

DUNG BUI

Born on 15/11/1997, Vietnamese

📍 Sorbonne Université, CNRS, LIP6

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CURRENT POSITION

Sorbonne Université, CNRS, LIP6

Postdoctoral Researcher

Hosted by: Eleni Diamanti, Alex B.Grilo, Ludovic Perret

Paris, France

Jun 2025 – Current

EDUCATION

○ **Université Paris Cité, CNRS, IRIF**

PhD, Computer Science

Thesis: Efficient Secure Computation from Correlated Pseudorandomness

Supervisor: Geoffroy Couteau

Paris, France

Oct 2021 – Mar 2025

○ **Université de Limoges**

Master degree in Mathematics, Cryptology, Coding and Application

Highest Honours, Ranked 1st

Limoges, France

2019 – 2021

○ **École Normale Supérieure de Hanoi**

Pure Mathematics

Highest Honours, top 5%

Ha Noi, Viet Nam

2015 – 2019

RESEARCH INTERESTS

My research interests are in various aspects of both practical and theoretical cryptography, including Secure Multiparty Computation (MPC), Zero-Knowledge Proofs (ZKP), and Post-Quantum Cryptography (PQC).

RESEARCH EXPERIENCE

○ **NTT Social Informatics Laboratories**

Visiting Researcher

Supervisor: Masayuki Abe

Multi-round Zero-Knowledge Proofs and Applications to Advanced Post-quantum Signatures based on Multiparty Computation (MPC)

Tokyo, Japan

Jun – Aug 2024

○ **COSIC, KU Leuven**

Visiting Researcher

Supervisor: Nigel Smart

Efficient Post-quantum Signatures from Multiparty Computation (MPC)

Leuven, Belgium

Jul – Aug 2023

○ **Research Institute IRIF, Université Paris Cité**

Research Intern

Supervisor: Geoffroy Couteau

Efficient Multiparty Computation (MPC) Protocols from Pseudorandom Correlation Generators

Paris, France

Mar – Aug 2021

○ **Research Institute XLIM, Université de Limoges**

Summer Intern

Supervisor: Duong Hieu Phan

Private Set Intersection and its Application to Covid 19

Limoges, France

Jun – Aug 2020

SHORT-TERM VISIT

- **Centrum Wiskunde & Informatica (CWI)**

Hosted by: Lisa Kohl

Amsterdam, Netherlands

Dec 2024

- **NTT Social Informatics Laboratories**

Hosted by: Masayuki Abe

Tokyo, Japan

Nov 2025

FELLOWSHIPS & AWARDS

- **Best Paper Award at 24th International Conference on Cryptology and Network Security (CANS 2025)**

Paper: Efficient Fuzzy Labeled PSI from Vector Ring-OLE.

- **Fully-Funded Doctoral Grants, DIM Math Innov – FSMP (2021)**

Awarded by the Ile-de-France Region for doctoral studies, with a selection of up to 9 PhD fellowships in mathematics and computer science.

- **Silver Medal, NSUCRYPTO (2021)**

Awarded in the second round of International Olympiad in Cryptography Non-Stop University CRYPTO.

- **Fully-Funded Scholarship For Master's CRYPTIS Program (2019)**

Awarded by Vingroup Scholarship Program for Master's CRYPTIS Program in Mathematics, Cryptology, Coding and Applications (MCCA) at the Université de Limoges.

- **VIASM Scholarship, National Program for the Development of Mathematics (2017, 2018, 2019)**

Awarded by the Vietnam Institute for Advanced Study in Mathematics, Viet Nam (VIASM) for encouraging young students to learn mathematics.

- **Bronze Medal, Viet Nam National Mathematical Olympiad (VMO 2015).**

Awarded in the most prestigious high school mathematics competition in Vietnam, part of the selection process for the International Mathematical Olympiad (IMO).

PRESENTATION

Conference, workshops:

Nov 2025 **Efficient Fuzzy Labeled PSI from Vector Ring-OLE**

Conference CANS 2025, Osaka, Japan

Jul 2025 **Improved All-but-One Vector Commitment with Applications to Post-Quantum Signatures**

Conference ACISP 2025, Wollongong, Australia

Dec 2024 **Faster Signatures from MPC-in-the-Head**

Conference ASIACRYPT 2024, Kolkata, India

May 2023 **Improved Private Set Intersection with Small Entries**

Conference PKC 2023, Atlanta, USA

Apr 2022 **Private Set Intersection from Correlated Randomness**

Workshop Journées C2 (Codage & Cryptographie), Hendaye, France

Seminars:

FOLEAGE: \mathbb{F}_4 OLE-Based Multi-party Computation for Boolean Circuits

Sep 2025 Crypto Café, Florida Atlantic University, Florida, USA (Virtual).

Mar 2025 ALMASTY seminar, Université Sorbonne, Paris, France.

Optimized MPC-in-the-Head based signatures from Puncturable PRF

Nov 2025 Crypto Seminars, NTT Social Informatics Laboratories, Tokyo, Japan.

Apr 2025 Vietnam Institute for Advanced Study in Mathematics (VIASM), Ha Noi, VietNam (Virtual).

Dec 2024 Crypto Student Seminar CWI, Amsterdam, Netherlands.

Nov 2024 Crypto Day, Telecom Paris, Institut Polytechnique de Paris, Paris, France.

Efficient MPC from Correlated Randomness

Jun 2024 Crypto Seminars, NTT Social Informatics Laboratories, Tokyo, Japan.

Fast Public-Key Silent OT and More from Constrained Naor-Reingold

May 2024 AlgoCRYPT Seminars, J.P. Morgan, New York, USA (Virtual).

May 2024 IRIF, Algorithm and Complexity Seminars, Paris, France.

Efficient PSI from Pseudorandom Correlation Generators

July 2023 Crypto Seminar, COSIC (KU Leuven), Leuven, Belgium.

May 2023 Vietnam Institute for Advanced Study in Mathematics (VIASM), Ha Noi, VietNam (Virtual).

Apr 2023 IRIF, Algorithm and Complexity Seminar, Paris, France.

Jul 2022 Crypto Student Seminar CWI, Amsterdam, Netherlands (Virtual).

PROFESSIONAL ACTIVITIES

- **External Reviewer:** TCC 2022, CSF 2022–2023, IEEE-TIFs 2023, EUROCRYPT 2025, ACNS 2025, CRYPTO 2025 (x3), PRICRYPT 2025, CCS 2025, ASIACRYPT 2025, EUROCRYPT 2026 (x2), PKC 2026.
- **Program Committee:** APKC 2025, LATINCRYPT 2025, APKC 2026.

PUBLICATION

In Conference Proceedings:

- [BGM+26] Dung Bui, Gayathri Garimella, Peihan Miao, and Phuoc Van Long Pham. “New Framework for Structure-Aware PSI From Distributed Function Secret Sharing”. In: *Advances in Cryptology – ASIACRYPT 2025*. 2026.
- [ABC+25] Benny Applebaum, Dung Bui, Geoffroy Couteau, and Nikolas Melissaris. “Structured-Seed Local Pseudorandom Generators and Their Applications”. In: *Approximation, Randomization, and Combinatorial Optimization. Algorithms and Techniques (APPROX/RANDOM 2025)*. 2025.
- [Bui25] Dung Bui. “Efficient Multi-instance Vector Commitment and Application to Post-quantum Signatures”. In: *Information Security and Privacy*. 2025.
- [BC25] Dung Bui and Kelong Cong. “Efficient Fuzzy Labeled PSI from Vector Ring-OLE”. In: *Cryptology and Network Security - 24th International Conference, CANS 2025, Osaka, Japan, November 17-20, 2025, Proceedings*. 2025.
- [BCS25] Dung Bui, Kelong Cong, and Cyprien Delpech de Saint Guilhem. “Faster VOLEitH Signatures from All-But-One Vector Commitment and Half-Tree”. In: *Information Security and Privacy*. 2025.
- [BBC+24] Maxime Bombar, Dung Bui, Geoffroy Couteau, Alain Couvreur, Clément Ducros, and Sacha Servan-Schreiber. “FOLEAGE: F_4 OLE-Based Multi-party Computation for Boolean Circuits”. In: *Advances in Cryptology – ASIACRYPT 2024*. 2024.
- [BCC+24] Dung Bui, Eliana Carozza, Geoffroy Couteau, Dahmun Goudarzi, and Antoine Joux. “Faster Signatures from MPC-in-the-Head”. In: *Advances in Cryptology – ASIACRYPT 2024*. 2024.
- [BCM+24] Dung Bui, Geoffroy Couteau, Pierre Meyer, Alain Passelègue, and Mahshid Riahinia. “Fast Public-Key Silent OT and More from Constrained Naor-Reingold”. In: *Advances in Cryptology – EUROCRYPT 2024*. 2024.
- [BC23] Dung Bui and Geoffroy Couteau. “Improved Private Set Intersection with Small Entries”. In: *Public-Key Cryptography – PKC 2023*. Ed. by Alexandra Boldyreva and Vladimir Kolesnikov. 2023.

Journal Articles:

- [BCC+24] Dung Bui, Haotian Chu, Geoffroy Couteau, Xiao Wang, Chenkai Weng, Kang Yang, and Yu Yu. “An Efficient ZK Compiler from SIMD Circuits to General Circuits”. In: *Journal of Cryptology* (2024).

Manuscripts:

[ABB+24] Masayuki Abe, David Balbás, Dung Bui, Miyako Ohkubo, Zehua Shang, Akira Takahashi, and Mehdi Tibouchi. *Critical Rounds in Multi-Round Proofs: Proof of Partial Knowledge and Trapdoor Commitments*. 2024. URL: <https://eprint.iacr.org/2024/1766>.

OUTREACH ACTIVITIES

- **Co-organizer of an educational board game on quantum mechanics (QATS) and card-based cryptography:** Led activities during "la semaine d'accueil des élèves de 3^e (2026)", organized by LIP6.
- **Organizer of the IRIF Crypto Seminar.**
- **Founder and author of the Vcryptis Blog:** Shared experiences and practical advice on student life and academic survival at the University of Limoges (vcryptis.tech.blog).
- **Featured in a Vietnamese national magazine:** Interview on career paths and motivation in cryptography (*Tuổi Trẻ*, [link](#)).

SKILLS

- **Programming Languages:** Python, C/C++, \LaTeX , R, Mapple
- **Languages:** Vietnamese (native), English (Professional proficiency), French (B2).