

# 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

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

IEEE Symposium on Security and Privacy (2024)

IEEE S&P 2024

### On the Cost of Suppressing Volume for Encrypted Multi-maps

Megumi Ando and Marilyn George

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

PETS 2022

### Adversarial Level Agreements for Two-Party Computation

Marilyn George and Seny Kamara

AsiaCCS 2022

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) <sub>tiny</sub> 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

**External Reviewer** – CRYPTO 2025

2025

**Program Committee** – CCS 2024

2024

**Program Committee** – CT-RSA 2024

2023

<b>Invited Speaker</b> – RISE Workshop at CRYPTO 2023	2023
<b>External Reviewer</b> – CCS 2023, CRYPTO 2023	2023
<b>External Sub-reviewer</b> – CRYPTO 2021, EUROCRYPT 2022	2021
<b>External Sub-reviewer</b> – EUROCRYPT 2021	2020
<b>Ph.D. Mentorship Czar</b> – Brown Computer Science	2019-2022
<b>President</b> – Indian Community at Brown University	2018-2019

## PROGRAMMING

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C, C++, Java, ~~TeX~~TeX, MATLAB, Python, Shell, and MySQL

## OTHER INTERESTS

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Reading, Word Games, Math and Logic Puzzles