

**8th INTERNATIONAL CONFERENCE ON INDUSTRIAL
ENGINEERING**

**INNOVATION CENTER OF THE FACULTY OF MECHANICAL
ENGINEERING**

&

**INDUSTRIAL ENGINEERING DEPARTMENT, FACULTY OF
MECHANICAL ENGINEERING, UNIVERSITY OF BELGRADE,
SERBIA**



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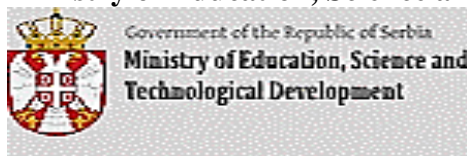
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PREFACE

Since the first event in Belgrade, Serbia more than 25 years ago, in 1996, International Conference on Industrial Engineering - SIE has been held regularly every 3 years. This time we are one year late due to pandemic conditions. It represents an opportunity for researchers in the Industrial Engineering community to review and evaluate their scientific achievements over the period since the previous SIE, share their most recent results and ideas, and discuss possibilities for new directions in research, joint experiments and observing campaigns.

The first aim of the 8th International Conference on Industrial Engineering – SIE 2022 is to celebrate 70 years from founding of our department by prof. dr Vukan Dešić! We are proud of professor Dešić who, as stated in one of the archive documents was “a man of excellent professional abilities and one of the best experts” and thank him for all his immeasurable contributions! The second aim of SIE 2022 is to contribute to a better comprehension of the role and importance of Industrial Engineering and to point out to the future trends in the field of Industrial Engineering. The conference is also expected to foster networking, collaboration and joint effort among the conference participants to advance the theory and practice as well as to identify major trends in Industrial Engineering today. According to these goals the conference addresses itself to all experts in all fields of Industrial Engineering to make their contribution to success and show capabilities achieved in the work that has been done are very welcomed. SIE 2022 traditionally provides an international forum for the dissemination and exchange of scientific information in industrial engineering fields through the large number of multidisciplinary topics and continues tradition established by prof. Dešić to gather and bring together experts in the field.

The book brought together almost 200 authors from 20 countries, namely from Canada, Croatia, Finland, Germany, Iran, Italy, Libya, Montenegro, Netherlands, North Macedonia, Poland, Portugal, Russia, Bosnia & Herzegovina, Singapore, Slovakia, Switzerland, Turkey and USA and Serbia. The 84 submitted full length manuscripts were peer-reviewed, and 81 of them were selected for publication by experts in their respective fields. The authors ranged from senior and renowned scientists to young researchers. Only unpublished papers were accepted and the first author is responsible for the originality of the paper. All papers are classified into five chapters, including plenary lectures and numerous results of national and EU projects are there presented (financed by MESTD, PSHE SR ARV, SF RS, EC, EF RD, TUKE, INAIL etc.).

We expect that papers and discussions will contribute to better comprehension the role and importance of Industrial Engineering in this and other countries, both in domain of scientific work and everyday practice.

Our efforts in organizing would not succeed without the considerable help of the members of Scientific Program and the financial help of Ministry of Education, Science and Technological Development was greatly supportive for the success of the entire project.

At the end, the editors hope, and would like, that this book to be useful, meeting the expectation of the authors and wider readership and to incentive further scientific development and creation of new papers in the field of Industrial Engineering.

Welcome to the 8th International Conference on Industrial Engineering – SIE 2022! We wish to all participants a pleasant stay in Belgrade and are looking forward to seeing you all together at the 9th Conference on Industrial Engineering – SIE 2025.

Belgrade, September 2022

EDITORS



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