

# Preface

This volume of proceedings includes the selected papers presented at the 10<sup>th</sup> International Conference: Innovative Technology for Joining Advanced Materials (TIMA 19) held in Timișoara, Romania, during November 7 - 8, 2019. The conference takes place every two years and is traditionally organized by the National R&D Institute for Welding and Material Testing, ISIM Timișoara in cooperation with the “Politehnica” University Timișoara and the Technical Science Academy of Romanian, Timișoara Branch .

The conference aims to provide a platform for useful interaction on actual problems in the field of advanced materials joining and testing procedures. A particular attention was given to practical problems coming from the industry. The event brought together researchers from institutes and universities from different countries in order to discuss on the following actual topics:

- New joining technologies
- Coatings: advanced materials and innovative technologies
- Modelling and simulation of welding processes
- Specific problems in advanced materials joining
- Advanced methods and new trends in NDT
- Mechanical and structural characterization of advanced materials and joints
- Quantitative non-destructive testing
- Fracture mechanics of advanced materials
- Damage of advanced materials under time-dependent-actions and remaining life assessment, fatigue, creep, corrosion, irradiation
- Quality of welded joints and welded structures

The volume includes 25 selected papers, in which the authors reveal the results of their own research and development activity, carried out in the frame of their institutes and universities from Romania, Hungary, Serbia, Vietnam and Ukraine.

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

Editor,

Dr. Eng. Nicușor-Alin SÎRBU

National R&D Institute for Welding and Material Testing - ISIM Timișoara, [www.isim.ro](http://www.isim.ro)

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