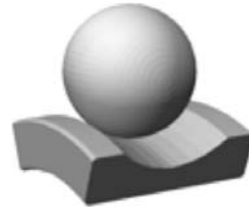




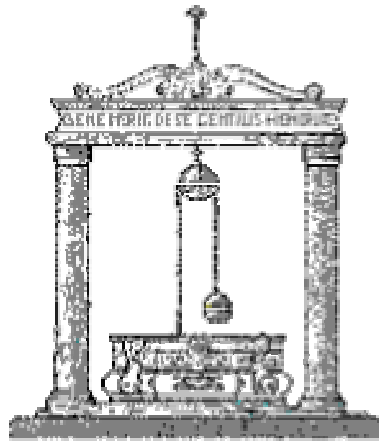
AIMETA

Italian Association for
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TRIBOLOGY
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AIT 2004
**4th AIMETA INTERNATIONAL
TRIBOLOGY CONFERENCE**



**MMIV
IV AIMETA GENTIUM
CONVENTUS SCIENTIAE TRITUS**

Proceedings

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*Proceedings of the
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14 – 17 September 2004*

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PREFACE

This volume of proceedings includes the papers presented at the 4th AIMETA International Tribology Conference (AITC 20004), organised in Rome by the Tribology Group of AIMETA (Italian Association for Theoretical and Applied Mechanics) in collaboration with other Italian Institutions.

The papers refer to several aspects of Tribology, an interdisciplinary science that deals today not only with the improvement of the operating conditions of kinematic pairs, heart of mechanical systems, but also with the reduction of the ecological degradation caused by energy and material losses due to friction and wear.

The papers are subdivided in two sections: Friction and Wear, and Lubrication. The first section deals with the tribological behaviour of materials and coatings, also at micrometric level. Problems related to Tribology of vehicles, of technological processes and of spatial systems are also considered, while a last group of papers refers to contacts also in presence of adhesion. The second section deals with fluidostatic (gas and oil) lubrication, hydrodynamic lubrication, elastohydrodynamic lubrication and their applications. Squeeze and turbulence are also considered, while a last group of papers refers to lubricants.

Most works on friction and wear report experimental studies mainly because of the great number of involved parameters, while most works on lubrication are more of theoretical nature.

More than half of the Authors are not Italian and coming both from Universities and Industries. Italian Authors are mainly coming from Universities.

An effective University – Industry collaboration is one of the targets of the AIMETA Tribology Conferences. To this aim, the establishment of an Italian Society of Tribology, similarly to Societies of Tribology already existing in all the industrialized countries of the world, could corroborate the improvements done during the last years. This has been hoped by many people and the AITC 2004 could be a good occasion.

Many thanks to all members of the Scientific and Organising Committees and a warm welcome to all participants at the 4th AIMETA International Tribology Conference.

Roberto Bassani