



NANT 2016

**Book of Abstracts of
Third International Conference
MODERN METHODS OF TESTING AND EVALUATION
IN SCIENCE**

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Book of Abstracts of 3rd International Conference
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PREFACE

The volume of Book of Abstracts includes the selected abstracts presented at the 3rd International Conference "Modern Methods of Testing and Evaluation in Science" NANT 2016. The Conference takes place every year and this year was held on 24-25th December 2016. at Central Institute of Conservation in Belgrade.

The main aim of this Conference is to provide a Forum for researchers and experts from various country to exchange their ideas and achieved results, but also to include young people and students in scientific research and acquaint them closer with the methods of testing and evaluation in science. Having that in mind, we put additional emphasis on active participation of students and young researchers, so the idea is that all papers will be presented by students who previously contributed to these papers with their older colleagues.

The Conference brought together the participants from institutes and universities from various countries: Romania, USA, Bosnia and Herzegovina, Macedonia, Sweden, Spain, Montenegro, Slovenia and others.

The aim of the conference is, also, to connect different fields of science, because we can find many common points between different research areas, and by doing that, to open possibilities of developing new technologies or improving the old ones. Therefore, the Conference covers various topics from the following fields: mechanical science, transport and traffic engineering, material science, metallurgy, electrical engineering, civil engineering and other engineering areas, but all other sciences as well, including for example medical science, which uses various techniques of experimental examination and testing.

The program of the Third Conference consists of keynote lectures, oral and poster presentations. Co-organizer of the Conference is Central Institute of Conservation in Belgrade and a main sponsor is BAS from Belgrade. We would like to kindly thank them for their help.

We would like to thank all authors who have contributed to this volume and also to the Scientific Committee, Organizing Committee, reviewers, speakers, chairpersons, and all the conference participants for their support for a successful scientific meeting.

Editors

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SURFACE TOPOLOGY OF LASER BEAM CUT AUSTENITIC MATERIALS

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Austenitic materials have high demand in modern manufacturing industries due to their improved technological characteristics such as high mechanical strength and hardness, corrosion resistance, heat resistance and wear resistance. Some applications of austenitic materials include elevated pressure and temperature, and require stringent design requirements and close tolerances in manufactured products. Laser cutting is one of the non-conventional cutting processes, used to obtain complex shapes and geometries. In this paper, laser cutting was performed on austenitic material. The laser cutting process parameters are varied with the aim to obtain the optimal process parameters. Surface roughness plays important role in high demanded work environment. The main characteristics of surface topology are investigated and discussed.

Keywords: austenitic materials, laser, cutting, surface topology