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

IMEKO
International Measurement Confederation

Technical Committee TC10
Measurement for Diagnostics, Optimization and Control

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



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.



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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)

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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.

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LATEST NEWSLETTERS

Newsletter September 2026

Newsletter June 2026

Newsletter April 2026

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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

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

IMEKO TC10 Events

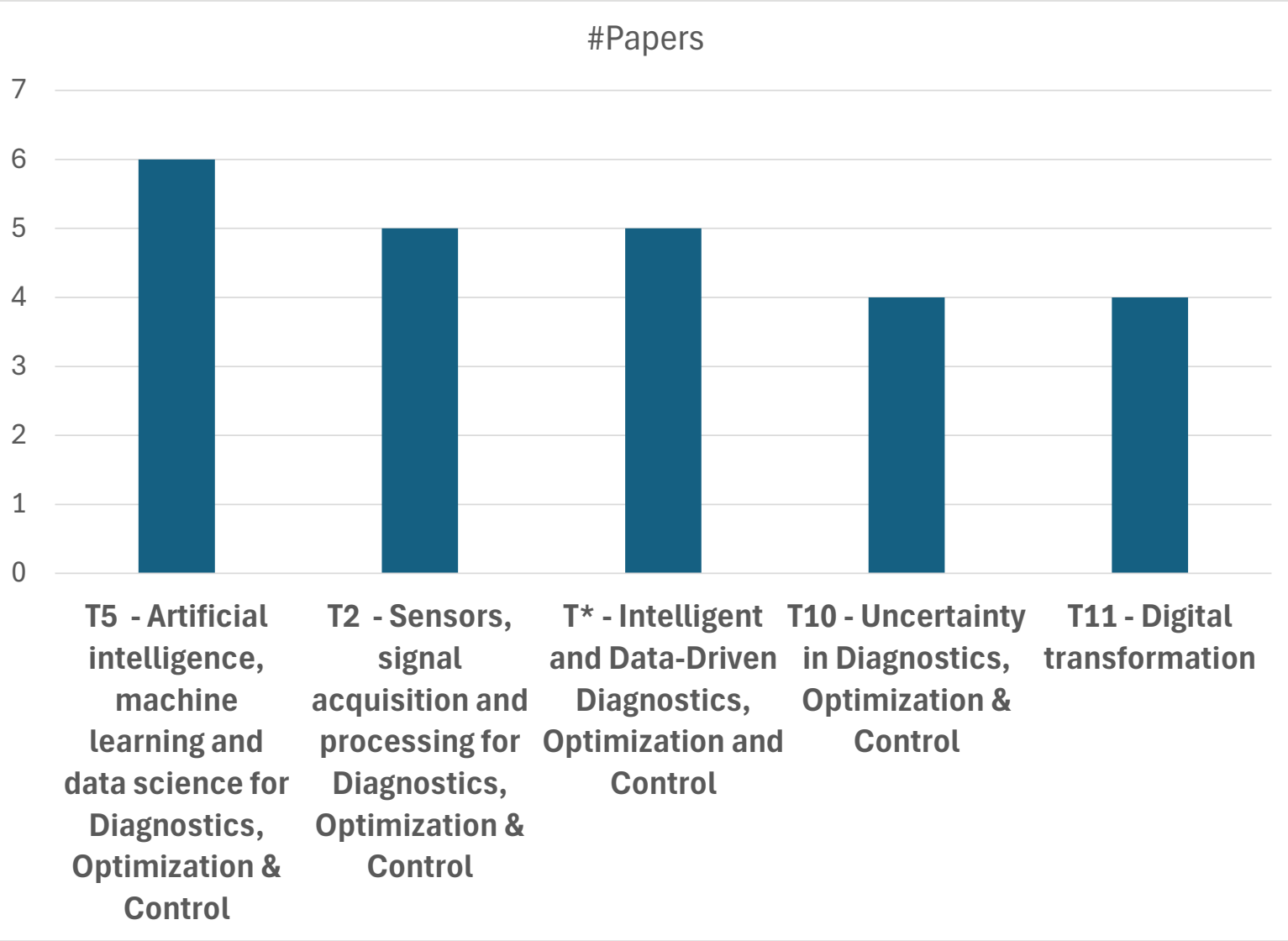
Event	Year	Place	Country
TC10 Conference 2026	2026	Lisbon	PORTUGAL
TC10 Conference 2023	2023	Delft	The NETHERLANDS
TC10 Conference 2022	2022	Warsaw	POLAND
TC10 Conference 2020 (ONLINE)	2020	Dubrovnik	CROATIA
TC10 Conference 2019	2019	Berlin	GERMANY
TC10 Workshop on Technical Diagnostics 2017	2017	Budapest	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



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



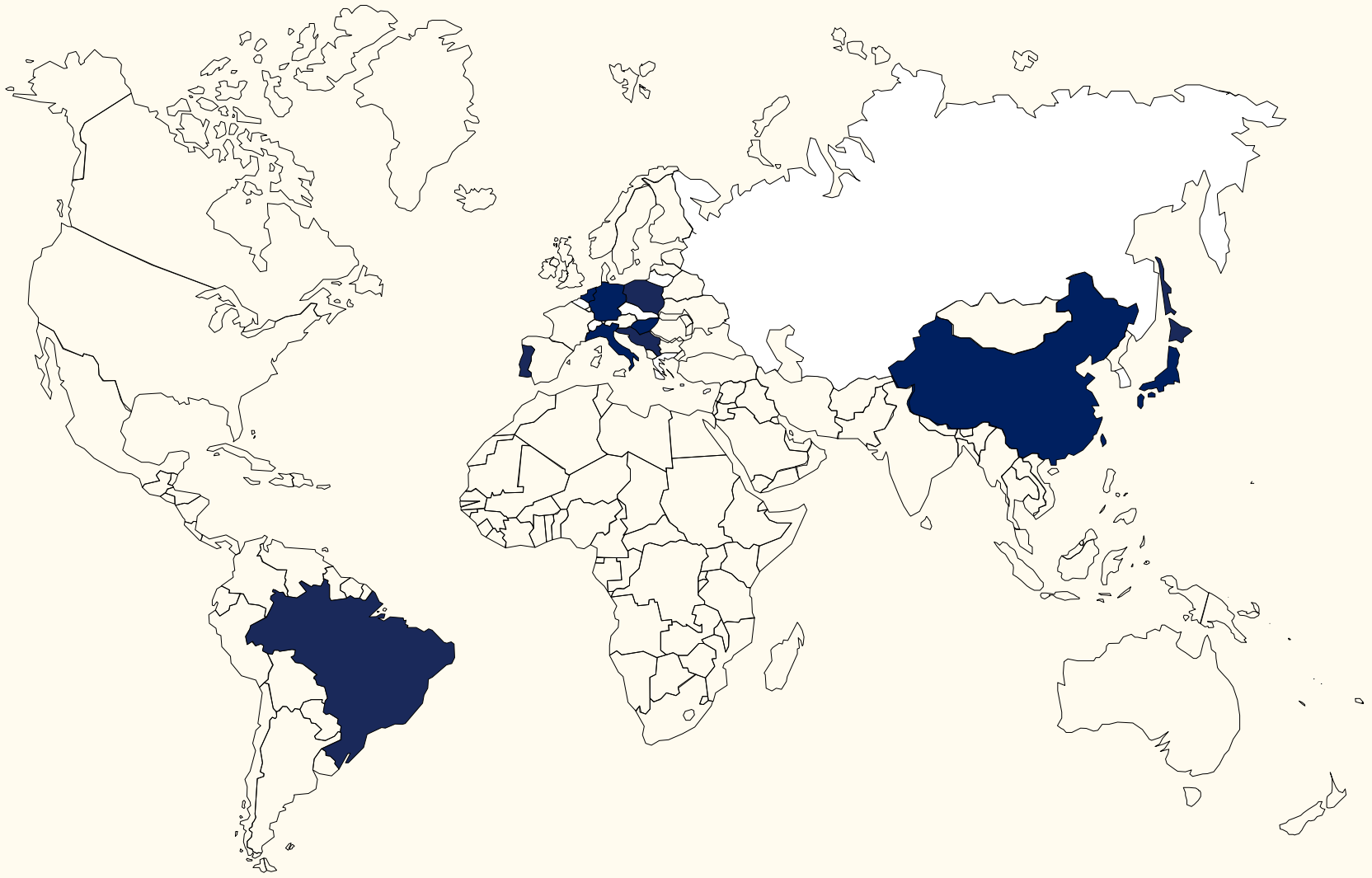
→Increase impact

→Collaboration potential

→Follow others' results

Authors' countries

Italy
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Japan
Poland
Taiwan



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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

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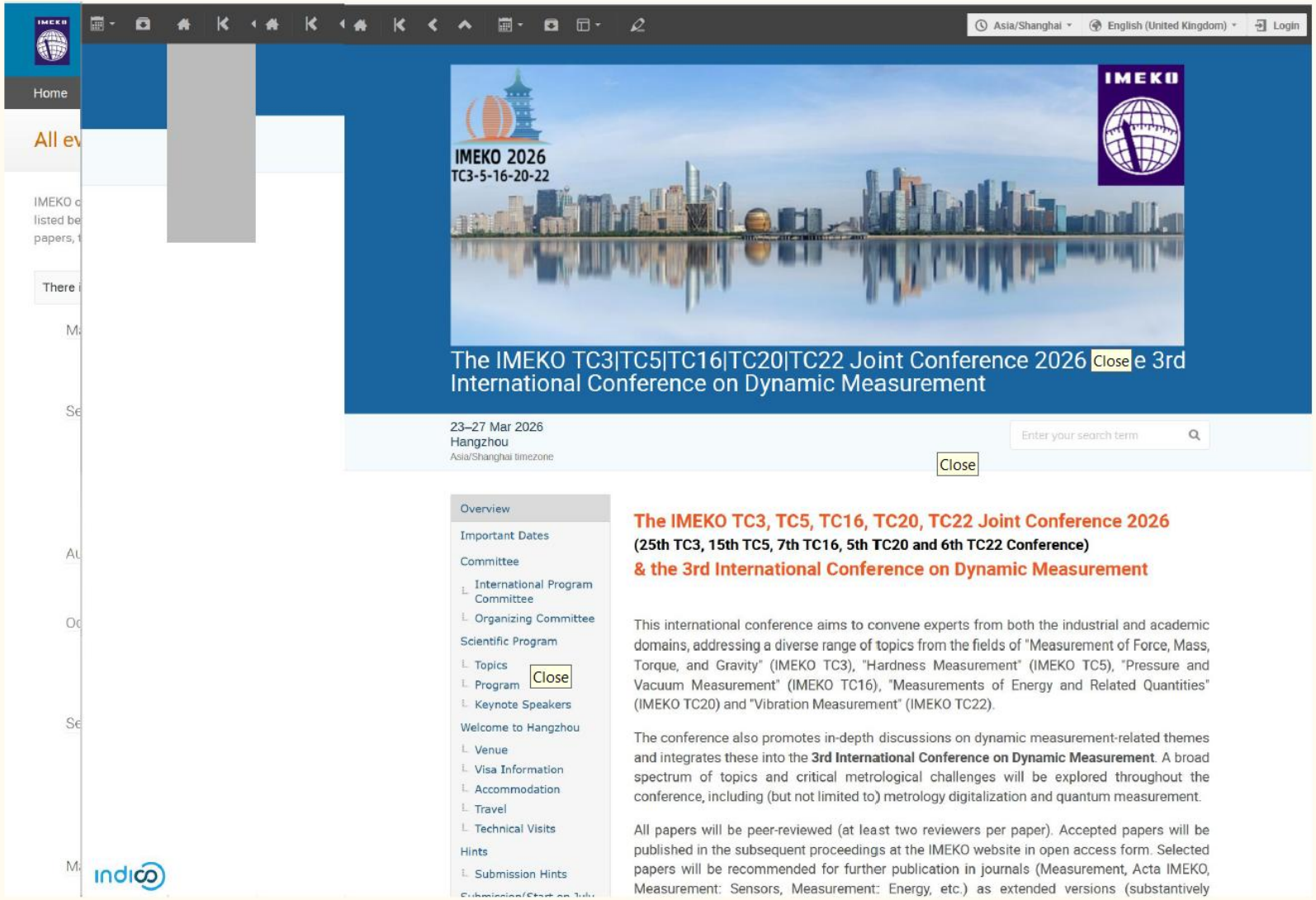
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IMEKO's conference tool: conferences.imeko.org



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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),
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Co-Chairperson of the Conference
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Co-Chairperson of the scientific committee
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Faculty of Electronics and Information Technology Institute of Radioelectronics, Warsaw, POLAND
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Chairperson of the Organizing Committee
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Ana Duarte
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RELACRE – Portuguese Association of Accredited Laboratories, Lisboa, PORTUGAL
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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.

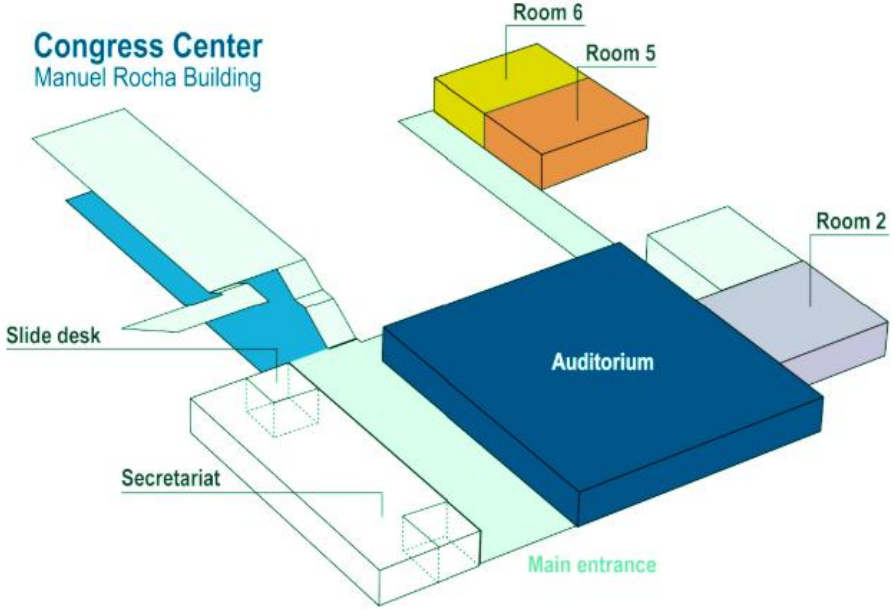


Campus and congress center plan

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/



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
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Dr. Lauryna Siaudinyte	THE NETHERLANDS
Prof. Ephraim Suhir	USA
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Ádám Szaller	HUNGARY
Prof Yan Ruqiang	CHINA
Prof. Li Li	CHINA

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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**.

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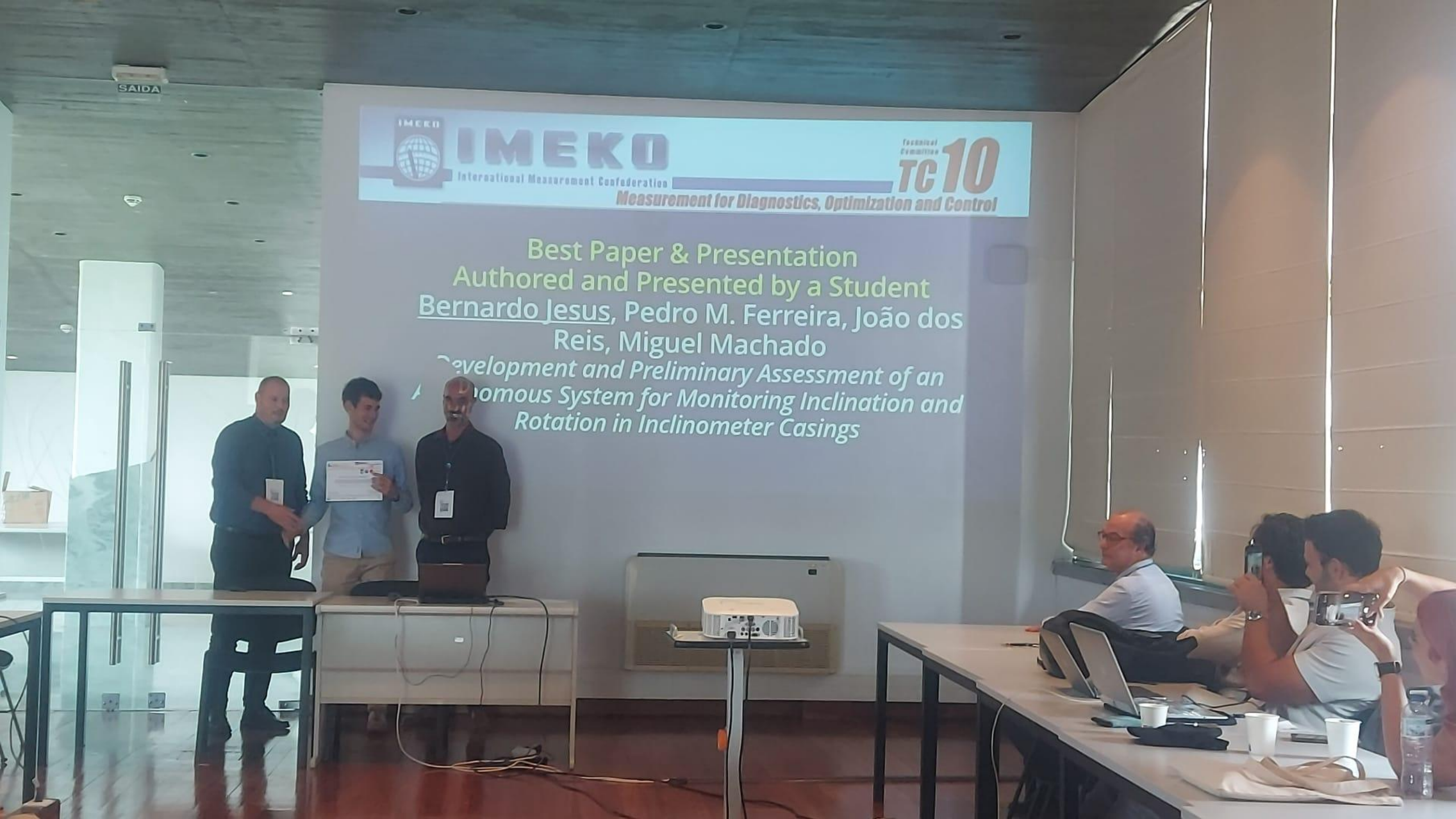
Technical Committee TC10

Measurement for Diagnostics, Optimization and Control

Best Paper & Presentation Authored and Presented by a Student

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


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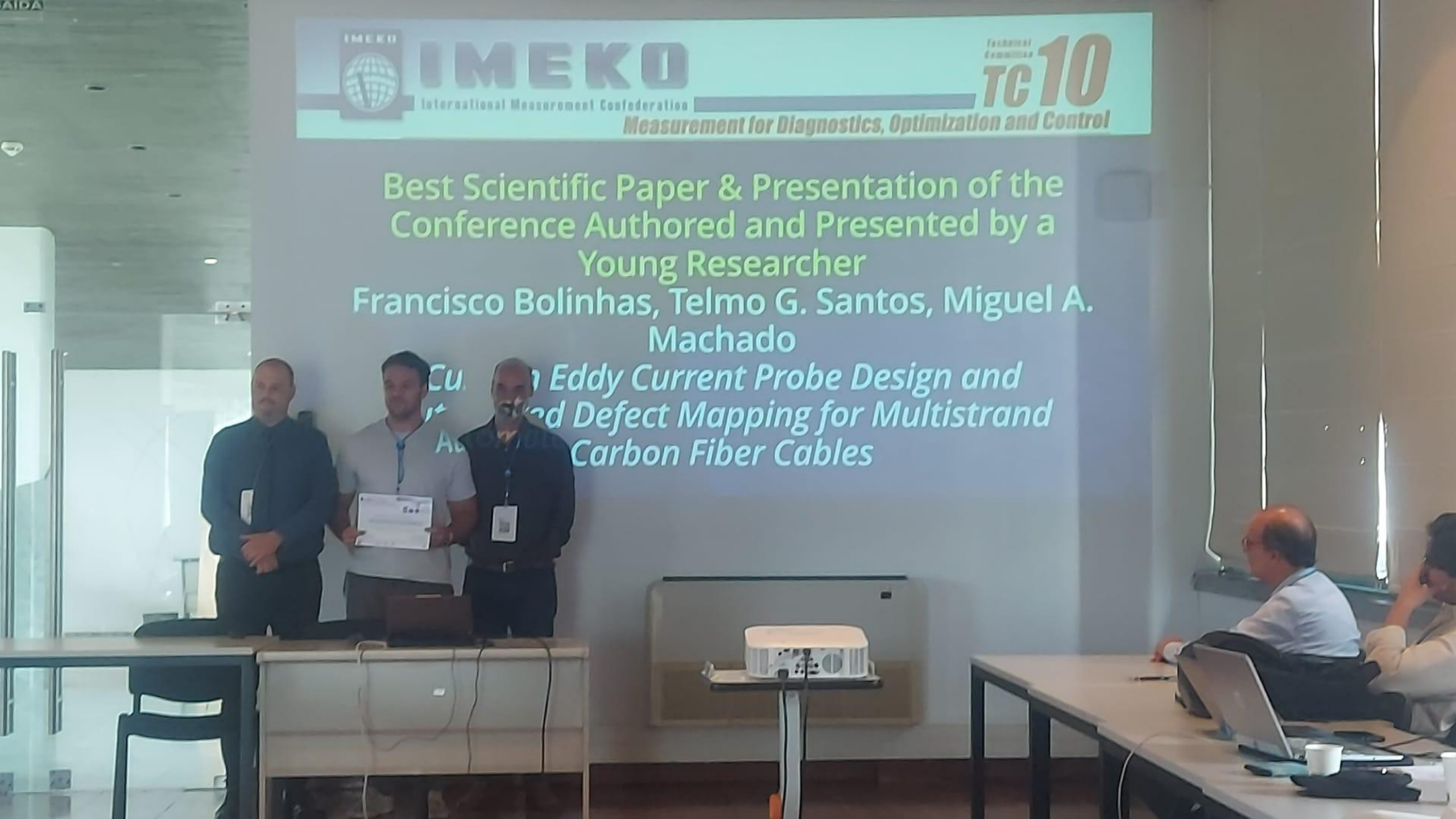
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Measurement for Diagnostics, Optimization and Control

Best Scientific Paper & Presentation of the Conference Authored and Presented by a Young Researcher

Francisco Bolinhas, Telmo G. Santos, Miguel A. Machado

Custom Eddy Current Probe Design and Automated Defect Mapping for Multistrand Carbon Fiber Cables


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Best Scientific Paper & Presentation of the Conference Authored and Presented by a Young Researcher
Francisco Bolinhas, Telmo G. Santos, Miguel A. Machado
Eddy Current Probe Design and
Defect Mapping for Multistrand
Carbon Fiber Cables

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Measurement for Diagnostics, Optimization and Control

Best Scientific Paper & Presentation of the Conference

Marco Carratů, 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


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Measurement for Diagnostics, Optimization and Control
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Best Scientific Paper & Presentation of the Conference

Luciano Chiominto, Giulio D'Emilia, Stefano Marsella, Marcello Marzoli, Davide Pozzi, Emanuela Natale

Geometrical characterization of evacuation routes from Terrestrial Laser Scanner point clouds


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Best Scientific Paper & Presentation of the Conference
Luciano Chiominto, Giulio D'Emilia, Stefano Marsella, Marcello Marzoli, Davide Pozzi, Emanuela Natale
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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.



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

Registration form: here

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



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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

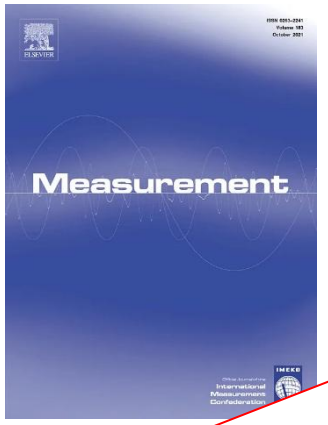

2026.09.28.
SAIDA
IMEKO
International Measurement Confederation
TC 10
Measurement for Diagnostics, Optimization and Control
SZTAKI
(Open) Members Meeting, 2026 Autumn
2026.09.28, 18:00 – 19:00, in-person

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

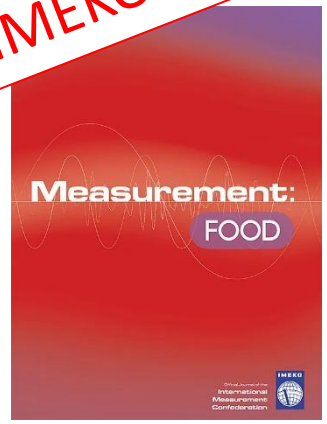
****All conference events will take place at LNEC's conference facilities, except for the conference dinner.**
Address:
LNEC – National Laboratory for Civil Engineering
Av. do Brasil, 101
1700-066 Lisbon, Portugal

SIX IMEKO Journals now being published













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

Let us organize special issues as next step

IMEKO
International Measurement Confederation

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IMEKO

International Measurement Confederation

Technical Committee TC10

Measurement for Diagnostics, Optimization and Control

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Key, actual challenges

- **On TC level**
  - ***Internationalization***
    - 45 IMEKO member „country” vs. 8-12 „TC10 active member country”
      - The TC10 topic is everywhere → finding active, motivated people in additional IMEKO countries
        - *Missing*: Albania, Austria, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Canada, China, Croatia, Czech Republic, Finland, Germany, Greece, India, Kazakhstan, Kenya, Korea, Romania, Rwanda, Russia, Serbia, Slovakia, Slovenia, South Afrika, Switzerland, Thailand, Türkiye, Uganda, Ukraine, United Arab Emirates, United Kingdom, USA
        - BUT: *The Netherlands, Taiwan, 2 x Portugal, Australia*
  - Finding successors for *inactive members (e.g. China, but Spain)*
  - *How to share the work* among TC10 leaders (regular meetings)
  - *Conference* host country: having *more papers/participants by the host*
  - More joint scientific projects
- **On IMEKO level**
  - WG: Functioning, Publications, Legal… – to continue (& Supervisory Committee)

The order of our conferences:

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



MTA SZTAKI

2027 IMEKO TC10 Spring (Winter) Meeting - online

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