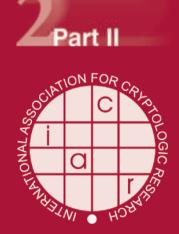
Kobbi Nissim Brent Waters (Eds.)

# Theory of Cryptography

19th International Conference, TCC 2021 Raleigh, NC, USA, November 8–11, 2021 Proceedings, Part II





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# Theory of Cryptography

19th International Conference, TCC 2021 Raleigh, NC, USA, November 8–11, 2021 Proceedings, Part II



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#### **Preface**

The 19th Theory of Cryptography Conference (TCC 2021) was held during November 8–11, 2021 at North Carolina State University in Raleigh, USA. It was sponsored by the International Association for Cryptologic Research (IACR). The general chair of the conference was Alessandra Scafuro.

The conference received 161 submissions, of which the Program Committee (PC) selected 66 for presentation giving an acceptance rate of 41%. Each submission was reviewed by at least four PC members. The 43 PC members (including PC chairs), all top researchers in our field, were helped by 197 external reviewers, who were consulted when appropriate. These proceedings consist of the revised version of the 66 accepted papers. The revisions were not reviewed, and the authors bear full responsibility for the content of their papers.

As in previous years, we used Shai Halevi's excellent Web Submission and Review software, and are extremely grateful to him for writing it, and for providing fast and reliable technical support whenever we had any questions.

This was the seventh year that TCC presented the Test of Time Award to an outstanding paper that was published at TCC at least eight years ago, making a significant contribution to the theory of cryptography, preferably with influence also in other areas of cryptography, theory, and beyond. This year the Test of Time Award Committee selected the following paper, published at TCC 2005: "Keyword Search and Oblivious Pseudorandom Functions" by Michael Freedman, Yuval Ishai, Benny Pinkas, and Omer Reingold. The award committee recognized this paper for "introducing and formalizing the notion of Oblivious Pseudorandom Functions, and identifying connections to other primitives such as keyword search, inspiring a vast amount of theoretical and practical work".

We are greatly indebted to many people who were involved in making TCC 2021 a success. A big thanks to the authors who submitted their papers and to the PC members and external reviewers for their hard work, dedication, and diligence in reviewing the papers, verifying the correctness, and in-depth discussions. A special thanks goes to the general chair Alessandra Scafuro, Kevin McCurley, Kay McKelly, and the TCC Steering Committee.

October 2021 Kobbi Nissim
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