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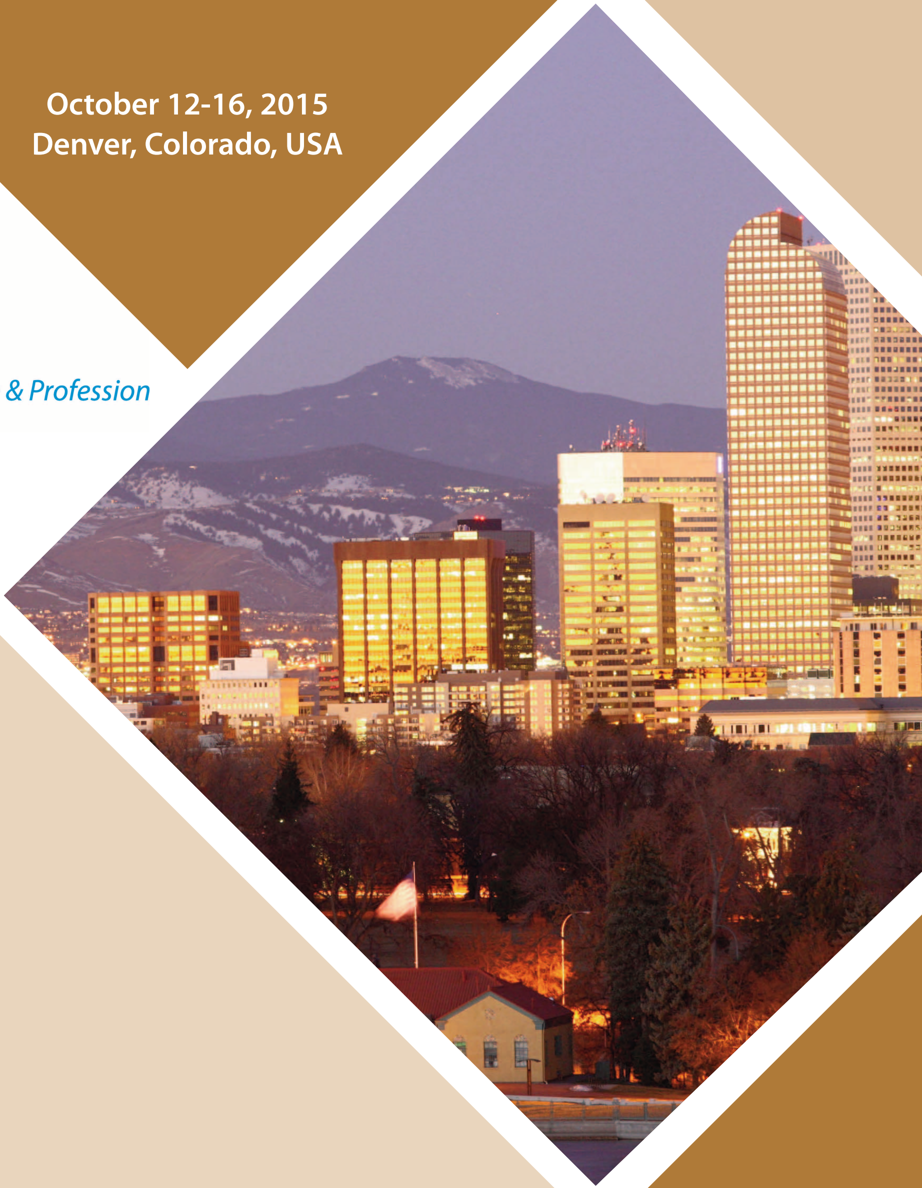

CCS'15

Proceedings of the 22nd ACM SIGSAC Conference on Computer and Communications Security

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ACM CCS 2015 General Chair’s Welcome

I take this opportunity to welcome you to the 22nd Annual ACM Conference on Computer and Communications Security (CCS 2015). It has been an honor for me to provide leadership to this conference. The mission of CCS is to bring together information security researchers, practitioners, developers, and users from all over the world to explore cutting-edge ideas and results. From its inception, CCS has established itself as a high standard research conference in its area. This year’s CCS event continues this long tradition with a very strong technical program comprising 12 technical sessions, 3 tutorials, 28 posters/demos, 10 specialized pre- and post-conference workshops and talks by distinguished invited speakers.

Organizing such a prestigious conference is never a solo effort and I have been very fortunate to receive incredible help and support from many colleagues. I would first like to thank all the authors without whose dedication and commitment to security research this conference would never have been possible. At the same time, I would like to thank Christopher Kruegel and Ninghui Li, the Program Chairs, and members of the Program Committee for their hard work in peer-reviewing and critiquing the papers for the research track and putting together a strong program.

I would like to extend this appreciation to the Workshop Chairs, Xiaofeng Wang and Kui Ren, for providing leadership to the CCS 2015 workshops, as well as to the respective Workshop Program Chairs and Program Committees – David Lee and Glenn Wurster (SPSM 2015), Nicholas Hopper and Rob Jansen (WPES 2015), Ehab Al-Shaer, Christopher Oehmen and Mohammad Ashiqur Rahman (SafeConfig 2015), Tomas Sander and Moti Yung (WISCS 2015), George Cybenko and Dijiang Huang (MTD 2015), Elisa Bertino and Ilsun You (MIST 2015), Christina Nita-Rotaru and Florian Kerschbaum (CCSW 2015), Christos Dimitrakakis, Katerina Mitrokotsa and Arunesh Sinha (AISec 2015), Rakesh Bobba, Alvaro Cardenas and Roshan Thomas (CPS-SPC 2015) and Jorge Guajardo and Stefan Katzenbeisser (TrustED 2015). Special thanks to Xinming Ou, Sachin Shetty and Anna Squicciarini for their hard work as Poster/Demo Chairs and James Joshi, Rinku Dewri and Patrick Tague for their hard work as Tutorial Chairs. Many thanks to the CCS 2015 Steering Committee chaired by Somesh Jha and ACM SIGSAC chaired by Trent Jaeger.

I am very grateful to members of the Organizing Committee – Yu Chen (Treasurer), Indrakshi Ray and Hasan Takabi (Student Travel Grant Chairs), Feng Li and Tarik Moataz (Publications Chairs), Chuan Yue and Stacy Karas (Web Chairs), Alex Sprintson and Mikhail Strizhov (Registration Chairs), and Dongwan Shin and Dieudonne Mulamba (Publicity Chairs). Thanks to Christos Papadopoulos as Sponsor/Industry Outreach Chair and Ramki Thurimella and Edward Chow for help with local arrangements. I would also like to acknowledge the administrative staff of ACM, ACM SIGSAC, Colorado State University, George Mason University and the Denver Marriott City Center for smooth running of the conference.

Last but not least, I would like to specially thank the following institutions for their generous financial support to 2015 ACM CCS – the U.S. National Science Foundation, the Army Research Office, Cisco, SAP, Microsoft Research, Google, HP Labs, IBM Research, and Arizona State University.

Indrajit Ray
General Chair, CCS 2015
Colorado State University, USA

CCS 2015 Program Chairs’ Welcome

We are pleased to present herein the proceedings of the 2015 ACM Conference on Computer and Communications Security (CCS 2015), held in Denver, Colorado, USA, October 12-16, 2015.

We received 660 submissions (not including some initial withdrawals). This is the largest number of submissions received to date by a computer security conference. A Program Committee comprising 120 experts from 20 countries, helped by 338 external reviewers, evaluated these submissions, employing the customary double-blind review procedure. The review process resulted in 128 papers being accepted to the program (with authors from 19 countries), representing an acceptance rate of about 19.4% and providing a very broad coverage of the entire information security area.

The review process was organized in three phases. After a first review phase, the authors of each paper were sent at least two preliminary reviews (the vast majority of papers, in fact, got three reviews). Authors 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. The first and third phases included comprehensive discussions, and after an intensive final debate, the acceptance decisions were made.

This year, we introduced a rebuttal task force, whose 15 members were selected from the Program Committee. The goal of this task force was to go over all the authors’ responses (rebuttals) received in the second phase and to ensure that the reviewers properly addressed all valid concerns that the authors had raised. We hope that most authors benefitted from the feedback received from the CCS reviewers, and that the review process has helped them improve their papers (while we are also aware that due to the short reviewing time, at a conference of CCS scale it is unavoidable that a handful of reviews may be possibly lacking in some respect).

We are very grateful to the members of the Program Committee for their very hard work, professionalism, and responsiveness under very tight deadline requirements. On average, each individual reviewed 18 papers, and nearly a third of the members volunteered to help shepherd accepted papers toward improved presentations. Most members 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 2015 conference committee: the general chair, workshop/ poster/ tutorial co-chairs, 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 the authors of all submitted papers, and all attendees for their participation in the technical discussion during the conference. We hope that you find the program stimulating, enjoyable, and helpful in advancing the exciting area of computer and communication security.

Ninghui Li
ACM CCS’15 Program Co-Chair
Purdue University, USA

Christopher Kruegel
ACM CCS’15 Program Co-Chair
University of California at Santa Barbara, USA

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