

Marilyn George

Senior Research Scientist
Cryptography Research Group, MongoDB Inc.

1633 Broadway
New York, NY 10019

EDUCATION

Brown University

Ph.D. in Computer Science

M.S. in Computer Science

Providence, Rhode Island

Aug 2017 – May 2022

Aug 2017 – May 2019

Indian Institute of Science

M.E. in Computer Science

Bangalore, Karnataka

Aug 2014 – May 2016

National Institute of Technology

B.Tech. in Computer Science and Engineering

Calicut, Kerala

Aug 2009 – May 2013

EXPERIENCE

MongoDB Research

Research Scientist

New York City, New York

Aug 2022 –

- Researching practical methods for leakage suppression.
- Analyzing the system-level security of Queryable Encryption.

Brown University

Graduate Research Assistant

Providence, Rhode Island

Aug 2017 – May 2022

- Designed structured encryption schemes with a focus on dynamic and practically efficient leakage suppression with Prof. Seny Kamara
- Designed GDPR compliance mechanisms for legacy databases with Prof. Malte Schwarzkopf, and studied pricing equilibria in single-minded markets with Prof. Amy Greenwald

MongoDB

Research Intern

New York City, New York

Jul 2021 – Sep 2021

- Designed new methods of practically efficient leakage suppression to hide query volumes

UTU Technologies

Research Intern

Remote

May 2020 – Aug 2020

- Analyzed cryptographic methods for customer data provision on the blockchain

Microsoft Research India

Research Fellow

Bangalore, Karnataka

Jun 2016 – Jul 2017

- Developed efficient methods to support analytics on encrypted data using partially homomorphic encryption

Indian Institute of Science

Graduate Research Assistant

Bangalore, Karnataka

Aug 2015 – May 2016

- Studied searchable encryption and designed search pattern hiding techniques with Prof. Bhavana Kanukurthi

Goldman Sachs India

Programmer Analyst

Bangalore, Karnataka

May 2013 – Aug 2014

- Developed and maintained internal trade compliance systems

RESEARCH

Synq: Public Policy Analytics over Encrypted Data

IEEE S&P 2024

Zachary Espiritu, Marilyn George, Seny Kamara, and Lucy Qin

IEEE Symposium on Security and Privacy (2024)

On the Cost of Suppressing Volume for Encrypted Multi-maps

PETS 2022

Megumi Ando and Marilyn George

Proceedings of the 22nd Privacy Enhancing Technologies Symposium (2022)

Adversarial Level Agreements for Two-Party Computation

AsiaCCS 2022

Marilyn George and Seny Kamara

Proceedings of the ACM Asia Conference on Computer and Communications Security (2022)

GDPR Compliant Legacy Databases

VLDB 2022

Archita Agarwal, *Marilyn George*, Aaron Jeyaraj, and Malte Schwarzkopf

Proceedings of the VLDB Endowment, Volume 15 (2021-2022)

Structured Encryption and Dynamic Leakage Suppression

EUROCRYPT 2021

Marilyn George, Seny Kamara, and Tarik Moataz

Annual International Conference on the Theory and Applications of Cryptographic Techniques (2021)

Towards Untrusted Social Video Verification to Combat Deepfakes

Workshop, CVPR 2020

Eleanor Tursman, *Marilyn George*, Seny Kamara, and James Tompkin

Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (2020)

Structured Encryption and Distribution-aware Leakage Suppression

Manuscript

Marilyn George, Seny Kamara, and Tarik Moataz

Updatable Private Set Intersection from Structured Encryption

Manuscript

Archita Agarwal, David Cash, *Marilyn George*, Seny Kamara, Tarik Moataz, and Jaspal Singh

tEX: (Practical and Near-Optimal) _{tiny} Encrypted Indexes

Manuscript

Zachary Espiritu and *Marilyn George*

TALKS

On the Cost of Suppressing Volume for Encrypted Multi-maps – PETS 2022 2022

Adversarial Level Agreements for Two-Party Protocols – AsiaCCS 2022 2022

Structured Encryption and Dynamic Leakage Suppression – Indian Institute of Science 2022

Structured Encryption and Dynamic Leakage Suppression – Duke University 2022

Structured Encryption and Dynamic Leakage Suppression – University of Massachusetts, Dartmouth 2022

Structured Encryption and Dynamic Leakage Suppression – Monash University 2021

Structured Encryption and Dynamic Leakage Suppression – Google Research 2021

Structured Encryption and Dynamic Leakage Suppression – Boston University 2021

Structured Encryption and Dynamic Leakage Suppression – EUROCRYPT 2021 2021

Structured Encryption and Dynamic Leakage Suppression – University of Chicago 2021

Surveillance, Privacy, and Social Control – DIMACS Workshop on Law and CS 2020

TEACHING

Course Design Certificate – Sheridan Center for Teaching and Learning 2021

Teaching Consultant Program – Sheridan Center for Teaching and Learning 2021

Graduate Teaching Assistant, Brown CS – Algorithmic Game Theory 2020

Reflective Teaching Certificate – Sheridan Center for Teaching and Learning 2020

Instructor, Summer@Brown – An Introduction to Cryptography 2019

Co-instructor, Summer@Brown – An Introduction to Cryptography 2018

HONORS AND AWARDS

Coline M. Makepeace Fellowship 2021-2022

Kanellakis Fellowship 2021-2022

Rising Stars EECS 2020

SERVICE

Program Committee – PETS 2026 2025-2026

Women in Cryptography Chair – CRYPTO 2025 2025

External Reviewer – CRYPTO 2025 2025

Program Committee – CCS 2024 2024

Program Committee – CT-RSA 2024	2023
Invited Speaker – RISE Workshop at CRYPTO 2023	2023
External Reviewer – CCS 2023, CRYPTO 2023	2023
External Sub-reviewer – CRYPTO 2021, EUROCRYPT 2022	2021
External Sub-reviewer – EUROCRYPT 2021	2020
Ph.D. Mentorship Czar – Brown Computer Science	2019-2022
President – Indian Community at Brown University	2018-2019

PROGRAMMING

C, C++, Java, \LaTeX , MATLAB, Python, Shell, and MySQL

OTHER INTERESTS

Reading, Word Games, Math and Logic Puzzles