

# Ning Luo

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New Haven, CT, US

## Education

- Sep. 2017 – **Yale University** – New Haven, CT, US  
Dec. 2022 PhD in Computer Science  
Advisor: Prof. Ruzica Piskac  
Thesis: Privacy-Preserving Formal Methods
- Sep. 2013– **Shandong University** – Jinan, Shandong, CN  
Jun. 2017 B.S. in Mathematics

## Publications

- 2023 *Privacy-Preserving Regular Expression Matching using Nondeterministic Finite Automata*  
**Ning Luo**, Chenkai Weng, Jaspal Singh, Gefei Tan, Ruzica Piskac, Mariana Raykova  
*eprint.*
- 2023 *Ou: Automating the Parallelization of Zero-Knowledge Protocol*  
Yuyang Sang\*, **Ning Luo**\*, Samuel Judson, Ben Chaimberg, Timos Antonopoulos, Xiao Wang, Zhong Shao. *Proceedings of the 2023 ACM SIGSAC Conference on Computer and Communications Security (CCS 2023).*
- 2022 *Proving UNSAT in Zero Knowledge.*  
**Ning Luo**, Timos Antonopoulos, William Harris, Ruzica Piskac, Eran Tromer, Xiao Wang. *Proceedings of the 2022 ACM SIGSAC Conference on Computer and Communications Security (CCS 2022).*  
Receipt of **Distinguished Paper Award.**
- 2022 *ppSAT: Towards Two-Party Private SAT Solving.*  
**Ning Luo**, Samuel Judson, Timos Antonopoulos, and Ruzica Piskac. *Proceedings of the 31st USENIX Security Symposium (USENIX Security 2022).*
- 2021 *Looking for the Maximum Independent Set: A New Perspective on the Stable Path Problem.*  
Yichao Cheng, **Ning Luo**, Jingxuan Zhang, Timos Antonopoulos, Ruzica Piskac, Qiao Xiang. *IEEE International Conference on Computer Communications 2021 (INFOCOM 2021).*
- 2019 *Privacy Preserving CTL Model Checking through Oblivious Graph Algorithms.*  
Samuel Judson, **Ning Luo**, Timos Antonopoulos, Ruzica Piskac. *Workshop on Privacy in the Electronic Society 2020 (WPES 2020).*

## Honors and Scholarships

|             |                                                                                                |
|-------------|------------------------------------------------------------------------------------------------|
| Jan. 2023   | Yale Robert Innovation Award                                                                   |
| Nov. 2022   | Distinguished Paper Award, ACM CCS 2022 (5 selected from 972 submissions)                      |
| Jun. 2022   | USENIX Security 2022 Student Grant                                                             |
| Jan. 2022   | VMCAI 2022 Student Fellowship                                                                  |
| Spring 2021 | Student participant at Simons Institute for Theoretical Foundations of Computer Systems (TFCS) |
| Jun. 2019   | CAV 2019 Student Fellowship                                                                    |

## Talks

|             |                                                                                                                                                                          |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| April. 2023 | Proving UNSAT in Zero Knowledge<br><i>Invited talk at Satisfiability: Theory, Practice, and Beyond Workshop<br/>Simons Institute, University of California, Berkeley</i> |
| April. 2023 | Automating the Parallelization of Zero-Knowledge Protocols<br><i>DARPA SIEVE PI Meeting</i>                                                                              |
| Nov. 2022   | Proving UNSAT in Zero Knowledge.<br><i>ACM SIGSAC Conference on Computer and Communications Security</i>                                                                 |
| Aug. 2022   | ppSAT: Towards Two-Party Privacy-Preserving SAT Solving<br><i>USENIX Security Symposium</i>                                                                              |
| Jan. 2022   | Privacy-preserving formal methods: proving UNSAT in Zero Knowledge.<br><i>Invited talk at New York University</i>                                                        |
| Dec 2019    | Privacy-Preserving Model Checking<br><i>Invited talk at Microsoft</i>                                                                                                    |

## Mentorship

|             |                                                       |
|-------------|-------------------------------------------------------|
| Fall 2022   | Qiuyue Qin, Huisan Xu (Masters at Xiameng University) |
| Summer 2020 | Michael Chen (Undergraduate at Yale University)       |
| Fall 2019   | Yichao Cheng (Undergraduate at Yale University)       |

## Internship Experience

|              |                                          |
|--------------|------------------------------------------|
| June. 2022 – | <b>Galois, Inc.</b> – Portland, OR.      |
| Sep. 2022    | Mentors: James Parker                    |
| June. 2020 – | <b>Galois, Inc.</b> – Portland, OR.      |
| Sep. 2020    | Mentors: Bill Harris and Alex Malozemoff |

## Teaching Experience

|             |                                                                     |
|-------------|---------------------------------------------------------------------|
| Fall 2022   | <b>Teaching Fellow</b> , Law, Security, and Logic (Yale University) |
| Spring 2022 | <b>Teaching Fellow</b> , Software Engineering (Yale University)     |
| Fall 2021   | <b>Teaching Fellow</b> , Computer System Security (Yale University) |
| Spring 2021 | <b>Teaching Fellow</b> , Software Engineering (Yale University)     |

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|-------------|----------------------------------------------------------------------------------|
| Fall 2020   | <b>Teaching Fellow</b> , Cryptography and Computer Security (Yale University)    |
| Spring 2020 | <b>Teaching Fellow</b> , Artificial Intelligence (Yale University)               |
| Fall 2019   | <b>Teaching Fellow</b> , Algorithm via Continuous Optimization (Yale University) |

## **Service**

|      |                                                    |
|------|----------------------------------------------------|
| 2024 | CSF 2024 Program Committee                         |
| 2024 | PETS 2024 Program Committee                        |
| 2023 | CAV 2023 External Reviewer                         |
| 2023 | USENIX Security 2023 Artifact Evaluation Committee |
| 2022 | POPL 2022 Session Chair of TutorialFest            |