

Marilyn George

Senior Research Scientist
Cryptography Research Group, MongoDB Inc.

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EDUCATION

Brown University <i>Ph.D. in Computer Science</i> <i>M.S. in Computer Science</i>	Providence, Rhode Island <i>Aug 2017 – May 2022</i> <i>Aug 2017 – May 2019</i>
Indian Institute of Science <i>M.E. in Computer Science</i>	Bangalore, Karnataka <i>Aug 2014 – May 2016</i>
National Institute of Technology <i>B.Tech. in Computer Science and Engineering</i>	Calicut, Kerala <i>Aug 2009 – May 2013</i>

EXPERIENCE

MongoDB Research <i>Research Scientist</i> <ul style="list-style-type: none">Researching practical methods for leakage suppression.Analyzing the system-level security of Queryable Encryption.	New York City, New York <i>Aug 2022 –</i>
Brown University <i>Graduate Research Assistant</i> <ul style="list-style-type: none">Designed structured encryption schemes with a focus on dynamic and practically efficient leakage suppression with Prof. Seny KamaraDesigned GDPR compliance mechanisms for legacy databases with Prof. Malte Schwarzkopf, and studied pricing equilibria in single-minded markets with Prof. Amy Greenwald	Providence, Rhode Island <i>Aug 2017 – May 2022</i>
MongoDB <i>Research Intern</i> <ul style="list-style-type: none">Designed new methods of practically efficient leakage suppression to hide query volumes	New York City, New York <i>Jul 2021 – Sep 2021</i>
UTU Technologies <i>Research Intern</i> <ul style="list-style-type: none">Analyzed cryptographic methods for customer data provision on the blockchain	Remote <i>May 2020 – Aug 2020</i>
Microsoft Research India <i>Research Fellow</i> <ul style="list-style-type: none">Developed efficient methods to support analytics on encrypted data using partially homomorphic encryption	Bangalore, Karnataka <i>Jun 2016 – Jul 2017</i>
Indian Institute of Science <i>Graduate Research Assistant</i> <ul style="list-style-type: none">Studied searchable encryption and designed search pattern hiding techniques with Prof. Bhavana Kanukurthi	Bangalore, Karnataka <i>Aug 2015 – May 2016</i>
Goldman Sachs India <i>Programmer Analyst</i> <ul style="list-style-type: none">Developed and maintained internal trade compliance systems	Bangalore, Karnataka <i>May 2013 – Aug 2014</i>

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)

Practical Query Equality Hiding via Approximate 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

Surveillance, Privacy, and Social Control

Manuscript

Grace Boghossian, *Marilyn George*, and Seny Kamara

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 – 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