



Organizers

National Polytechnic University of Armenia in partnership with American University of Armenia



Under the patronage of the International Federation for the Promotion of Mechanism and Machine Science (IFTOMM)

CALL FOR PAPERS

Welcome!

We invite you to participate in the 1st International Conference “MECHANICAL ENGINEERING SOLUTIONS: Design, Simulation, Testing and Manufacturing” (MES-2018), which will take place on September 17-19, 2018, in Yerevan, Armenia. The conference is organized by the National Polytechnic University of Armenia (NPUA) in partnership with the American University of Armenia (AUA).

Conference goals

The conference intends to become a forum regularly bringing together researchers and academic staff from technical universities and practitioners from industrial companies in the field of mechanical engineering. With its multi-topic program and international scale, it has to establish a networking and educational platform, and to facilitate contacts and cooperation between universities, research and development centers and industrial companies from different countries.

Although the conference will mainly focus on technical issues of designing, calculating, producing and using various machines and mechanical systems (such as precision, load capacity, performance, etc.), advanced educational methods and models, as well as market aspects like customer benefits, economic efficiency, latest trends, etc. will also be considered. Contributions indicating existing or potential practical applications of known or newly developed designs, technologies and equipment, as well as theories, methods, algorithms and software, are particularly welcome.

Besides the plenary and technical sessions, it is planned to have poster sessions and an exhibition.

Conference languages

The working languages of the conference are English and Russian. Papers can be written in one of the working languages (if possible, a short summary has to be provided in the other language). Submitting a paper together with its full translation in the other language is welcome.

Paper submission, review and publication

We invite the authors to submit an abstract of their paper (max. one page / 350 words) to the organizers at mes2018@aua.am according to the topics and in the timeframe mentioned below (please follow our website for updates: <http://mes2018.aua.am/>).

Together with notification of acceptance of the abstract, the authors will receive templates and instructions on preparation of their full papers.

All submitted full papers will be peer-reviewed. The full texts of all accepted papers will be electronically pre-published in the preliminary Conference Proceedings, and made available to all participants at the registration desk.

Note: only the papers presented at the conference, will be included in the final Conference Proceedings, getting the status of official publication.

Important dates

1. Abstracts due – by ~~October 31, 2017~~ by **December 31, 2017**
2. Notification of acceptance of abstracts – by ~~November 15, 2017~~ **January 15, 2018**
3. Full papers due – by ~~January 31, 2018~~ **February 28, 2018**
4. Notification of acceptance of the papers – by March 31, 2018
5. Final papers due – by April 15, 2018
6. Conference “early-bird” registration – by April 30, 2018
7. Conference standard registration – by June 15, 2018

Additional program

There will be a technical tour and a cultural program organized (the details will be announced later, closer to the conference date).

In addition, a hands-on workshop on [AVL EXCITE™ Designer](#) will be held – a software package allowing fast and realistic simulation of dynamics and vibrations of the internal combustion engine and its mounts, transmission, as well as assessment of crankshaft strength and bearing loads – already in the concept phase of the development process. (For now, the workshop is planned to be held in Russian only).

Conference topics include, but are not restricted to:

- Design methodology, simulation methods and software tools
- Machine tools and mechanical manufacturing technology
- Cutting and forming tools
- Computer-aided design, engineering and manufacturing (CAD / CAE / CAM)
- Structural, kinematic and dynamic analysis and synthesis of mechanisms
- Dynamics of machines
- Numerical methods: method of finite elements (FEM), method of boundary elements (BEM), multi-body dynamics (MBD)
- Verification and validation of calculation models
- Stress, fatigue and durability of machine parts
- Tribology, lubrication, friction reduction
- Noise and vibration in machines
- Computational fluid dynamics (CFD) and thermodynamics
- Mechatronics
- Additive manufacturing technologies
- Advanced materials and coatings
- Measurement techniques, test beds and instrumentation - hardware and software
- On-board diagnostics (OBD) and condition monitoring systems (CMS)
- Biomechanics

Main application fields and industry branches

- Vehicles: automotive, railed, watercraft, aircraft
- Inner combustion engines
- Transmissions and drivelines
- Electric and hybrid powertrains
- Turbomachinery and turbochargers
- Industrial machines and equipment
- Machine tools
- Robots and manipulators
- 3D printers

Conference Co-Chairs

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Registration Fee

"Early-bird" registration	€450
Standard registration	€500
Registration discount for IFToMM members	€50

More details can be found in a separate document and on the website.

Sponsorship

Platinum Sponsor	€3000
Gold Sponsor	€2000
Sponsor	€1000

More details can be found in a separate document and on the website.

For further information, updates and abstract submission:

Website: <http://mes2018.aua.am/>

For abstract and paper submission, as well as for any inquiries about the conference:

E-mail: mes2018@aua.am

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