Sacha Servan-Schreiber

Sc.B. Computer Science, Brown University
sachaservanschreiber.com | github.com/sachaservan

Dual Citizen: U.S. and France

RESEARCH INTERESTS

Theoretical and Applied Cryptography

Encrypted Search, Delegated Computing, Anonymous Communication, MPC, Integrity Management, Differential Privacy,

Data Science

Learned Data Structures
Approximate Algorithms
Machine Learning

Law & Policy

Implications of Encryption
International Cyber Threats
Digital Rights

EDUCATION

Brown University

January 2016 - December 2018 (expected)

Pursuing a Bachelor of Science in Computer Science (with honors) with a focus on Cryptography and Data Science. Undergraduate research, teaching, and industry experience. Relevant courses taken include:

- *Theory of Computation* (taught by Prof. Anna Lysyanskaya).
- *Intro Cryptography and Computer Security* (taught by Prof. Anna Lysyanskaya).
- *Topics in Applied Cryptography* (taught by Prof. Seny Kamara).
- *Intro to Computer System Security* (taught by Prof. Roberto Tamassia).
- *Cybersecurity and International Relations* (taught by Prof. John Savage).
- *Probability for Computing and Data Analysis* (taught by Prof. Eli Upfal).
- *Honors Linear Algebra & Abstract Algebra*.

University of Toronto

September 2014 - June 2015

Studied Computer Science and Global Affairs before transferring to Brown University.

Columbia University

September 2013 - June 2014

Attended Computer Science, Math, and Astronomy courses as a visiting student while in high school.

PUBLICATIONS

- **S. Servan-Schreiber**, O. Ohrimenko, T. Kraska, E. Zgraggen, *Custodes: Framework for Auditable Hypothesis Testing Procedures.* (Currently under review for SIGMOD '19).

- **S. Servan-Schreiber**, *Cryptographically Certified Hypothesis Testing*, Senior Honors Thesis, Brown University, 2018. Advised by Anna Lysyanskaya and Tim Kraska.

- **S. Servan-Schreiber**, M. Riondato, E. Zgraggen, *ProSecCo: Progressive Sequence Mining with Convergence Guarantees*, IEEE International Conference on Data Mining '18 (full paper, 8.86% acceptance rate), 2018.

- Y. Chung, **S. Servan-Schreiber**, E. Zgraggen, T. Kraska, *Towards Quantifying Uncertainty in Data Analysis & Exploration*, IEEE Data Engineering Bulletin, 41 (3), 2018.

AWARDS

- Best Student Paper Award runner-up
  IEEE International Conference on Data Mining (ICDM '18)

- Nominated for 2019 CRA Outstanding Undergraduate Research Award

INVITED TALKS

- *Framework for Auditable Hypothesis Testing*, Cryptography Seminar, Brown University (2018)

- *Blockchains and their applications: parsing the hype*, One Salon, Brown University (2017)

EXPERIENCE

Meditect, Paris, France — Co-founder and CTO

January 2018 - Present

Meditect is a startup based in France aiming to tackle fake medication markets. We are designing a supply chain management system using blockchain technology to certify medication exports. The company was recently featured by MIT Technology Review's EmTech Europe as the best startup of 2018.

Brown University — Undergraduate Researcher

May 2018 - Present

Conducting research with Tim Kraska and Emanuel Zgraggen in the Database Lab at Brown. Developing methods to address data dredging in scientific studies, differentially private hypothesis testing, and developing faster data structures using machine learning techniques. An article on this work appeared in the IEEE Data Engineering bulletin.

January 2017 - May 2018

Conducted research with Andy van Dam and Emanuel Zgraggen in the Visualization Research Lab and independently with Matteo Riondato. During this time I developed a new frequent sequence mining algorithm called ProSecCo. A full paper on this work was accepted at IEEE ICDM'18.

MongoDB, New York City — Engineering Intern

Summer 2016

Worked as a Full-stack developer on the MongoDB University team. Spent the summer improving the functionality of the online course system used by over 1 million people to learn how to use MongoDB.

Summer 2015 - December 2015

Planned and developed the MongoDB university platform on mobile. The mobile apps that I developed have contributed to the expansion of usership by thousands of students.

TEACHING

Brown University — Teaching Assistant

CS1800: Cybersecurity and International Relations

Spring 2018

Instructor: John Savage.

Developed course topics, curated readings, and led weekly discussions on cyberspace technologies, international agreements, policy studies, and strategies.

CS1230: Introduction to Computer Graphics

Fall 2017

Instructor: Andy van Dam.

Presented lectures, led weekly labs, held office hours and mentored student projects on fundamental topics in 2D and 3D computer graphics: 2D raster graphics techniques, 3D modeling, ray tracing, C++.

TECHNICAL SKILLS

Cryptography | Data Science | Computer Security | Software Engineering | Mobile Development
C++, Go, Python, C#, Java, Swift
LaTex

LANGUAGES

English *(fluent)* | French *(fluent)* | Russian *(fluent)* | Croatian *(proficient)*

EXTRACURRICULAR

Photography | Languages | Hiking | Travelling | Skiing | Ghanaian Drumming