

International Students Olympiad on Metal Forming Processes

Students of mechanical engineering are invited to take part in the International Students Olympiad on Metal Forming Processes, which will take place in April/May 2027 at universities around the world.

The Olympiad 2027 will be held in three sections:

1. Hot Bulk Forging

Students will get a drawing of an axisymmetric part after machining and should design the hot forged part and die impression for the final forging and then determine the necessary technological chain for its manufacturing and then simulate the proposed forging process.

2. Extrusion

Students are required to develop an aluminum profile extrusion technology

3. Longitudinal rolling

Students should select a caliber system, calculate calibration in QKaliber CAD, complete simulation in QForm UK, and prepare drawings.

4. Sheet metal forming

The participant should create and justify the process for manufacturing a detail, taking into account the available machinery, the size of the production batch, and the technological characteristics of the detail.

Each participant can only compete in one section. Organizers are asked to submit a competition entry with a list of applicant students. If the local organizer invites students from multiple universities, then each university is limited to 3 participating students so if more are interested in participating, then each university must pre-select 3 most qualified participants. If only one university is involved with a local organizer, then more than 3 students may participate.

On the day of the event in April or May 2027 competing students should arrive to assigned classroom and each student will work on a personal computer with QForm UK simulation and CAD software installed and will have 6 hours to design the technology, to simulate it and to create a report using text editor such as Microsoft Word. Students' reports should include calculations and justification of the proposed technology, applications, and drawings in text file as well as saved QForm FE-simulation file. Each report will have special random number to achieve fair and unbiased judging. The results will be judged by a local committee. Winners will get diplomas and prizes.

Then 1st place winner reports from each country will move on to the Scientific Committee judgment between countries where three best students' reports from around the world will get special diplomas and prizes. Basic language of the Olympiad is English. Each Organizer may use different languages for reports but the students' reports for International Committee judgment have to be translated into English.

Deadlines:

- January 2027: simple confirmation letter including a contact person sent to market@qform3d.com
- March 2027: list of applicant students
- April 2027: confirmation of the time and date of the Olympiad

Additional conditions:

All universities taking part in the Olympiad will get a free 3-month network QForm UK software license for 3 places to practice before the Olympiad by request. The universities will also get the solved example from the previous Olympiad for review as well as a training course of simulation in QForm UK.



Coordinator

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Scientific Committee

Budapest University of Technology and Economics (Hungary)
Department of Material Science and Engineering

www.bme.hu

Dr. József Bálint Renkó, Materials Specialist



Secretary of the International Students Olympiad
in Hot Bulk Forging and Extrusion Technologies Committee

Yuri Gladkov, PhD., Asst. Professor

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Diego Poutón, Professor, Metallurgical Engineer



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Darob Berdiev, Professor, Head of the Department of Materials Technology

