tsinghua University, Beijing, China 2011-2015
B.E. in Computer Science, Special Pilot Class (Yao Class), advised by Prof. Giulio Chiribella

PUBLICATION

Synthesis with Asymptotic Resource Bounds CAV 21
Qinheping Hu, John Cyphert, Loris D'Antoni, Thomas Reps

Semantics-guided Synthesis POPL 21
Jinwoo Kim, Qinheping Hu, Loris D'Antoni, Thomas Reps

**Exact and Approximate Methods for Proving Unrealizability of
Syntax-Guided Synthesis Problems** PLDI 20
Qinheping Hu, John Cyphert, Loris D'Antoni, Thomas Reps

Solving Program Sketches with Large Integer Values ESOP 20
Rong Pan, Qinheping Hu, Rishabh Singh, Loris D'Antoni
Selected for special issue of TOPLAS
Nominated for EAPLS Award for the best ETAPS paper on PL and systems

Automatic Repair of Regular Expressions OOPSLA 19
Rong Pan, Qinheping Hu, Gaowei Xu, Loris D'Antoni

Direct Manipulation for Imperative Programs SAS 19
Qinheping Hu, Roopsha Samanta, Rishabh Singh, Loris D'Antoni

Proving Unrealizability for Syntax-Guided Synthesis CAV 19
Qinheping Hu, Jason Breck, John Cyphert, Loris D'Antoni, Thomas Reps

Syntax-Guided Synthesis with Quantitative Syntactic Objectives CAV 18
Qinheping Hu, Loris D'Antoni

Automatic Program Inversion using Symbolic Transducers PLDI 17
Qinheping Hu, Loris D'Antoni

Units of rotational information New J. Phys. 17
Yuxiang Yang, Giulio Chiribella, Qinheping Hu

WORKSHOP

Guarantees in Program Synthesis SYNT 19
Qinheping Hu, Jason Breck, John Cyphert, Loris D'Antoni, Thomas Reps

RESEARCH EXPERIENCE

Research Intern, Microsoft Research

Summer 2017

- Proposed and Developed a framework to utilize NLP technology in fault localization and program repair.
- Mentor: Rishabh Singh.

Bachelor Thesis

2014-2015

- *Quantum Fission of Maximally Entangled Spins*
- This work is part of the paper **Units of rotational information**.

Semester Thesis

Spring 2014

- *Survey on Partial Satisfaction* Download
- We survey the results of lower bounds of satisfied fraction in a k -satisfiable CNF formula.
- Advisors: Timon Hertli, Emo Welzl in ETH.

HONOR AND AWARD

Baidu Academic Scholarship

2011-2013

Scholarship for Special Pilot Class

2011-2015

SERVICE

Artifact Evaluation Committee

PLDI 19

REFERENCES

Loris D'Antoni

Advisor

- University of Wisconsin-Madison
- 1210 West Dayton Street (Office 6355) - Madison, WI 53706-1685 USA
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Thomas W. Reps

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