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***DEDICATED TO THE 150th ANNIVERSARY
OF THE ROMANIAN ACADEMY***



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INSTITUTE OF SOLID MECHANICS
COMMISSION OF ACOUSTICS**

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FORWARD

The volume dedicated to the 150 years since the founding of the Romanian Academy includes a selection of the papers presented at the Annual Symposium of the Institute of Solid Mechanics and of the Session of the Commission of Acoustics, SISOM 2016. This is the XXVIIth edition of the Symposium and, as the most previous ones, it has been granted by international participation.

One way for speeding up research and development and so contribute to the efficient exchange of new knowledge is the organization of scientific meetings. The intention of SISOM meetings is to bring together scientists and engineers involved in various fields of solid mechanics, covering research and development as well as technical applications.

I am grateful to all speakers for the quality of their presentations and to all attendants for enthusiastic discussion that took place. All submitted papers are included in the conference electronic proceedings. The Referee Board selected 46 published papers to be included in this volume, from the 75 presented papers at the conference, about 40% rejection factor. Papers presented at SISOM cover a large area of research fields in mechanics: System dynamics and Continuum Mechanics, Robotics and Mechatronics, Wear Investigations of Materials and Biomechanics, Technical Acoustics. The most 8 representative papers were included in one special section of excellence in solid mechanics. Renowned personalities from Romanian scientific research have participated for the conference successfulness, along with many other researches from important university.

Support and help in organizing the conference were received from the Section of Technical Sciences of Romanian Academy, NASR (ANCS)-National Authority for Scientific Research, RATS (ASTR)-Academy for Technical Sciences of Romania, Mediamira Publishing House Cluj-Napoca, The General Association of Romanian Engineers AGIR and VTC- Industrial Engineering and Technology, dealer ABB. I would-like to express my thanks to all of them and to many others whose dedicated work was of great help in organizing the conference and editing the Proceedings. Special thanks are due to the ANCS for financial support that made possible the publishing of the SISOM Proceedings.

I am strongly convinced the conference and this Proceedings will initiate many suggestions for further extension of knowledge in the field of solid mechanics and will also give new opportunities for scientific cooperation.

Corresponding Member of the Romanian Academy

Prof. Dr. Tudor Sireteanu

Director of the Institute of Solid Mechanics of Romanian Academy

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