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*IFIP is the global non-profit federation of societies of ICT professionals that aims at achieving a worldwide professional and socially responsible development and application of information and communication technologies.*

IFIP is a non-profit-making organization, run almost solely by 2500 volunteers. It operates through a number of technical committees and working groups, which organize events and publications. IFIP's events range from large international open conferences to working conferences and local seminars.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is generally smaller and occasionally by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is also rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

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Steven Furnell · Nathan Clarke (Eds.)

# Human Aspects of Information Security and Assurance

15th IFIP WG 11.12 International Symposium, HAISA 2021  
Virtual Event, July 7–9, 2021  
Proceedings

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ISSN 1868-4238                      ISSN 1868-422X (electronic)  
IFIP Advances in Information and Communication Technology  
ISBN 978-3-030-81110-5              ISBN 978-3-030-81111-2 (eBook)  
<https://doi.org/10.1007/978-3-030-81111-2>

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The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

# Preface

It is now widely recognized that technology alone cannot provide the answer to cyber security problems. A significant aspect of protection comes down to the attitudes, awareness, behavior, and capabilities of the people involved, and they often need support in order to get it right. Factors such as lack of awareness and understanding, combined with unreasonable demands from security technologies, can dramatically impede the ability to act securely and comply with policies. Ensuring appropriate attention to the needs of users is therefore a vital element of a successful security strategy, and users need to understand how the issues may apply to them and how to use the available technology to protect their systems.

With all of the above in mind, the Human Aspects of Information Security and Assurance (HAISA) symposium series specifically addresses information security issues that relate to people. It concerns the methods that inform and guide users' understanding of security, and the technologies that can benefit and support them in achieving protection.

This book presents the proceedings from the fifteenth event in the series, held virtually, due to the COVID-19 pandemic, during July 7–9, 2021. A total of 18 reviewed papers are included, spanning a range of topics including security management, cyber security education, and people and technology. All of the papers were subject to double-blind peer review, with each being reviewed by at least two members of the International Program Committee. We are grateful to all of the authors for submitting their work and sharing their findings. We are also grateful to David Emm, from Kaspersky, UK, for being the keynote speaker for this year's event.

The HAISA symposium is the official event of IFIP Working Group 11.12 on Human Aspects of Information Security and Assurance, and we would like to thank Prof. Kerry-Lynn Thomson for supporting the event as Working Group chair. We would also like to acknowledge the significant work undertaken by our International Program Committee, and recognize their efforts in reviewing the submissions and ensuring the quality of the resulting event and proceedings. Finally, we would like to thank Dr. Christos Kalloniatis and the organizing team for making all the necessary arrangements to enable this symposium to take place.

July 2021

Steven Furnell  
Nathan Clarke

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