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CCS'13

The Proceedings of the 2013 ACM SIGSAC Conference on Computer and Communications Security

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The Association for Computing Machinery 2 Penn Plaza, Suite 701 New York, New York 10121-0701

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ISBN: 978-1-4503-2477-9

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Hours of Operation: 8:30 am - 4:30 pm ET

Printed in the USA

CCS 2013 General Chair's Welcome

Information and communications security has become a fundamental element in our highly and globally computerized life. To tackle current and future security and privacy challenges adequately and globally, we need not only to advance research but also to bring together, from all over the world, researchers, developers and academics, as well as professionals from government agencies, research labs and corporate sectors.

The ACM Conference on Computer and Communications Security (CCS) is a leading forum, providing a highly suitable environment to conduct intellectual discussions and to exchange ideas. CCS is, in fact, the flagship annual conference of the Special Interest Group on Security, Audit and Control (SIGSAC) of the Association of Computing Machinery (ACM) and the oldest ACM conference in this field. Its reputation continues to grow and is reflected in its highly selective and prestigious technical program.

From 2002-2012, the number of paper submissions increased from about 150 to about 430. This year (2013), after more than a decade, CCS has moved to Europe/Germany. With 530 submissions we have witnessed the highest submission record in the history of CCS. Further, on the sponsorship side, CCS 2013 received over \$125,000 funding support from various high-profile sources: The Army Research Office (ARO), The National Science Foundation (NSF), Bosch, Horst Görtz Stiftung (HGS), Fraunhofer SIT, SAP, Certgate, Google, Heise Security, Intel, Microsoft Research, NXP Semiconductors, IBM Research, Kobil and Sirrix AG. The Organizing Committee of CCS 2013 has put together an outstanding program that includes 105 papers (a new record), several keynote as well as invited speakers from academia, industry and government, 9 specialized pre- and post-conference workshops, 3 tutorials, 39 posters and demos, and one social event.

Given the above submission records causing an increased conference scale, organizing and setting up the program of CCS 2013 required a highly dedicated, committed and professional organizing committee, a strong technical program committee, and sponsoring decision makers who appreciate the high standards and impact of this flagship conference.

We are most grateful to the authors of the submitted papers (both to the main conference and to the workshops). We thank the technical program committee members and the program chairs as well as the external reviewers, who enabled a high quality review process. We thank the CCS 2013 Organizing Committee for selecting the workshops and tutorials on timely topics and cutting-edge technologies, and for the website design and maintenance, publications, publicity, local arrangements and registrations. Special acknowledgements go to the CCS Steering Committee, particularly to Prof. Elisa Bertino who strongly supported us with her advice. We thank the staff of the ACM for assisting us throughout the organization and publication process, the Center for Advanced Security Research Darmstadt (CASED) and the Fraunhofer SIT for providing their infrastructure and public relations. Last but not least, we would like to express our gratitude to our generous sponsors.

We wish you a pleasant stay in Berlin, a productive and highly utilized conference, and an exciting week at CCS 2013!

Ahmad-Reza Sadeghi

CCS 2013 General Chair Technische Universität Darmstadt, Germany

CCS 2013 Program Chairs' Welcome

We are pleased to present to you the proceedings of the 2013 ACM Conference on Computer and Communications Security (CCS 2013), held in Berlin, Germany, November 4-8, 2013.

This year we received 530 submissions from 38 countries. This represents a record on at least two counts: it is both the largest number of submissions received by a computer security conference and the largest year-over-year submission increase (over 25%) to date. Remarkably, nearly half of the authors have professional affiliations in countries outside North America, with most in Europe and Asia-Pacific regions. A Program Committee comprising 82 experts from 16 countries as well as 310 external reviewers evaluated these submissions in the customary double-blind manner. At the end of the review process, 105 papers were selected for inclusion in the program, representing an acceptance rate of about 20%.

The review process was organized into three phases. After a first review phase, the authors of each paper were sent at least two preliminary reviews and were given an opportunity to respond to the comments received. During the second phase, reviews were updated as necessary, and in some cases additional reviews were solicited. At the end of the second phase, 403 papers received at least 3 reviews, 120 received 4, and 7 received 5. The third phase included discussion of papers that remained under consideration at that stage, and after intensive debate, the final acceptance decisions were made.

As is typically the case with very competitive conferences, many of the papers that could not be included in the program contained interesting ideas. Some also included new research results worth reporting to the security community. For these reasons, we encouraged the authors of these papers to consider submitting their work to the specialized workshops associated with CCS, as appropriate. Other works that could not be accepted for the program, will surely see the light of day in other leading venues after suitable improvement. We hope that all authors benefitted from the feedback received from the CCS reviewers and that the review process has helped them improve their papers.

We are very grateful to the members of the Program Committee for their hard work, professionalism, and responsiveness under very tight deadlines. On average, each individual reviewed 21 papers, and nearly a third of the members volunteered to help shepherd accepted papers towards improved presentations. Most engaged in lively discussions on both submissions and author responses, and updated their reviews to reflect valuable insights derived from those discussions. We are also indebted to the external reviewers whose focused expertise added substantial value to the feedback for authors. Moreover, we want to thank the CCS 2013 conference committee: the general chair, workshop co-chairs, tutorial co-chair, and other chairs and organizers, as well as the steering committee, for numerous discussions on how to produce an exceptional program and for their hard work on the production of these proceedings.

Lastly, we thank all authors for submitting their work to CCS 2013 and to all attendees for their participation in technical discussion and debate. We hope that you find the program stimulating and enjoyable, and that your contributions will help further computer and communication security.

Virgil Gligor

ACM CCS '13 Program Chair Carnegie Mellon University, USA **Moti Yung**

ACM CCS '13 Program Chair Google, USA

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Arslan Munir Junghwan Rhee Abhradeep Guha Thakurta		Alexandre Rebert	Rob Templeman
	Collin Mulliner	Tazchy Reinman	Stefano Tessaro
Divya Muthukumaran Alfredo Rial Nikos Triandopoulos	Arslan Munir	Junghwan Rhee	Abhradeep Guha Thakurta
	Divya Muthukumaran	Alfredo Rial	Nikos Triandopoulos

Mahesh Tripunitara	Robert Walls	York Yannikos
Jonathan Trostle	Chi-Wei Wang	Ting-Fang Yen
Michael Carl Tschantz	Chiawei Wang	Yung Yi
Uday Tupakula	Lingyu Wang	Jun Yuan
Mathieu Turuani	Shumiao Wang	Angeliki Zavou
Yavgeniy Vahlis	Yang Wang	Danfeng Zhang
Giorgos Vasiliadis	Zhan Wang	Yinqian Zhang
Amit Vasudevan	Gaven J Watson	Yizhou Zhang
Daniele Venturi	Lei Wei	Zhi-Kai Zhang
Nino Vincenzo Verde	Zachary Weinberg	Hang Zhao
Giovanni Vigna	Cyrille Wiedling	Ziming Zhao
Hayawardh Vijayakumar	Peter Williams	Lan Zhou
Antonio Villani	Maverick Woo	Zhibin Zhou
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