

Dung Bui

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🌐 <https://dungbui15.github.io>

EDUCATION

- **IRIF, University Paris Cité** **Paris, France**
PhD student in Secure Computation for Privacy-Preserving *Oct 2021 – Current*
Supervisor: Geoffroy Couteau
- **Université de Limoges** **Limoges, France**
Master degree in Mathematics, Cryptology, Coding and Application *2019 – 2021*
Highest Honours, Ranked 1st

RESEARCH INTERESTS

My research interests are in various aspects of both practical and theoretical cryptography; including secure multiparty computation, MPC-in-the-Head, and zero-knowledge proofs.

EXPERIENCE

- **COSIC (KU Leuven)** **Leuven, Belgium**
Visiting Researcher *Jun – Aug 2023*
Building and optimizing MPCitH-based Signatures
Supervisor: Nigel Smart
- **Research Institute IRIF** **Paris, France**
Research Intern *Mar – Aug 2021*
Batch equality tests and secure comparison from pseudorandom correlation generators
Supervisor: Geoffroy Couteau
- **Research Institute XLIM** **Limoges, France**
Summer Intern *Jun – Aug 2020*
PSI (Private Set Intersection) and its Applications
Supervisor: Duong Hieu Phan

PUBLICATION

- **Conference Publications:**
 1. **Fast Public-Key Silent OT and More from Constrained Naor-Reingold**
by Dung Bui, Geoffroy Couteau, Pierre Meyer, Alain Passelègue, Mahshid Riahinia.
In Annual International Conference on the Theory and Applications of Cryptographic Techniques (EUROCRYPT'24), Springer, 2024
 2. **Improved Private Set Intersection for Sets with Small Entries**
by Dung Bui and Geoffroy Couteau.
In Conference on Practice and Theory in Public-Key Cryptography (PKC '23), Springer, 2023
- **Preprints:**
 1. **Short Signatures from Regular Syndrome Decoding, Revisited**
by Dung Bui, Eliana Carozza, Geoffroy Couteau, Dahmun Goudarzi, Antoine Joux.
Cryptology ePrint Archive 2024/252
 2. **Improved All-but-One Vector Commitment with Applications to Post-Quantum Signatures**
by Dung Bui, Kelong Cong, Cyprien Delpèch de Saint Guilhem.
Cryptology ePrint Archive 2024/097
 3. **An Efficient ZK Compiler from SIMD Circuits to General Circuits**
by Dung Bui, Haotian Chu, Geoffroy Couteau, Xiao Wang, Chenkai Weng, Kang Yang, Yu Yu.
Cryptology ePrint Archive 2023/1610

HONOURS/AWARDS

- **Fully-Funded DIM Math Innov Doctoral Grants** for doctoral degree, supported by grants from Ile-de-France Region (2021)
- **NSUCRYPTO Silver Medal** in the second round of the International Olympiad in Cryptography NsuCrypto (2021)
- **Fully-Funded Vingroup Scholarship** for Master's CRYPTIS Program in Mathematics, Cryptology, Coding and Applications (MCCA) (2019)
- **VIASM Scholarship** National Program for the Development of Mathematics, awarded by the Vietnam Institute for Advanced Study in Mathematics, Viet Nam (2017, 2018, 2019)
- **Bronze Medal** in Viet Nam National Mathematics Olympiad (VMO 2015)

PRESENTATION

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| ○ Conference
<i>PKC 2023</i> | Atlanta, USA
<i>May 2023</i> |
| ○ Crypto Seminar
<i>Vietnam Institute for Advanced Study in Mathematics (VIASM)</i> | Ha Noi, Vietnam
<i>May 2023</i> |
| ○ Algorithm and Complexity Seminar
<i>IRIF</i> | Paris, France
<i>Apr 2023</i> |
| ○ Crypto Student Seminar
<i>CWI</i> | Amsterdam, Netherlands
<i>Jul 2022</i> |
| ○ Workshop
<i>Journées C2 (Codage & Cryptographie)</i> | Hendaye, France
<i>Apr 2022</i> |

PROFESSIONAL ACTIVITIES

- **External Reviewer:** TCC 2022, CSF 2022–2023, IEEE-TIFs 2023.

REFERENCES

Geoffroy Couteau

CNRS research scientist at IRIF, University Paris Cité

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Duong-Hieu Phan

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