Todor Tagarev
Nikolai Stoianov (Eds.)

Communications in Computer and Information Science 1790

Digital Transformation, Cyber Security and Resilience

Second International Conference, DIGILIENCE 2020
Varna, Bulgaria, September 30 – October 2, 2020
Revised Selected Papers

Springer

Communications in Computer and Information Science 1790

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Todor Tagarev · Nikolai Stoianov
Editors

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Editors
Todor Tagarev
Institute of Information and Communication Technologies
Sofia, Bulgaria

Nikolai Stoianov
Bulgarian Defence Institute
Sofia, Bulgaria

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Preface

The rapid development and integration of information and communication technologies influence the ways in which people work, fight, study, organize their political representation, communicate, and relax. The process of digitalization transforms our lives but also brings new threats and ways to promote security and safety. To reflect on the new opportunities and challenges and present novel solutions, a group of academics and practitioners decided in 2019 to launch the series of international scientific conferences under the title "Digital Transformation, Cyber Security and Resilience", or DIGILIENCE for short. The proceedings of the first conference were published by Springer Nature in volume 84 of the series "Studies in Big Data" [1].

This volume includes selected papers from the second DIGILIENCE conference, hosted during Sept. 30 – Oct. 2, 2020 by the Bulgarian Naval Academy, Varna, Bulgaria. 119 submissions went through a single-blind review process, with three reviews per paper. The conference program included fifty-eight accepted and six invited papers, along with plenary discussions. It was structured in the following themes:

- ICT Governance and Management for Digital Transformation
- Human Systems Integration Approach to Cybersecurity
- Education and Training for Cyber Resilience
- Novel Conceptual Approaches and Solutions
- Cyber Situational Awareness and Information Exchange
- Security Implications and Solutions for IoT Systems
- Protecting Critical Infrastructures from Cyberattacks
- Big Data and Artificial Intelligence for Cybersecurity
- Secure Communication and Information Protection
- Advanced ICT Security Solutions

Due to the COVID-19 pandemic, the conference was conducted in a mixed format with approximately 50 participants physically present at the Bulgarian Naval Academy, and the remainder participating online. Eighteen of them were Ph.D. students or young researchers. In total, the participants represented 13 different countries, the NATO Communications and Information Agency and the European Defence Agency.

The Steering Committee of the conference invited the authors of selected papers to contribute to this volume. The final product, presented here, includes 17 papers organized in six sections:

- Cyber Situational Awareness, Information Sharing and Collaboration
- Protecting Critical Infrastructures and Essential Services from Cyberattacks
- Big Data and Artificial Intelligence for Cybersecurity
- Advanced ICT Security Solutions
- Education and Training for Cyber Resilience
- ICT Governance and Management for Digital Transformation

We continue to work towards turning the DIGILIENCE conference series into a valuable platform for exchanging and strengthening cybersecurity knowledge and contributing to the resiliency of our societies in the process of digital transformation.

February 2023

Todor Tagarev
Nikolai Stoianov

Reference

1. Tagarev, T., Atanassov, K., Kharchenko, V., Kasprzyk, J. (eds.): Digital Transformation, Cyber Security and Resilience of Modern Societies, in Studies in Big Data, vol. 84. Springer Nature, Cham (2021).

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