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The 10th International Symposium Machine and Industrial Design in Mechanical Engineering (KOD 2018)

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**The 10th International Conference Machine and Industrial Design
in Mechanical Engineering - KOD 2018**

June 6-8, 2018, Novi Sad, Serbia

WITH SUPPORT OF:



ADEKO – Association for Design, Elements and Constructions



**IFTOMM - International Federation for the Promotion of Mechanism and
Machine Science**

Accepted, peer reviewed papers from the 10th KOD 2018

Edited by

**Milan RACKOV, Novi Sad
Radivoje MITROVIĆ, Belgrade**



Preface

Dear Ladies and Gentlemen, respectable Colleagues and Friends of KOD,

The 10th International Conference Machine and Industrial Design in Mechanical Engineering - KOD 2018 is organized by Faculty of Technical Sciences, University of Novi Sad from 6th till 8th of June 2018.

KOD 2018 is an anniversary conference, the 10th time, and we organize it for almost twenty years. KOD Conference has become over the years a tradition of the Faculty of Technical Sciences, carried on by the Department of Mechanization and Design Engineering.

The basic goal of this conference is to assemble experienced researchers and practitioners from universities, scientific institutes and different enterprises and organizations from this region. Also, it should initiate more intensive cooperation and exchanging of practical professional experiences in the field of shaping, forming and design in mechanical and graphical engineering, industrial design and shaping, product development and management. Having always present need for making more effective, simpler, smaller, easier, noiseless, cheaper and more beautiful and esthetic products that can easy be recycled and are not harmful for environment, the cooperation between specialists of these fields should certainly be intensive.

Two hundred and three papers were submitted, but after review, a hundred and sixty seven papers have been accepted to be presented at the conference. Accepted papers are very interesting, contribute to the understanding of design building relationships across multidisciplinary design domains including engineering and product development, innovation, manufacturing, management, complexity, human behaviour and system design, so that means these topics have potentials and have to be further researched.

Of course, we believe that the time for organizing conference has not passed and we want to prove it. In that way extended abstracts of all accepted papers are published in this Book of Abstracts and all final papers have a chance to be published online with open-access in a volume of IOP Conference Series: Materials Science and Engineering indexed in major international databases: Ei Compendex, Scopus, Thomson Reuters / Clarivate Analytics (WoS), Inspec, et al.

Finally, we would like to thank all people who have been supportive to the Conference and have helped and encouraged us in all the activities.

We are very grateful to our reviewers whose enormous work for assessing the papers is gratefully appreciated.

We would like also to express our appreciation to our keynote speakers for their invaluable contribution.

We would like to thank to the authors themselves for contributing research papers, without whose expert input there would have been no conference.

And last but not least, we are pleased to acknowledge the assistance provided by the members of the International Scientific Committee and Technical Program Committee of KOD 2018 Conference.

We wish You to have stimulating and memorable conference that will bring about numerous fruitful discussions and lay the foundations of much future collaboration.

Have unforgettable stay in city of Novi Sad, catch up with old friends and make some new ones.

We wish You success in Your further researching and great fortune and happiness in personal life.

Conference Chairs of KOD2018

Prof. Milan Rackov, PhD. Eng.

Prof. Radivoje Mitrović, PhD. Eng.

Prof. Daizhong SU, PhD. Eng.

Novi Sad, 6th June 2018

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