

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 nineteen chapters authored by the researchers from five countries. The original and creative contributions to particular chapters' area selected after a strong review process of the 15th Summer Safety and Reliability Seminar 2021 that was organized jointly by the Gdynia Maritime University and the Polish Safety and Reliability Association and took place in the Conference Hotel "Pod Tężniami" in Ciechocinek, Poland from 5th to 9th September 2021. 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 the 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:

- reliability and safety of complex systems and processes modelling, identification, prediction and optimization,
- critical infrastructure safety and operation cost optimization,
- reliability and safety of transportation and industrial systems and processes,
- environmental pollution modelling,
- system safety impacted by climate and weather change modelling,
- COVID-19 pandemic human safety modelling.

The accepted chapters are forming the monograph entitled "Safety and Reliability of Systems and Processes, Summer Safety and Reliability Seminar 2021", published by Gdynia Maritime University.

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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