

ADVANCES IN THEORETICAL AND APPLIED MECHANICS:
SELECTED CONTRIBUTIONS FROM
**THE 14TH NATIONAL CONGRESS ON
THEORETICAL AND APPLIED MECHANICS***

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The 14th Congress on Theoretical and Applied Mechanics (NCTAM2024) was held from 2 to 4 September 2024 at the Hilton Hotel, Sofia. For many years (the first congress was held in 1969), this scientific event has established itself as a meeting of Bulgarian scientists working in the field of mechanics, both among themselves and with the world's leading specialists in the field.

After a break of 7 years, the tradition was restored and NCTAM2024 was very successful. The Congress hosted 107 delegates from 15 countries, who contributed with 95 oral presentations and 13 poster presentations that addressed research issues of current interest. Although the number of scientists participating in the congress was not very large, scientists from all major national centers of mechanics took part in the congress: Technical University-Sofia, Rousse University "Angel Kanchev", University of Architecture, Civil Engineering and Geodesy, University of Chemical Technology and Metallurgy, Burgas University "Asen Zlatarov", Medical University, National Sports Academy, University of Transport "Todor Kableshkov", South University "Neofit Rilski", etc. In addition to the Institute of Mechanics, there was a strong presence of scientists from other institutes of the Bulgarian Academy of Sciences: Institute of Mathematics and Informatics, Institute of Information and Communication Technologies, National Institute of Geophysics, Geography and Geodesy, Institute for Climate, Atmospheric and Water Research, Institute of Engineering Chemistry, Institute of Biophysics and Biomedical Engineering. The invited plenary lecturers significantly enhanced the high scientific level of the Congress. From Bulgaria, the

*Congress webpage: <https://congress.imbm.bas.bg/>

plenary speakers were Prof. Alexander Rachev and Prof. Dora Karagiozova. Internationally, the Congress featured Prof. Marian Wiercigroch from the University of Aberdeen, Prof. Giuseppe Rega from Sapienza University in Rome, and Prof. Jerzy Warminski from the Technical University of Lublin, Poland.

A competition for the “Best young scientist in mechanics” was also held during the congress. The prize was established and sponsored by Academician Yachko Ivanov and the prize was shared between the young scientists Pavel Iliev and Kaloyan Vitantov from the Institute of Mechanics, BAS.

This Special Issue, featuring a selection of papers presented at the Congress, aims to further advance research in theoretical and applied mechanics and to sustain interest and engagement leading up to the next NCTAM. As the articles in this Special Issue are published upon acceptance, they appear in different JTAM issues, starting with Issue 4 of Volume 54.