



**Ministry of Education Republic of Azerbaijan,
Azerbaijan Technical University,
International Federation for the Promotion of
Mechanism and Machine Science (IFTOMM),
Azerbaijan Committee of International Federation for
the Promotion of Mechanism and Machine Science
(AzC IFTOMM),
Izmir Institute of Technology**

PROCEEDINGS

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Aim:

The main objective of the second **ISMMS-2017** is to attract scholars, researchers, teachers, students, professionals and other groups interested in the promotion of science of mechanisms and machines, to submit their scientific work in our Symposium.

ISMMS is well-known and the number of scientific works in the field of MMS grows in the world every year. Potential speakers are offered to submit offers on oral, poster or the video-presentations which offer new researchers and theoretical contributions of field of science about mechanisms and machines. All adopted articles will be published in the scientific journal Machine Science (ISSN 2227-6912), and also in scientific proceeding of the Symposium with ISBN, and also with the modified version the selected papers will be published in scientific journals **IFToMM**.

Topics:

Computational kinematics and synthesis of mechanisms; gear driver and transmissions; dynamic of machines; reliability of machines; tribology; mechatronics; manipulators and robots; oil-field machines and mechanisms; technological machines; transport vehicles.

Correspondence Address:

1. Professor Rasim Alizade, Charman of Department of Theory Mechanism and Machine,
Azerbaijan Technical University, Baku, Azerbaijan

2. Profesor Gokhan Kiper, Department of Mechanical Engineering, Izmir Institute of
Technology, Izmir, Turkey

www.aztu.edu.az

E-mail: alizada_rasim@hotmail.com; gokhankiper@iyte.edu.tr

Phone:(+994 12)538-94-03;(994 50)679-59-65; (+994 50)856-00-09; (+994 51)664-50-25;

Fax: (+994 12)538-32-80

H.Javid ave 25, Baku, Azerbaijan, AZ1073, Azerbaijan Technical University

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Foreword

IFTToMM was found in 1969 in Poland at the second World congress as the International Federation for the Development of the Theory of Mechanisms and Machines. The main goal of the World Federation is the development of international cooperation in the field of Theory of Mechanisms and Machines - TMM.

Initially, IFTToMM included scientific organizations from 13 countries. In 1995, the General Assembly of the Ninth World Congress of the International Federation of the Theory of Mechanisms and Machines - IFTToMM (Italy, Milan) approved the Azerbaijan Committee of the International Federation of the Theory of Mechanisms and Machine (AzC IFTToMM). The scientific organization was approved Azerbaijan Technical University and the Chair of AzC IFTToMM was appointed Doctor of Technical Science, Professor Rasim Alizade.

AzC IFTToMM has performed first International Symposium of Mechanism and Machine Science ISMMS-2010 in Izmir Institute of Technology, Izmir Turkey, on 5-8 October 2010. The Symposium ISMMS-2010 was organized by Azerbaijan National Aviation Academy (Rector, Academician, Dr. Sc., Professor Arif Pashayev), Izmir Institute of Technology (Rector, Dr., Professor Zafer Ilken) and the Azerbaijan Committee of International Federation Theory of Mechanism and Machine (Dr. Sc. Professor Rasim Alizade). The programs of the ISMMS-2010 covered following sections of relevance to MMS, Mechanism and Machine Science: Structural Synthesis and Kinematic Architecture; Linkages, Cams, Gearing and Transmissions; Control Systems; Mechanisms of Flying and Space Machinery; Mechatronics; Robotics; Dynamics and Vibrations of Machinery; Computational Kinematic Synthesis and Analysis; Nanotechnology and Micro: Manipulators, Robots, Mechanisms.

In 2011 year, at the 13-th World Congress of IFTToMM noted that 48 countries of the world are members of the International Federation for promotion of development the Machine and Mechanism Science (MMS) with the keyboard IFTToMM. The science of mechanisms and machines (MMS) consider the theory of geometry, motion, dynamics and control of machines and mechanisms with the transformation and transmission of energy and information using in industry, biomechanics, in space and the environment.

AzC IFTToMM 2017 International Symposium of Mechanism and Machine Science ISMMS-2017 has taken place in Azerbaijan Technical University, Baku, Azerbaijan, on 11-14 September 2017.

The programs of ISMMS-2017 cover sections of relevant to Mechanism and Machine Science:

- Manipulators and Robots.
- Kinematics and Synthesis of Mechanisms.
- Dynamic of Machines.
- Transport Vehicles.