


TJITSKE KOSTER

I walk where the beautiful views are, and the road will bring me further




The ongoing battle of breaking and encrypting messages in cryptography has always fascinated me. My bachelor's degree in mathematics provided a solid mathematical foundation to analyze these cryptographic systems. After completing my bachelor's degree, I chose to pursue a master's in cryptography to apply and extend the skills I had learned. Now, I'm doing a PhD at the cybersecurity group of the TU Delft to develop my skills in cryptography further.


PHD

 PhD Cryptography TU Delft
October 2024- expected October 2028


VOLUNTEER WORK

 Organize PhD and Postdoc lunches
2025 - ongoing.
We provide a safe space for PhDs and Postdocs to talk.

RESEARCH


Bandwidth Efficient Partial Authorized PSI
TU Delft
 2025

- [Eprint.](#)
- PSI is the secure computation of a Private Set Intersection.
- Cryptographic design of a PSI (2PC) protocol.
- Optimizes the bandwidth and runtime of a previous protocol.
- Provides an open source implementation.

On the Insecurity of Bloom Filter-Based Private Set Intersections
TU Delft
 2024

- [Eprint.](#)
- Identifies flaws in the proofs of Bloom filter-based PSI protocols.
- Formally proves new bounds on parameters.

Young Talents Cybersecurity 2025
Institut Français-NL


 2025

- Worked in a multidisciplinary team of young talents.
- Answered the question "Are organizations ready for the post-quantum era?"


STRENGTHS

- Proactive
- Collaborative
- Persevering
- Rust
- C++
- Magma
- Python


AWARD

 Cyber Woman Student of the World
2025, awarded by the CEFYS

BEST EXPERIENCE

 Gap year March - June 2021
Walking from Nijmegen (NL) to Santiago de Compostela (E)

EDUCATION

M.Sc. in Mathematics
Radboud university
 September 2021 -August 2024


- [Thesis.](#)

B.Sc. in Mathematics
Radboud University
 September 2018 - January 2022

WORK EXPERIENCE

Student assistant
Radboud university
 September 2022 - July 2023

- Introduction to Mathematics, Geometry, and Cryptography

Retail assistant
Bever
 April 2016 - December 2024

- Acting store manager

LANGUAGES

- Dutch
- English
- French