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39th Annual International Cryptology Conference
Santa Barbara, CA, USA, August 18–22, 2019
Proceedings, Part II

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Preface

The 39th International Cryptology Conference (Crypto 2019) was held at the University of California, Santa Barbara, California, USA, during August 18–22, 2019. It was sponsored by the International Association for Cryptologic Research (IACR). As in the previous year, a number of workshops took place on the days (August 17 and August 18, 2019) immediately before the conference. This year, the list of affiliated events included a Workshop on Attacks in Cryptography organized by Juraj Somorovsky (Ruhr University Bochum); a Blockchain Workshop organized by Rafael Pass (Cornell Tech) and Elaine Shi (Cornell); a Workshop on Advanced Cryptography Standardization organized by Daniel Benarroch (QEDIT) and Tancrède Lepoint (Google); a workshop on New Roads to Cryptopia organized by Amit Sahai (UCLA); a Privacy Preserving Machine Learning Workshop organized by Gilad Asharov (JP Morgan AI Research), Rafail Ostrovsky (UCLA) and Antigoni Polychroniadou (JP Morgan AI Research); and the Mathcrypt Workshop organized by Kristin Lauter (Microsoft Research), Yongsoo Song (Microsoft Research) and Jung Hee Cheon (Seoul National University).

Crypto continues to grow, year after year, and Crypto 2019 was no exception. The conference set new records for both submissions and publications, with a whopping 378 papers submitted for consideration. It took a Program Committee (PC) of 51 cryptography experts working with 333 external reviewers for over two months to select the 81 papers which were accepted for the conference.

As usual, papers were reviewed in the double-blind fashion, with each paper assigned to three PC members. Initially, papers received independent reviews, without any communication between PC members. After the initial review stage, authors were given the opportunity to comment on all available preliminary reviews. Finally, the PC discussed each submission, taking all reviews and author comments into account, and selecting the list of papers to be included in the conference program. PC members were limited to two submissions, and their submissions were held to higher standards. The two Program Chairs were not allowed to submit papers.

The PC recognized three papers and their authors for standing out amongst the rest. “Cryptanalysis of OCB2: Attacks on Authenticity and Confidentiality”, by Akiko Inoue, Tetsu Iwata, Kazuhiko Minematsu and Bertram Poettering was voted Best Paper of the conference. Additionally, the papers “Quantum cryptanalysis in the RAM model: Claw-finding attacks on SIKE” by Samuel Jaques and John M. Schanck, and “Fully Secure Attribute-Based Encryption for t-CNF from LWE” by Rotem Tsabary, were voted Best Papers Authored Exclusively By Young Researchers.

Beside the technical presentations, Crypto 2019 featured a Rump session, and two invited talks by Jonathan Katz from University of Maryland, and Helen Nissenbaum from Cornell Tech.

We would like to express our sincere gratitude to all the reviewers for volunteering their time and knowledge in order to select a great program for 2019. Additionally, we are very appreciative of the following individuals and organizations for helping make Crypto 2019 a success:

- Muthu Venkitasubramaniam (University of Rochester) - Crypto 2019 General Chair
- Carmit Hazay (Bar-Ilan University) - Workshop Chair
- Jonathan Katz (University of Maryland) - Invited Speaker
- Helen Nissenbaum (Cornell Tech) - Invited Speaker
- Shai Halevi - Author of the IACR Web Submission and Review System
- Anna Kramer and her colleagues at Springer
- Whitney Morris and UCSB Conference Services

We would also like to say thank you to our numerous sponsors, the workshop organizers, everyone who submitted papers, the session chairs, and the presenters. Lastly, a big thanks to everyone who attended the conference at UCSB.

August 2019

Alexandra Boldyreva
Daniele Micciancio

CRYPTO 2019

The 39th International Cryptology Conference

University of California, Santa Barbara, CA, USA
August 18–22, 2019

Sponsored by the *International Association for Cryptologic Research*

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