



The Hungarian Welding Association (MAHEG)  
invites you and your colleagues to the

# **33rd INTERNATIONAL WELDING CONFERENCE**

## **CO-ORGANIZERS:**

Hungarian Association of Welding and Material Testing (MHtE)  
Budapest University of Technology and Economics (BME)

## **PARTNERS:**

Hungarian Association for Nondestructive Testing (MAROVISZ)  
Hungarian Steel Structure Association (MAGÉSZ)

## **LOCATION AND TIME:**

Budapest, Hungary  
Budapest University of Technology and Economics  
**18-19th of June, 2026**





### **CHAIR OF THE CONFERENCE**

Dr. Attila Farkas, president of MAHEG

### **A KONFERENCIA TÁRSELNÖKEI**

Dr. László Gyura, director of MHTÉ

Dr. Szabolcs Szávai, president of MAROVISZ

Ferenc Aszman, president of MAGÉSZ

Dr. Imre Orbulov, dean of BME Faculty of Mechanical Engineering

### **PROGRAM COMMITTEE**

Chair: Dr. Marcell Gáspár, executive committee member of MAHEG

Tagjai:

Dr. Attila Farkas

Dr. József Gáti

János Ilinyi

Dr. Tünde Kovács

Dr. Zsolt Kovács

Dr. Dénes Kollár

Csaba Kristóf

Zoltán Meiszterics

Dr. Kornél Májlinger

Dr. Béla Palotás

Dr. Judit Pap

Dávid Pammer

Dr. Ferenc Szigeti

Dr. Balázs Varbai

Dr. Zoltán Weltsch

### **ORGANIZING COMMITTEE**

Chair: Dr. Kornél Májlinger

Members:

Dr. Levente Katula

Dávid Kemény

Dr. Dénes Kollár

János Kuti

Gergely Simon

Orsolya Ugrainé Farkas

### **Address of the organizing committee:**

Budapest University of Technology and Economics

Hungary, 1111 Budapest, Műegyetem rakpart 3.

e-mail: [rendezveny@maheg.hu](mailto:rendezveny@maheg.hu)



# 33rd International Welding Conference

Budapest University of Technology and Economics

18-19th of June, 2026, Budapest

## 9:00 Registration

10:00 Opening ceremony (chair: Dr. Kornél Májlinger)

Dr. Attila Farkas (MAHEG)

Prof Dr. Imre Orbulov (BME)

Dr. László Gyura (MHTÉ)

Luca Costa (IIW)

10:20 Awarding ceremony

10:50 Plenary session (chair: Dr. Kornél Májlinger)

10:50 Dr. Attila Farkas: How does MAHEG contribute to the development and sustainability of welding competence?

11:10 Dr. László Gyura: The role of MHTÉ in the development of national welding culture

11:30 Prof. Dr. Péter Szabó: Welding education and research at the Department of Materials Science and Engineering of BME

## 11:50 Opening of the Welding Technology Exhibition

## 12:00 Lunch

## Parallel sessions

### 13:30 Session 1: Manufacturing and automation (chair: Prof. Dr. Tünde Kovács)

13:30 Attila Farkas: Application of artificial intelligence in the robotization of arc welding processes

13:50 Miklós Bognár, Péter Horvát: Robotization of welding at Bognár and Partners Ltd.

14:10 Péter Barabás, Dániel Ipoly: Production supervisory system for arc welding robot cells

14:30 Tamás Katona, Elek Bak, Ottó Kurgyis: Industrial application of offline robot programming in arc welding robot cells: production experience, technological advantages and limitations

14:50 László Gyura, Marcell Gáspár: Effect of flame straightening on the integrity of the structure

15:10 Szabina Lakos: Advanced process variants in the automatized welding

15:30 Ilker Olucak: Development trends in welding machines and modern drop transitions by Kolarc



**13:30 Session 2: New trends in welding - I (chair: Prof. Dr. Marcell Gáspár)**

- 13:30 Marcell Gáspár: The results of the COVE-WENDT project related to the sustainability and digitalization of welding
- 13:50 Adelaide Almeida, Wim Verlinde, Paula Queipo, Jens Kruse, Bethan Smith, Eujin Pei, Ulas Yaman, Jim Kingele: Advancing additive manufacturing qualifications for the aerospace and defence sectors: The role of the AILEEN centres of vocational excellence
- 14:10 Ana Luísa Marques, Ana Q. Barbosa, Georgia Kolyva: AR-enhanced modular competences for welding inspection supporting safe hydrogen pipeline transport and storage
- 14:30 Vlad-Ștefan Constantin, Adelina-Alina Han, Alin-Constantin Murariu, Ion-Aurel Perianu, Duma Iuliana, Popescu Radu-Nicolae: Factorial design-based optimization of spot fiber laser welding parameters for dissimilar Ni–Al joints
- 14:50 Boțilă Lia-Nicoleta, Alin-Constantin Murariu, Ion-Aurel Perianu, Duma Iuliana, Popescu Radu-Nicolae, Raia Angelo-Ovidiu Daniel, Valușescu Cristian-Ilie: Effects of single-pass submerged friction stir processing on the structure and mechanical properties of CuZn37 BRASS
- 15:10 Maciej Stec, Damian Janicki: Microstructure of in situ TiC-reinforced Ti-based composite coatings produced by laser cladding
- 15:30 Discussions
- 15:50 Coffee break**





**16:10 Session 3: Simulation and modelling (chair: Dr. László Gyura)**

- 16:10 Károly Jármaj: Design of welded structures using artificial intelligence
- 16:30 Marcell Gáspár, Judit Kovács, Johannes Sainio, Henri Tervo, Antti Kaijalainen: Weld properties with different compositions in S500ML shipbuilding steel
- 16:50 Ádám Pap, Ákos Meilinger, Marcell Gáspár: Physical simulation of the welding of pipeline steels
- 17:10 Áron Balázs, Marcell Gáspár: Welding technology analysis of P355NH pipeline steel by finite element modelling
- 17:30 Judit Kovács, János Lukács: Notch sensitivity of L450M pipeline steel and of the heat-affected zones of its welded joint
- 17:50 Dorián Hodonicki, Attila Szlancsik: Simulation of the mechanical properties of lead-free solder using finite element method

**16:10 Session 4: New trends in welding - II (chair: Dr. Judit Pap)**

- 16:10 Elchin Musayev, Marcell Gáspár: Review of hydrogen embrittlement phenomena in welded joints of pipelines
- 16:30 Ali Mansi, László Dunai: Fatigue assessment of welded cope hole bridge details by hot spot and notch stress analyses
- 16:50 András Horváth, Dénes Kollár, Balázs Kövesdi, Maxime Lebastard, Alain Bureau: Measurement and welding simulation of residual stresses in welded I-sections
- 17:10 Raghawendra P. S. Sisodia, Piotr Śliwiński, Mateusz Radon: Handheld laser welding of aluminium alloy lap joints: microstructural and mechanical characterization
- 17:30 Damian Janicki, Waldemar Kwaśny, Krzysztof Matus: Laser Metal Deposition of in situ NbC and (Nb,Ti)C-reinforced Inconel 625-based composites

**19:00 Danube cruise and gala dinner**





**19.06.2026. Friday**

**8:40 Session 5: Laser technologies - I (chair: Dr. Zoltán Weltsch)**

- 8:40 Gábor Halász, József Újvári: Parameters and shielding gases for handheld laser welding – Experimental experiences with different parameters and shielding gases
- 9:00 Béla Palotás, Károly Abaffy, János Kuti: Corrosion susceptibility of manual laser welded seams of austenitic stainless pipes to the influence of purging gases
- 9:20 Sándor Takács, Enikő Réka Fábián: Laser welding of 22MnB5 grade PH steels: effect of welding parameters on the microstructure and mechanical properties
- 9:40 Virág Simon, Csaba Breznay: Investigation of dissimilar laser welded joints of duplex and austenitic stainless steel plates
- 10:00 Csaba Breznay, Kornél Májlinger, Michał Landowski, Dariusz Fydrych: The effect of surface roughness during the welding of austenitic stainless steels
- 10:20 Miklós Berczeli, Péter Pécsi-Kovács: Development of adhesive bonds using laser and plasma beam surface treatment

**10:40 Coffee break**

**11:00 Session 6: Manufacturing, Health and safety (chair: Dr. Attila Farkas)**

- 11:00 Csaba Kristóf: Risk management of welder's inhalation exposition
- 11:20 Csaba Kővágó: Applicability of low-cost sensors and IoT systems for monitoring air quality in welding workshops
- 11:40 Benjamin Lanca: The silent killer in your workshop: Why our lungs should not be the filter
- 12:00 Benjamin Végh, István Borhy: Possibilities and experiences in repairing of welded aluminium tram structures
- 12:20 Barna Csata: Modern practice of submerged arc welding





**11:00 Session 7: Related welding technologies (chair: Dr. Zsolt Kovács)**

- 11:00 János Kuti, Enikő Réka Fábián, László Gyura, Gábor Halász: Thermal cutting of high-strength steels, heat-affected zone examination
- 11:20 József Gáti, Judit Pázmán, Róbert Stadler, János Kuti: Changes in the mechanical properties of polymer welded joints due to post-heat treatment
- 11:40 Hareancz Ferenc, Tóth-Nagy Bendegúz Viktor: Investigation of the brazing of modern high-strength automotive steels
- 12:00 Gábor Kozsely, Gyula Medgyesi, Bernadett Stefán: Energetic consequences of arc nonlinearity during welding
- 12:20 András Molnár, Kristóf Németh: Investigation of the bonding and microstructure of NiCrBSi coatings prepared by high velocity oxygen fuel thermal spraying and mixed laser beam remelting to steel substrates

**12:40 Lunch**

**14:10 Session 8: Laser technologies - II (chair: Dr. Dénes Kollár)**

- 14:10 Dániel Csótó, Virág Simon: Robotic Laser Beam Welding – Application tests
- 14:30 Ferenc Hareancz, Gergely Juhász: Investigation of a carbide-reinforced cocrfreni-based alloy layer produced by laser metal deposition
- 14:50 Márk Schnieder: Development and future of welding consumables for wear protection
- 15:10 Gergely Juhász, Ferenc Hareancz: Investigation and heat treatment of INCONEL 718 layers produced by laser cladding
- 15:30 Péter Riszt: Laser welded heating blade production at Körber Hungária
- 15:50 Csaba Kristóf: Experiences of the manual laser welding forum
- 16:10 János Rittinger Degree Thesis Application I.
- 16:20 János Rittinger Degree Thesis Application II.
- 16:30 János Rittinger Degree Thesis Application III.

**16:40 Closing words (Dr. Attila Farkas)**





## The schedule for the conference presenters is as follows:

Application deadline for participants not giving presentations: June 1, 2026.

The conference papers, which are 6-10 pages long and conform to the template attached to the call, will be published in an electronic conference proceedings with an ISBN

number: (i) The scientific presentations, after review based on the recommendation of MAHEG, may be published in the Scientific Section of the Hungarian Welding Journal (Hegesztéstechnika), referred by the Hungarian Academy of Sciences, or in the Periodica Polytechnica Mechanical Engineering (Q3, IF=1.0), referred by Web of Science (WoS).

Venue of the event: Budapest University of Technology and Economics, Hungary, 1111, Budapest, Műegyetem rakpart 3. Information about accommodation options near the conference venue is available on [www.maheg.hu](http://www.maheg.hu).

### Participation fee

The conference participation fee includes the electronic conference proceedings containing the publications, the program booklet containing the abstracts, meals and refreshments during the conference, the dinner combined with the planned Danube cruise, and the costs of organization. We also offer an optional early bird discount without dinner.

#### 1. Full-price fee of the conference:

Participation fee of the conference: 129.000 +VAT HUF/person

#### 2. Reduced price for members and employees of the following organizations:

MAHEG, MAROVISZ, MAGÉSZ, MHtE

2.1. Normal reduced fee 99.000+VAT HUF/person

2.2. Special extra discount under age of 26 and above 65 years 69.000 +VAT HUF/person

In case of 2.2 participation available without dinner: 29.000 +VAT HUF/person

Advertisement (in conference proceedings) 95.000+VAT HUF/adv.

Exhibition at the conference venue 250.000+VAT HUF

Exhibition combined with practical demonstration 400.000+VAT HUF

