



IMEKO

International Measurement Confederation

Technical
Committee

TC10

Testing, Diagnostics & Inspection

eurolab aisbl



MTA SZTAKI

Hungarian Academy of Sciences
Computer and Automation Research Institute

16th IMEKO TC10 Conference: “Testing, Diagnostics & Inspection as a comprehensive value chain for Quality & Safety” to be held in Berlin, Germany, on September 3-4, 2019.

Closing and Award Ceremony

Dr. Zsolt János VIHAROS

Senior research fellow, Institute for Computer Science and Control of the
Hungarian Academy of Sciences

President of the Hungarian Member Organisation of IMEKO

Chairperson, IMEKO TC10 on Testing, Diagnostics & Inspection

Programme (<http://www.imekotec10-2019.sztaki.hu/programme.php>)

8:30-9:00	Registration
9:00-10:00	Welcome & Opening - IMEKO TC10 & EUROLAB aisbl leaders, Conference organisers
10:00-11:00	<i>Keynote presentation</i> Fundamentals of Testing: the Role of Metrology, Sensors and Standards Prof. Dr. Horst Czichos Professor of Mechatronics University of Applied Sciences, BHT Berlin, Germany
11:00-11:30	Coffee break
11:30-13:30	<i>Scientific session</i> Testing, diagnostics and inspection applications in industry, transportation, mechatronics, avionics, automotive, food and biomedical fields <i>Chair: Balázs Scherer</i>
	6 presentations
13:30-14:30	Lunch
14:30-16:10	<i>Scientific session</i> Industry 4.0 foundations, applications, trends and novelties, Certification and accreditation, Measurements and methods for TQM <i>Chair: Prof. Lorenzo Ciani</i>
	5 presentations
16:10-16:20	Coffee break
16:20-17:45	IMEKO TC10 on Testing, Diagnostics & Inspection Members Meeting - IMEKO TC10 Members and All interested participants
18:30-~21:00	Gala Dinner <i>Schnitzerei Charlottenburg Röntgenstraße 7b 10587 Berlin (1000 m from the Conference Venue)</i>

9:00-10:00	<i>Keynote presentation</i> Measurement uncertainty added value for experimental research and testing in civil engineering Dr. Álvaro Silva Ribeiro PhD in Tech. Physics President of the BoA of EUROLAB aisbl and RELACRE, Vice-President of UILI, Head of the Metrology Division and Quality Manager at LNEC
10:00-10:30	Coffee break
10:30-13:10	<i>Scientific session</i> Condition monitoring and maintenance of industrial processes, plants and complex systems: measurements and methods <i>Chair: Prof. Giulio D'Emilia</i>
	8 presentations
13:10-14:00	Lunch
14:00-16:20	<i>Scientific session</i> Data Analytics, artificial intelligence techniques and machine learning for testing, diagnostics and inspection, Traceability and Maintainability, safety, risk assessment and management <i>Chair: Prof. Eduard Egusquiza</i>
14:00-14:20	7 presentations
16:20-17:00	Closing and Award Ceremony - IMEKO TC10 & EUROLAB aisbl leaders, Conference organisers

IMEKO TC10 History (16/20 Conferences + 23/17 World Congresses)

<u>Name</u>	<u>Year</u>	<u>Place</u>	<u>Country</u>
16th IMEKO TC10 Conference 2019	2019	Berlin	GERMANY
15th IMEKO TC10 Workshop on Technical Diagnostics 2017	2017	Budapest	HUNGARY
14th IMEKO TC10 Workshop on Technical Diagnostics 2016	2016	Milano	ITALY
13th IMEKO TC10 Workshop on Technical Diagnostics 2014	2014	Warsaw	POLAND
TC10 Workshop 2013	2013	Florence	ITALY
TC10 Workshop 2010	2010	Krakow	POLAND
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

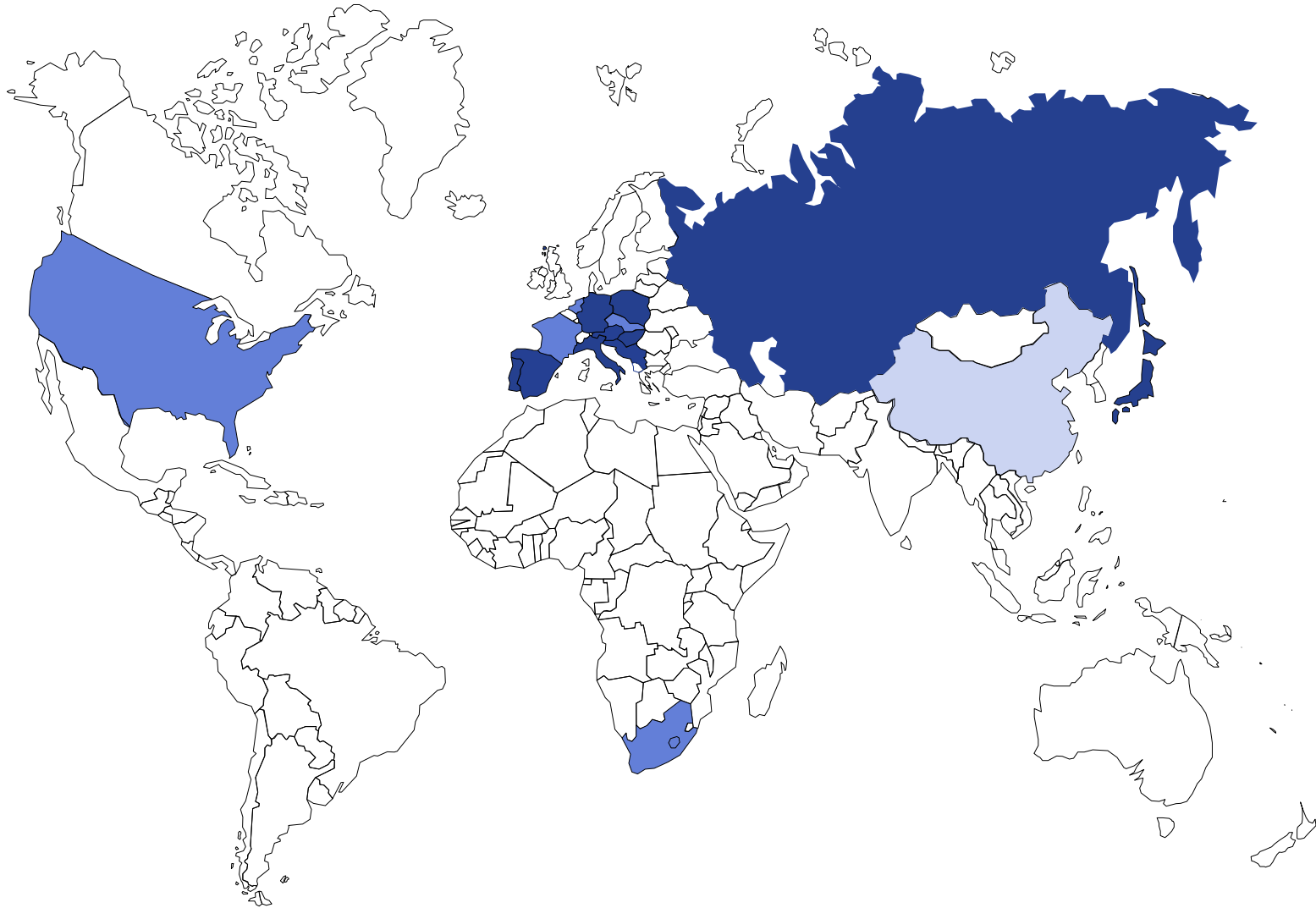
I IMEKO World Congress	1958	Budapest	HUNGARY
II IMEKO World Congress	1961	Budapest	HUNGARY
III IMEKO World Congress	1964	Stockholm	SWEDEN
IV IMEKO World Congress	1967	Warsaw	POLAND
V IMEKO World Congress	1970	Versailles	FRANCE
VI IMEKO World Congress	1973	Dresden	GERMAN D. R.
VII IMEKO World Congress	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

Thank you for the

Participants (10 countries)

Authors (14 countries)

Visitors (1 country)



16th IMEKO TC10 Conference: "Testing, Diagnostics & Inspection as a comprehensive value chain for Quality & Safety"

Organisers & Sponsors

IMEKO TC10



**Technical Committee
on
Testing, Diagnostics
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PRODUCTION SYSTEMS AND
DESIGN TECHNOLOGY



16th IMEKO TC10 Conference “Testing, Diagnostics & Inspection as a comprehensive value chain for Quality & Safety”

Scientific Keynote Lecturer

Prof. Dr. Horst Czichos

Professor of Mechatronics
University of Applied Sciences, BHT Berlin,
Germany



Presentation title: ***Fundamentals of Testing:
the Role of Metrology, Sensors and
Standards***

Horst Czichos, formerly President of BAM and EUROLAB, graduated in Precision Engineering and worked as design engineer in the optical industry. He holds degrees in Physics and in Materials Science. The University KU Leuven awarded him an honorary doctorate for his research in Tribology and in Technology Studies for European Research Programmes. Currently, he is Professor for Mechatronics at the University of Applied Sciences, BHT Berlin. He authored and edited several books, including the Springer Handbook of Metrology and Testing (Springer 2011), the Handbook of Technical Diagnostics (Springer 2013) and the Textbook Measurement, Testing and Sensor Technology (Springer 2018).

16th IMEKO TC10 Conference “Testing, Diagnostics & Inspection as a comprehensive value chain for Quality & Safety”

INVITED KEYNOTE LECTURERS

Industrial Keynote Lecturer

Dr. Álvaro Silva Ribeiro

PhD in Tech. Physics
President of the BoA of EUROLAB aisbl and RELACRE
Vice-President of UILI
Head of the Metrology Division and Quality Manager at LNEC



Presentation title: ***Measurement uncertainty added
value for experimental research and testing in
civil engineering***

Álvaro Silva Ribeiro, President of the BoA of EUROLAB aisbl and RELACRE (Eurolab Portugal), Vice-President of UILI, graduated in Tech. Physics, MSc in Instrumentation, Industrial Maintenance and Quality and PhD in Tech. Physics. Currently, he is Head of Metrology Division and Quality Manager at LNEC (National Institute for Civil Engineering, Research Institute in Lisbon), with interests in Metrology (flow, temperature and humidity, geometric dimensions, force, mass and pressure), quality management systems, accreditation, mathematical modelling, numerical simulation and measurement uncertainty, and measurement quality of testing in civil engineering domains (bridges, dams, seismic infrastructures and others). He is founder of the Portuguese Society for Metrology and member of the Portuguese Society of Physics, being author of a large number of publications in these fields of knowledge. He is member of several international committees and member of EURAMET Research Council.

Thank you

Chairs: Thank you

- **Balázs Scherer**, IMEKO TC10 member, Department of Measurement and Information Systems, Budapest University of Technology and Economics, Budapest, Hungary
- **Dr. Lorenzo Ciani**, Scientific secretary of the IMEKO TC10 on Testing, Diagnostics & Inspection, University of Florence, School of Engineering, DINFO - Department of Information Engineering, Florence, Italy
- **Prof. Giulio D'Emilia**, IMEKO TC10 member, Department of Industrial and Information Engineering and Economics, University of L'Aquila, L'Aquila, Italy
- **Prof. Eduard Egusquiza**, IMEKO TC10 member, Center for Industrial Diagnostics and Fluid Dynamics (CDIF), Polytechnic University of Catalonia (UPC), Barcelona., Spain

16th IMEKO TC10 Conference

“Testing, Diagnostics & Inspection as a comprehensive value chain for Quality & Safety”

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16th IMEKO TC10 Conference

“Testing, Diagnostics & Inspection as a comprehensive value chain for Quality & Safety”

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Thank to IMEKO TC10 Organisation and PC Members

16th IMEKO TC10 Conference

“Testing, Diagnostics & Inspection as a comprehensive value chain for Quality & Safety”

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Editors: Dr. Zsolt János Viharos and Prof. Lorenzo Ciani

16th IMEKO TC10 Conference

“Testing, Diagnostics & Inspection as a comprehensive value chain for Quality & Safety”

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**Thank to
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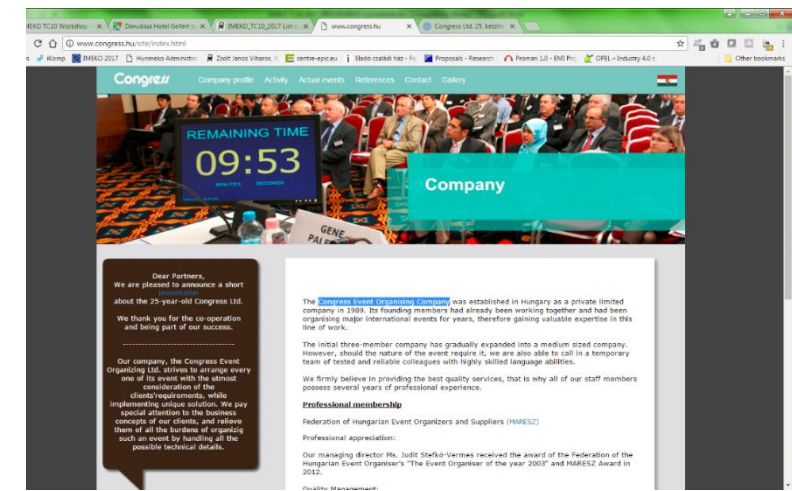
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**Thank to
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Members**



Workshop awards

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



International Measurement Confederation



Certificate of Award for the Best Paper Authored and Presented by a Student

In recognition of professional excellence, the paper titled

Design Approach for a Stand Alone Merging Unit

presented at the

16th IMEKO TC10 Conference: “Testing, Diagnostics & Inspection as a comprehensive value chain for Quality & Safety” to be held in Berlin, Germany, on September 3-4, 2019.

The author(s) of this paper,

Giuliano Cipolletta, Antonio Delle Femine, Daniele Gallo, Carmine Landi and Mario Luiso

are hereby congratulated and recognised for the excellent research work reported in the paper and presentation.

Dr. Zsolt János Viharos,
Chairperson of IMEKO TC10 on
Testing, Diagnostics & Inspection



International Measurement Confederation



Certificate of Award for the Best Scientific Paper & Presentation

In recognition of professional excellence, the paper titled

Hybrid approach and sensor fusion for reliable condition monitoring of a mechatronic apparatus

presented at the

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Dr. Zsolt János Viharos,
Chairperson of IMEKO TC10 on
Testing, Diagnostics & Inspection



Global trends in Testing, Diagnostics & Inspection for 2030.

Dubrovnik
Oct 19 - 22, 2020

Conference news

1. Call for abstracts published on our website. [Read and download!](#)
2. Our [first keynotes](#) released!
3. Imeko TC 10

Dear guests,

The International Measurement Confederation IMEKO, Technical Committee 10 on Testing, Diagnostics & Inspection and EUROLAB aisbl kindly invite you to attend the

17th IMEKO TC 10 Conference: "Global trends in testing, diagnostics & inspection for 2030" to be held in Dubrovnik, Croatia, on October 19-22, 2020.

It is the second conference jointly organized by IMEKO and EUROLAB aisbl with the aim to enhance the co-operation on global level. The participants will have an excellent opportunity to meet top specialists from all over the world with professional experience in industry, universities, research & development as well as in metrology, testing, inspection, diagnostics and certification. The conference is a forum for exchanging ideas



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Thank you for your contributions

→ See the photos on the conference website (<http://www.imekotc10-2019.sztaki.hu/>)

→ See you in Dubrovnik, 2020, Oct. 19-22.

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