



The 12th International Symposium on Measurement
and Quality Control - Cyber Physical Issue,

DETAILED PROGRAMME

(Draft)

www.mefics.org

June 3rd – 7th 2019, Belgrade, Serbia

Main sponsor:



Preface from the Conference Presidents / Foreword

The 12th International Symposium on Measurement and Quality Control - Cyber Physical Issue - (IMEKO TC 14 2019), was held in Mechanical Engineering Faculty, Belgrade, Serbia, from 4th to 7th June 2019. It is organised by the University of Belgrade, Faculty of Mechanical Engineering, Belgrade and TU Vienna, Faculty of Mechanical and Industrial Engineering, Vienna. We expect that a total of over 100 participants to attending at this year's Symposium - academics, practitioners and scientists from 15 countries, who will contribute 26 papers on Plenary, Special, Workshop and Ordinary sessions. The event follows the Symposium Programme which includes keynote addresses (opening/closing session), breakout sessions and workshop discussions, a gala dinner and a closing session on the final day.

The previous International Symposium on Measurement and Quality Control, according IMEKO TC 14 Measurement of Geometrical Quantities umbrella of were:

<u>Name</u>		<u>Place</u>	<u>Country</u>
TC14 LMPMI Symposium 2014	2014	Tsukuba	Japan
TC14 ISMQC 2013	2013	Cracow and Kielce	Poland
TC14 LMPMI Symposium 2011	2011	Braunschweig	Germany
TC14 ISMQC 2010	2010	Osaka	Japan
TC14 LMPMI Laser Symposium 2008	2008	Singapore	Singapore
TC14 ISMQC 2007	2007	Chennai/Madras	India
TC14 LMPMI Symposium 2005	2005	Merida	Mexico
TC14 ISMQC 2004	2004	Erlangen	Germany
TC14 LMPMI Symposium 2002	2002	Novosibirsk	Russia
TC14 ISMQC 2001	2001	Cairo	Egypt
TC14 LMPMI Symposium 1999	1999	Florianopolis/SC	Brazil
TC14 ISMQC Symposium 1999	1999	Tokyo	Japan
TC14 ISMQC 1998	1998	Vienna	Austria
TC14 LMPMI Symposium 1996	1996	Lyngby	Denmark
TC14 ISMQC 1995, Zaragoza	1995	Zaragoza	Spain
TC14 LMPMI Symposium 1994	1994	Heidelberg	Germany
TC14 ISMQC 1992	1992	Tampere	Finland
TC14 LMPMI Workshop 1990	1990	Balatonfüred	Hungary
TC14 ISMQC 1989, Aachen	1989	Aachen	Germany
TC14 ISMQC 1989, Beijing	1989	Beijing	China
TC14 LMPMI 1986	1986	Budapest	Hungary
TC14 ISMQC 1984	1984	Tokyo	Japan

The main goal of the Symposium is to bring together experts from academia and industry and it represents an excellent occasion for exchange of knowledge, ideas, experiences, research results, and information in the field of manufacturing metrology and quality control, based on advanced approaches, like for example Industry 4.0 model and Cyber-Physical Systems.

We acknowledge the outstanding contributions of the all keynote and opening/closing sessions speakers at this year's Symposium.

Very welcome in Belgrade on IMEKO TC 14 Symposium 2019.

Belgrade, 15th April, 2019.

Prof. Dr. Vidosav D. Majstorovic, Symposium Chair

Prof. Dr. Numan M. Durakbasa, Symposium Co-Chair

Main Patron:

Government of the Republic of Serbia, Ministry of Economy, Ministry of Education, Science and Technological Development, Belgrade, Serbia.

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Prof. Dr. Vidosav Majstorovic, University of Belgrade, Belgrade, Serbia.

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Prof. Dr. Numan Durakbasa, Vienna University of Technology, Vienna, Austria

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Organized by:



University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia



TU Wien, Faculty of Mechanical and Industrial Engineering

ISMQC 2019 CONFERENCE INFORMATION

DATE: June 3rd – 7th, 2019.

VENUE: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade / Hall 211 (second floor), Digital Hall (ground floor), Cocktails / Refreshments: Club CeNT (first floor), Registration desk Club CeNT (first floor).

OFFICIAL LANGUAGE

The official language of the Conference is English.

WEB-SITE & E – MAIL

For further information please visit web-site: www.mefics.org

E - mail: ismqc2019@mas.bg.ac.rs

IMPORTANT DATES

Early Registration:	Before May 15 th , 2019.
Late Registration:	After May 15 th , 2019.
Welcome Reception:	June 3 rd , 2019.
Welcome Cocktail:	June 4 th , 2019.
Opening Session:	June 4 th , 2019.
Conference Dinner (informal):	June 5 th , 2019.
Farewell Cocktail:	June 6 th , 2019.

CONFERENCE REGISTRATION

You can register for the participation at the Conference on the following e-mail:
ismqc2019@mas.bg.ac.rs

Conference IMEKO (ISMQC) 2019 Plan

Date: June 3 rd / Monday	Venue: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade
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Registration desk: **17:00 – 18:30** Registration (CeNT – first floor)

19:30 AMP/IMEKO(ISMQC)/ICQ Serbia 2019/ Conferences Welcome Reception at the Belgrade City Hall
(informal dress code)

Belgrade City Hall address: Dragoslava Jovanovića 2, Belgrade

Conference Plan

Date: June 4 th / Tuesday	Venue: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade
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Registration desk: **08:00 – 16:30** Registration (CeNT – first floor)

Time	Event
09:00 - 10:00	<p><i>Session 1: The Opening Ceremony and Plenary Presentation – AMP/IMEKO(ISMQC)/ICQ</i> Opening addresses <u>Opening Plenary Presentation:</u> CYBER-PHYSICAL MANUFACTURING AND INDUSTRY 4.0, Prof. Dr. Laszlo MONOSTORI, SZTAKI, Budapest, Hungary. Hall 211 (Second floor)</p>
10:00 - 10:30	Welcome Cocktail - Club 210 (Second floor)
10:30 - 12:30	<p><i>Session 2 AMP/IMEKO(ISMQC): Opening Plenary Session/Panel 1</i> <u>Plenary Presentations:</u> INDUSTRY 4.0 – WORLD-WIDE APPROACHES, Part 1 Hall 211 (Second floor)</p>
12:30 - 14:00	Lunch break
14:00 - 16:00	<p><i>Session 3 IMEKO (ISMQC): Plenary Session/Panel 2</i> <u>Opening Plenary Presentations:</u> MICRO AND NANO-METROLOGY Digital Hall (Ground floor)</p>
16:00 - 16.30	Coffee Break (CeNT – first floor)
16:30 - 18:30	<p><i>Session 4 IMEKO (ISMQC): Plenary Session/Panel 3</i> OPTICAL MEASUREMENT TECHNIQUES AND LASER METROLOGY FOR PRECISION MEASUREMENTS Digital Hall (Ground floor)</p>

Conference Plan

Date: June 5 th / Wednesday	Venue: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade
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Registration desk: **08:00 – 16:30** Registration (CeNT – first floor)

Time	Event
09:00 – 10:30	<p><i>Session 5 IMEKO (ISMQC): Plenary Session/Panel 4</i></p> <p>QUALITY INSPECTION AND REGRESSION DATA ANALYSIS</p> <p>Digital Hall (Ground floor)</p>
10:30 – 11:00	<p>Coffee Break (CeNT – first floor)</p>
11:00 – 13:00	<p><i>Session 6 IMEKO (ISMQC): Plenary Session/Panel 5</i></p> <p>DIMENSIONAL MANAGEMENT IN INDUSTRY AND PRODUCT QUALITY ASSURANCE METHODS</p> <p>Digital Hall (Ground floor)</p>

20:00 AMP/IMEKO(ISMQC)/ICQ Serbia 2018 / Conference Dinner (informal dress code)

Conference Plan

Date: June 6 th / Thursday	Venue: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade
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Registration desk: **08:00 – 11:30** Registration (CeNT – first floor)

Time	Event
09:00 - 10:30	<p><i>Session 7 IMEKO (ISMQC): Plenary Session/Panel 6</i></p> <p>MULTISENSOR TECHNIQUES AND INDUSTRIAL COMPUTED TOMOGRAPHY</p> <p>Digital Hall (Ground floor)</p>
10:30 - 11:00	Coffee Break (CeNT – first floor)
11:00 - 13:00	<p><i>Session 8 IMEKO (ISMQC): Plenary Session/Panel 7</i></p> <p><u>Closing Plenary Presentations:</u></p> <p>COORDINATE MEASURING MACHINE, VERIFICATION AND SIMULATION AND 3D MEASUREMENT OF GPS CHARACTERISTICS</p> <p>Digital Hall (Ground floor)</p>
13:00 - 14:00	Farewell cocktail at CeNT – first floor

Conference IMEKO (ISMQC) 2019 Programme

Date: June 3 rd / Monday	Venue: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade
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Registration desk: **17:00 – 18:30** Registration (CeNT – first floor)

19:30 AMP/IMEKO(ISMQC)/ICQ Serbia 2019/ Conferences Welcome Reception at the Belgrade City Hall
(informal dress code)

Belgrade City Hall address: Dragoslava Jovanovića 2, Belgrade

Conference Programme

Date: June 4th / Tuesday

Venue: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade

Registration desk: 08:00 – 16:30 Registration (CeNT – first floor)

Time	Event
09:00 - 10:00	<p>Hall 211 (Second floor)</p> <p>Session 1: The Opening Ceremony and Plenary Presentation of AMP/IMEKO/ICQ Conference/Session Speaker – Mrs. Gordana Stijačić, TV Journalist RTS</p> <p><u>Opening addresses:</u></p> <ul style="list-style-type: none"> University of Belgrade, Faculty of Mechanical Engineering, Prof. Dr. R. Mitrović, Dean Main Sponsor-Abela Pharm, PhD. D. J. Korčok, General Manager Government of Serbia, (tbd) - Opening Conference <p><u>Opening Plenary Presentations:</u></p> <p>CYBER-PHYSICAL MANUFACTURING AND INDUSTRY 4.0, Prof. Dr. Laszlo MONOSTORI, SZTAKI, Budapest, Hungary.</p>
10:00 - 10:30	<p>Welcome Cocktail - Club 210 (Second floor)</p>
10:30 - 12:30	<p>Hall 211 (Second floor)</p> <p>Session 2: Opening Plenary Session AMP/IMEKO/ICQ Panel 1</p> <p><u>Plenary Presentations:</u></p> <p>INDUSTRY 4.0 – WORLD-WIDE APPROACHES, Part 1</p> <p><u>Session Chairmen:</u></p> <p>Prof. Dr. S. Jack Hu, The University of Michigan, Ann Arbor, Michigan, USA. Prof. Dr. Tullio A. M. Tolio, Politecnico di Milano, Department of Mechanical Engineering, Milan, Italy. Prof. Dr. Yasuhiro Takaya, University of Osaka, Mechanical Engineering Faculty, Osaka, Japan. Dr. Ömer Sahin Ganiyusufoglu, Shenyang Machine Tool (Group) Co., Ltd., China.</p> <p><u>Keynote Papers:</u></p> <ol style="list-style-type: none"> INDUSTRIAL INTERNET OF THINGS AND SMART AND PERSONALIZED MANUFACTURING, Prof. Dr. S. Jack Hu, The University of Michigan, Ann Arbor, Michigan, USA. THE PARADIGM OF PIT-STOP MANUFACTURING, Prof. Dr. Tullio A. M. Tolio, Maria Chiara Magnanini, Politecnico di Milano, Department of Mechanical Engineering, Milan, Italy. ADVANCED MANUFACTURING METROLOGY IN CONTEXT OF INDUSTRY 4.0 MODEL, Prof. Dr. Yasuhiro Takaya, University of Osaka, Mechanical Engineering Faculty, Osaka, Japan, Prof. Dr. Vidosav D. Majstorovic, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia Prof. Dr. Numan Durakbasa, TU Viena, Viena, Austria, Prof. Dr. Slavenko Stojadinovic, University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia. A CRITICAL EVALUATION OF CURRENT MACHINE TOOL DESIGNS IN THE DIGITALIZED GLOBAL PRODUCTION NETWORKS, Dr. Ömer Sahin Ganiyusufoglu, Shenyang Machine Tool (Group) Co., Ltd., China.

12:30 - 14:00	Lunch break
14:00 - 16:00	<p>Digital Hall (Ground floor) Session 3 IMEKO (ISMQC): Plenary Session/Panel 2 <u>Opening Plenary Presentations:</u> MICRO AND NANO-METROLOGY</p> <p><u>Session Chairmen:</u> Prof. Dr. Yasuhiro Takaya, Osaka University, Suita, Osaka, Japan. Prof. Dr. Numan Durakbasa, Vienna University of Technology (TU Wien) Prof. Dr. Ismail Bogrekci, Aydın Adnan Menderes University, Aydın, Turkey Prof. Dr. Masaki Michihata, The University of Tokyo, Japan</p> <p><u>Keynote papers:</u></p> <ol style="list-style-type: none"> IN-LIQUID LASER NANOMACHINING BY PHOTONIC NANOJET IN OPTICAL TWEEZERS CONFIGURATION, Reza Aulia Rahman, Tsutomu Uenohara, Yasuhiro Mizutani, Yasuhiro Takaya, Department of Mechanical Engineering, Osaka University, Suita, Osaka, Japan. SYSTEM DEVELOPMENT FOR MICROSPHERE MEASUREMENT BASED ON WHISPERING GALLERY MODE RESONANCE, Masaki Michihata¹, Yumeki Kobayashi², Bohuai Chu¹, Kiyoshi Takamasu² and Satoru Takahashi¹, ¹Research Center for Advanced Science and Technology, The University of Tokyo, Japan, ²Department of Precision Engineering, The University of Tokyo, Japan. SURFACE TOPOLOGICAL INVESTIGATION OF SEAL BUSHING BY USING CHROMIUM PLATING PROCESS, P. Demircioglu¹, I. Bogrekci¹, M.N. Durakbasa², N. Demir¹ and U. Kose³, ¹Aydın Adnan Menderes University, Faculty of Engineering, Department of Mechanical Engineering, Aydın, Turkey, ²Vienna University of Technology (TU Wien), Institute for Production Engineering and Laser Technology, Department of Interchangeable Manufacturing and Industrial Metrology / Production Metrology and Quality, Vienna, Austria, ³EYS METAL Research and Development Center, Aydın, Turkey. PRACTICAL ASPECTS IN THE APPLICATION OF GEOMETRICAL PRODUCT SPECIFICATIONS AND VERIFICATION (GPS) IN THE MICRO AND NANO-SCALE MANUFACTURING, N. M. Durakbasa and G. Poszvek, Department of Industrial Metrology and Adaptronic Systems Institute of Production Engineering and Photonic Technologies, TU Wien, Vienna, Austria.
16:00 - 16:30	Coffee Break (CeNT – first floor)

16:30 - 18:30	<p style="text-align: center;">Digital Hall (Ground floor) Session 4 IMEKO (ISMQC): Plenary Session/Panel 3</p> <p>OPTICAL MEASUREMENT TECHNIQUES AND LASER METROLOGY FOR PRECISION MEASUREMENTS</p> <p>Session Chairmen: Prof. Dr. Piotr Gaska, Cracow University of Technology, Cracow, Poland. Prof. Dr. Chu-Shik Kang, Korea Research Institute of Standards and Science, Republic of Korea Prof. Dr. Binnur Sagbas, Yildiz Technical University, Istanbul, Turkey Prof. Dr. Bojan Acko, University of Maribor, Maribor, Slovenia.</p> <p>Papers:</p> <ol style="list-style-type: none"> 1. DEVELOPMENT OF A 3-AXIS DISPLACEMENT MEASURING HETERODYNE INTERFEROMETER SYSTEM USABLE WITH A HE-NE LASER OF EITHER 3.76 MHZ OR 20 MHZ SPLIT FREQUENCY, Kyu Sik Yoon¹, Eun JiJeong¹, Don Young Jeong², and Chu-Shik Kang², ¹EPIR Co. Ltd., Republic of Korea, ²Korea Research Institute of Standards and Science, Republic of Korea. 2. ASSESSMENT OF INFLUENCE OF SCANNING PARAMETERS ON UNCERTAINTY OF MEASUREMENTS PERFORMED USING LASER TRACKING SYSTEM, Maciej Gruza, Piotr Gaska, Wiktor Harmatys and Adam Gaska, Laboratory of Coordinate Metrology, Cracow University of Technology, Cracow, Poland. 3. PROFILE AND AREAL SURFACE CHARACTERIZATION OF ADDITIVE MANUFACTURING POLYMER AND METAL PARTS, Binnur Sagbas¹ and Numan M.Durakbasa², ¹Yildiz Technical University, Istanbul, Turkey, ²TU Wien, Vienna, Austria. 4. METROLOGICAL APPROACH FOR TESTING PERFORMANCE OF OPTICAL 3D MEASUREMENTS SYSTEMS, Bojan Acko and Rok Klobucar, University of Maribor, Faculty of Mechanical Engineering, Maribor, Slovenia.

Conference Programme

Date: June 5th / Wednesday

Venue: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade

Registration desk: 08:00 – 16:30 Registration (CeNT – first floor)

Time	Event
09:00 – 10:30	<p align="center">Digital Hall (Ground floor) Session 5 IMEKO (ISMQC): Plenary Session/Panel 4 QUALITY INSPECTION AND REGRESSION DATA ANALYSIS</p> <p><u>Session Chairmen:</u> Prof. Dr. Cem Yurci, Yildiz Technical University, Istanbul, Turkey Prof. Dr. Ali Serdar Vanli, Yildiz Technical University, Istanbul, Turkey Dr. Srdjan Zivkovic, Military Technical Institute, Coordinate Metrology Lab, Belgrade, Serbia Dr. Vijay Srinivasan, Engineering Laboratory National Institute of Standards and Technology, USA</p> <p><u>Papers:</u></p> <ol style="list-style-type: none"> CONSTRAINED LEAST-SQUARES FITTING FOR TOLERANCING AND METROLOGY, Craig M. Shakarji¹ and Vijay Srinivasan², ¹Engineering Laboratory National Institute of Standards and Technology, USA, ²Engineering Laboratory National Institute of Standards and Technology, USA. DETERMINATION OF RESISTANCE SPOT WELDING PARAMETERS TO GUARANTEE CERTAIN STRENGTH VALUES INCLUDING REGRESSION ANALYSIS, Cem Yurci¹, Anil Akdogan¹ and M. Numan Durakbasa², ¹Yildiz Technical University, Mechanical Engineering Department, Istanbul, Turkey, ²TU Wien, Vienna, Austria. MANUFACTURING AUTOMATION FOR MAGNESIUM DIE CASTING, Ali Serdar Vanli and Anil Akdogan, Yildiz Technical University, Mechanical Engineering Department, Istanbul, Turkey. DETERMINATION OF THE OPTIMAL REGRESSION MODEL FOR THE MEASUREMENT QUALITY CHARACTERISTICS OF THE MICRO CUTTING STONE-BASED MATERIALS, Miloš Pjevic, Slavenko Stojadinović, Ljubodrag Tanović, Mihajlo Popović, Goran Mladenović and Radovan Puzović, University of Belgrade, Faculty of Mechanical Engineering, Production Engineering Department, Belgrade, Serbia NEW IMPROVED METHOD OF SETTING THE JAW'S COORDINATE SYSTEM, Srdjan Živković¹, Nemanja Majstorović², Branislav Glišić² and Davorin Kramar³, ¹Military Technical Institute, Coordinate Metrology Lab, Belgrade, Serbia, ²Faculty of Dentistry, Clinic for Jaw Orthopedics, University of Belgrade, Serbia, ³Faculty of Mechanical Engineering, Quality Assurance Lab, University of Ljubljana, Slovenia.
10:30 – 11:00	Coffee Break (CeNT – first floor)

	<p align="center">Digital Hall (Ground floor)</p> <p align="center">Session 6 IMEKO (ISMQC): Plenary Session/Panel 5</p> <p align="center">DIMENSIONAL MANAGEMENT IN INDUSTRY AND PRODUCT QUALITY ASSURANCE METHODS</p> <p>Session Chairmen:</p> <p>Prof. Dr. Ina Heine, RWTH Aachen University, Aachen, Germany Prof. Dr. Zbigniew Humienny, Warsaw University of Technology, Warszawa Prof. Dr. Almira Softić, University of Sarajevo, Sarajevo, Bosnia and Herzegovina, Mr. Luis Rocha, CATIM – Technological Centre for the Metal Working Industry, Porto, Portugal</p> <p>Papers:</p> <ol style="list-style-type: none"> MEASURING QUALITY ORIENTATION IN ORGANISATIONS: A COGNITIVE-BEHAVIOURAL APPROACH, Ina Heine and Robert Schmitt, Laboratory for Machine Tools and Production Engineering, RWTH Aachen University, Aachen, Germany HARD GAUGE VISUALIZATION – EFFECTIVE TOOL FOR MMR VERIFICATION DISCUSSION, Marcin Berta¹ and Zbigniew Humienny², ¹DMG MORI Polska Sp. z o.o., Pleszew, Poland, ²Institute of Machine Design Fundamentals, Warsaw University of Technology, Warszawa RESEARCH OF TRACEABILITY OF UNIT OF LENGTH IN METROLOGY SYSTEM OF BOSNIA AND HERZEGOVINA, Almira Softić¹, Hazim Bašić¹, Samir Lemeš² and Nermina Zaimović-Uzunović², ¹University of Sarajevo, Sarajevo, Bosnia and Herzegovina, ²University of Zenica, Zenica, Bosnia and Herzegovina TRAINING IN THE AERONAUTIC INDUSTRY FOR GEOMETRICAL QUALITY CONTROL AND LARGE SCALE METROLOGY, Luis Rocha¹, Paul Bills², Michael Marxer³ and Enrico Savio⁴, ¹CATIM – Technological Centre for the Metal Working Industry, Porto, Portugal, ²Centre for Precision Technologies, University of Huddersfield, Huddersfield, UK, ³NTB Interstate University of Applied Science, Buchs, Switzerland, ⁴Università di Padova, DII – Dipartimento di Ingegneria Industriale, Padova, Italy INDUSTRY 4.0 FROM THE STANDPOINT NIKON METROLOGY, Davy Willems, Nikon Metrology NV, Leuven, Belgium CYBER-PHYSICAL APPROACH TO COORDINATE MEASUREMENT OF FLEXIBLE PARTS, Samir Lemeš¹, Nermina Zaimović-Uzunović¹, Josip Kačmarčik¹, Almira Softić² and Hazim Bašić², ¹University of Zenica, Zenica, Bosnia and Herzegovina, ²University of Sarajevo, Sarajevo, Bosnia and Herzegovina
11:00 – 13:00	
13:00 – 14:00	Coffee Break (CeNT – first floor)

20:00 AMP/IMEKO(ISMQC)/ICQ Serbia 2018/Conference Dinner (informal dress code)

Conference Programme

Date: June 6th / Thursday

Venue: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade

Registration desk: 08:00 – 11:30 Registration (CeNT – first floor)

Time	Event
09:00 - 10:30	<p>Digital Hall (Ground floor) Session 7 IMEKO (ISMQC): Plenary Session/Panel 6 MULTISENSOR TECHNIQUES AND INDUSTRIAL COMPUTED TOMOGRAPHY</p> <p>Session Chairmen: Prof. Dr. Ágota Drégelyi-Kiss, Prof. Dr. Pinar Demircioglu, Prof. Dr. Grigore Marian Pop, Prof. Dr. Anil Akdogan,</p> <p>Papers:</p> <ol style="list-style-type: none"> 1. ADDITIVE MINIATURIZED-MANUFACTURED GEAR PARTS VALIDATED BY VARIOUS MEASURING METHODS, N. M. Durakbasa¹, P. Demircioglu², J. Bauer¹, I. Bogrekci², G. Bas¹, O. Bodur¹ and G. Poszvek¹, TU Wien (Vienna University of Technology), Institute for Production Engineering and Photonic Technologies, Department of Industrial Metrology and Adaptronic Systems, Vienna, Austria, Aydın Adnan Menderes University, Faculty of Engineering, Department of Mechanical Engineering, Aydın, Turkey 2. TOWARDS TRACEABLE DIMENSIONAL MEASUREMENTS BY MICRO COMPUTED TOMOGRAPHY, Ágota Drégelyi-Kiss, Bánki Donát Faculty of Mechanical and Safety Engineering, Óbuda University, Hungary 3. ON THE ASSOCIATION OF DATUMS AND MEASUREMENTS USING CONVENTIONAL MEASURING DEVICES - TOPICS WITHIN THE GPS TOOLBOX PROJECT, Grigore Marian Pop, Liviu Adrian Crisan, Mihai Tripa, Calin Neamtu and Mihai Dragomir, Department of Design Engineering and Robotics, Faculty of Machine Building, Technical University of Cluj-Napoca, Cluj-Napoca, Romania 4. RE-ENGINEERING OF MANUFACTURING PARTS BY COMPUTED TOMOGRAPHY DATA, Anil Akdogan¹, Ali Serdar Vanli¹ and Numan Durakbasa², ¹Yildiz Technical University, Mechanical Engineering Department, Istanbul, Turkey, ²Vienna University of Technology, Industrial Metrology and Adaptronic Systems at the Institute of Production Engineering and Photonic Technologies, Vienna, Austria 5. MULTI-MATERIAL ACCEPTANCE TESTING FOR CT-BASED COORDINATE MEASUREMENT SYSTEMS, Fabricio Borges de Oliveira¹, Markus Bartscher¹, Ulrich Neuschaefer-Rube¹, Rainer Tutsch² and Jochen Hiller³, ¹Physikalisch-Technische Bundesanstalt, Braunschweig, Germany, ²Technische Universität Braunschweig, Braunschweig, Germany, ³Technische Hochschule Deggendorf, Deggendorf, Germany

10:30 - 11:00	Coffee Break (CeNT – first floor)
11:00 - 13:00	<p>Digital Hall (Ground floor)</p> <p>Session 8 IMEKO (ISMQC): Plenary Session/Panel 7</p> <p><u>Closing Plenary Presentations:</u></p> <p>COORDINATE MEASURING MACHINE, VERIFICATION AND SIMULATION AND 3D MEASUREMENT OF GPS CHARACTERISTICS</p> <p><u>Session Chairmen:</u></p> <p>Prof. Dr. Jerzy Śladek Prof. Dr. Ryoshu Furutani Prof. Dr. Krzysztof Stępień Ass. Prof. Dr. Slavenko Stojadinovic</p> <p><u>Keynote Papers:</u></p> <ol style="list-style-type: none"> ADAPTIVE CALIBRATION FOR ARTICULATED ARM COORDINATE MEASURING MACHINE, Ryoshu Furutani, Tokyo Denki University, School of Engineering, Department of Advanced Machinery Engineering, Tokyo, Japan VALIDATION OF VIRTUAL CMM-BASED METHOD FOR UNCERTAINTY ESTIMATION OF MEASUREMENTS PERFORMED ON FIVE-AXIS COORDINATE MEASURING MACHINES, Adam Gąska, Wiktor Harmatys, Piotr Gąska, Maciej Gruza and Jerzy Śladek, Laboratory of Coordinate Metrology, Cracow University of Technology, Cracow, Poland VERIFICATION OF THE CMM MEASURING PATH BASED ON THE MODIFIED HAMMERSLY'S ALGORITHM, Slavenko Stojadinovic, Sasa Zivanovic and Nikola Slavkovic, University of Belgrade, Faculty of Mechanical Engineering, Production Engineering Department, Belgrade A GENERAL CONCEPT OF MEASUREMENTS OF FORM DEVIATIONS OF 3D ROTARY ELEMENTS WITH THE USE OF THE ADAPTIVE STRATEGY, Krzysztof Stępień, Dariusz Janecki and Stanisław Adamczak, Kielce University of Technology, Kielce, Poland
13:00 - 14:00	Farewell cocktail at CeNT – first floor

Welcome to Belgrade on IMEKO(ISMQC) Conference 2019!