IMEKO International Measurement Confederation

Technical Committee TC10 Measurement for Diagnostics, Optimization and Control

SZTAKI

20th IMEKO TC10 Conference: "Measurement for Diagnostics, Optimization and Control to Support Competitiveness and Innovation"

28-29 September 2026, LNEC, National Laboratory for Civil Engineering, Av. do Brasil, 101, 1700-066 Lisbon, Portugal

Dr. Zsolt János VIHAROS

Senior research fellow, Institute for Computer Science and Control

Vice Dean for Science and Strategy of the John von Neumann University

President of the Hungarian Member Organisation (MO) of IMEKO

Chairperson, IMEKO TC10 on Measurement for Diagnostics, Optimization and Control

SZTAKI 2015

2023 → 2028

Founded: 1958

2nd IMEKO World Congress



Budapest, Hungary, 1961



The IMEKO President, Professor Frank Härtig, brought a toast at the festive dinner. As part of the celebration, the cake was served.



IMEKO International Measurement Confederation

Who we are

About IMEKO

Organization

- Members
- Officers
- Organs and Dates
- The UN goals and IMEKO
- Presentations
- Downloads
- Log in / Log out

Secretariat

Technical Committees

Services

IMEKO News & Events

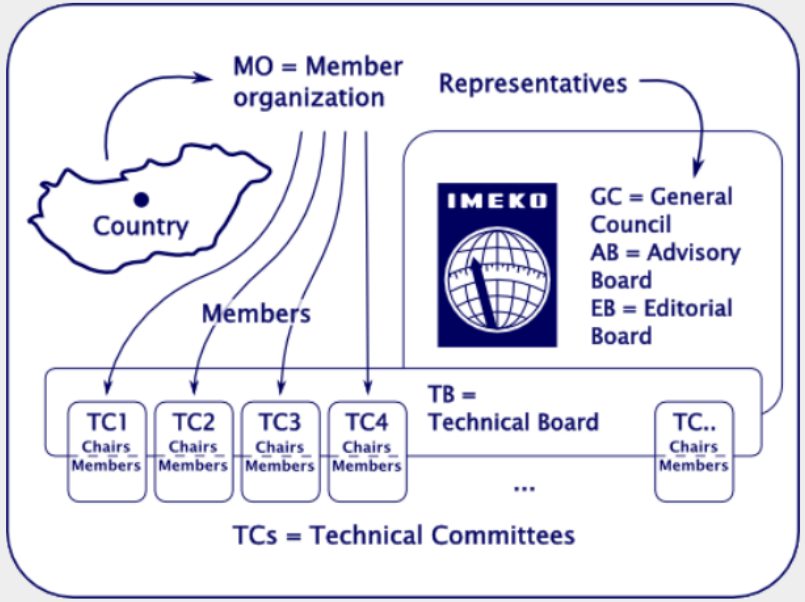
Publications

Proceedings

How we are organized

Our organization

The principal organizational scheme is shown in the figure below. For details, we refer to ou



IMEKO TC1 TC2 TC3 TC4 TC5 TC6 TC7 TC8 TC9 TC10 TC11 TC12 TC13 TC14 TC15 TC16 TC17 TC18 TC19 TC20 TC21 TC22 TC23 TC24 TC25 TC26

IMEKO International Measurement Confederation

Who we are

About IMEKO

Organization

- **Members**
  - **Map**
- Officers
- Organs and Dates
- The UN goals and IMEKO
- Presentations
- Downloads
- Log in / Log out

Secretariat

Technical Committees

Services

IMEKO News & Events

Publications

Proceedings

Acta IMEKO

Newsletter

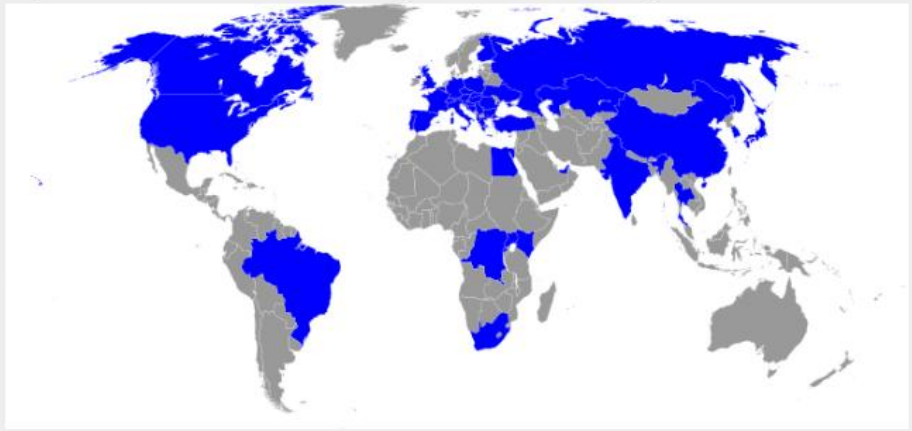
Awards

Links

Search

Map

Map of the World with Countries having an IMEKO Member Organization or Institute



imeko.org

ROS - Onlin... Proman 1.0 - EMI Proj... Zsolt János Dr. Viharo... Fájlok - SZTAKI Nextcl... Login - OpenStack Da... AI EDIH ELTE Teams a... AI E

LOGIN

IMEKO

Home | About | Technical Committees | Events | Publications | Proceedings | Acta IMEKO | Newsletter

Search



Latest News

The second 2026 issue of Acta IMEKO is complete and published.

Dear readers, The second issue of volume 15 (year 2026) of Acta IMEKO is now complete. There are 21 research papers and one technical note in this issue. This time the issue contains...

INTERNATIONAL MEASUREMENT CONFEDERATION

IMEKO is an independent federation of 42 member organizations dedicated to the advancement of measurement technology. Its main purpose is to promote the international exchange of scientific and technical knowledge in the field of measurement and instrumentation. IMEKO also aims to strengthen cooperation between scientists and engineers from both research and industry.

Founded in 1958, the Confederation holds consultative status with UNESCO and UNIDO. Within FIACC – the *Five International Associations Co-ordinating Committee* – IMEKO collaborates closely with four sister federations.

These partner organizations are:
IFAC – International Federation of Automatic Control,
IFIP – International Federation for Information Processing,
IFORS – International Federation of Operational Research Societies,
and IMACS – International Association for Mathematics and Computers in Simulation.

The member organizations provide the financial resources required for the Secretariat's operation. The Treasurer oversees all financial matters, while all officers serve on an honorary, unpaid basis.

READ MORE

LATEST NEWSLETTERS

Newsletter September 2026

Newsletter June 2026

Newsletter April 2026

IMEKO

LOGIN

Home | About | Technical Committees | Events | Publications | Proceedings | Acta IMEKO | Newsletter

Search

TC10
- About
- Aims
- Members
- Events
- Documents
- Links
- Contact
- Log in / Log out

IMEKO TC10 on Measurement for Diagnostics, Optimization & Control

IMEKO TC10 next, regular conference

The scientific community of the **IMEKO TC10 on Measurement for Diagnostics, Optimization & Control** is organising our next conference:

20th IMEKO TC10 Conference: "Measurement for Diagnostics, Optimization and Control to Support Competitiveness and Innovation"

28-29 September 2026*, LNEC, National Laboratory for Civil Engineering, Av. do Brasil, 101, 1700-066 *Lisbon, Portugal

All the details are presented on the conference website:

https://www.imekotc10-2026.sztaki.hu/

The International Measurement Confederation (IMEKO), through its Technical Committee 10 (TC10) on Measurement for Diagnostics, Optimization and Control, **invites researchers, scientists, and practitioners from academia and industry worldwide** to submit original papers to the 20th IMEKO TC10 International Conference, to be held in Lisbon, Portugal, on 28–29 September 2026. The conference will serve as an international forum dedicated to measurement for diagnostics, optimization and control, in line with the longstanding IMEKO TC10 mission to promote research, development, and best practices that enhance system performance, reliability, and decision-making.

Important deadlines:

May 26, 2026	Deadline for extended abstract submission
June 15, 2026	Notification of authors of abstract acceptance
July 15, 2026	Early registration deadline
July 15, 2026	Final paper submission deadline
September 28-29, 2026	Date of the 20th IMEKO TC10 Conference: "Measurement for Diagnostics, Optimization and Control to Support Competitiveness and Innovation" to be held in Lisbon, Portugal

https://www.imekotc10-2026.sztaki.hu/deadlines.php

IMEKO TC10 agreed long-term conference schedule

The scientific community of the **IMEKO TC10 - Measurement for Diagnostics, Optimization & Control** decided the following order of our next conferences:

- **2026: Portugal**
- **2027: Italy, Rimini (XXV. IMEKO World Congress)**
- **2028: China**
- **2029: Germany**
- **2030: Poland, Krakow (XXVI. IMEKO World Congress)**

Enjoy the scientific life inside our IMEKO TC10 on Measurement for Diagnostics, Optimization and Control!

Responsible for the IMEKO TC10 website content: Dr. Zsolt Janos Viharos, TC10 Chairperson, Budapest, HUNGARY (see

Who we are

About IMEKO
Organization
Secretariat
Technical Committees

Services

News
Events
Publications
Proceedings
Acta IMEKO
Newsletters
Awards
Links
Search

Newsletter

Our newsletter can be downloaded here:

Newsletter September 2026 (Sep 2026)
Newsletter June 2026 (Jun 2026)
Newsletter April 2026 (Apr 2026)
Newsletter February 2026 (Feb 2026)
Newsletter December 2025 (Dec 2025)
Newsletter November 2025 (Nov 2025)
Newsletter September 2025 (Sep 2025)
Newsletter June 2025 (Jun 2025)
Newsletter April 2025 (Apr 2025)
Newsletter February 2025 (Feb 2025)
Newsletter December 2024 (Dec 2024)
Newsletter November 2024 (Nov 2024)
Newsletter September 2024 (Sep 2024)
Newsletter July 2024 (Jul 2024)
Newsletter April 2024 (Apr 2024)
Newsletter February 2024 (Feb 2024)
Newsletter December 2023 (Dec 2023)
Newsletter November 2023 (Nov 2023)
Newsletter September 2023 (Sep 2023)
Newsletter June 2023 (Jun 2023)

IMEKO International Measurement Confederation

Report from the VP for External Relations

September 2025 - August 2026

Network for Growth and expansion

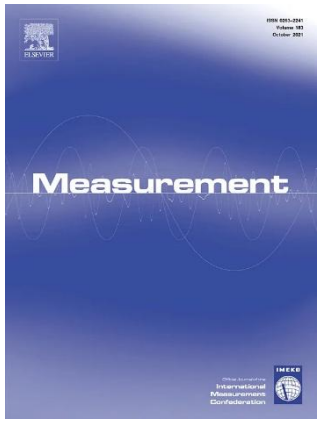
World organisations

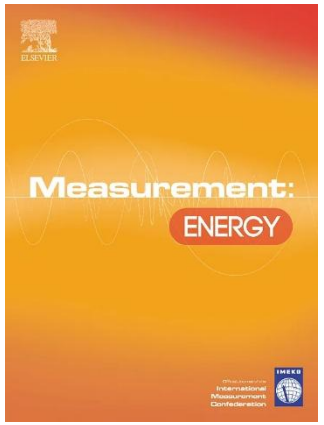
This section presents the opportunities to establish long term relationships with 3 world organisations devoted to sustainable development:

- **UNESCO - United Nations Educational, Scientific and Cultural Organization**
- **UNIDO - United Nations Industrial Development Organization**
- **ISC – International Science Council**

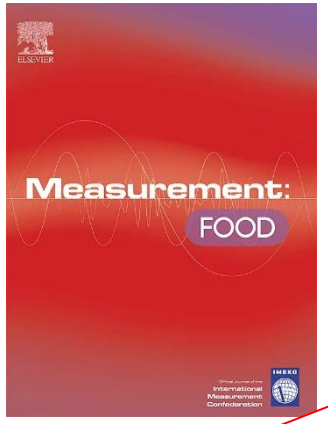
This would be a way for IMEKO to enhance its visibility at the international level. Indeed, IMEKO already maintains strong ties with Regional Metrology Organizations (RMOs) and international bodies such as the CIPM, BIPM, and OIML. Recognition of its commitment to several fundamental values would further strengthen its standing within its network. Furthermore, an increasing number of scientists and engineers involved in IMEKO's activities also share these values.

SIX IMEKO Journals now being published













Excellent year for IMEKO's Journals – on-going successes over the year

IMEKO

International Measurement Confederation

Who we are
About IMEKO
Organization
Secretariat
Technical Committees

Services
IMEKO News & Events
Publications
Proceedings
Acta IMEKO
Newsletter
Awards
Links
Search

IMEKO Technical Committees

The activity of **IMEKO** is basically carried out through the **Technical Committees** which

- organize symposia, conferences, workshops, seminars on specific topics at regular intervals;
- publish proceedings of events, text-books, glossaries, studies, etc.

to realize the objectives set out in the Constitution and By-Laws.

Display # 30

TC1	Education and Training in Measurement and Instrumentation (established in 1967)
TC2	Photonics (established in 1962)
TC3	Measurement of Force, Mass, Torque, and Gravity (1967-1998: Measurement of Force and Mass, 1998-2022: Measurement of Force, Mass and Torque)
TC4	Measurement of Electrical Quantities (established in 1984)
TC5	Hardness Measurement (established in 1973)
TC6	Digitalization (until 2020: Vocabulary Committee)
TC7	Measurement Science (1975-1993: Measurement Theory)
TC8	Traceability in Metrology (established in 1972)
TC9	Flow Measurement (established in 1976)
TC10	Measurement for Diagnostics, Optimization and Control (1976-2019: Technical Diagnostics, 2019-2021: Testing, Diagnostics and Inspection)
TC11	Measurement in Testing, Inspection and Certification (1976-1994: Metrological Requirements for Developing Countries, 1994-2020: Metrological Infrastructures)
TC12	Temperature and Thermal Measurements (established in 1979)
TC13	Measurements in Biology and Medicine (established in 1980)
TC14	Measurement of Geometrical Quantities (established in 1980)
TC15	Experimental Mechanics (established in 1984)
TC16	Pressure and Vacuum Measurement (established in 1986)
TC17	Measurement in Robotics (established in 1987)
TC18	Measurement of Human Functions (established in 1998)
TC19	Environmental Measurements (established in 1999)
TC20	Measurements of Energy and Related Quantities (1999-2010: Measurement Techniques for the Construction Industry, 2010-2015: Energy Measurement)
TC21	Mathematical Tools for Measurements (established in 2004)
TC22	Vibration Measurement (established in 2005)
TC23	Metrology in Food and Nutrition (established in 2006)
TC24	Chemical Measurements (established in 2008),
TC25	Quantum Measurement and Quantum Information (established in 2021)
TC26	Metrology for Cultural Heritage (established in 2024)

IMEKO TC10 History (20 Conferences + 17/24 World Congresses)

IMEKO TC10 Events

Event	Year	Place	Country
TC10 Conference 2026	2026	Lisbon	PORTUGAL
TC10 Conference 2023	2023	Delft	The NETHERLANDS
TC10 Conference 2022	2022	Warsaw	POLAND
TC10 Conference 2020 (ONLINE)	2020	Dubrovnik	CROATIA
TC10 Conference 2019	2019	Berlin	GERMANY
TC10 Workshop on Technical Diagnostics 2017	2017	Budapest	HUNGARY
TC10 Workshop on Technical Diagnostics 2016	2016	Milano	ITALY
TC10 Workshop on Technical Diagnostics 2014	2014	Warsaw	POLAND
TC10 Workshop 2013	2013	Florence	ITALY
TC10 Workshop 2010	2010	Krakow	POLAND
TC10 International Workshop on Technical Diagnostics 2008	2008	Budapest	HUNGARY
TC10 Conference 2005	2005	Budapest	HUNGARY
TC10 Symposium 2001	2001	Compiègne	FRANCE
TC10 Symposium 1999	1999	Wroclaw	POLAND
TC10 Workshop 1995	1995	Trondheim	NORWAY
TC10 Symposium 1992	1992	Dresden	GERMANY
TC10 Workshop 1991	1991	Warsaw	POLAND
TC10 Symposium 1990	1990	Helsinki	FINLAND
TC10 Conference 1989	1989	Prague	CZECHOSLOVAKIA
TC10 Workshop 1988	1988	Budapest	HUNGARY
TC10 Conference 1987	1987	Paderborn	F. R. GERMANY
TC10 Conference 1986	1986	Dubrovnik	YUGOSLAVIA
TC10 Conference 1981	1981	London	UNITED KINGDOM
2-day Meeting of TC10 1980	1980	Nienwagen	THE NETHERLANDS
TC10 Conference 1979	1979	Karlovy Vary	CZECHOSLOVAKIA

II IMEKO World Congress	1961	Budapest	HUNGARY
III IMEKO World Congress	1964	Stockholm	SWEDEN
IV IMEKO World Congress	1967	Warsaw	POLAND
V IMEKO World Congress	1970	Versailles	FRANCE
VI IMEKO World Congress	1973	Dresden	GERMAN D. R.
VII IMEKO World Congress	1976	London	UNITED KINGDOM
VIII IMEKO World Congress	1979	Moscow	SOVIET UNION
IX IMEKO World Congress	1982	Berlin (West)	F. R. GERMANY
X IMEKO World Congress	1985	Prague	CZECHOSLOVAKIA
XI IMEKO World Congress	1988	Houston/Texas	USA
XII IMEKO World Congress	1991	Beijing	P. R. CHINA
XIII IMEKO World Congress	1994	Torino	ITALY
XIV IMEKO World Congress	1997	Tampere	FINLAND
XV IMEKO World Congress	1999	Osaka	JAPAN
XVI IMEKO World Congress	2000	Vienna	AUSTRIA
XVII IMEKO World Congress	2003	Dubrovnik	CROATIA
XVIII IMEKO World Congress	2006	Rio de Janeiro	BRAZIL
XIX IMEKO World Congress	2009	Lisbon	PORTUGAL
XX IMEKO World Congress	2012	Busan	REPUBLIC of KOREA
XXI IMEKO World Congress	2015	Prague	CZECH REPUBLIC
XXII IMEKO World Congress	2018	Belfast	UNITED KINGDOM
XXIII IMEKO World Congress	2021	Yokohama	JAPAN
XXIV IMEKO World Congress	2024	Hamburg	GERMANY

Number of publications over the years

Number of IMEKO TC10 publications



20th IMEKO TC10 conference

TITLE:

Measurement for

- **Diagnostics**

&

- **Optimization**

&

- **Control**

IMEKO International Measurement Confederation

Technical Committee TC10 Measurement for Diagnostics, Optimization and Control

You are here: IMEKO ▸ TC10 ▸ Aims

TC10

- About
- **Aims**
- Members
- Events
- Documents
- Links
- Contact
- Log in / Log out

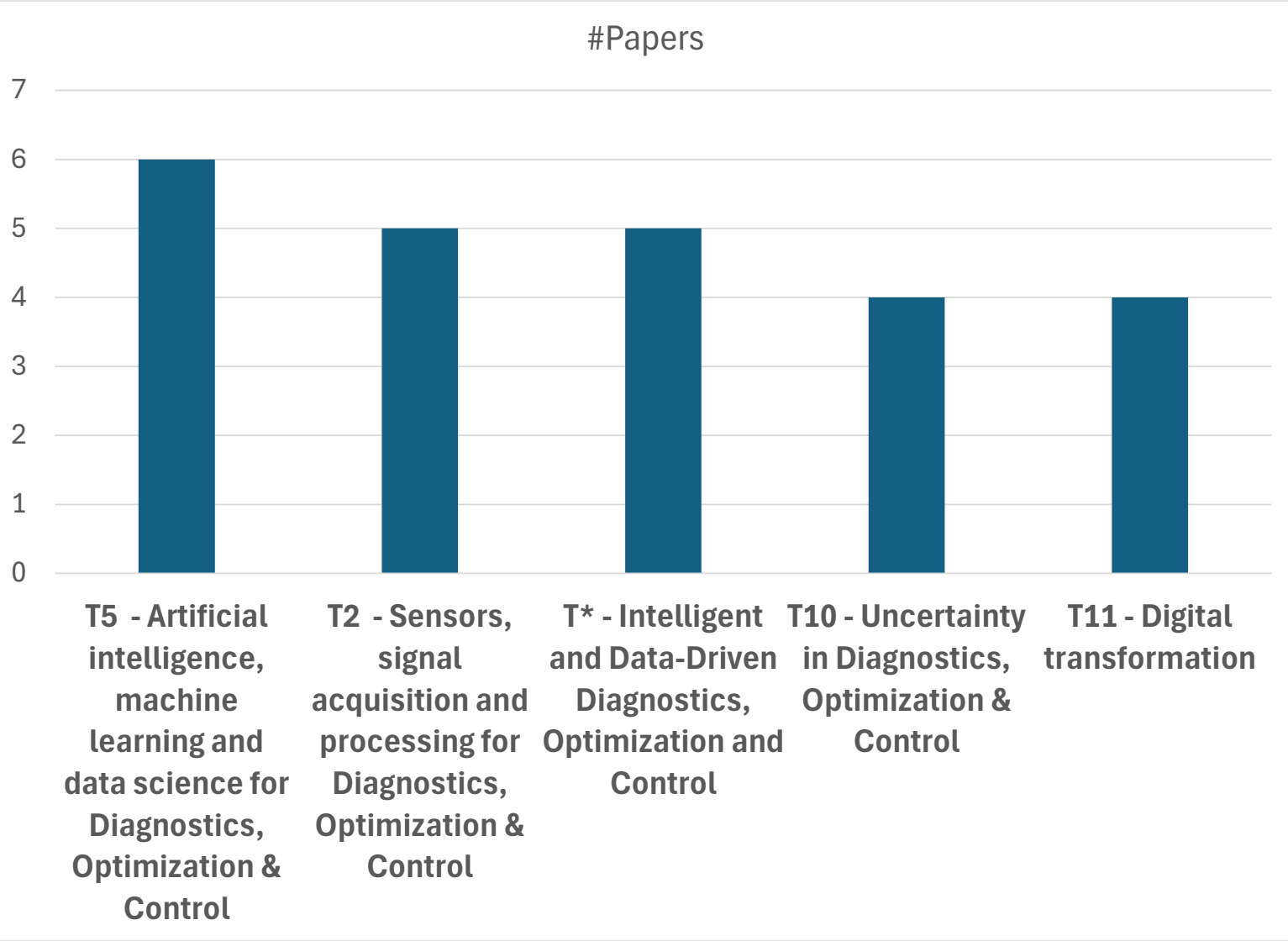
TC10 - Measurement for Diagnostics, Optimization & Control - Aims

Aims and objectives of IMEKO TC10 - Measurement for Diagnostics, Optimization & Control are to facilitate the exchange of scientific and technical information on diagnostics, optimization & control methods, measurement, instrumentation and systems by organizing symposia, discussion meetings and encouraging the publication of scientific papers. Also, the co-operation between scientists and engineers in different subject areas in solving various diagnostics, optimization & control problems is supported.

Topics:

- T1 - Basic principles and development trends in Measurement for Diagnostics, Optimization & Control
- T2 - Sensors, signal acquisition and processing for Diagnostics, Optimization & Control
- T3 - Condition monitoring and maintenance of industrial processes, plants and complex systems
- T4 - Failure & fault detection and prognosis
- T5 - Artificial intelligence, machine learning and data science for Diagnostics, Optimization & Control
- T6 - Industry 4.0 foundations, applications, trends and novelties
- T7 - Methods and algorithms for real-time Diagnostics, Optimization & Control
- T8 - In the loop testing, design, and simulation approaches of dynamic systems
- T9 - Embedded systems in Diagnostics, Optimization & Control
- T10 - Uncertainty in Diagnostics, Optimization & Control
- T11 - Digital transformation
- T12 - Internet of Things (IoT) oriented Measurement for Diagnostics, Optimization & Control
- T13 - Human aspects in Diagnostics, Optimisation & Control
- T14 - Measurement for Diagnostics, Optimization & Control for the improvement of quality of life and environment
- T15 - Product conformity assessment, quality management and process analysis
- T16 - Measurement for Diagnostics, Optimization & Control for safety and risk assessment
- T17 - Non-destructive Testing for Diagnostics, Optimization & Control
- T18 - Standards in Measurement for Diagnostics, Optimization & Control
- T19 - Mechanical systems' principles in Measurement for Diagnostics, Optimization & Control
- T20 - Instrument fault detection, optimization & control in autonomous driving vehicles
- T21 - Diagnostics, Optimization & Control applications in various sectors like industry, transportation, mechatronics, electronics, acoustics, urban systems, living environment, civil engineering, technology of health systems, avionics, automotive, energy, machining, green environment, water treatment and biomedical fields, etc.

24 published papers
Key scientific topics – ***2026*** (only oral presentations)



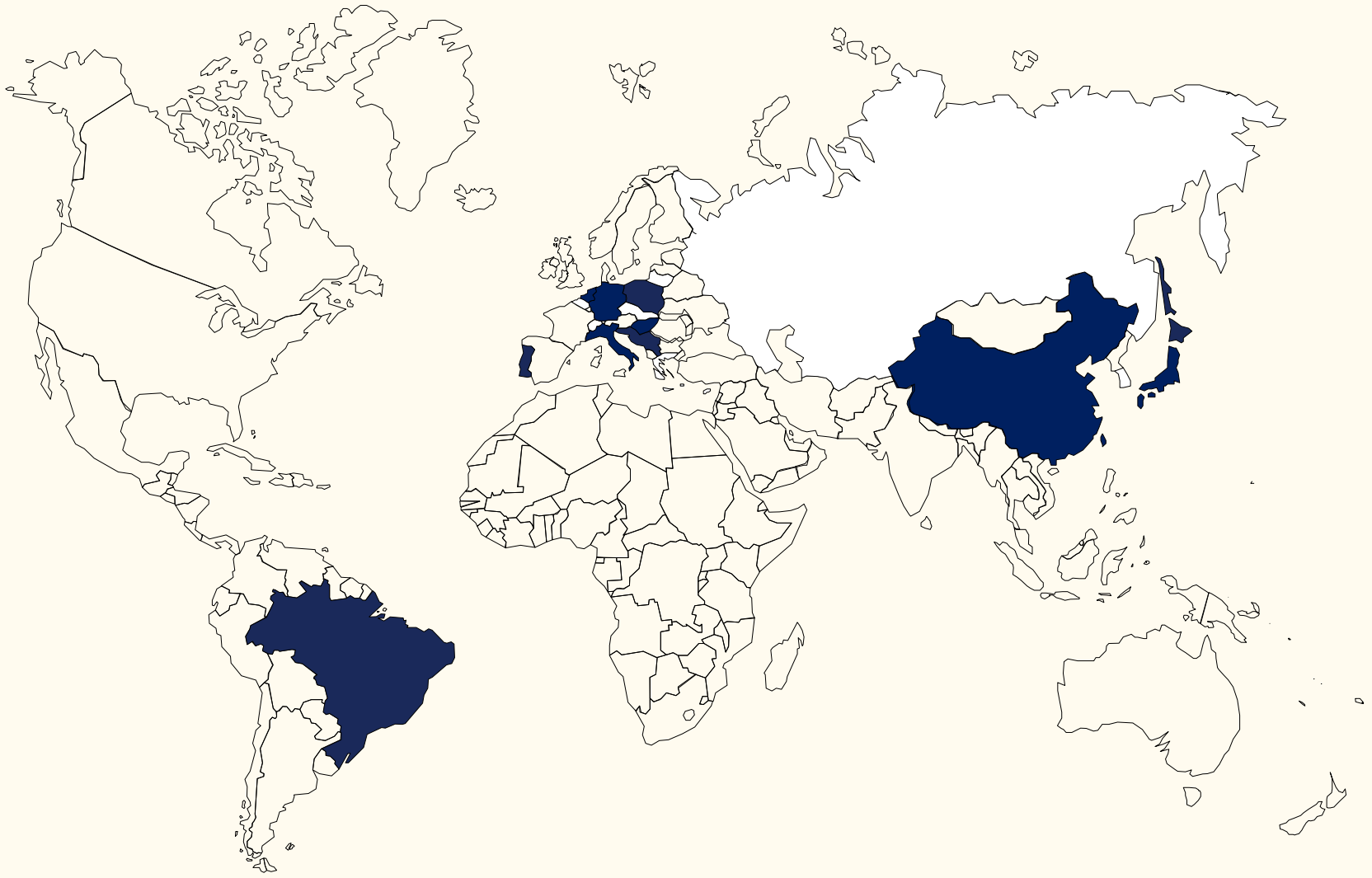
→Increase impact

→Collaboration potential

→Follow others' results

Authors' countries

Italy
Hungary
Germany
China
Portugal
Serbia
Brazil
Japan
Poland
Taiwan



Encouraging new members

- **The main responsibilities for current and future IMEKO TC10 members:**
  - Do research in our TC10 fields, send papers and ***participate (with presentations) on (all) the TC10 conferences, workshops and the IMEKO Word Congresses***
  - Explore, get in contacts and **build relationship with researchers in his/her own country doing research in our TC10 fields – call attention to IMEKO TC10 results, conferences, papers in their country**
  - **Do networking inside our TC10**, do **common projects**, expert exchange, common scientific collaborations, etc.
  - ***Enjoy the scientific life inside our IMEKO TC10 on Diagnostics, Optimization and Control***

- **Sending an**
  - **(preferred Europass) CV and**
  - **a short motivation letter**

  to TC10 Chairperson (viharos.zsolt@sztaki.hu) with cc. to imeko@hunmeko.org

  and
  - the TC10 Chairperson (Dr. Zsolt János Viharos) will organise the next steps:
    - discussion with the candidate
    - nomination to IMEKO secretary
    - IMEKO secretary will organize the approval from the relevant NMO presidents
  - ***Having all the documents, the approval will be in next IMEKO GC meeting***
    - This will be the starting day of the membership

imekotc10-2026.sztaki.hu

Proj... Zsolt János Dr. Viharo... Fájlok - SZTAKI Nextcl... Login - OpenStack Da... AI EDIH ELTE Teams a... AI EDIH Hungary | Eur... MI_LAB_Fájlok - Nextc... AIEDIH - Home Tudományos bizottsá...

Navigation

Home

Deadlines

Committees

Authors

Invited Keynote Lecturers

Programme

Venue

Registration

Sponsorship

Photos

Privacy Policy

Contacts

20th IMEKO TC10 Conference: "Measurement for Diagnostics, Optimization and Control to Support Competitiveness and Innovation"

28-29 September 2026, LNEC, National Laboratory for Civil Engineering, Av. do Brasil, 101, 1700-066 Lisbon, Portugal

Invitation & call for papers

The International Measurement Confederation (IMEKO), through its Technical Committee 10 (TC10) on Measurement for Diagnostics, Optimization and Control, invites researchers, scientists, and practitioners from academia and industry worldwide to submit original papers to the 20th IMEKO TC10 International Conference, to be held in Lisbon, Portugal, on 28–29 September 2026. The conference will serve as an international forum dedicated to measurement for diagnostics, optimization and control, in line with the longstanding IMEKO TC10 mission to promote research, development, and best practices that enhance system performance, reliability, and decision-making.

In today's highly competitive and innovation-driven environment, accurate and intelligent measurement is essential for diagnostics, optimization, and control of complex systems, fostering sustainable innovation, strengthening competitiveness, and addressing emerging technological and societal challenges through advances in measurement methods, principles, instruments, technologies, IT tools, keynote lectures, and international scientific exchange.

Authors are kindly invited to submit extended abstracts in the appointed scientific topics, three to four pages long in A4 format. The abstract should report original research results of theoretical or applied nature and should explain the significance of the contribution to the research field. The abstracts will be reviewed by the International Programme Committee. Electronic abstracts must be in pdf and should be sent according to https://www.imekotc10-2026.sztaki.hu/authors.php.

SCIENTIFIC TOPICS

SCIENTIFIC TOPICS

- Basic principles and development trends in Measurement for Diagnostics, Optimization & Control
- Sensors, signal acquisition and processing for Diagnostics, Optimization & Control
- Condition monitoring and maintenance of industrial processes, plants and complex systems
- Failure & fault detection and prognosis
- Artificial intelligence, machine learning and data science for Diagnostics, Optimization & Control
- Industry 4.0 foundations, applications, trends and novelties
- Methods and algorithms for real-time Diagnostics, Optimization & Control
- In the loop testing, design, and simulation approaches of dynamic systems
- Embedded systems in Diagnostics, Optimization & Control
- Uncertainty in Diagnostics, Optimization & Control
- Digital transformation
- Internet of Things (IoT) oriented Measurement for Diagnostics, Optimization & Control
- Human aspects in Diagnostics, Optimisation & Control
- Measurement for Diagnostics, Optimization & Control for the improvement of quality of life and environment
- Product conformity assessment, quality management and process analysis
- Measurement for Diagnostics, Optimization & Control for safety and risk assessment
- Non-destructive Testing for Diagnostics, Optimization & Control
- Standards in Measurement for Diagnostics, Optimization & Control
- Mechanical systems' principles in Measurement for Diagnostics, Optimization & Control
- Instrument fault detection, optimization & control in autonomous driving vehicles
- Diagnostics, Optimization & Control for sustainability and Innovation
- Diagnostics, Optimization & Control to support competitiveness
- Diagnostics, Optimization & Control applications in various sectors like industry, transportation, mechatronics, electronics, acoustics, urban systems, living environment, civil engineering, technology of health systems, avionics, automotive, energy, machining, green environment, water treatment and biomedical fields, etc

Navigation

Home
Deadlines
Committees
Authors
Invited Keynote Lecturers
Programme
Venue
Registration
Sponsorship
Photos
Contacts

Important Deadlines

~~April 30, 2026~~	~~Deadline for extended abstract submission~~
May 26, 2026	Deadline for extended abstract submission
~~May 29, 2026~~	~~Notification of authors of abstract acceptance~~
June 15, 2026	Notification of authors of abstract acceptance
~~June 30, 2026~~	~~Early registration deadline~~
~~June 30, 2026~~	~~Final paper submission deadline~~
July 15, 2026	Early registration deadline
July 15, 2026	Final paper submission deadline
September 28-29, 2026	Date of the 20th IMEKO TC10 Conference: "Measurement for Diagnostics, Optimization and Control to Support Competitiveness and Innovation" to be held in Lisbon, Portugal

© Copyright IMEKO

Navigation

Home
Deadlines
Committees
Authors
Invited Keynote Lecturers
Programme
Venue
Registration
Sponsorship
Photos
Privacy Policy
Contacts

Committees

General Chairs

Dr. Zsolt János Viharos
Chairperson of the IMEKO TC10 on Measurement for Diagnostics, Optimization and Control
Chairperson of the International Program Committee and Scientific Committee
President of the Hungarian National IMEKO Committee
HUN-REN Institute for Computer Science and Control (HUN-REN SZTAKI),
Center of Excellence of the Hungarian Academy of Sciences (MTA) Budapest, HUNGARY
viharos.zsolt@sztaki.hu

Gustavo Esteves Coelho
Chairperson of the Conference
National Laboratory for Civil Engineering, Lisboa, PORTUGAL
gfcoelho@lnec.pt

Lorenzo Ciani
Vice Chairperson of the IMEKO TC10 on Measurement for Diagnostics, Optimization and Control
Co-Chairperson of the Conference
University of Florence | Department of Information Engineering (DINFO), Florence, ITALY
lorenzo.ciani@unifi.it

Piotr Bilski
Scientific Secretary of the IMEKO TC10 on Measurement for Diagnostics, Optimization and Control
Co-Chairperson of the scientific committee
Warsaw University of Technology
Faculty of Electronics and Information Technology Institute of Radioelectronics, Warsaw, POLAND
pbilski@ire.pw.edu.pl

Álvaro Silva Ribeiro
Co-Chairperson of the Conference
Chairperson of the Organizing Committee
National Laboratory for Civil Engineering, Lisboa, PORTUGAL
asribeiro@lnec.pt

Ana Duarte
Co-Chairperson of the Organizing Committee
RELACRE – Portuguese Association of Accredited Laboratories, Lisboa, PORTUGAL
ana.duarte@relacre.pt

International, Technical Programme Committee Members

(Invited, Members of IMEKO TC10 on Measurement for Diagnostics, Optimization and Control)

Prof. Marcantonio Catelani (Honorary member)	ITALY
Prof. Laszlo Monostori	HUNGARY
Prof. Eduard Egusquiza	SPAIN
Dr. Eng. Yukio Hiranaka	JAPAN
Dr. Lauryna Siaudinyte	THE NETHERLANDS
Prof. Ephraim Suhir	USA
Prof. Diego Galar	SWEDEN
Mr Balázs Scherer	HUNGARY
Prof. Giulio D'Emilia	ITALY
Prof. Dr. Ing. David Delaux	FRANCE
Dr. Marco Carratú	ITALY
Dr. Gábor Nick	HUNGARY
Dr. Gabriele Patrizi	ITALY
Prof. Chao-Ching Ho	TAIWAN, CHINESE TAIPEI (economy)
Ádám Szaller	HUNGARY
Prof Yan Ruqiang	CHINA
Prof. Li Li	CHINA

Navigation

Home
Deadlines
Committees
Authors
Invited Keynote Lecturers
Programme
Venue
Registration
Sponsorship
Photos
Contacts

For authors

Presenters Guidelines

Time provided for the presentations is 15 minutes, followed by 5 minute discussion.

Presenters of the papers should contact the session chairs before their presentation and upload their slides (in .pdf form).

Submission Guidelines

Extended abstracts (three to four pages long) and full papers (exactly six pages long) must be prepared according with the rules reported in the following template file: .doc Template – download. Electronic abstracts and full papers must be in Adobe Acrobat (pdf) format.

The abstracts/papers can be submitted in the conferencing system of IMEKO: https://conferences.imeko.org/e/imekotc10-2026

lease provide the paper ID you received upon abstract submission. Please check carefully reviewers' suggestions.

Inclusion of your paper in the Conference Proceedings requires assignment of copyright to the organising Society: IMEKO. You can find the copyright form at this link: Copyright Form. Please, send it to us by email as a signed and scanned .pdf file to: mailto:imeko2026tc10@lnec.pt.

Conference Awards

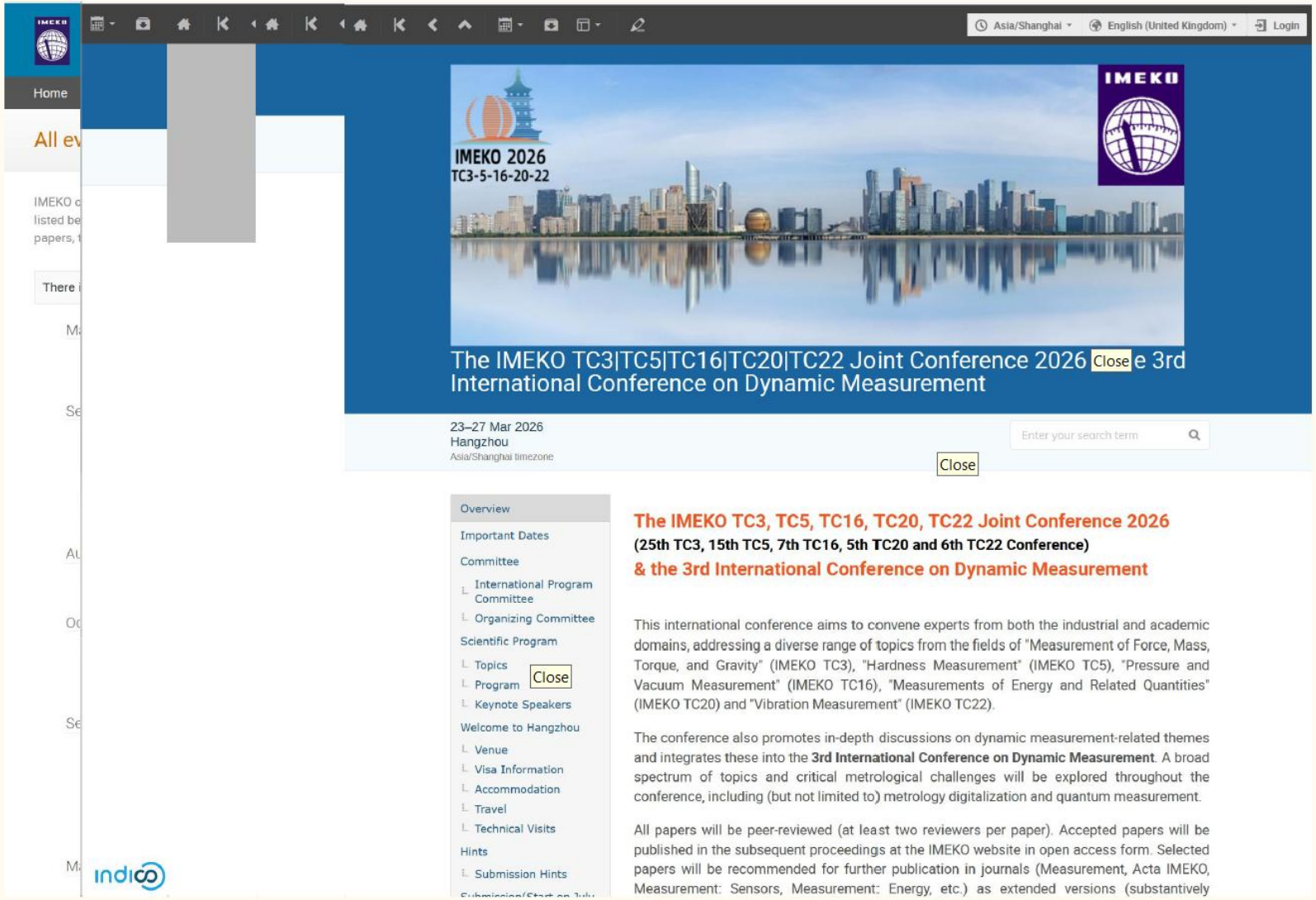
An award will be given for the **Best Scientific Paper & Presentation of the Conference**.

An award will be given for the **Best Scientific Paper & Presentation of the Conference Authored and Presented by a Young Researcher**.

To encourage the attendance of young researchers, an award will be given for the **Best Paper Authored and Presented by a Student**.

© Copyright IMEKO

IMEKO's conference tool: conferences.imeko.org



Navigation

Home
Deadlines
Committees
Authors
Invited Keynote Lecturers
Programme
Venue
Registration
Sponsorship
Photos
Contacts

Invited Keynote Lecturers

Industrial Keynote Lecturers



Carlos Pereira

ENDRESS+HAUSER Portugal, S. A.

Title of Talk: **Taking the Pulse of Measurement: Unlocking Plant Knowledge with Heartbeat Technology and Netilion**

Short CV:

Carlos Pereira is Service Manager at Endress+Hauser Portugal, where he leads service operations, customer lifecycle support, calibration, maintenance, and performance optimization activities. With more than two decades of experience in process instrumentation and industrial services, he has played a key role in developing service portfolios and implementing an ISO/IEC 17025 calibration laboratory.

His expertise combines measurement technology, quality management, digital services, and customer-focused innovation. His work focuses on helping industrial customers transform diagnostics, calibration, and installed-base data into actionable insights that improve reliability, efficiency, and operational performance.



Scientific Keynote Lecturers



Professor Antonio M. Pascoal

Institute for Systems and Robotics (ISR), Instituto Superior Técnico (IST)/University of Lisbon(UL), Portugal

Title of Talk: **Networked Mobile Sensors for Ocean Exploration and Environmental Monitoring**

Short CV:

Ph.D. degree in Control Science from the Univ. Minnesota, Mpls, USA in 1987. Since 1988 he has been with the Department of Electrical Engineering of the Instituto Superior Tecnico (IST), Lisbon, PT where he lectures in the areas of Control and Robotics. He was a Visiting Associate Professor with the Department of Aeronautics and Astronautics of the US Naval Postgraduate School of Monterey, California, USA. He is currently an Associate Professor of IST, a senior researcher with the Institute for Systems and Robotics (ISR), and coordinator of the Thematic Area "Technologies for Ocean Exploration and Exploitation" of the Laboratory of Robotics and Systems in Engineering and Science (LARSyS).

He has held temporary positions in India as Adjunct Scientist with CSIR-NIO, Goa, Visiting Professor with the Department of Ocean Engineering, IIT Madras, and Visiting Scholar with BITS Pilani, KK Birla Goa Campus. He was elected Chair, IFAC Technical Committee Marine Systems, from 2008-2014. He has coordinated and participated in a large number of international projects that have led to the design, development, and field-testing of single and multiple autonomous marine and air vehicles in cooperation with partners in India (National Institute of Oceanography, Goa), USA (Naval Postgraduate School, Monterey, CA), Korea, (KAIST), Saudi Arabia (KAUST), and Europe. His research interests include Autonomous Robotic Systems and Instrumentation with applications to the development and operation of aerial and marine robots for ocean exploration and exploitation. He received the IEEE OES AUV Distinguished Lifetime Technical Achievement Award in 2020.

Navigation

Home
Deadlines
Committees
Authors
Invited Keynote Lecturers
Programme
Venue
Registration
Sponsorship
Photos
Privacy Policy
Contacts

Venue

LNEC, National Laboratory for Civil Engineering,
Avenida do Brasil 101, 1700-066 Lisbon, Portugal

LNEC Campus has the appropriate facilities for the organisation of events with a scientific and technical character. It also enjoys a privileged location due its vicinity with Lisbon's airport.

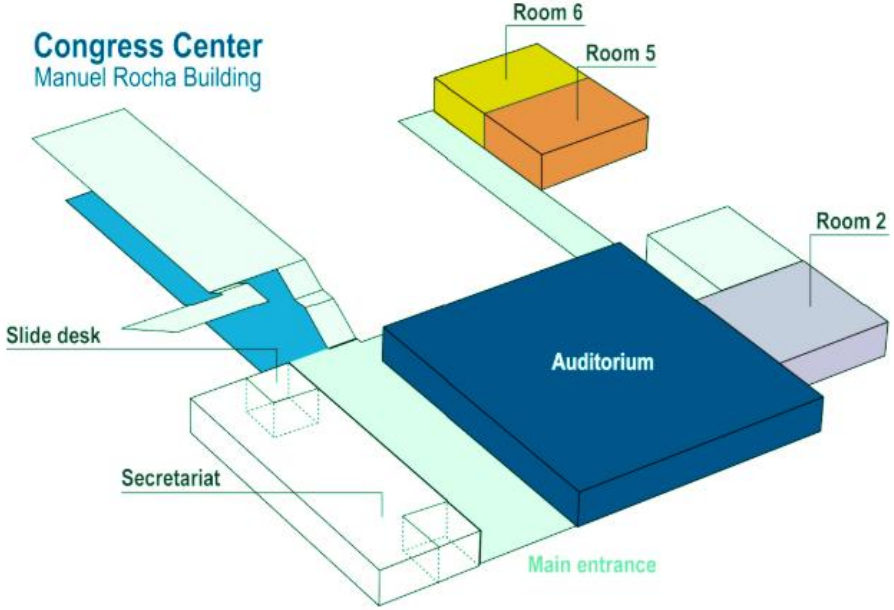


Campus and congress center plan

LNEC's congress center hall, designed by the architect Norberto Correia and equipped with furniture designed by Daciano Costa, is housed in LNEC Campus and has the appropriate facilities for the organisation of events with a scientific and technical character. It also enjoys a privileged location due its vicinity with Lisbon's airport.

LNEC's Congress Centre has 8 meeting rooms with capacity ranging from 6 to 280 attendees. It provides adequate parking facilities.





How to get to LNEC

By air: Lisbon airport
By train Main stations: Lisbon-Santa Apolonia and Lisbon -Oriente International links to Madrid and Paris only
By car: GPS: 38º45´34,4´´N,9º8´27,7´´
Map URL: https://maps.app.goo.gl/aehSVEWKknf14KKV6

Local Transport

Bus: 731, 783, 744, 717, 755 carris

Subway: Station Alvalade (distance 700m) metro
Taxi: Avenida do Brasil, 101 |1700-066 LISBOA | PORTUGAL

About Lisboa

Visit Lisboa: http://www.visitlisboa.com/Home_UK.aspx?lang=en-GB
Tourit&Travel Guide: https://www.lisbon.net/
Lisboa Tourism Guide-GoLisboa: https://www.golisbon.com/



Navigation

Home

Deadlines

Committees

Authors

Invited Keynote Lecturers

Programme

Venue

Registration

Sponsorship

Photos

Privacy Policy

Contacts

Registration

For the conference registration please use the following link:

Online registration form

Early registration fees (on or before June 30, 2026) Full: € 350.00 Student: € 180.00

Regular registration fees (after June 30, 2026) Full: € 400.00 Student: € 220.00

Late fee: € 450.00

Extra paper fee: € 50.00

Accompanying attendee: € 200.00

Authors are kindly asked to register at their earliest convenience, but not later than **31 August, 2026. Papers and presentations, without registered authors by this date, won't be included in the conference proceedings and programme**.

© Copyright IMEKO



Navigation

Home
Deadlines
Committees
Authors
Invited Keynote Lecturers
Programme
Venue
Registration
Sponsorship
Photos
Contacts

Sponsors

itecons

Institute for Research and Technological Development in Construction, Energy, Environment and Sustainability
https://www.itecons.uc.pt/

ANAI TEGOVA

Associação Nacional de Avaliadores Imobiliários
https://anavaliadores.pt/

iep

Instituto Electrotécnico Português
https://www.iep.pt/

ADMedida

Instrumentação para Laboratório e Indústria
https://www.admedida.pt/

Registration Fee Sponsors & Exhibitors	Terms and Conditions
1000 EUR + 23% VAT	**Type A** Includes: • Same as **Type C** + • 2 Registrations • Provision of exhibition space • The possibility of having a keynote speaker, including the dissemination of technical information from the sponsoring organization • Inclusion of the Technical information in IMEKO's promotional material and in the event's, communication channels both before and after the conference
500 EUR + 23% VAT	**Type B** Includes: • Same as **Type C** + • 1 Registration
300 EUR + 23% VAT	**Type C** Includes: • Display of the company logo on event documents and on slides shown during breaks • Distribution of promotional material to participants at the event venue

Further sponsoring is open, a dedicated sponsoring package is available.

Registration form: here

Sponsors are welcome, please contact: imeko2026tc10@lnec.pt



Navigation

Home

Deadlines

Committees

Authors

Invited Keynote Lecturers

Programme

Venue

Registration

Sponsorship

Photos

Privacy Policy

Contacts

Contacts

Event organiser

LNEC, National Laboratory for Civil Engineering, Lisbon, PORTUGAL
Address: Avenida do Brasil 101, 1700-066 Lisboa, Portugal
Conference central email: imeko2026tc10@lnec.pt

General Chair

Dr. Zsolt János Viharos
Chairperson of the IMEKO TC10 on Measurement for Diagnostics, Optimization and Control
Chairperson of the International Program Committee and Scientific Committee
President of the Hungarian National IMEKO Committee
HUN-REN Institute for Computer Science and Control (HUN-REN SZTAKI),
Center of Excellence of the Hungarian Academy of Sciences (MTA) Budapest, HUNGARY
viharos.zsolt@sztaki.hu

© Copyright IMEKO

Navigation

Home
Deadlines
Committees
Authors
Invited Keynote Lecturers
Programme
Venue
Registration
Sponsorship
Photos
Contacts

Programme

Presenters Guidelines link

Monday 28 september

8:45 - 9:15	Registration
9:15 - 9:45	Opening Ceremony
9:45 - 10:30	**Invited Keynote Lecturer:** **Carlos Pereira** ENDRESS+HAUSER Portugal, S. A. *Taking the Pulse of Measurement: Unlocking Plant Knowledge with Heartbeat Technology and Netilion*
10:30 - 11:00	Coffee & Networking
Scientific session 1	**Sessions Chair: Dr. Zsolt János Viharos - Uncertainty in Diagnostics, Optimization & Control**
11:00 - 11:20	#28 Bernardo Jesus, Pedro M. Ferreira, João dos Reis, Miguel Machado: *Development and Preliminary Assessment of an Autonomous System for Monitoring Inclination and Rotation in Inclinometer Casings*
11:20 - 11:40	#10 Mu Fu, Eugene Su, Chao-Ching Ho, Liang-Chia Chen, Pradeep Kumar, Ming Chieh Jean: Accurate 3D Reconstruction of TGVs Using Hybrid Mesh–NURBS Modeling with Z-Axis Constraints and RL-Based Optimization
11:40 - 12:00	#18 Sara Pires, Maria João Henriques, Dora Roque, Hugo Silva: *Point Cloud-Based and Multi-Source Data Fusion for Monitoring the State of Conservation of the Defensive Walls of the Historic Town of Mértola, Portugal*
12:00 - 12:20	#26 Luciano Chiominto, Giulio D'Emilia, Stefano Marsella, Marcello Marzoli, Davide Pozzi, Emanuela Natale: *Geometrical characterization of evacuation routes from Terrestrial Laser Scanner point clouds*
12:30 - 14:00	Lunch & Networking
Scientific session 2	**Session Chair: Dr. Gustavo Esteves Coelho - Artificial intelligence, machine learning and data science for Diagnostics, Optimization & Control**
14:00 - 14:20	#33 Prasad Sadhusaran, Grzegorz Makarewicz, Piotr Bilski: *Fault location and identification in the RIAA equalizer based on the frequency analysis*
14:20 - 14:40	#21 Bence Pálvölgyi, Zsolt János Viharos: *Single-Agent Reinforcement Learning in MultiAgent Production Environments: Effects of Action and Observation Overlap*
14:40 - 15:00	#25 Zeqi Wei, Zhibin Zhao, Ruqiang Yan: *When Multimodal Fusion Fails: A Study of Pose-Vibration Fusion for Robot Fault Diagnosis*
15:00 - 15:20	#20 Zsolt János Viharos, Bence Pálvölgyi: *Parallelized Reinforcement Learning Environment for Industrial Production Optimization*
15:20 - 15:40	#16 Yukio Hiranaka, Koichi Tsujino, Ojiro Miyazaki, Tadashi Yasufuku, Fumiaki Tsukazaki, Kazuyuki Kouno: *Anomaly detection of ventilation fan by training a variational auto-encoder with current waveforms of brushless DC motor*
15:40 - 16:00	#17 Sadia Ali, Valentina Bianchi, Gabriele Patrizi, Lorenzo Ciani, Ilaria De Munari: *State of Charge Estimation of Energy Storage Systems using a Flexible Reward based Reinforcement Learning Approach*
16:00 - 16:30	Coffee & Networking/td>
Scientific session 3	**Sessions Chair: Dr. Fernando Oliveira - Digital transformation**
16:30 - 16:50	#32 Gustavo Esteves Coelho, Álvaro Silva Ribeiro, Ana Catarina Soares: *Incremental Modernization of Legacy Hydraulic Metrology Infrastructure Using Open-Source Edge Architectures*
16:50 - 17:10	#27 László Zahorán, József Váncza, Gábor Nick, Ádám Szaller: *Simulation-Based Measurement of Information Value in Circular Economy Networks*
17:10 - 17:30	#31 João dos Reis, Álvaro Silva Ribeiro, Pedro M. Ferreira, Xu Min, Jorge Pereira Gomes: *Towards Metrologically Grounded Sensor-Network Digital Twins for Structural Health Monitoring*
17:30 - 17:50	#2 Leonardo Batista Paiva: *The New Inmetro Seal as a Digitally Verifiable Conformity Mark: Digital Verification, Fraud Detection and Quality Infrastructure*
18:00 - 19:00	**All Participants - TC10 meeting:** **Dr. Zsolt János Viharos**
19:00	Bus to conference dinner
19:30 - 23:00	Conference Dinner: **VINYL** Praça das Indústrias, 1300-307 Lisboa

Tuesday 29 september

10:00 - 10:45	**Invited Keynote Lecturer:** **Prof. António M. Pascoal** Institute for Systems and Robotics (ISR), Instituto Superior Técnico (IST)/University of Lisbon(UL), Portugal *Networked Mobile Sensors for Ocean Exploration and Environmental Monitoring*
Scientific session 4	**Sessions Chair: Dr. Lorenzo Ciani - Sensors, signal acquisition and processing for Diagnostics, Optimization & Control**
10:45 - 11:05	#23 Ricardo Correia dos Santos: *Proposal for Design and Preliminary Testing of an Affordable In-Place Inclinometer System for Geotechnical Monitoring*
11:05 - 11:25	#13 Marco Carratù, Lorenzo Ciani, Valter Laino, Gabriele Patrizi, Antonio Pietrosanto, Roberto Singuaroli, Paolo Sommella, Silvia Storai: *Application-Oriented Assessment of the Usable Dynamic Bandwidth of Low-Cost MEMS Accelerometers Under Multi-g Sinusoidal Excitation*
11:25 - 11:45	#19 Francisco Bolinhas, Telmo G. Santos, Miguel A. Machado: *Custom Eddy Current Probe Design and Automated Defect Mapping for Multistrand Carbon Fiber Cables*
11:45 - 12:05	#22 Fernando Oliveira, Madalena Ponte, Paulo Candeias, Luís Martins, Filipe Ribeiro, Vasco Bernardo, António Correia: *Force-Instrumented Reaction Wall for Dynamic Testing on LNEC's 3D Shaking Table*
12:05 - 12:25	#30 Sara Kasapović, Vasilije Bursać, Dragan Pejić: *Vibration Characterization of Gamepad Haptic Actuators: A Multi-Axis Measurement Approach with Spectral and Thermal Investigation*
12:30 - 14:00	Lunch & Networking
Scientific session 5	**Sessions Chair: Dr. Piotr Bilski - Intelligent and Data-Driven Diagnostics, Optimization and Control**
14:00 - 14:20	#14 Qin Guangyi, Song Shuo, Dong Yue, Li Li: *Data-driven feedforward iterative tuning for MLPM with position-dependent nonlinearities*
14:20 - 14:40	#24 Antonella Gaspari, Giulio D'Emilia, Claudio Geisert, Julian Polte: *Advanced Validation Methodology for KPI-Based Robotic Condition Monitoring in an Industry 4.0 Framework*
14:40 - 15:00	#12 Anh Tuan Hoang, András Szépligeti, András Németh, Zsolt János Viharos: *Feature Selection for EDM Process Optimization in Manufacturing*
15:00 - 15:20	#29 António José Costa, Hugo Morais: *Testing a Low Processing Methodology for Intermittent Fault Detection in Power Distribution Grids with Low Impedance Neutral*
15:20 - 15:40	#11 Li Li, Song Shuo, Dong Yue, Li Liyi: *LPV Feedforward Iterative Tuning for a Cam-Driven Precision Motion Stage*
15:45 - 16:15	Sunset Gathering
16:15 - 17:00	Closing and Awards ceremony

****All conference events will take place at LNEC's conference facilities, except for the conference dinner.**
Address:
LNEC – National Laboratory for Civil Engineering
Av. do Brasil, 101
1700-066 Lisbon, Portugal

So, the order of our conferences:

- 2026: Portugal
- 2027: Italy, Rimini (IMEKO World Congress)
- 2028: China
- 2029: Germany (if novel TC10 member will be from Germany)
- 2030: Krakow, Poland (IMEKO World Congress)

XXV IMEKO World Congress

30th August - 3rd September 2027

Palacongressi di Rimini

Rimini – Italy

https://imeko2027.org/

Important Dates

Submission of Proposal for Special Session
Deadline: August 31, 2026
Submission of Extended Abstract (min. 4 pages)
Open: October 15, 2026 – Deadline: January 15, 2027
Notification of Abstract Acceptance
February 28, 2027
Submission of Revised Full Paper (max. 6 pages)
Open: May 3, 2027 – Deadline: May 18, 2027
Submission of Final Full Paper (max. 6 pages)
Open: May 25, 2027 – Deadline: June 15, 2027

IMEKO International Measurement Confederation

Technical Committee TC10 Measurement for Diagnostics, Optimization and Control

SZTAKI

Enjoy the scientific life inside our IMEKO TC10 on Measurement for Diagnostics, Optimization and Control

Dr. Zsolt János VIHAROS

Senior research fellow, Institute for Computer Science and Control

Vice Dean for Science and Strategy of the John von Neumann University

President of the Hungarian Member Organisation (MO) of IMEKO

Chairperson, IMEKO TC10 on Measurement for Diagnostics, Optimization and Control