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Jim Alves-Foss · Kevin Chang
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Cyber Security

Second International Symposium, CSS 2015
Coeur d'Alene, ID, USA, April 7–8, 2015
Revised Selected Papers

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Preface

The 2015 Cybersecurity Symposium: Your Security, Your Future was the second in a series of conferences hosted by the Center for Secure and Dependable Systems (CSDS). The symposium offered a key opportunity for academic researchers and system stakeholders from industry and government organizations to meet and discuss state-of-the-art and state-of-the-practice techniques and processes related to cybersecurity. The objective of the symposium was to provide a platform for stakeholders to collaborate and exchange ideas and processes to help improve the security of today's critical systems. The 2015 Cybersecurity Symposium was partially funded by the State of Idaho and CSDS.

Since its inception in 2014, the symposium has attracted national and international stakeholders, including engineers, practitioners, researchers, and learners from industry, government, and academia. The 2015 conference brought together approximately 50 attendees from diverse locations such as the US East and West Coast and Europe. Hence, the opportunities created by this symposium to bring world-class knowledge and state and nationwide interest to the ongoing efforts in cybersecurity by the University of Idaho and the State of Idaho are significant.

The 2015 conference received 20 extended abstracts and 11 full-paper submissions. The peer-review process for extended abstracts and research papers included two stages. In the first stage, all potential participants submitted extended abstracts. These abstracts were reviewed by the Organizing Committee. Authors of extended abstracts deemed suitable for the conference goals were invited to present their research at the symposium and to submit full papers for consideration for the conference proceedings. In the second stage, full-paper submissions went through a series of anonymous peer-reviews. The resulting detailed reviews were given to all draft authors. Decisions about final paper acceptance were reviewed and approved by the Organizing Committee. The committee accepted nine papers to be included in the 2015 proceedings.

The collection of papers in these proceedings reflect four areas of scholarly work: (1) permissions and trust evaluation, implementation, and management; (2) cloud and device security and privacy; (3) social implications of networked and mobile applications, and (4) system and process assessments for improved cybersecurity. These areas demonstrate a maturity in the fields of cybersecurity and privacy by providing novel examples of secure computer systems and associated theoretical advances.

The results and case studies presented in these proceedings capture the scope of current knowledge as well as potential future applications. Previous books on cybersecurity and privacy have been largely divided by discipline. Industry has discovered the limitations to current security measures, social scientists have investigated public attitudes and behavior toward privacy and security, engineers have investigated risks of cybersecurity breaches in critical infrastructures, and computer scientists have explored practical measures that can be taken to maximize online security while maintaining some level of privacy for users. Until recently, these fields have operated in a

non-collaborative fashion resulting in a limited understanding of how technology development and adoption are affected by broader societal needs.

The present proceedings are an attempt at merging the knowledge and strengths of a number of different fields. Because we have included scholarly and professional work from the social sciences, computer science, engineering, and infrastructure, this volume provides a comprehensive and practical information source for graduate students, faculty, industry, governmental organizations, and other stakeholders who are interested in cybersecurity and privacy.

The careful selection and organization of the papers in this volume extends the fields of cybersecurity and privacy in several important ways. The Cybersecurity Symposium and resulting conference proceedings:

- Provide a platform for industry and academia to merge their knowledge and experience
- Present a clear analysis of the challenges faced by the public and private sector while simultaneously connecting these issues with current, cutting-edge, computer science research
- Bring human factors into the analysis of cybersecurity and privacy concerns
- Present an avenue for social scientists and computer scientists to deepen their understanding of security needs and privacy demands
- Include an analysis of the problems and opportunities in cybersecurity as it applies to critical infrastructures
- Present an analysis of the economic impacts of cybersecurity

We look forward to this publication bridging cybersecurity advances in academia, industry, and governmental organizations and providing a foundation to future developments in the fields of cybersecurity and privacy.

October 2015

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Organization

The 2015 Cybersecurity Symposium was organized by the Center for Secure and Dependable Systems of the University of Idaho. The center is partly sponsored by the Idaho Global Entrepreneurial Mission. The conference was held at the Coeur d'Alene Resort.

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