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# Security and Cryptography for Networks

8th International Conference, SCN 2012 Amalfi, Italy, September 5-7, 2012 Proceedings



Volume Editors

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# Preface

The 8th Conference on Security and Cryptography for Networks (SCN 2012) was held in Amalfi, Italy, during September 5–7, 2012. This biennial conference has traditionally been held in Amalfi, with the exception of the fifth edition which was held in nearby Maiori.

The world-wide use of computer networks, and in particular of the Internet, opens new challenges for the security of electronic and distributed transactions. Cryptography and information security must face both the theoretical and practical aspects of the above challenges, by providing concepts, techniques, applications, and practical experiences. The principal aim of SCN as a conference is to bring together researchers, practitioners, developers, and users interested in the above fields, to foster cooperation and to exchange techniques, tools, experiences, and ideas in the stunning Amalfi Coast setting.

The conference received 72 submissions in a broad range of cryptography and security areas. The selection of papers was a difficult task. This year we received many high-quality submissions and 31 of them were accepted for publication in these proceedings on the basis of quality, originality, and relevance to the conference's scope.

At least three Program Committee (PC) members—out of 28 world-renowned experts in the conference's various areas of interest—reviewed each submitted paper, while submissions co-authored by a PC member were subjected to the more stringent evaluation of five PC members.

In addition to the PC members, many external reviewers joined the review process in their particular areas of expertise. We were fortunate to have this knowledgeable and energetic team of experts, and are deeply grateful to all of them for their hard and thorough work, which included a very active discussion phase—almost as long as the initial individual reviewing period. The paper submission, review, and discussion processes were effectively and efficiently made possible by the Web-Submission-and-Review software, written by Shai Halevi, and hosted by the International Association for Cryptologic Research (IACR). Many thanks to Shai for his assistance with the system's various features and for his constant availability.

Given the perceived quality of the submissions, the PC decided also this year to give a Best-Paper Award, both to promote outstanding work in the fields of cryptography and information security and to keep encouraging high-quality submissions to SCN. "Deterministic Public Key Encryption and Identity-Based Encryption from Lattices in the Auxiliary-Input Setting" by Xiang Xie, Rue Xue, and Rui Zhang was conferred such distinction.

The program was further enriched by the invited talks of Yuval Ishai (Technion, Israel) and Giuseppe Persiano (Università di Salerno, Italy), top experts on the subjects of the conference. We thank all the authors who submitted papers to this conference; the Organizing Committee members, colleagues, and student helpers for their valuable time and effort; and all the conference attendees who made this event a truly intellectually stimulating one through their active participation.

We finally thank the *Dipartimento di Informatica* of the University of Salerno, Italy, for the financial support.

September 2012

Ivan Visconti Roberto De Prisco

# SCN 2012 The 8th Conference on Security and Cryptography for Networks

#### September 5–7, 2012, Amalfi, Italy

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