

Safety and Reliability of Systems and Processes



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PREFACE

The monograph presents new developments and current trends in different topic areas of safety and reliability of systems and processes, delivered by excellent specialists researching in this field. The collective monograph consists of fifteen chapters and two short communications authored by researchers from five countries. The original and creative contributions to particular chapters' area were selected after a strong review process of the 16th Summer Safety and Reliability Seminar 2022 that was organized jointly by the Gdynia Maritime University and the Polish Safety and Reliability Association, also supported by the European Safety and Reliability Association, and took place in the Conference Hotel "Pod Tężniami" in Ciechocinek, Poland from 4th to 8th September 2022. The Seminar was a great opportunity for researchers working in safety and reliability of systems and processes areas to transfer knowledge and enrich the comprehensions of this scientific community.

The chapters of this collective monograph include advanced methods for the safety and reliability analysis of complex systems and processes and their real applications to disseminate the newest achievements in the field. The subjects are chosen in an effort to dynamically represent the methodological advancements developed to meet the newly arising challenges in the field of safety and reliability. In this volume, the emphasis is focused on the following subjects:

- global safety and security management,
- safety and reliability of complex systems and processes modeling, identification, prediction and optimization,
- risk assessment, reduction and accident consequences mitigation of process industry and transport critical infrastructures,
- cybersecurity,
- warning systems,
- food packing safety,
- safety and resilience training.

The accepted chapters are forming the monograph entitled "Safety and Reliability of Systems and Processes, Summer Safety and Reliability Seminar 2022", published by Gdynia Maritime University.

Moreover, in this monograph, we have initiated with the new cyclic chapter entitled "People of Polish Safety and Reliability Association and Summer Safety and Reliability Seminars" including biographical notes of people who have made significant contributions to the development of the Association and the Seminars.

We, the editors of this volume, would like to express our thanks to all Authors for their research results that contribute to further progress in safety and reliability and create excellent and valuable source for scientists, researches, MSc and PhD students and practitioners working in this area.

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