Program

&

Book of Delegates

In Memoriam of Prof. Thomas Geβner

Many times active German chief delegate, who passed away

in Tokio during last MMS2016, on 25th of May 2016

WELCOME MESSAGE

Dear Colleagues,

Welcome to the 23rd World Smart Systems & Micromachine Summit 2017, formerly named World Micromachine Summit.

This year 70 delegates and observers from 21 country and region delegations will share their knowledge and points of view on Micro and Nanotechnologies and Smart Systems.

Special interest topic for this MMS2017 is **Smart Systems for Smart Cities applications**. Other related applications and results from new and highly relevant recent R&D actions in different countries will be also presented.

Barcelona, located at the Mediterranean Sea, is the capital of Catalonia, a region of Spain known for its enterprising and dynamic nature. It is an unforgettable city of art and culture that is open to people and to the world and an international point of reference both socially and economically.

Barcelona has always proved its will to be modern, to follow the latest international tendencies or be ahead of them. In this sense, Barcelona is committed to be a live example of a Smart City.

Thank you for being part of MMS2017!

Carles Cané
MMS2017 General Chair
Iberia Delegation

LOCAL SECRETARIAT

Carles Cané (Chair)

Luis Fonseca (co-chair)

Inci Dönmez

Marc Salleras

Stella Vallejos

Carlos Calaza

Isabel Gràcia

Eduard Figueras

Joaquín Santander

COLLABORATORS

VENUE

The conference will be held at:

HOTEL SILKEN DIAGONAL BARCELONA

AVENIDA DIAGONAL, 205

08018 BARCELONA

Tel. +34 934 895 307

Fax.+34 934 895 319

MMS2017 SCHEDULE

Date	Activity	Time	Room/Place
May 14	Reception and Registration	18:00 - 20:00	Lounge Room FA+SOL
May 15	MMS2017 Meeting and Registration	08:30 - 18:00	Room FA+SOL
May 15	Tourist Visit of "la Pedrera" and Banquet at "Restaurant el Xalet"	19:00 - 23:00	Montjuich Mountain
May 16	MMS2017 Meeting	08:30 - 18:00	Room FA+SOL
May 16	Dinner at "La Fonda del Port Olímpic"	19:30 - 22:30	Marina Port Olimpic
May 17	Technical Tour	8:30- 18:00	Barcelona Metropolitan Area

Technical Program

MMS2017 23rd World Smart Systems and Micromachine Summit	
PROGRAM	

Sunday, 14 May	
6:00PM 8:00PM	**Registration and Welcome Cocktail**

Monday, 15 May		
7:30AM 6:00PM	**Registration**	
8:30AM	Opening	
Session 1: Country/Region Reviews (I)		**Chairman: Paolo Dario Chief Delegates**
8:45AM	Australia	**Mariusz Martyniuk** The University of Western Australia
9:00AM	Austria	**Ulrich Schmid** TU Wien. Institute of Sensor and Actuator Systems
9:15AM	Benelux	**Albert van den Berg** University of Twente
9:30AM	Canada	**Dan Gale** CMC Microsystems
9:45AM	China	**Xinxin Li** Shanghai Institute Microsystem and Information Technology
10:00AM	Danubian	**Adrian Dinescu** IMT. National Institute for R&D in Microtechnologies Romania
10:15AM	European Commission	**Henri Rajbenbach** European Commission
10:30AM	Coffee Break	
11:00AM	PHOTO	
Session 2: Country/Region Reviews (II)		**Chairman: Philippe Fischer Chief Delegates**
11:15AM	France	**Michel de Labachelerie** INSIS. Institute of Engineering and Systems Sciences
11:30AM	Germany	**Thomas Otto** ENAS. Fraunhofer-Institute for Electronic Nano Systems
11:45AM	Ireland	**Cian O'Mathuna** Tyndall National Institute
12:00PM	Italy	**Paolo Dario** SSSA. Scuola Superiore Sant'Anna
12:15PM	Japan	**Isao Shimoyama** University of Tokyo
12:30PM	Korea	**Tae Song Kim** KIST. Korea Institute of Science and Technology
12:45PM	Latin America	**Daniel Lupi** FAN. Argentinean Foundation of Nanotechnology
1:00PM	Lunch Break	

Session 3: Country/Region Reviews (III)		**Chairman: Albert van den Berg Chief Delegates**
2:30PM	Nordic	**Per Ohlckers** University College of Southeast Norway
2:45PM	Singapore	**Jianmin Miao** Nanyang Technological University
3:00PM	Switzerland	**Philippe Fischer** FSRM. Swiss Foundation for Research in Microtechnology
3:15PM	Taiwan	**Yu-Ting Cheng** National Chiao Tung University
3:30PM	UK	**Massimiliano Zecca** Loughborough University
3:45PM	USA	**Steven Walsh** University of New Mexico - Mancef
4:00PM	Iberian	**Carles Cané** CNM-CSIC. Centro Nacional de Microelectrónica
4:15PM	Coffee Break	
4:45PM 6:00PM	**ROUND TABLE: Smart Systems for Smart Cities: Vision from the users and systems integrators**. Participants from the Catalan Government, from a large Utilities company, from a SME and from IT Technological Centres.	**Xavier Vilalta**. Acció. Generalitat de Catalunya.Spain. **Milagros Rey**. Gas Natural Fenosa. Spain **Andrea Bartoli**. WorldSensing. Spain **Josep Paradells**. I2CAT. Spain **Jordi Ricart**. LEITAT. Spain
7:00PM 11:00PM	**Bus leaving at 6:30PM from the hotel** Cultural visit to "la Pedrera", Gaudi's Architect Art Nouveau Masterpiece. Conference banquet at the restaurant "El Xalet de Montjuich" on the Olympic Mountain.	

Tuesday, 16 May		
Session 4: Smart Systems for Smart Cities		**Chairman: Adrian Dinescu Speaker**
8:30AM	*Smart systems for smart home and smart city*	**Torsten Thieme** Memsfab GmbH. Germany
8:45AM	*Microsystems in smart small towns*	**Paolo Dario** Scuola Superiore Santa Anna. Italy
9:00AM	*The MSP-Project: Multi sensor platform for smart building management. Results and perspectives*	**Anton Köck** Materials Center Leoben Forschung GmbH. Austria
9:15AM	*Seamless interfaces for monitoring and interacting in the city: A practical view using smart POIs*	**Antonio Jara** HOP Ubiquitous S.L. Spain (EC Delegation)
9:30AM	*The Italian cluster on smart living technologies: strategies and roadmap*	**Pietro Siciliano** IMM-CNR. Institute Microelectronics and Microsystems. Italy
9:45AM	*Intelligent health sensor network for smart city*	**Shengbo Sang** MicroNano System Research Center. Taiyuan Uni. Tech. China
10:00AM	*Nanosensors for sustainable cities: from fundamentals to deployments*	**Bérengère Lebental** IFSTTAR. Institute of science and technology for transport, spatial planning, development and networks. France
10:15AM	*Energy harvesting and smart cities*	**Nilton Morimoto** Polytechnic School of University of São Paulo. Brazil
10:30AM	Coffee Break	
Session 5: Smart Systems and Technologies for other Applications (I)		**Chairman: Steven Walsh Speaker**
11:00AM	*MEMS – enabling technology for the Internet of Things.*	**Markus Sonnemann** Robert Bosch GmbH. Germany
11:15AM	*Industry 4.0: Pooling resources and know-how to accelerate digital transformation processes in SME*	**Christine Neuy** MicroTEC Südwest e.V. Germany
11:30AM	*Would you please take part in the MEMS related international standard activity "IEC/SC47F"?*	**Takashi Mihara** Micromachine Center. Japan
11:45AM	*Silicon carbide MEMS for harsh environments*	**Hoang Phuong Phan** Queensland Micro and Nanotechnology Centre Griffith University. Australia
12:00PM	*Nano-constructed multilayer materials and their applications in MEMS/NEMS*	**Zhiyu Hu** Shanghai Jiao Tong University. China
12:15PM	*Nano imprint and photonics for smart systems*	**Otto Bobenstetter** Electronics Vision Group. Austria
12:30PM	*Recent advances in MEMS switches*	**Jun-Bo Yoon** KAIST. Advanced Institute of Science and Technology. Korea
12:45PM	*Piezoelectric Microsystems: Material Aspects, Devices and Applications*	**Ulrich Schmid** Institute of Sensor and Actuator Systems, TU Wien. Austria
1:00PM	Lunch Break / Chief Delegates Committee meeting	

Session 6: Smart Systems and Technologies for other applications (II)		**Chairman: Tae Song Kim Speaker**
2:30PM	*Ternary composite Si/TiN/MnO2 nanostructure array for On-Chip supercapacitor with improved energy density*	**Per Øhlckers** University College of Southeast Norway
2:45PM	*SAW pressure sensors based on micromachining and nanolithographic processing of GaN/Si*	**Alexandra Stefanescu** IMT-Bucharest. National Institute for R&D in Microtechnologies. Romania
3:00PM	*Bacterium detection by microfluidic chip*	**Yi Xu** School of Optoelectronics Engineering Chongqing University. China
3:15PM	*Recent progresses in solid-state nanopore for biomolecule sensing*	**Ki-Bum Kim** Seoul National University. Korea
3:30PM	*Wearables for human wellbeing: New developments and applications*	**Thomas Dietrich** IVAM. Microtechnology Network. Germany
3:45PM	*Co-integration of MEMS, microfluidics and nanomaterials for water networks monitoring*	**Tarik Bourouina** ESIEE. École Supérieure d'Ingénieurs en Électrotechnique et Électronique. France
4:00PM	*Autonomous microsystems for environment monitoring and food quality control*	**Carmen Moldovan** IMT-Bucharest. National Institute for R&D in Microtechnologies. Romania
4:15PM	Coffee Break	
4:45PM 6:00PM	**Round Table: Smart Systems for Smart Cities. Vision from big and small cities and citizens**: *The view of Barcelona's town hall. Enabling cities to make more of available resources. Humans need not apply – Smart cities without smart people? The post digitization aspect of competitiveness for MEMS and other companies. An inSSIght on how Europe integrates integration technologies .*	**Mariano Lamarca**. Ajuntament de Barcelona. Spain **Juán Gavilán**. ST Microelectronics. Italy **Uwe Kleinkes.** Hochschule Hamm-Lippstadt. Germany **Petra Weiler**. VDI/VDE. Germany
8:00PM 11:00PM	**Group leaving at 7:30PM from the hotel** Dinner at "La Fonda del Port Olímpic". Marina Barcelona	

Wednesday, 17 May	
Technical Tour / **Bus leaving at 8:45PM from the hotel**	
9:00AM	Institute of Bioengineering of Catalonia (IBEC) at the Scientific Park of Barcelona (PCB)
1:30PM	Hewlett Packard World R&D Center for 3D Printing
1:30PM	Lunch
3:00PM 6:00PM	Visit to Smart Cities pilot sites at the "22@ Innovation District", Barcelona

MMS2017
Delegates

LIST OF DELEGATES

Australia
Chief Delegate: Mariusz Martyniuk (U. Western Australia)
Delegates: Sanchitha Fernando (Panorama Synergy), Bernard Orelup (NanoMelbourne), Hoang-Phuong Phan (Griffith University)

Austria
Chief Delegate: Ulrich Schmid (TU Wien)
Delegates: Otto Bobenstetter (EV Group), Ernest Fantner (Getec Microscopy GmbH), Anton Köck (Materials Center Leoben)

Benelux
Chief Delegate: Albert Van den Berg (U. Twente)
Delegates: Henne Van Heeren (Enabling MNT)

Canada
Chief Delegate: Dan Gale (CMC)

China
Chief Delegate: Xinxin Li (Shanghai Institute of Microsystem and Information Technology)
Delegates: Zhiyu Hu (Shanghai Jiao Tong University), Shengbo Sang (Taiyuan University of Technology), Jijun Xiong (North University of China), Yi Xu (Chongqing University)

Danubian
Chief Delegate: Adrian Dinescu (IMT)
Delegates: Dan Dascalu (IMT), Piotr Dumania (ITE), Carmen Moldovan (IMT), Alexandra Stefanescu (IMT)

European Commission
Chief Delegate: Henri Rajbenbach (EC)
Delegates: Antonio Jara (HOP Ubiquitous SL), Petra Weiler (VDI/VDE)

France
Chief Delegate: Michel de Labachelerie (INSIS-CNRS)
Delegates: Tarik Bourouina (ESIEE), Bérengère Lebental (IFSTTAR)

Germany
Chief Delegate: Thomas Otto (FhG-ENAS)
Delegates: Thomas Dietrich (IVAM), Uwe Kleinkes (HSHL), Christine Neuy (MICROTEC), Markus Sonnemann (BOSCH), Reinhard Streter (FhG-ENAS), Torsten Thieme (MEMSFAB)

Iberia
Chief Delegate: Carles Cané (CNM-CSIC)
Delegates: Luis Fonseca (CNM-CSIC), Albert Romano (U. Barcelona)
Observers: Xavier Vilalta (ACCIÓ), Rosa Paradell (I2CAT), Josep Paradells (I2CAT), Andrea Bartoli (WorldSensing), Jordi Ricart (LEITAT), Milagros Rey (GNF), Mariano Lamarca (Aj. Barcelona)

Ireland
Chief Delegate: Cian O'Mathuna (Tyndall)

Italy
Chief Delegate: Paolo Dario (SSSA)
Delegates: Gastone Ciuti (SSSA), Juan Gavilán (ST), Alessandro Leone (IMM), Leandro Lorenzelli (FBK), Arianna Menciassi (SSSA), Leonardo Ricotti (SSSA), Pietro Siciliano (CNR-IMM), Mario Zen (FBK), Virgilio Mattoli (IIT)

Japan
Chief Delegate: Isao Shimoyama (University of Tokyo)
Delegates: Takashi Mihara (MMC)

Korea
Chief Delegate: Tae Song Kim (KIST)
Delegates: Ki-Bum Kim (Seoul National University), Jun-Bo Yoon (KAIST)

Latin America
Chief Delegate: Daniel Lupi (FAN)
Delegates: Nilton Morimoto (U. São Paulo)

Nordic
Chief Delegate: Per Ohlckers (University College of Southeast Norway)

Singapore
Chief Delegate: Jianmin Miao (NTU)

Switzerland
Chief Delegate: Philippe Fischer (FSRM)
Delegates: Philippe Flückiger (EPFL-CMi)

Taiwan
Chief Delegate: Yu-Ting Cheng (NCTU)
Delegates: Chun-Hsun Chu (ITRI), Jung-Tang Huang (NTUT)

United Kingdom
Chief Delegate: Massimiliano Zecca (Loughborough University)

USA
Chief Delegate: Steven Walsh (U. New Mexico)

ATTENDANCE RANKING TO MMSummit

Ranking	Name	Region	Number of Times
1	Paolo Dario	Italy	21
1	Albert Van den Berg	Benelux	21
3	Philippe Fischer	Switzerland	20
4	Nico de Rooij	Switzerland	17
4	Dan Gale	Canada	17
6	Zhaoying Zhou	China	14
6	Carles Cané	Iberia	14
8	Per Ohlckers	Nordic	13
8	Isao Shimoyama	Japan	13
10	Jason Chaffey	Australia	11
10	Geoffrey Beardmore	United Kingdom	11
10	Michael Gaitan	USA	11
10	Young-Ho Cho	Korea	11
14	Henne Van Heeren	Benelux	10
15	Thomas Gessner	Germany	9
15	Luis Fonseca	Iberia	9
15	Uwe Kleinkes	Germany	9

Biography of Delegates

AUSTRALIA Delegation *Chief Delegate*

Mariusz **Martyniuk**

The University of Western Australia

35 Stirling Hwy
6009 Crawley, Western Australia
Australia

+618 6488 1905
mariusz.martyniuk@uwa.edu.au

Mariusz Martyniuk was born in Poland. He received his B.Sc. (Hons.) degree from the University of Toronto, M.A.Sc. from McMaster University, and the Ph.D. degree from the University of Western Australia in 2007. He worked in the industry sector as an Electronics Engineer before rejoining The University of Western Australia, where he is currently with the Microelectronics Research Group and manages the Western Australian Node of the Australian National Fabrication Facility. His primary areas of interest encompass thin-film materials and thin-film mechanics, as well as their applications in micro-electromechanical systems and optoelectronic devices. Dr. Martyniuk's research contributions were recognized by the award as a team member of the Inaugural Australian Museum Eureka Prize (the Oscars of Australian science) for Outstanding Science in Support of Defence or National Security in 2008.

AUSTRALIA Delegation

Sanchitha **Fernando**

Panorama Synergy Ltd

Level 1, 61 Spring Street
3000 Melbourne
Australia

+61 4 22 450 535
sfernando@panoramasynergy.com

Dr. Fernando is the Senior MEMS Engineer with Panorama Synergy Ltd, Australia, where he working towards commercializing their LumiMEMS and micro-spectrometer technologies.

Prior to joining Panorama, he was a scientist with the A*STAR Institute of Microelectronics in Singapore, primarily working on inertial MEMS sensors.

Sanchitha holds a BSc.Eng (Hons) in Electronic and Telecommunication Engineering, and a PhD. He is a member of the IEEE.

AUSTRALIA Delegation

Bernard **Orelup**

Melbourne Centre for Nanofabrication

151 Wellington Road
3168 Clayton, VIC
Australia

+61 03 9902 9655
bernie.orelup@nanomelbourne.com

Bernie has a multidisciplinary background in materials science and engineering (BSc - Purdue University), business administration (MBA - Arizona State University), and management.

At MCN Bernie leads a team which assists both industry and academic clients with application-oriented research, as well as the design and development of prototypes, through to small volume production. As the Quality Manager, Bernie also oversees and ensures the adherence of all quality systems, practices, and standards throughout MCN. Bernie has extensive experience implementing Lean Manufacturing methodologies to increase operational efficiencies and reduce costs.

Prior to joining the MCN, Bernie spent 17 years with the semiconductor fabrication industry, working in process engineering and manufacturing with Intel Corporation. His vast expertise includes nanotechnology process development, process characterisation, technology and equipment start-ups, manufacturing operations, cost reduction, quality control, and employee management and training.

Bernie has a wealth of industrial cleanroom fabrication experience and knowledge in the areas of dry/chemical etching, thin films deposition, and photolithography to support MCN clients.

AUSTRALIA Delegation

Hoang-Phuong **Phan**

Queensland Micro and Nanotechnology Centre,
Griffith University

N. 74, West Creek Road Nathan
4111 Brisbane, Queensland
Australia

+61737358009
hoangphuong.phan@griffithuni.edu.au

Dr. Hoang-Phuong Phan received the B.E and M.E. degrees from the University of Tokyo, Japan, and the PhD degree from the Queensland Micro and Nanotechnology Centre (QMNC), Griffith University, Australia. He is currently a research fellow at the QMNC, where his main interests focus on silicon carbide MEMS for applications in harsh environments. He was also a visiting scholar at the Aichi Institute of Technology (AIT) and the National Institute of Advanced Industrial Science and Technology (AIST), Japan in 2016. Dr. Phan has published more than 45 refereed journal articles and conference papers, as well as filed two US patents, all in micro and nanotechnologies. He is the author of the review paper entitled “The Piezoresistive Effect of SiC for MEMS Sensors at High Temperatures” (JMEMS 2015), and a book on “SiC mechanical sensors for harsh environment” (Springer, in press, 2017). He was the recipient of the Japanese Government Scholarships (MEXT) for undergraduate and postgraduate studies, and the GUPRS and GUIPRS scholarships from Griffith University for the doctoral course. Dr. Phan was honored with the GU publication award, the GGRS-IEIS travel grant, and Springer outstanding theses award. Dr. Phan has served as a reviewer for several journals, including JMEMS, Sensors and Actuators A, Micromachines, Material Science & Engineering B, and IEEE Electron Device Letters.

AUSTRIA Delegation *Chief Delegate*

Ulrich **Schmid**

TU Wien, Institute of Sensor and Actuator Systems

Gusshausstrasse 27-29
1040 Vienna
Austria

+43 (1) 58801 36689
ulrich.e366.schmid@tuwien.ac.at

U. Schmid started studies in physics and mathematics at the University of Kassel in 1992. In 1995, he spent 6 months at the Transport Group in the Physics Department, University of Nottingham, UK, to gain experience in wide band gap semiconductor physics. He performed his diploma work at the research laboratories of the Daimler-Benz AG (now Daimler AG) on the electrical characterization of silicon carbide (6H-SiC) microelectronic devices for high temperature applications. He finished his studies in 1998 at the University of Frankfurt/Main, Germany. In 1999, he joined the research laboratories of DaimlerChrysler AG (now Airbus Group) in Ottobrunn/Munich, Germany. He developed a robust MEMS flow sensor for high-pressure automotive applications and received his Ph.D. degree in 2003 from the Technical University of Munich, Germany. From 2003 to 2008, he was post-doc at the Chair of Micromechanics, Microfluidics/ Microactuators at Saarland University. Since October 2008, he is full professor for Microsystems Technology at the Vienna University of Technology serving since 2012 as director at the Institute of Sensor and Actuator Systems.

U. Schmid holds more than 35 different patent families and has authored or co-authored more than 300 publications in peer-reviewed journals and conferences.

AUSTRIA Delegation

Otto **Bobenstetter**

EV Group

Hartham 13
94152 Neuhaus am Inn
Germany

+43 7712 5311 0
O.Bobenstetter@EVGroup.com

Apprenticeship at Wacker Burghausen as Meß- und Regelmechaniker

Studied later Elektrotechnik at the Fachhochschule Landshut

Working for EVG since 1999 as Sales Manager Europe

AUSTRIA Delegation

Ernest J. **Fantner**

Getec Microscopy GmbH

Dechantstraße 9
3550 Langenlois
Austria

+43644/3937743
Ernest.fantner@getec-afm.com

Dr. Ernest J. Fantner has 10 years experience in academic research and 20 years of management experience in international high-tech enterprises. He has pioneered the development of high-resolution x-ray diffraction both in academic research as well as in industrial product innovation. He has been co-founder and CEO of several start-ups in the analytical and IT market. With his companies he has won several innovation awards.

AUSTRIA Delegation

Anton **Köck**

Materials Center Leoben Forschung GmbH

Roseggerstrasse 12
8700 Leoben
Austria

+43 3842 45922 505
anton.koeck@mcl.at

Anton Köck received his master's degree (1986) and PhD (1989) in Experimental Physics at the University of Innsbruck, Austria. After a 4-years Post Doc position at the Walter Schottky Institute, Technical University Munich, he was head of the Optoelectronics research group from 1993 to 1997 at the Institute for Solid State Electronics, Vienna University of Technology, where he habilitated in the field of Optoelectronics in 1998. Then he was professor for Physics and Material Science at the Wiener Neustadt University for Applied Sciences, where he was heading the MEMS research group. From 2004 to 2013 he was deputy head of the business unit Nano Systems, Austrian Institute of Technology (AIT) in Vienna, where he established the research on gas sensors based on nanomaterials. Since 08/2013 he is key researcher at the Materials Center Leoben (MCL) in the microelectronics department and is head of the gas sensor research group. Major focus is CMOS and 3D-system integration of nanotechnology based gas sensors. Anton Köck has more than 190 publications and conference contributions and is coordinator of the FP7-project "MSP – Multi Sensor Platform for Smart Building Management" (1.9.2013 – 30.4.2017, Project No. 611887, FP7-ICT-2013-10).

BENELUX Delegation *Chief Delegate*

Albert **Van den Berg**

University of Twente

P.O. Box 217
7500 AE Enschede
The Netherlands

+31-53-4892691
a.vandenberg@utwente.nl

UNIVERSITY OF TWENTE.

Albert van den Berg received his MSc in applied physics in 1983, and his PhD in 1988 both at the University of Twente, the Netherlands. From 1988-1993 he worked in Neuchatel, Switzerland, at the CSEM and the University (IMT) on miniaturized chemical sensors. In 1998 he was appointed as part-time professor “Biochemical Analysis Systems”, and later in 2000 as full professor on Miniaturized Systems for (Bio)Chemical Analysis in the faculty of Electrical Engineering and part of the MESA+ Institute for Nanotechnology. In 1994 he initiated together with Prof. Bergveld the international MicroTAS conference series. He published over 400 peer reviewed publications (H=53) a.o. in Science, Nature, PNAS, NanoLetters etc. He received several honors and awards such as Simon Stevin (2002), two ERC Advanced (2008, 2015) and three ERC Proof of Concept (2011, 2013, 2016) grants, Simon Stevin award (engineering sciences), Spinoza prize (2009), Distinguished University Professor (Twente, 2010), Distinguished Professor (South China Normal University SNCU, 2012) and board member of the Royal Dutch Academy of Sciences (KNAW) (2011-2016). In 2014 he was appointed scientific director of the MIRA institute for Biomedical Engineering. In 2017 he became co-PI of the Max Planck – University of Twente Center for Complex Fluid Dynamics.

BENELUX Delegation

Henne **Van Heeren**

enablingMNT

Drakensteynlaan 34
3319 RG Dordrecht
The Netherlands

+31 78 6300748
henne@enablingMNT.com

Henne van Heeren studied chemistry at the University of Utrecht and worked at the University Delft in the area of material science. At Philips Electronics he was responsible as operation manager for a magnetic head / MEMS waferfab. He followed his career as a business development manager at Philips and OnStream. After 17 years in the industry Henne started his own company in 2003 and initiated the enablingMNT group, now having offices in Germany, UK and the Netherlands. He assisted several high tech start-up companies and established companies on industrialization and commercialization issues. He lectured for the NATO on nanotechnology and published over 60 articles and reviews about the development and industrialization of MEMS/MST products, including three guidelines for microfluidic design and manufacturing. Henne initiated a discussion on microfluidic standardization, resulting in a New Work Item proposal to International Standards Organization (ISO).

CANADA Delegation	*Chief Delegate*

Dan **Gale**

CMC Microsystems

945 Princess St., Suite 103
K7L 0E9 Kingston
Canada

+1-613-530-4660
+1-613-329-4892
gale@cmc.ca

Dan Gale is Vice-President and Chief Technology Officer of CMC Microsystems and has more than 30 years of experience in building and shaping Canada's National Design Network through his leadership roles at CMC Microsystems. He serves as officer of CMC's Board and as Vice-Chair of the corporate Technical Advisory Committee. He is a Director of DMT Microsystems, a subsidiary of CMC Microsystems and a Director and Vice-Chair on the Board of the Canadian Photonics Industry Consortium, Chair of the program committee for the Silicon Electronic-Photonic Integrated Circuits program and a founding participant in the newly established NanoCanada. He has also served recently as a Director on the Board of the Photovoltaic Innovation Network and as a Member of the program committee for the Next Generation Optical Networks program, He is Chief Delegate (Canada) for the annual World Micro and Nanoelectronics Systems Summit—a position that evolved from his participation in the Canadian delegation at the inaugural Summit hosted in Japan in 1995. He is a member of the Institute of Corporate Directors, a member of the IEEE, an Information Systems Professional (CIPS) and graduated with an MSc (Electrical Engineering) from Queen's University, Canada in 1978.

CHINA Delegation *Chief Delegate*

Xinxin **Li**

Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences

865 Changning Road
200050 Shanghai
China

+86-21-62131794
xxli@mail.sim.ac.cn

Xinxin Li received his B.S. degree in semiconductor physics and devices from Tsinghua University, Beijing, China, in 1987, and the Ph.D. degree in microelectronics from Fudan University, Shanghai, China, in 1998.

For a long period of time, his research interests have been in the fields of micro/nano sensors and MEMS/NEMS. He was a Research Engineer with Shenyang Institute of Instrumentation Technology, Shenyang, China, for five years. He was also with The Hong Kong University of Science and Technology, Kowloon, Hong Kong, as a Research Associate and with Nanyang Technological University, Singapore, as a Research Fellow. He then joined Tohoku University, Sendai, Japan, as a Lecturer (Center of Excellence Research Fellowship). Since 2001, he has been a Professor with the Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, Shanghai. From 2007 he has been serving as the Director of the State Key Laboratory of Transducer Technology, China. He has invented more than 100 patents and published more than 400 papers in refereed journals and conference proceedings (including about 190 SCI papers). He is in the Editorial Board of Journal of Micromechanics and Microengineering, Scientific Reports, Microsystema & Nanoengineering, as wll as, Micro and Nano Systems letters. Prof. Xinxin Li served as the Technical Program Committee member for IEEE MEMS 2008, 2011 and 2017, IEEE Sensors from 2002 to 2016. From 2014, he has been serving as an International Steering Committee member for the conference of Transducers.

CHINA Delegation

Zhiyu **Hu**

Shanghai Jiao Tong University

Room 304-A, No.2 of Experimental Building
800 Dongchuan Road
200240 Shanghai
China

+86-21-34206904
zhiyuhu@sjtu.edu.cn

Prof. Dr. Zhiyu (Jerry) Hu (Ph.D. MBA), National Chair Professor of China, is also holding a Zhi Yuan Chair professorship at Shanghai Jiao Tong University and serving as the director of National Key Laboratory of Science and Technology on Micro-/Nano-Fabrication. He is also the founder and director of the Institute of NanoMicroEnergy. Dr. Hu is an adjunct professor appointment at University of Tennessee, Knoxville, Tennessee, USA plus other honorary positions in several universities and institutes. He was a research staff member at Oak Ridge National Laboratory (ORNL) of the U.S. Department of Energy. His research interests are in NEMS- and MEMS-based sensors, nanoscale energy conversion, implantable BioMEMS devices and nanocatalytic materials. Dr. Hu is the author of more than eighty publications in peer reviewed journals; several dozens invited talks; ninety plus conference presentations and fifty published and pending patents. He is the recipient of many awards that includes Discover Magazine Award, National and Regional Federal Laboratory Consortium awards and several awards from ORNL including The Inventor of the Year Award (2000). Dr. Hu's work generated many press accolades and mentions around the world. He is an active member of APS, ASME, ACS, ECS, MRS, IECS and the National Physics Honor Society Sigma Pi Sigma. He is an executive member of Nano Engineering Council of ASME and a committee member of the Sensor Division of ECS.

CHINA Delegation

Shengbo **Sang**

MicroNano System Research Center, College of Information Engineering, Taiyuan University of Technology

No.79 West Yingze Street
030024 Taiyuan
China

0086-13753492863
sangshengbo@tyut.edu.cn

Sheng-bo Sang, male, was born in Apr. 1979 in Ding-tao, Shandong Province, P.R.China. He doctor graduated from Ilmenau University of Technology in Germany in Nov. 2010 and is the professor of Taiyuan University of Technolog, vice dean of College of Information Engineering.

Professor Sang has obtained the National Outstanding Youth Science Foundation. He is the research leader of the intelligent sensor of Technology Innovation Team of key field of MOST and the Collaborative Innovation Center of High Level Coal Mining Machine Equipment of Shanxi Province, the director of Micro-nano Devices and Systems Technology branch of Instrument Association of China. In 2016, he was awarded “Top Young and Middle-aged Innovative Talents of Shanxi Province” by Education Department of Shanxi Province. In 2015, he was earned the title of “Outstanding Youth Talents Program of Shanxi Province” --the honour given by Organization Department of Shanxi Province. In 2014, he was selected as “131 leading talent project outstanding young and middle-aged innovative talents of Shanxi Province”. In 2013, he was elected as “Top Young Academic Leaders of Higher Learning Institutions of Shanxi Province”.

Over the years, Prof. Sang hosted more than 14 researching projects. Moreover, he published more than 50 academic papers which indexed by SCI, 1 English monograph, 3 Chinese books, and was granted 15 patents for invention. Meanwhile, he was authorized 1 software copyright.

CHINA Delegation

Jijun **Xiong**

North University of China

No. 3 Xueyuan Road, Jiancaoping District
030051 Taiyuan
China

+86 351 392 1882
+86 139 0113 3593
xiongjijun@nuc.edu.cn

Jijun Xiong, born in 1971, Xishui County, Hubei Province. He is now professor and vice-president of North University of China, the deputy to the Nation People's Congress, Shanxi Provincial Standing Committee of China Association for Promoting Democracy. He graduated from Tsinghua University in 2003 with a PhD degree in major of precision instruments. In 2002 and 2009, he was a visiting scholar at City University of Hong Kong and the University of Minnesota.

Professor Xiong was elected to the national "Ten Thousand Talent Program ", “The National Science Fund for Distinguished Young Scholars”, “Youth Science and Technology Innovation Leader”, “talents of The Ministry of human resources”, “Education Ministry's New Century Excellent Talents Supporting Plan”, “Shanxi Province Shanxi scholars”, “Special allowance of the State Council”. He has also received several scientific awards from the national government: one Second Class Prizes of the State Scientific and Technological Progress Award, two Second Class Prizes of the State Technological Invention Award, one Second Class Prizes of the State Teaching Achievement Award. He has published more than 100 peer reviewed journal papers and 50 national invention patents. At the same time, he is also the executive director of Chinese Society of Micro-Nano Technology, chairman of the Youth Work Committee of Chinese Society Of Micro-Nano Technology, executive director of MEMS & NEMS Society of China, Deputy director of China Society of Higher Education Instrument Science and Measurement and Control Technology Professional Committee.

During the past twenty years, he is dedicated on the measurement technology and instrumentations under extremely high impact, high temperature and other extreme conditions. A new pressure measurement method based on high temperature co-fired ceramic microstructure and wireless electromagnetic mutual coupling signal pick-up was developed. It has been achieved for a long time 1000 ℃ high temperature dynamic pressure parameters in-situ test. It has laid a foundation for realizing the in-situ monitoring of a variety of parameters of the advanced engine combustion chamber (long time 1500 ℃ high temperature environment). The anti-impact storage test equipment solved the ultra-high-impact transient high temperature dynamic data testing challenges, which successfully applied to Chang'e lunar exploration, manned spaceflight.

CHINA Delegation

Yi **Xu**

School of Optoelectronics Engineering, Chongqing University

Shapingba, Shazheng Str. No.174
400030 Chongqing
China

+86 023 65111022
xuyibbd@sina.com

Dr. Yi Xu is a professor and doctoral supervisor at Chongqing University. She earned her B. S in 1986 and M. S. in 1989 from department of chemistry at Chongqing University. In 2006, Prof. Xu received her Ph.D. in Optoelectronic Engineering from Chongqing University. During 1998.3-1999.3and2002.1-2002.6, she worked in Analytical Science Center of Imperial College as a senior visiting scholar. Prof. Xu was on the faculty of College of Chemistry and Chemical Engineering at Chongqing University from 1989 to 2015, and she has served as the director of pharmacy department in there. After her experience in chemistry and chemical engineering, she joined School of Optoelectronic Engineering in Chongqing University and now she is the director and a member of the second academic committee of Key disciplines laboratory of Novel Micro-nano Devices and System Technology, meanwhile, she is working as the deputy director of Key Laboratory of Photoelectric Technology and System of the Ministry of Education.

She was a member of the expert panel convened by the Science and Technology Ministry for major new drug discovery, and has served as an evaluation expert of Natural Science Foundation of China. She worked as the director in China institute of nanotechnology, a member of academic title evaluation committee convened by Chongqing education commission, the director of analysis and test professional committee convened by chemical institute of Chongqing, the director of the Chongqing institute of electronics, and the deputy director of Chongqing Chromatography Institute. She gained Award of National Excellent Doctoral Dissertation of China in 2008, and has been chosen as the Chongqing Advanced Personnel in 2015.

As a project principal she has completed more the 20 national projects, including three projects of Natural Science Foundation of China, two “863” technology projects, one international cooperative project, and seven ministry projects. She has published more than 80 academic papers, 50 of them were on the journals cited by SCI. She is the editor in chief of《Additives for polymer synthetic》and《Pharmaceutical Analysis》, which is a National Planned Teaching Material. She also took part in the edition of《Analysis of Chinese Medicine》recommended by National Education Committee, and six of her inventions are patented. Prof. Xu participated in the design and development of Micro-Optical Spectrum Analyzer, which awarded the first-class advanced science technology of province. She won one Third Prize award of Science and nature (Rated number one), one advanced science technology award of province (Rated number three), and one AQSIQ(General Administration of Quality Supervision) " Award of Science and Technology in Quality Inspection " (Rated number five).

DANUBIAN Delegation *Chief Delegate*

Adrian **Dinescu**

IMT Bucharest - National Institute for R&D in Microtechnologies

126A Erou Iancu Nicolae
077190 Bucharest
Romania

+40722552033
adrian.dinescu@imt.ro

Dr. Adrian Dinescu obtained the MSc and PhD degrees in solid state physics both from University of Bucharest, being with IMT Bucharest since 1997. At present Adrian Dinescu is the CEO and President of the Board of IMT Bucharest. His expertise is in micro and nano fabrication, optoelectronics, electron beam lithography and field emission scanning electron microscopy. He has co-authored more than 80 papers in refereed international journals. He was project coordinator in 10 national projects, for a joint research project Romania-Bulgaria and coordinator from the Romanian part in one FP7 project.

DANUBIAN Delegation

Dan **Dascalu**

IMT Bucharest - National Institute for R&D in Microtechnologies

126A Erou Iancu Nicolae
077190 Bucharest
Romania

+40-722341012
dan.dascalu@imt.ro

Prof. Dan Dascalu was the founder and the director (CEO) of the Centre for Microtechnology (1991), then of the Institute of Microtechnology (July 1993), and finally (since November 1996) of the National Institute for Research and Development in Microtechnologies (IMT Bucharest). Since June 2011, he is the Coordinator of the Centre for Nanotechnologies and President of the Coordinating Board of IMT-MINAFAB. Dan Dascalu is a full member (academician) of the Romanian Academy (of Sciences) and Professor at the University “Politehnica” of Bucharest. He is the author of "Transit-time Effects in Unipolar Solid-State Devices" and "Electronic Processes in Unipolar Solid State Devices" (both published by Abacus Press, Kent, U.K., 1974 and 1977) as well as of many technical papers published in scientific periodicals or conference proceedings. He was coordinating 3 FP6 projects in FP6 as well as other projects. Dan Dascalu is an expert representing Romania in the NMBP Programme Committee (FP6, FP7, H2020), in the "mirror group" for the European Technological Platform for Nanomedicine and in the High Level Group (HLG) for Nanotechnologies and Advanced Materials.

DANUBIAN Delegation

Piotr **Dumania**

Institute of Electron Technology (ITE)

Al Lotnikow 32/46
02-668 Warsaw
Poland

+48 601392373
pdumania@ite.waw.pl

Dr. Piotr Dumania graduated from Warsaw University of Technology in 1974. He joined ITE, where he was working as a device engineer for semiconductor processing responsible for technology development of CMOS IC's and ASIC's up to implementing them into mass production. In 1994 Piotr Dumania received PhD degree in electronics. His PhD research topics was modelling of MOS transistors for diagnostics purposes. From 1990 his research interest includes silicon micromachining and process integration of micromechanical structures with CMOS circuitry, also supervising the development of silicon detectors and micro-electro-mechanical systems (MEMS). Results of his research were presented in more than 70 papers published in international journals and over 100 conference presentations. Among other international activities, he was a chairmen of the NAS-Europractice/Nexus Workshop, Feb 2001, Warsaw as well as chair of Europractice session at Prague workshop, Jan. 12, 2005. He organized and chaired an international seminars devoted Interdisciplinary Application of Microsystem Technology and international cooperation in the field of MNS Technologies. Piotr Dumania was a chairmen of an organizing committee of International conferences: "4th Forum on Innovative Technologies for Medicine – ITMED", Bialystok, in 2010 and „Micro- and nano- systems technology for modern industrial applications", Warsaw, in 2014. He has supervised ITE contribution to MINAEAST-NET, MINOS and MNT-ERA.NET FP6 projects as well as SMART-FRAME Central Europe project also as workpackage leader within this projects. He has coordinated national-level initiatives: MANTARC Micro- and Nano Technology Applied Research Centre of Excellence and MINAS Micro- and Nano- Structures Scientific Network. He was also a leader of several research projects funded by Polish Ministry of Scientific Research. Piotr Dumania is currently supervising industrial research and business development activities of ITE research teams.

DANUBIAN Delegation

Carmen **Moldovan**

IMT Bucharest - National Institute for R&D in Microtechnologies

126A Erou Iancu Nicolae
077190 Bucharest
Romania

+40212690770
carmen.moldovan@imt.ro

Dr. Carmen Moldovan is the Head of the "Laboratory for Microsystems in Biomedical and Environmental Applications" at IMT-Bucharest. She graduated in Electronics and Telecommunications and holds a PhD in Microsensors. She was working at Microelectronica Bucharest in CMOS Technology and joint IMT-Bucharest in 1995, working in simulation, design, technology and characterization of microsystems, data acquisition and signal processing. She was/is involved in more than 15 EU Projects and 20 National Projects and published more of 120 papers in journals and Conference Proceedings. She holds 7 patents. She was (1998-2010) part-time professor at Politehnica University of Bucharest providing courses on MEMS technology and applications.

Dr. Moldovan contributed and is currently coordinating several applications dedicated to the market: Piezoelectric MEMS for Efficient Energy Harvesting, Autonomous system for nitrites/nitrates and heavy metals monitoring of natural water sources; Blood pressure monitoring bracelet for early detection of preeclampsia; Integrated Platform for Pesticids Detection: Micro Immunosensors Platform for Metabolic Syndrome Investigation, Microbiosensor arrays fabrication and portable DETECTion apparatus development for Acute Myocardial Infarction diagnostic, Apparatus for optical and electrical monitoring of drugs toxicity using cell culture, and eNOSE (Electronic Nose for detection of low concentration pollutant and explosive gases).

DANUBIAN Delegation

Alexandra Raluca **Stefanescu**

IMT Bucharest - National Institute for R&D in Microtechnologies

126A Erou Iancu Nicolae
077190 Bucharest
Romania

+40 21 269 07 75
alexandra.stefanescu@imt.ro

Alexandra Stefanescu graduated from Politehnica University of Bucharest, Faculty of Electrical Engineering, in 2006 and obtained her PhD in 2010. She participated as a team member in several national and European projects (FP6, FP7, ENIAC, ESA). She worked in the frame of the FP7 MIMOMEMS project where she was involved in RF-MEMS technologies. Between 2010 and 2012 she conducted post-doctoral research funded by the EU (structural funds, POSDRU/89/1.5/S/63700) where her main work was focused on the numerical analysis and experimental development of surface acoustic wave (SAW) and bulk acoustic wave resonators (FBAR) on WBG semiconductors (GAN).

Since 2015 she coordinates a national project for young research teams, dedicated to applications of substrate integrated waveguide structures. Her current research activities focus on acoustic devices on WBG materials working as sensors as well as on electromagnetic simulation of RF MEMS switches for K to W band.

EUROPEAN COMMISSION
Delegation

Chief Delegate

Henri **Rajbenbach**

European Commission

Avenue de Beaulieu 33
B-1160 Brussels
Belgium

+32 2 295 66 84
henri.rajbenbach@ec.europa.eu

Henri Rajbenbach is a Senior Expert and Programme officer at the European Commission (EC), in the Directorate General DG CONNECT (Communications Networks, Content & Technology)

Henri Rajbenbach joined the EC in 1997 as a Project officer in the areas of microelectronic integration, sensors and displays. In 1999, he launched the “Photonic Components” initiative in the IST (Information Society Technologies) programme, and then expanded the original field of optical telecommunications to include health, life science, environment, lighting and security.

In 2007, Henri took over a project portfolio in the area of Microsystems, supporting multidisciplinary research for the integration of core technologies and associated materials. Applications address biochips and biosensors, microdisplays, large-area organic devices and miniaturized smart system sensors and actuators. He is currently coordinating the ICT activities on Smart System Integration and related policies.

Prior to joining the EC, Henri conducted research in image processing and lasers for biometrics, security and defense applications at Thomson-CSF (now Thales), France (1987-1997) and in optical signal processing and computing at the University of California, San Diego, USA (1984-1987). He was also teaching an Optoelectronics course at the University of Paris XII (1990-1997).

Henri has published some 50 conference and journal publications, 2 text book chapters and few patents in the areas of information processing, biometrics, photorefractive materials, semiconductor lasers, real-time holography, optical storage, image processing and target recognition.

Henri graduated from the Ecole Supérieure de Physique et Chimie Industrielles, ESPCI (1983) and received his PhD from the Université de Paris VI (1984). He received the first SPIE Europe recognition award in 2008 and was elected SPIE fellow in 2009.

EUROPEAN COMMISSION Delegation

Antonio **Jara**

HOP Ubiquitous S.L.

Luis Buñuel, 6
30562 Ceutí
Spain

+34 627228126
jara@hopu.eu

Antonio J. Jara (CEO), founder of HOP Ubiquitous S.L. (www.hopu.eu), vice-chair of the IEEE Communications Society Internet of Things Technical Committee, and adjoint scientifique in the University of Applied Sciences Western Switzerland. He did his PhD (Cum Laude) at the University of Murcia (UMU), Spain. These PhD results present a novel way to connect objects to Internet-enabled platforms in an easy, secure and scalable way. He also carried out a MBA and entrepreneurship formation in the ENAE business school and UCAM (2012). He received entrepreneurship awards from ENAE (sponsored by SabadellCAM financial services), emprendeGo (sponsored by Spanish government), IPSO Alliance Award (Sponsored by Google) for its disruptive innovation in the IoT, selected and mentored by the acceleration program FABULOUS (part of the FIWARE EU project). Antonio Jara as part of HOP Ubiquitous is focused on the Smart Cities market with solutions for citizens engagements, tourism, active participation, physical web and environmental monitoring (air quality sensors), interoperability / pilots and also in several actions related to security/privacy. Antonio Jara has also participated in over 100 international events about Internet of Things as Speaker, over 100 international publications / papers (~2000 citations and impact factor h=24), he holds several patents in the IoT domain and finally he has advised in the IoT domain to companies such as Microsoft and Fujitsu.

EUROPEAN COMMISSION Delegation

Petra **Weiler**

VDI/VDE Innovation + Technik GmbH

Steinplatz 1
10623 Berlin
Germany

+49 30 31 00 78-161
+49 160 98 79 08 47
petra.weiler@vdivde-it.de

Petra Weiler has a degree in technical translation from the University of Hildesheim. Her areas of expertise are electrical and mechanical engineering, and computer linguistics.

She joined VDI/VDE-IT in January 2009. Since than she works for the Office of EPoSS, the European Technology Platform on Smart Systems Integration. She has also been responsible for the FP7 Coordination Actions CEPoSS “Coordination and Implementation of a European Strategy on Smart Systems Technologies”, IRISS “Implementation of Research and Innovation on Smart Systems Technologies”, and EXPRESS "Mobilising Expert Resources in the European Smart Systems Integration Ecosystem", which were coordinated by VDI/VDE-IT. Currently she is coordinator of the H2020 Coordination and Support Action inSSIght “In-depth support for innovation and exploitation in Smart Systems Integration”.

From her previous 13-year-appointment at DIN, the German Institute for Standardisation, she has profound knowledge of policy instruments for stimulation of innovation, and of market mechanisms with respect to R&D, Innovation and standardisation in Germany and Europe.

FRANCE Delegation *Chief Delegate*

Michel **de Labachelerie**

Institut FEMTO-ST/ CNRS

15B av. des Montboucons
25000 Besancon
France

+33 6 71 00 25 61
labachel@femto-st.fr

Michel de Labachelerie has been scientist at the French National Center for Scientific Research (CNRS) since 1982. His research was first dedicated to high-frequency-stability semiconductor lasers at Orsay University. Then he has been visiting researcher at Tokyo Institute of Technology between 1993 and 1995, where he switched to the field of MEMS technologies and founded the LIMMS (French-Japanese laboratory at the University of Tokyo). Then he obtained a position of CNRS Research Director for the development of MEMS devices in a laboratory of Besancon. In 2004, he switched to research management by creating in Besancon the FEMTO-ST Institute (comprising now about 700 staff members) and has been its Director for 8 years. Between 2012 and 2016 he was in charge of industrial partnerships at CNRS/INSIS headquarters. He is also coordinator of the "Renatech" Network of nanofabrication facilities since 2004, now for the CNRS/INSIS headquarters in Paris. Since 2016, he is also Vice-President for research of the new UBFC University, federating 3 universities and 6 schools located in Dijon, Besancon and Belfort-Montbeliard.

FRANCE Delegation

Tarik **Bourouina**

ESIEE Paris
Université Paris-Est

Cité Descartes 2 Bd Blaise Pascal
93162 Noisy-le-Grand
France

+33686126265
Tarik.bourouina@esiee.fr

Tarik Bourouina holds M.Sc. in Physics, M.Eng. in Optoelectronics, Ph.D. in MEMS (1991), and HDR (2000) from Université Paris-Sud, Orsay. His entire career was devoted to the field of MEMS and Lab-On-Chip. He started research at ESIEE Paris in 1988 on MEMS microphones and acoustic gyroscopes. More recently, he had several contributions in optical MEMS, among which the smallest MEMS-based FTIR Optical Spectrometer, jointly developed with Si-Ware-System and Hamamatsu Photonics, awarded the Prism award on photonics innovation in 2014. Among his contributions to the scientific community, Dr. Bourouina served in the Technical Program Committee of IEEE MEMS from 2012 to 2013. He is now serving as an Editor in two journals of Nature Publishing Group: 'Light: Science and Applications' and 'Microsystems and Nanoengineering', in partnership with the Chinese Academy of Science. Dr. Bourouina took several positions in France and in Japan, at the Université Paris-Sud, at the French National Center for Scientific Research (CNRS) and at The University of Tokyo. He is the representative of Université Paris-Est in the international research network on Nano and Micro Systems (NAMIS). Since 2002 Dr. Bourouina is full Professor at ESIEE Paris, Université Paris-Est, appointed as Dean for Research from 2012 to 2015. His current interests include optofluidics, analytical chemistry on-chip, seeking new opportunities for MEMS in the areas of Sustainable Environment and Smart-Cities. He is the Co-Laureate of the French Excellence Grant (EquipEx 'Sense-City'). He is also actively involved in the development of several companies launched by his former students and colleagues, which include Si-Ware Systems, Fluidion, Memscap and MEMS-Schlumberger.

FRANCE Delegation

Bérengère **Lebental**

IFSTTAR & Ecole Polytechnique

14-20 boulevard Newton, Cité Descartes
77 447 Marne La Vallée Cedex 2
France

+33 1 81 66 81 18
Berengere.lebental@ifsttar.fr

Bérengère Lebental is a graduate from Ecole Polytechnique (Paris Saclay University, France) Engineering Program in 2006 and Master's Degree in Physics and Nanotechnology in 2007. She achieved her PhD from Université Paris-Est, France, in 2010 and her Research Direction Clearance from Université Paris Sud in 2016.

Since 2010, she is research scientist and project director at IFSTTAR (The French Institute of Science and Technology for Transport, Development and Networks, a major player in European research on city, sustainable development and transportation) and at LPICM (Laboratory of Physics of Interfaces and Thin Films, a joined research team between Ecole Polytechnique and CNRS).

A physicist specialized in nanoelectronics and sp2-carbon-based nanomaterials, her research work focuses on the development and field deployment of reproducible and reliable nanosensors for applications to the Smart City, with a focus on micromechanical and chemical sensing. She was scientific coordinator between 2010 and 2016 of the 9M€ Sense-City Equipment program dedicated to the prototyping and large-scale validation of nanosensors for sustainable cities and is currently the coordinator of the H2020 project Proteus on water quality monitoring using Smart Integrated Micro and Nanosystems.

GERMANY Delegation *Chief Delegate*

Thomas **Otto**

FhG-ENAS. Fraunhofer-Institute for Electronic Nano Systems

Technologie-Campus 3
09126 Chemnitz

Germany

+49 371 45001-100
thomas.otto@enas.fraunhofer.de

- Studies in electrical engineering and completed doctoral thesis to Dr.-Ing. at TH Karl-Marx-Stadt (1987)
- Postdoctoral lecturing qualification to Dr.-Ing. habil. in the field of electrical engineering/ information technology at University of Technology Chemnitz (1996)
- Development engineer at SENTECH Instruments GmbH, Berlin (1997 - 1998)
- Since 1998 group leader/ head of department at Fraunhofer IZM, Department Multi Device Integration
- Since 2008 deputy head of the Fraunhofer-Institute for Electronic Nano Systems ENAS (7/2008 - 12/2010 Fraunhofer Research Institution for Electronic Nano Systems)
- Appointment of Honorary Professor of Chongqing University (China) in the year 2004
- Appointment as Honorary Professor at the University of Technology Chemnitz in the year 2008
- Since May 2016 acting Director of the Fraunhofer-Institute for Electronic Nano Systems ENAS
- Since October 2016 Chair for Microtechnology at University of Technology Chemnitz
- Since October 2016 Director of the Center for Microtechnologies of the University of Technology Chemnitz
- More than 220 publications and 26 patents and published patent applications

GERMANY Delegation

Thomas R. **Dietrich**

IVAM Microtechnology Network

Joseph-von-Fraunhofer-Str. 13
44227 Dortmund
Germany

+49-213/9742-148
td@ivam.de

Dr. Thomas R. Dietrich studied chemistry at Johann-Wolfgang-Goethe-University in Frankfurt. He finished PhD in 1991.

Since 2014 he is CEO of IVAM the largest international Network of Micro- and Nano-Technology and New Materials in Germany

From 1991 to 1996 he worked as a group manager at the IMM Mainz . In 1996 he founded mikroglas and worked there as CEO. Within mikroglas Dr. Dietrich developed the microstructurization technology of photoetchable glass and brought it to a "production quality" level.

He is Chairman of DECHEMA Industry-Plattform "MicroChemTec". Since 2005 Dr. Dietrich acted as a project leader for several research projects funded by the German government, the European Commission and other organizations on microreaction technology. Since 2007 Dr. Dietrich is Chairman of the German Standardization Group (DIN) "Microchemical Engineering". He started the standardization process on the international level (ISO).

He is member of the Advisory Board of the "Centro Microprocesos Quimicos" at the Tec de Monterrey (ITESM), Mexico. Moreover he is the Activity Chairman within the American Institute for Chemical Engineering (AIChE), Process Development Division, Area12e "Micro Process Engineering" and its chairman since 2010.

Dr. Dietrich is author of a number of papers and presents mikroglas' results regularly on conferences in different parts of the world, e.g. during ACHEMA in Germany, during IMRET in the U.S.A. and Europe, or during the MCPT workshops in Japan.

GERMANY Delegation

Uwe **Kleinkes**

HSHL

Marker Allee 76-78
59063 Hamm
Germany

+4923818789419
uwe.kleinkes@hshl.de

HOCHSCHULE
HAMM-LIPPSTADT

Uwe Kleinkes received his PhD in Chemistry at the Ruhr-University Bochum (Germany) in 1998. He worked as a scientist at the Ruhr University Bochum and at the Nitrogen Fixation Laboratory in Brighton, UK. He studied chemistry at the University of Sussex (Brighton, UK) and the Ruhr University Bochum. In 2000 he joined the Institute of Microtechnology in Mainz, Germany, in the marketing department and in this year he took over a position at IVAM where he was ten years managing director of the IVAM Microtechnology Network with 300 companies and institutes worldwide. Now he belongs to the Advisory Council of IVAM (www.ivam.com).

Today he is Professor for Technology Marketing and Director of Studies ("Technical Management and Marketing and Biomedical Management Management and Marketing") at the Hochschule Hamm-Lippstadt (Germany). His fields of interest are international business relations of high-tech companies and B2B-Marketing of high-tech components and systems, digitalization of business and marketing with a focus on small and medium sized enterprises (SME).

GERMANY Delegation

Christine **Neuy**

microTEC Südwest e.V.

Emmy-Noether-Str. 2
79110 Freiburg
Germany

+49 761 386909-12
Christine.neuy@microtec-suedwest.de

Dr. Christine Neuy is managing director of microTEC Südwest, one of 15 German “Spitzencluster”.

Christine studied chemistry and made her degree in biotechnology (technical chemistry). Her doctoral thesis is on metal-organic chemistry / nanotechnology.

From 1996 to 1998 Christine worked with IMM, the research institute for microtechnology at Mainz, today Fraunhofer IMM, in the Public Relations department.

From 1998 to 2010 she worked with IVAM, an international industrial interest group in microsystems technology, in Dortmund in different positions and finally was managing director of the association.

In 2000 she finished her avocational studies in economics.

In 2011 Christine joined microTEC Südwest, being responsible for the overall project management of the "Spitzencluster“ microTEC Südwest, the microtechnology cluster in Germany’s Southwest.

Since 2016 she is managing director.

www.microtec-suedwest.de

GERMANY Delegation

Markus **Sonnemann**

Robert Bosch GmbH

Tübinger Str. 123
72762 Reutlingen
Germany

+49 0174 3226337
Markus.Sonnemann@de.bosch.com

Dr. Markus Sonnemann – VP Engineering MEMS – Robert Bosch GmbH

Markus is heading the pre-development of MEMS at Bosch providing advanced sensor concepts for automotive, consumer and multi-market applications.

He started at Bosch in the sensor development and held various management positions in the Bosch electronics engineering world as well as in strategy development.

Since 2014 he is back in the sensor development where he is focusing on the successful transfer of new technologies from research to volume production.

GERMANY Delegation

Reinhard **Streiter**

FhG-ENAS Fraunhofer-Institute for Electronic Nano Systems

Technologie-Campus 3
09126 Chemnitz

Germany

+49 371 45001 288
reinhard.streiter@enas.fraunhofer.de

Fraunhofer ENAS

Reinhard was born in Salzwedel (Germany) Dec 06, 1959. 1981 to 1990 he studies in physics/electronic devices and completed doctoral thesis to Dr.-Ing. at the Faculty of Electrical Engineering and Information Technology at TU Chemnitz-Zwickau in 1990.

- Since 1990 research and teaching at chair for Microtechnology at Chemnitz, University of Technology. 1998 Chief Engineer at the Chemnitz University of Technology.
- Since 2007 Simulation Group Leader at Fraunhofer Institute for Electronic Nano Systems ENAS
- Since 2016 Guest Professor at National Center for International Research of Micro/Nano-Systems and New Material Technology at Chongqing University (CQU)

GERMANY Delegation

Torsten **Thieme**

memsfab GmbH

Technologie Campus 1
D-09126 Chemnitz
Germany

+49 371 5347 680
torsten.thieme@memsfab.de

memsfab GmbH

since 2004	**memsfab GmbH,** Chemnitz, Managing Director; development, production and sales of MEMS;
1999 - 2003	**Solid State Measurements GmbH**, Dresden, subsidiary of Solid State Measurements, Inc., Pittsburgh PA, USA, General Manager with Procure;
1997 - 1999	**System Antriebstechnik Dresden GmbH,** sales manager for special electro motor drives;
1989 - 1997	**SIOS Messtechnik GmbH**, Ilmenau; engineer for development of LASER-optical precision sensors;
1988	**Graduation Ph.D.**: „LASER-optical precision pressure measurement “;
1985 - 1988	**University of Technology in Ilmenau,** Institute “Sensor techniques”; research student
1985	**Diploma at the Institute „Manfred von Ardenne“**in Dresden: measurement in medical applications;
1981 - 1985	**University of Technology in Ilmenau**; Institute „Biomedical Cybernetics “; student;

IBERIA Delegation *Chief Delegate*

Carles **Cané**

IMB-CNM-CSIC. Centro Nacional de Microeletrónica

Campus UAB
08193 Bellaterra (Barcelona)
Spain

+34935947700
cane@cnm.es

Centro Nacional de Microelectrónica CSIC

Carles Cané is PhD on Telecommunication Engineering since 1989. In 1990 he joined the National Microelectronics Centre in Spain (CNM-CSIC) as full time senior researcher and has been working on the development of CMOS technologies and also of mechanical and chemical sensors, MEMs and Microsystems. His current expertise is on the integration of sensors and electronics. He is expert on behalf of the Spanish Ministry of Competitiveness and Economy in the H2020 NMPB Program Committee of the European Commission. In the past he has also been involved in the Industrial Programs related to the MicroNanoelectronics like, Eurimus, Euripides, Eniac, Ecsel and also in the EPoSS European Technology Platform on Smart Systems.

IBERIA Delegation

Luis **Fonseca**

IMB-CNM-CSIC. Centro Nacional de Microeletrónica

Campus UAB
08193 Bellaterra (Barcelona)

Spain

+34935947700
fonseca@cnm.es

Dr. Luis Fonseca was born in Barcelona, Spain, in 1966. He received his Ph.D. degree in Physics from the Autonomous University of Barcelona in 1992. He has developed his whole professional career in the National Center of Microelectronics (CNM). After a first research period on thin dielectrics, he worked as a process engineer, being in charge of the diffusion and deposition areas of the CNM production facilities, till he joined the Microsystems department as a full senior researcher in 2001. Nowadays he is leading the 'MicroEnergy sources and Sensor Integration' group, which deals with gas sensors, Si nanowire based thermogenerators, and micro fuel cells. He has participated in tens of national and international projects dealing with micronanotechnologies and has published more than 80 papers. He has coordinated the FP7 SiNERGY project (FP7-NMP-2013 GA 604169), recently finished, which focused in Silicon friendly materials and device solutions for microenergy applications.

Among other responsibilities, Luis Fonseca was IMB-CNM deputy director in the period June 2012-June 2016; he is member of the Steering Committee of the European Technology Platform on Smart Systems (EPoSS) since June 2008, and member of the Steering Committee of the Spanish TIC technological platform (PLANETIC) since January 2013.

IBERIA Delegation

Albert **Romano-Rodriguez**

Universitat de Barcelona

c/ Martí i Franquès, 1
08028 Barcelona
Spain

+34 934 039 156
aromano@el.ub.edu

UNIVERSITAT DE BARCELONA

Albert Romano-Rodríguez is a Professor in electronics at Universitat de Barcelona. He is active in the fields of characterisation of semiconducting materials and fabrication processes by using different structural, physical and chemical characterisation techniques, in the development of electronic materials for solar cells and in the design, fabrication and testing of different kinds of micro and nanosystems for physical and chemical sensors, with special emphasize in the fabrication of nanosensors based on nanowires towards the development of ultra-low power gas sensing systems based on these materials. He has authored over 180 peer-reviewed scientific and technical papers and has presented 15 invited talks at national and international conferences.

IBERIA Delegation	*Observer*

Andrea **Bartoli**

Worldsensing SL

c/ Aragó 383
08013 Barcelona
Spain

+34 673164127
abartoli@worldsensing.com

Dr. Andrea Bartoli, received the B.S. degree in telecommunications engineering from the “Universitá Politecnico di Milano” in 2009 and the M.S. degree from the “Universitat Politècnica de Catalunya” in 2010. He has finalized Ph.D. in telecommunications engineering with “cum laude” at the Centre Tecnològic de Telecomunicacions de Catalunya in Barcelona working on the MAESTRO project (machine-to-machine and embedded systems security protocol suite) in 2013. Since 2010, he has been a member of a security group community developing and implementing WAVE2M technology, a secure standard for low-powered networks. He worked as investigator and Project Manager in the Information Security Group of UPC until 2014. In 2015, he joined Worldsensing to work as Project Manager for coordinating several research activities of this SME. Today, he is the head of the Innovation Unit and is working in long list of projects concerning IoT, Secuirty, 5G, etc.

IBERIA Delegation	*Observer*

Milagros **Rey Porto**

Gas Natural Fenosa

Plaça del Gas 1
08019 Barcelona
Spain

+34 934025217
mreyp@gasnatural.com

Milagros Rey Porto (f). PhD in Electrical Engineering by the University of Pamplona and CENER (Renewable Energy National Centre) and graduated in Chemical Engineering by the University of Santiago de Compostela with a master in Renewable Energies also by the University of Santiago de Compostela and a master in Inorganic Chemistry by the University of Barcelona. She is working in GNF R&D&i area during the last 10 years participating and coordinating several EU projects and Clusters (3eHouses, GrowSmarter, DC4Cities, InteGridy, LNG Blue Corridors, GARNET, CleanPort, European Clusters for Smart Cities and Data Centers, etc). Currently, Milagros is manager of the Innovation Smart Client Area.

IBERIA Delegation	*Observer*

Mariano **Lamarca Lorente**

Barcelona City Council

220 Diagonal Avenue 2nd
08018 Barcelona
Spain

+34932908200
mlamarca@bcn.cat

In next lines you can read a resum of my CV:

- Telecommunications Engineer By Universitat Politècnica de Catalunya,
- Electronic Engineer By Universitat Ramon Llull,
- Master in Quality Management and Executive MBA by UPC.

Today I work in the Municipal Institute of Information Technology (IMI) from Barcelona City Council since 2007 as Infrastructures Manager and drive several projects in Wireless, Sensoring and Smart Cities.

I am member of AENOR CTN 178 Committee focused in Smart Cities and with Spain Delegation I participate Standardization Bodies (ITU, ISO,…)

I have mounted the Pilot WIFI Mesh Outdoor (69 nodes), the WIFI Mesh deployment in Barcelona (401 Nodes) and several sensoring test projects (B-Sens, BCI, Urban Labs, etc…) and EU Projects(Open Cities, iCity, OpenDAI, …).

Before, I worked in CATV Catalonia Operator as Access Technology Manager (HFC, FTTx, MVDS, LMDS, WIMAX, WIFI,...), in AUNA as O&M area manager and Access Technology Manager, in several enterprises as external consultant and as a Lecturer in several Universities (UPC, URL and UdA) and Andorra Governement. I worked in short projects in other countries: Switzerland, Belgium, Danemark, Great Britain, Netherlands, Andorra and USA.

PD: AENOR is formerly representative of CEN, CENELEC, ETSI, ITU, ISO and other standardization bodies in Spain.

IBERIA Delegation	*Observer*

Rosa **Paradell**

Fundació i2CAT

c/ Gran Capità nº 2
08034 Barcelona
Spain

+34 675 781 955
rosa.paradell@i2cat.net

Rosa Paradell is a Telecom Engineer with an Economics Degree, and a Master Degree in Energy Engineering.

After almost ten years working in a telecom operator, she started working in the application of IT to urban services and energy efficiency, projects that some years ago started to be known as Smart Cities.

She has been boosting the Smart Cities sector working as the Smart City Expo World Congress Director and also with other projects, like the Smart City Business Institute.

After this period she has come back to more technological responsibilities working as the IoT and Smart Cities Innovation Business Unit Manager in i2CAT.

i2CAT Foundation is a non-profit research and innovation center which promotes mission-oriented R+D+i activities on advanced Internet architectures, applications and services.

IBERIA Delegation *Observer*

Josep **Paradells**

Fundació i2CAT
Universitat Politècnica Catalunya

c/ Gran Capità nº 2
08034 Barcelona

Spain

+34 667447742
josep.paradells@i2cat.net

He is full professor in the Telematics Department of the Universitat Politècnica de Catalunya and director of the Fundació i2Cat. He is also the responsible of the connectivity area at the SEAT-UPC Chair. His research activity is focused on the usage of the wireless systems and Internet access technologies. He is coauthor together with C. Gomez and J.E. Caballero of the book "Sensors Everywhere: Wireless Network Technologies and Solutions?", published by Fundación Vodafone in 2010. He managed to install in 2007 the first smart city in Spain in the village of Sant Vicenç del Horts. It consisted on more than 80 nodes. Some of them are installed in lampposts to create an access network and the others in different places such trash containers, parking places or green zones. From 2010 to 2012 he has been in charge of the participation of the UPC in the project BCI (Barcelona Ciudad Inteligente) where new concepts such a REST protocol was defined to communicate from the gateway to the platform. Also with the support from Orange the infrastructureless smart city is demonstrated. This implies to have a public bus moving in the city and collecting information from sensors and measuring certain parameters by itself. At present he is participating in a lighthouse project called Growsmarter. The participation of i2CAT will deploy a set of environmental sensors in electric bikes.

IBERIA Delegation *Observer*

Jordi **Ricart Campos**

LEITAT Technological Center

c/ de la Innovació, 2
08225 Terrassa
Spain

+34937882300
jricart@leitat.org

Jordi Ricart (Male) holds a PhD in Electronic Engineering from the Polytechnic University of Catalonia and electronic enginier from the same University. His research career has focused on the development, modelling and testing of electronic devices. He has worked during 15 years in the sector of electronic devices and systems in task of design, development and testing. The main activity has focused on sensor devices and actuators for space applications. He has participated in various conferences and has publications in international journals in the field of sensors and electronic devices' design and development. His professional activity has been carried out in academic centers and private companies. He is currently developing his professional career at LEITAT Technology Center involved in R&D projects since 2015, specializing in the development of new technologies in the field of electronic systems. Currently he leads the team of Smart Systems, and participates in European and Spanish platforms such ECSEL, ENIAC, among others.

IBERIA Delegation	*Observer*

Xavier **Vilalta**

ACCIÓ / Government of Catalonia

Pg de Gràcia 129
08006 Barcelona
Spain

+34934767200
xvilalta@gencat.cat

ACCIÓ

Generalitat de Catalunya
Government of Catalonia

Xavier is an economist that has developed its professional career in Economic Development, Marketing and International Relations. He is now coordinating the Smart Strategy of ACCIÓ, the Agency for Business Competitiveness of the Government of Catalonia, which aims to identify opportunities for SME's in the Smart City environment. In the Economic Development field, Xavier has been involved in the promotion and management of Foreign Investment in Catalonia, both from Barcelona and New York, and was also involved in the promotion and Business Development of TECNIO, the network of Technological Centres in Catalonia.

IRELAND Delegation *Chief Delegate*

Cian **O'Mathuna**

Tyndall National Institute

Lee Maltings, Dyke Parade
T12 R5CP Cork
Ireland

+353 87 2414187
Cian.omathuna@tyndall.ie

Cian O'Mathuna is Head of Strategic Programs at Tyndall National Institute and a Research Professor in the College of Engineering in University College Cork, Ireland. His research is focused on making and powering the smart things for the Internet of Everything and he has 30+ years in research and technology transfer to both Irish and global electronics companies. From 1997 until 2012, he was Head of the Microsystems Centre at Tyndall. In 2005, he was co-founder of Irish industry/academic groups, PEIG (Power Electronics Ireland Group) and WiSEN (Wireless Sensor Networks). He has been a Director of the PSMA (US-based Power Sources Manufacturers Association) and co-chair of its Packaging Committee. In 2008, he founded the International Workshop on Power Supply-on-Chip (PwrSoC), which is now a global flagship for PSMA and the IEEE Power Electronics Society. He is co-author of more than 200 publications and currently is a Science Foundation Ireland Principal Investigator for Advanced Magnetics on Silicon. In 2013, he was named IEEE Fellow in the field of power electronics "for leadership in the development of power supply using micromagnetics on silicon".

ITALY Delegation	*Chief Delegate*

Paolo **Dario**

Scuola Superiore Sant'Anna (SSSA) – The BioRobotics Institute

Viale R. Piaggio 34
56025 Pontedera (Pisa)

Italy

+39 050 88 3102/3420
paolo.dario@santannapisa.it

Paolo Dario is Full Professor of Biomedical Robotics and Director of The BioRobotics Institute at the Scuola Superiore Sant'Anna (SSSA), Pisa, Italy. He has been Visiting Professor at several Universities (Brown University, EPFL, École Normale Superieure de Cachan, Polytechnic University of Catalunya and Zhejiang University). Currently, he is a Professor at Waseda University and at Tianjin University and Visiting Chief Researcher in Robotics and Biomedical Engineering at Khalifa University. He has been and is the coordinator of many national and European projects, the editor of two books on the subject of robotics, and the author of 800 scientific papers (400 on ISI journals). His H-index (Scopus) is 56 (he is the Italian scientist with the highest number of Scopus papers in the Engineering subject area), with 12,945 citations. He is also inventor of 33 patents. Prof. Dario has been and is Editor-in-Chief, Associate Editor and member of the Editorial Board of many international journals and book series. He is founding Editorial Board member of the prestigious journal Science Robotics. He is an IEEE Fellow, a Fellow of the European Society on Medical and Biological Engineering, and a recipient of many honours and awards, such as the Joseph Engelberger Award for Pioneer Research in Biomedical Robotics and the IEEE RAS George Saridis Leadership Award in Robotics and Automation for 2014 and the IEEE RAS Pioneering Award in 2017. He has promoted the creation of more than 20 start-up companies active in the market of biomedical devices and services, and he is/has been a partner of 5 of them. Paolo Dario's main fields of interest are BioRobotics and Bionics, frontier research areas that combine bio-inspiration and bio-application, as well as interdisciplinary and transdisciplinary knowledge.

ITALY Delegation

Gastone **Ciuti**

Scuola Superiore Sant'Anna (SSSA) – The BioRobotics Institute

Viale R. Piaggio 34
56025 Pontedera (Pisa)

Italy

+39 050 883072/3055
gastone.ciuti@santannapisa.it

Gastone Ciuti received the Master's degree (with Hons.) in Biomedical Engineering from the University of Pisa (Italy) in 2008 and the Ph.D. in Biorobotics (with Hons.) from The BioRobotics Institute (Scuola Superiore Sant'Anna, Pisa, Italy) in 2011. He is currently an Assistant Professor (tenure track) at The BioRobotics Institute leading the Computer-Integrated Technologies for Robotic Surgery laboratory (Surgical Robotics and Allied Technologies area). Research interests include robot/computer-assisted platforms (i.e., teleoperated magnetic-based robotic platforms) for navigation, localization and tracking of smart and innovative devices for guided, focused and targeted minimally invasive surgery and diagnosis (e.g., in advanced capsule endoscopy and cardiovascular surgery). He is actively involved in different National and International research projects, such the EU H2020 EndoVESPA project. He is co-author of about 50 International peer reviewed papers on computer-integrated platforms and innovative devices for medical robotic intervention and treatment and he is also inventor of 8 patents.

ITALY Delegation

Virgilio **Mattoli**

Istituto Italiano di Tecnologia

Via R. Piaggio, 34
56025 Pontedera (PI)
Italy

+39 349 5868436
virgilio.mattoli@iit.it

ISTITUTO ITALIANO
DI TECNOLOGIA

Virgilio Mattoli received his Laurea degree in chemistry (with honours) from the University of Pisa and the Diploma in Chemistry from the Scuola Normale Superiore of Pisa in 2000. In 2005 he received his PhD in bio-engineering (with honours) from Scuola Superiore Sant'Anna, with a thesis focused on the control and integration of miniaturized devices for environmental application. In 2004 he was visiting researcher at the University of Stanford, Center for Design Research, where he focused his activity on sensors and controls modules for biomimetic robotics applications. In 2005 and 2008 he was a short term visiting researcher at Waseda University (Tokyo, Japan) working on a bio-inspired mini-robot and on development of ultra-conformable polymeric films. From June 2008 to October 2009 he obtained a temporary position of Assistant Professor of bioengineer engineering at the Scuola Superiore Sant'Anna (SSSA). From November 2009 to July 2015, he has been a Team Leader of the Smart Materials Platform in the Center for Micro-BioRobotics @SSSA of the Istituto Italiano di Tecnologia. In August 2015, he obtained a permanent position of Senitor Researcher Technologist at the Center for Micro-BioRobotics @SSSA of the Istituto Italiano di Tecnologia. His main research interests include: smart and bio-inspired materials, nanomaterials, ultra-thin polymeric films, thin film sensors, sensor conditioning, miniaturised acquisition system and biorobotics. He is currently involved in several research projects on these topics. He is author or co-author of more than hundred articles on ISI journals, of more than forty full papers published in peer-reviewed international conferences proceedings and of several deposited patents.

ITALY Delegation

Juan Jose **Gavilán**

STMicroelectronics Srl

Via Tolomeo, 1
20010 Cornaredo (Milano)
Italy

+39 02 9351 9068
juan.gavilan@st.com

Juan Jose Gavilán is Vice President of Business Management and Market Development for South, East Europe, Middle East & Africa and has Sales responsibilities for South Europe at ST Microelectronics. He has over 20 years of experience in the Digital Consumer domain, covering different roles in his career, including product development, marketing and sales.

Juan Jose's background in software development, project management and consumer applications allow him to understand and address the customer and market needs. He and his team are actively contributing to several customer programs ensuring the proper coordination of the overall ecosystem by providing the best in class service across the different program steps (requirement analysis, solution proposal, development, and product ramp-up).

More recently, Juan Jose and his team has been working with clients to incorporate the most advanced ST's technology into their next generation of products, focusing on Strategic Applications in Smart Industry, Smart Cities, Smart Home, Smart Things and Smart Driving environments.

ITALY Delegation

Alessandro **Leone**

IMM-CNR - Institute for Microelectronics and Microsystems

Via Monteroni, presso Campus Universitario,
Palazzina A3
73100 Lecce
Italy

+39 0832 422 514
alessandro.leone@le.imm.cnr.it

Dr. Alessandro Leone received the Degree in Computer Science Engineering in 2003 from the University of Lecce. Since 2003 he is researcher at the Italian National Research Council, Institute for Microelectronics and Microsystems in Lecce. He is interested in Signal and Image Processing, Pattern Recognition, Computer Vision and Smart Multi-sensorial Systems with particular focus on the new Ambient Assisted Living technologies. Eng. Leone is the technical coordinator of the Signal&Image Processing Laboratory and he is mainly involved in development of enabling technologies for healthcare: fall detection & prevention, neurodegenerative cognitive rehabilitation, interoperability platforms and smart wearable sensors for vital signs monitoring. He is author of more than 60 papers in national and international journals and conference proceedings. He is the technical coordinator of InnovAALab (the Apulian Living Lab on “Healthy, Active & Assisted Living”) which is hosted by InnovAAL – PPP for research, development and testing of new Technologies and Services on AAL. Moreover, since 2014 Dr. Leone is member of the Europen AAL Forum Program Committee.

ITALY Delegation

Leandro **Lorenzelli**

FBK – Center for Materials and Microsystems

Via Sommarive, 18, Povo
38123 Trento
Italy

+39 0461 314455
lorenzel@fbk.eu

Leandro Lorenzelli received the Laurea degree in Electronic Engineering at the University of Genova in 1994 and a PhD in 1998 in Electronics Materials and Technologies at University of Trento and focused on the development of CMOS-based electrochemical microsensors. Since 1998 he has joined the staff of the ITC-irst Microsystems Division (now FBK-CMM) and he has been involved in the realization of microsystems for biomedical, environmental and agro-food applications. Since 2005 he had been head, at FBK-CMM, for the BioMEMS research area with specific tasks in the microfabrication technologies for both BioMEMS and microtransducers.

Since 2013 has been coordinator of the Microsystems Technology (MST) research unit at FBK.

Currently he is coordinator of European projects on the area of system integration.

His main research interests are on the sectors of MEMS-sensors, technologies for lab on chip and flexible sensors.

ITALY Delegation

Arianna **Menciassi**

Scuola Superiore Sant'Anna (SSSA) – The BioRobotics Institute

Viale R. Piaggio 34
56025 Pontedera (Pisa)

Italy

+39 050 883048
arianna.menciassi@santannapisa.it

Arianna Menciassi is Full Professor of Biomedical Robotics at SSSA and team leader and research principal investigator of the "Surgical Robotics & Allied Technologies" Area at The BioRobotics Institute. Last year she was Visiting Professor at the Ecole Nationale Superieure de Mecaniques et des Microtechniques (ENSMM) of Besancon (France), in the FEMTO Institute, and she was Visiting Professor at the ISIR Institute at the Université Pierre et Marie Curie, in Paris. She has considerable experience in leading interdisciplinary teams toward successful outcomes. Furthermore, she has a substantial devotion to training and education, both at SSSA and at the University of Pisa, having served as preceptor to 15 postdoctoral associates, 20 PhD students and ~ 50 graduate degree recipients.

She carries on an important activity of scientific management of several projects (more than 20), European and extra-European, thus implying many collaborations abroad and an intense research activity.

She is co-author of more than 370 scientific publications (more than 230 on international journals) and 7 book chapters on biomedical robots/devices and microtechnology. She is co-Editor of a book on piezoelectric nanomaterials for biomedical applications. She is also inventor of 25 patents, national and international. She has a H-index of 44 and a total of 6,370 citations according to the Scopus source.

She served until August 2013 in the Editorial Board of the IEEE-ASME Trans. on Mechatronics and she is now Topic Editor in Medical Robotics of the International Journal of Advanced Robotic Systems; she is Co-Chair of the IEEE Technical Committee on Surgical Robotics, she is the Nanotechnology Technical Committee representative of the steering committee of the IEEE Transactions on Nanobioscience.

ITALY Delegation

Leonardo **Ricotti**

Scuola Superiore Sant'Anna (SSSA) – The BioRobotics Institute

Viale R. Piaggio 34
56025 Pontedera (Pisa)

Italy

+39 050 883074
leonardo.ricotti@santannapisa.it

Leonardo Ricotti obtained a M.Sc. in Biomedical Engineering at the University of Pisa in 2007 and a PhD in Biorobotics at SSSA, in 2012. He is currently Assistant Professor of Bioengineering and Biorobotics at SSSA and head of the "Micro-nano-bio systems and targeted therapies" Lab at the BioRobotics Institute (http://sssa.bioroboticsinstitute.it /user/121). He supervises or co-supervises 9 PhD students and has been the tutor of 23 M.Sc. theses on bioengineering topics. He carries out innovative research efforts at the interface between different disciplines, such as robotics and mechatronics, materials science, molecular biology and biotechnology. He is co-author of 65 scientific publications (45 on ISI journals) and 6 book chapter. He is also inventor of 7 patents. He has a H-index of 19 and a total of 896 citations according to the Scholar source and a H-index of 14 and a total of 639 citations according to the Scopus source.

He is Associate Editor of the IEEE Transactions on NanoBioscience, Editorial Board Member of the Journal of Regenerative Medicine, Editorial Board Member of the International Journal of Nanomaterials, Nanotechnology and Nanomedicine and he has been Associate Editor for the IEEE International Conference on Robotics and Automation (ICRA) in 2015 and in 2016.

In 2012, he received the "Massimo Grattarola" award for the best PhD Thesis in bioengineering. In 2013, he received two "Best Oral Presentation" awards for Conference talks concerning bio-hybrid system development. In July 2014, he was awarded with the European Biomaterials and Tissue Engineering Doctoral Award.

ITALY Delegation

Pietro **Siciliano**

IMM-CNR- Institute of Microelectronics and Microsystems

Via Monteroni
73100 Lecce
Italy

+39 0832 422500
pietro.siciliano@le.imm.cnr.it

Dr. Pietro Siciliano received his degree in physics in 1985 from the University of Lecce. He took the Ph.D. in Physics in 1989 at the University of Bari. He is currently a Director of Research at the Institute for Microelectronics and Microsystems (IMM-CNR) at CNR in Lecce, where he has been working from many years in the field of Sensors, MEMS, Microsystems, being in charge of the Sensors and Microsystems group. He is author of about 350 scientific papers. Dr. Siciliano is referee and member of the advisory board of international journals. He has been responsible for several national (FISR, FIRB, PON) and international (V, VI and VII EU Framework) projects at IMM-CNR. He is member of the Steering Committee of AISEM, the Italian Association on Sensors and Microsystems. He has been chairman and member of the organising committee of international Conferences and School in Sensors and Microsystems area. He is Director of the Section in Lecce of IMM-CNR. He is President of INNOVAAL scarl, the Technological District on Active & Assisted Living, and President of the Italian Cluster on “Smart Living Technologies”

ITALY Delegation

Mario **Zen**

FBK – Center for Materials and Microsystems

Via Sommarive, 18, Povo
38123 Trento
Italy

+39 0461 314500
zen@fbk.eu

1978 Degree in Physics, University of Trento (Italy).

1979-1981 Fellowship grant at the Department of Physics - University of Trento.

1982-1991 Researcher of the Istituto Trentino di Cultura-ITC in the Integrated Circuits and Measurement Laboratory.

1992 Head of the ITC-irst Microfabrication Laboratory.

1993 Head of the ITC-irst Research Division “Microsensors and System Integration”.

1997-2005 Head of the ITC-irst Microsystems Division.

2004-2007 Director of ITC-irst.

2007-2011 Head of the Technological Transfer Office of FBK.

2011-present Head of the Research Intelligence & Technology Transfer Unit

JAPAN Delegation *Chief Delegate*

Isao **Shimoyama**

University of Tokyo

7-3-1, Hongo, Bunkyo-ku
113-8656 Tokyo
Japan

+81-3-5841-6317
isao@i.u-tokyo.ac.jp

東京大学
THE UNIVERSITY OF TOKYO

Isao Shimoyama was born in Japan in 1955. He received the B.E., M.E, and Dr. of Engineering degrees in mechanical engineering from The University of Tokyo in 1977, 1979, and 1982, respectively. He joined The University of Tokyo in 1982 and is presently Professor, Director of Information and Robot Technology Research Initiative. His current Research interest is in MEMS, nano-on-microsystems, and Robotics.

JAPAN Delegation

Takashi **Mihara**

Micromachine Center

MBR99 Bldg. 6F., 67 KandaSakumagashi, Chiyoda-ku
101-0026 Tokyo
Japan

+81-3-5835-1870
t_mihara@mmc.or.jp

Takashi Mihara received his MS degrees in physics from Tokyo University of Science, Japan in 1981. He worked on high speed bipolar devices and ultra-high-speed ECL memories for super computer at Hitachi LSI systems Corp. Since 1988, he worked on versatile BiCMOS with V-PNP, fatigue-free ferroelectric memories, and chemical sensor system using MEMS microcantilever in Olympus Corp. Now he is a Director General of MEMS Industry Forum, and MNOIC Strategy Planning Dept. Micromachine Center in Japan. He received the Ph. D. degree in Electrical Eng., in 1996.

KOREA Delegation *Chief Delegate*

Tae Song **Kim**

Korea Institute of Science and Technology

5, Hwarang-ro 14-gil, Seongbuk-gu
02792 Seoul
Republic of Korea

+82-2-958-5564
tskim@kist.re.kr

Korea Institute of Science and Technology

1. Education
1978-1982: BS., Department of Ceramic Engineering, Yon Sei Univ.
1982-1984: M.Sc., Electronic Materials, Department of Material Science & Engineering, KAIST
1990-1993: Ph.D., Thin Film Materials Processing; Department of Material Science & Engineering, KAIST

2. Professional career
1994-2000: Senior Researcher, Korea Institute of Science and Technology (KIST)
1997-1998: Post-doctoral associate, Department of Electrical Eng. and Computer Sci, Univ. of Minnesota, USA
2000-current: Principal Researcher, Center of BioMicrosystems, KIST
- 2000-2004: Head of Microsystem Research Center, KIST
2004-2010: Director, Intelligent Microsystem Center, 21stCentury Frontier Program, MOCIE, Korea
2004-current: Professor, University of Science and Technology (UST), Korea
2007-2010: Director, Korean MEMS Technology Association
2009: Chairman, MicroTAS 2009 at Jeju, Korea
2010-current: Board Member of Chemical and Biological Microsystem Society (CBMS)
2011-2013: President, Steering Committee of ISMM
2011: President, Korean BioChip Society
2012: President, Micro and Nano System Society, Korea
2013-2016: Director, Open Research Program, KIST
2014-current: Director, Micro Nano Fab Center, KIST

KOREA Delegation

Ki-Bum **Kim**

Seoul National University

1 Gwanak-ro, Gwanak-gu
08826 Seoul
Republic of Korea

+82-2-880-7095
kibum@snu.ac.kr

Ki-Bum Kim received the B.S. and M.S. degrees in Metallurgical Engineering from Seoul National University, Seoul, Korea, in 1980 and 1983, respectively, and the Ph.D. degree in Materials Science and Engineering from Stanford University, California, in 1990. From 1988 to 1991, he was with Philips Research Laboratory at Sunnyvale, California, as a Research Staff Member and, from 1991 to 1992. He was with Applied Materials Inc., California, as a Process Development Engineer. In 1992, he joined Seoul National University, Seoul, Korea, as an Assistant Professor in the Department of Materials Science and Engineering, where he is currently a Professor. In 2008, he worked at IBM, Yorktown Height, as a Visiting Professor on sabbatical year.

He was the committee member of AMC (Advanced Metallization Conference) and ADMETA (Advanced Metallization Conference in Asia), and is a member of MRS and ECS. His current research focus moved to the formation of sub-10nm scale single and multiple nanopores for detection of bio-molecules such as DNA. He has contributed as an associate editor of Journal of Nanoparticle Research since 2007. Since he started his research work, he has published about 169 SCI papers with a total citation of 3129 and an H-factor of 28.

KOREA Delegation

Jun-Bo **Yoon**

School of EE, KAIST

291 Daehak-ro, Yuseong-gu
305-701 Daejeon
Republic of Korea

+82-10-8912-7290
jbyoon@kaist.ac.kr

Jun-Bo Yoon received the Ph.D. degree in electrical engineering from Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, in 1999. From 1999 to 2000, he was with the University of Michigan, Ann Arbor, as a Postdoctoral Research Fellow. In 2000, he returned as a Research Assistant Professor to the Department of Electrical Engineering, KAIST, where he is currently a Professor. He was at Stanford University, Stanford, CA, from 2008 to 2009 on his sabbatical leave. He has made contributions to the world's smallest/lowest-voltage nanoelectromechanical switch, the invention of the 3D diffuser lithography, and high-Q RF MEMS components. He has authored and coauthored more than 200 journal and conference papers. He has 40 international/82 domestic patents. He is an Editor of the IEEE Journal of Microelectromechanical Systems. Also, he is on the editorial boards of the IOP Journal of Micromechanics and Microengineering and an Editor-in-Chief of Micro and Nano Systems Letters (SpringerOpen). His research interests include RF MEMS, display MEMS, and micro/nanoelectromechanical switches for solid-state memory/logic applications. He has served as a Technical Program Committee member for IEEE A-SSCC 2007, Transducers 2009, IEEE MEMS 2009, IEEE MEMS 2010, IEEE MEMS 2017 and Transducers 2011 conferences, and as an Executive Program Committee member for Transducers 2013 and 2015 conferences. He will be the co-general chair for IEEE MEMS 2019 Seoul. He has been with the World Micromachine Summit since 2011.

LATIN AMERICA Delegation	*Chief Delegate*

Daniel **Lupi**

Argentinean Foundation of Nanotechnology (FAN)

25 de Mayo 1021
B1650HMI Gral. San Martin, Buenos Aires
Argentina

+54 11 4518 1715
dlupi@fan.org.ar

Mr. Daniel O. Lupi is currently President of the Argentinean Foundation of Nanotechnology.
Member of the Board of Directors of the National Institute of Industrial Technology of Argentine.
He is professor and researcher in the National University of La Matanza, Buenos Aires.
He is Electromechanical Engineering at National University Buenos Aires and Master of Arts in Strategic Management of Innovation, at the Ecole Polytecnique ESST Federal Lausanne, Switzerland.
He was Director of the Center Electronics Telecommunications and Informatics of INTI (National Institute of Industrial Technology), International Manager ICT area of the Iberoamerican Program of Science and Technology for Development (CYTED).
Evaluator of Research and Development Projects in the Research Council (CIC) of the province Buenos Aires and National Universities and Organizations International.
National Coordinator of IBERNET (Microtechnologies Industrial Application, Training and Dissemination) 5th. European Framework Programme.
Chairman of the Committee on Science and Technology and Innovation of the Argentine Center of Engineers (CAI).
International Coordinator of Iberoamerican Network "Qualification and Certification Devices and Microelectronic Systems" CYTED.
National Director of the Project "Enhancing the Competitiveness of Argentine Industry" with the European Union.
National Coordinator Alfa-Nicron Network and participates as a researcher in a “Prosul” projects.
Program Chair of several International Conferences and Workshops in the field of microsensors, nanotechnology and applications.
He is author and co-authored several scientific papers and a patent in the areas of Microsensors, MEMS and Testing and the text book Sensors and Applications. Invited professor and lectures in several courses and seminars, on these issues, and post-graduate courses.
His areas of research interest include the application and development of sensors and in particular micro and nanosensors, and IoT applications.

LATIN AMERICA
Delegation

Nilton **Morimoto**

Polytechnic School of University of São Paulo

Av. Prof. Luciano Gualberto, 158 – trav.3
05508-010 São Paulo/SP
Brazil

+551130915314
morimoto@lsi.usp.br

Nilton Morimoto obtained his BS in Physics in 1984, MS (1987) and Ph.D. (1995) in Microelectronics at University of São Paulo, Brazil. Since 1982 he has been with the Laboratory of Integrated Systems (LSI) at Polytechnic School - University of São Paulo. He has worked in the microelectronics processes and devices areas. Presently, he is the LSI Administrative Manager and Head of the Integrated Microsystems Divisions and the Thin Films Section of LSI. He published more than 110 papers, mainly on thin films and CVD processes, in different journals and proceedings. His current interests are: CVD thin films deposition processes, materials characterizations technic, smart sensor, IC manufacturing, Micromachining for different applications. Elected President of Brazilian Microelectronics Society (2008/2012 and 2016/2018), and Vice President (2012/2016). Director of the IC Design House of LSI-Tec (since 2007) and of Brazilian National Microelectronics Program (IC Brazil) since 2014.

NORDIC Delegation *Chief Delegate*

Per **Ohlckers**

University College of Southeast Norway

Vestfold Innovation Park, Raveien 215
3184 Borre
Norway

(+47) 959 03 989
Per.Ohlckers@usn.no

HSN University College of Southeast Norway

Per Ohlckers is Professor at Department of Microsystems at University College of Southeast Norway, Borre, Norway from September 2005. He is also Emeritus Professor, Department of Physics, University of Oslo. He received his M.Sc. degree in Physical Electronics from Norwegian Institute of Technology (NTH, now NTNU) in 1974. Per Ohlckers has contributed to the development of several successful commercial products and he has a large number of international publications including textbook chapters with a focus on silicon sensor technology and micro- & nanotechnologies, including three patents. His time is spent on applied research, contract research for companies, and lecturing in semiconductor devices and supervising PhD students at University College of Southeast Norway.

SINGAPORE Delegation *Chief Delegate*

Jianmin **Miao**

Nanyang Technological University

50 Nanyang Avenue
639798 Singapore
Singapore

+65-67906038
mjmmiao@ntu.edu.sg

Professor Jianmin Miao received his bachelor degree from the Tongji University, Dipl.-Ing. and Dr.-Ing. degree in Microelectromechanical Systems (MEMS) from the Darmstadt University of Technology, Germany. After spending several years in industry for sensor/MEMS development, he joined the Nanyang Technological University in 1998 to establish the Micromachines (MEMS) Centre as the Founding Director. Professor Miao has collaborated with MIT at the Singapore-MIT Alliance for Research and Technology (SMART) since 2007 and was a visiting professor at MIT in 2013. He has been a distinguished visiting professor at the Shanghai Jiantong University since October 2013. He has authored or co-authored nearly 400 papers in international journals and conferences, several book/chapters, and holds 25 patents. He is the member of the editorial board of the Sensors and the Journal of Microelectromechanical Systems, has served as Chair and Co-Chair of MEMS/nanotechnology international conferences, technical committee member of international conferences, including the IEEE-MEMS and Transducers conference. He was invited by several international MEMS/Nanotechnology conferences as plenary speaker, keynote lecturer, and invited speaker. He is also actively involved in MEMS commercialization and co-founder of MEMS startups.

SWITZERLAND Delegation	*Chief Delegate*

Philippe **Fischer**

FSRM

Ruelle DuPeyrou 4, CP2353
2001 Neuchâtel
Switzerland

+41 32 720 09 00
fischer@fsrm.ch

Education: Master of Science in Microtechnology in 1984 from the EPFL

since 2007: Director of the FSRM (Swiss Foundation for Research in Microtechnology).

from 2000 to 2007: Vice Director of the FSRM

from 1990 to 2000: Scientific Assistant at the FSRM. Responsible for the training activities of the FSRM, including a large, Europe wide, training program in the field of Microsystems and a continuous education program targeted to the Swiss industry.

In charge of the organization of major events such as scientific conferences, information days, World Micromachine Summit in 1996.

from 1986 to 1990: Development engineer and project manager at Mettler- Toledo, manufacturer of precision weighing systems and balances, near Zürich.

from 1984 to 1986: Development engineer for measuring systems at the Dental Institute of the University of Zürich

since 1994: President of the Swiss Society for Sensor Technology.

since 2014: President of the International chronometry competition.

SWITZERLAND Delegation

Philippe **Fluckiger**

EPFL CMi

Station 17
CH-1015 Lausanne
Switzerland

+41 21 693 6695
philippe.fluckiger@epfl.ch

ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

Since 1999 Philippe Flückiger is the Director of Operations at the EPFL Center of MicroNanoTechnology (CMi), a world-class state-of-the-art cleanroom dedicated to research and development in the field of Micro and Nano Fabrication (see http://cmi.epfl.ch/). He received his diploma in physics from the University of Neuchâtel, Switzerland in 1987 and his PhD from the same University in 1993. From 1993 to 1994 he was a post doc at Stanford University in the group of Calvin Quate, inventor of the AFM. From 1995 to 1997 he was successively process engineer, project manager and process engineering manager at Micronas SA in Bevaix, Switzerland. He joined then the Swiss Federal Institute of Technology in Lausanne (EPFL) to start the new activity in diffusion, oxidation and CVD at the Center of MicroNanoTechnology. He was appointed Director of Operations of the Center in 1999.

Dr Flückiger is a member of the managing board of the Swiss MNT Network since 2006.

Dr Flückiger is a member of the Scientific Management Committee of the NAMIS international research network on Nano and Micro Systems since 2012.

TAIWAN Delegation *Chief Delegate*

Yu-Ting **Cheng**

National Chiao Tung University

ED640, 1001 Ta-Hsueh Rd.
300 HsinChu
Taiwan

+886-3-5712121, 54169
ytcheng@mail.nctu.edu.tw

Yu Ting Cheng (SM'07) was born in Taiwan, China. He received the B.S. and M.S. degrees in materials science and engineering from National Tsing Hua University, Hsinchu, Taiwan, in 1991 and 1993, respectively, also the M.S. degree in materials science and engineering from Carnegie Mellon University, Pittsburgh, PA, in 1996 and the Ph.D. degree in electrical engineering from the University of Michigan, Ann Arbor, in 2000. His Ph.D. thesis focused on the development of novel vacuum packaging technique for microelectromechanical systems (MEMS) applications. After finishing his Ph.D. study in 2000, he became a research staff member with IBM Thomas J. Watson Research Center, Yorktown Heights, where he was involved in several system-on-a-package (SoP) projects. In 2002, he joined the Department of Electronics Engineering, National Chiao Tung University, Hsinchu, Taiwan, as an Assistant Professor and has been promoted as a Professor since 2009. His research interests include the fundamental study of materials for microsystem integration and nano/MEMS applications, SoP, and the design and fabrication of microsensors and microactuators.

Dr. Cheng was a co-recipient of the 2006 Best Paper Award presented at the 13th IEEE International Conference on Electronics, Circuits and Systems. He has served as a TPC member in many international conferences including IEEE Transducers, Sensors, NEMS, ISMM, ISSNIP, and APCOT. He is a member of IOP, and Phi Tau Phi.

TAIWAN Delegation

Chun-Hsun **Chu**

Industrial Technology Research Institute

8 Gongyan Road.,Liujia Dist.
73445 Tainan
Taiwan

+886-6-3847121
chchu@itri.org.tw

ITRI
Industrial Technology
Research Institute

Dr. Chu, Director of the Smart Microsystems Technology Center at ITRI.

He is the author of about 30 patents. He also had been the member of Semicon Taiwan MEMS Committee. Dr. Chu received his Bachelor, Master and Ph.D. degrees in Material Science and Engineering from National Cheng Kung University in Taiwan

He joined ITRI in 1993. He worked first as a development and process engineer on optical component. In 1999 he starts the first activities in the field of Microsystems development at ITRI.

TAIWAN Delegation

Jung-Tang **Huang**

National Taipei University of Technology

1, Sec. 3, Zhong-Xiao E. Rd.
106 Taipei
Taiwan

+886-937043692
jthuang@ntut.edu.tw

Jung-Tang Huang received a degree in Mechanical Eng. from National Taipei University of Technology in 1981 and his MS degree from Tsing Hua University, Taiwan, in 1986 and, the Ph.D. on Mechanical Eng. from University of California Los Angeles in 1992. He then joined the faculty of National Taipei University of Technology, where he has been a Professor since 2003 and in 2009, he was awarded the title of distinguished professor. From 1998, he serves as a division leader for NSC Northern MEMS center to promote Industry-Academy Research Collaboration. He has served as a consultant or conducted industrial projects with several companies on innovated MEMS and IOT products. His research interests include the IOT, Care Robot, Smart Healthcare, BIOMEMS, NEMS and packaging technology. He holds 12 U.S. patents, two Japan patents, 12 China patents and 100 Taiwan patents. He also incubated two innovative technology companies in the past three years, one is devoted to IOT based system and application of smart city, and the other is developing transdermal microneedle array patch sensors.

UNITED KINGDOM Delegation *Chief Delegate*

Massimiliano **Zecca**

Loughborough University

Epinal Way
LE11 3TU Loughborough
United Kingdom

+44-1509-227122
m.zecca@lboro.ac.uk

Professor Massimiliano Zecca is Chair of Healthcare Technology at Loughborough University, UK, in the Sports Technology Institute of the Wolfson School of Mechanical, Electrical and Manufacturing Engineering, where he leads the WBR – Wearable BioRobotics research group. He is also a key member of NCSEM, the National Centre for Sport and Exercise Medicine. Before joining Loughborough University, he worked in Waseda University, Tokyo, Japan, from 2003 to 2014, and in Scuola Superiore Sant'Anna, Pisa, Italy, from 1999 to 2003.

Prof. Zecca's main research objective is the observation and the analysis of the performance and skills of the human being in high dexterous tasks, such as laparoscopic and neuro- surgery, gait rehabilitation, mastication analysis, and so on, as well as human-robot cultural, musical and emotional interactions. This is achieved through the development of miniaturised wearable sensors and associated data processing methods. This combination of miniaturised hardware with advanced software is making it possible to measure the unmeasurable, i.e. to clarify the basic mechanisms underlying human's control of their bodies, which is a fundamental step for the development of better health-care systems, in particular when linked with the wellness system of the smart cities of the future.

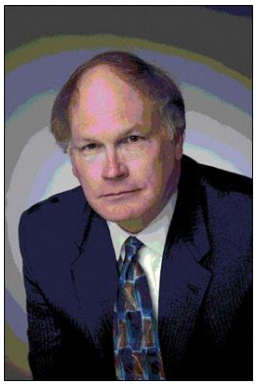
USA Delegation	*Chief Delegate*

Steven **Walsh**

University of New Mexico
University of Twente
MANCEF

P.O. Box 94465
87199 Albuquerque, NM
USA

+1 505 681-4835
swalsh91@comcast.net



Steve is a "Distinguished Professor" and the Creative enterprise professor at UNM's Anderson School of Management. He has served as the director of the Technology Entrepreneurship Program and is co-director of the MOT program at UNM. He is the "Institute" professor of Entrepreneurial Renewal of Industry at the University of Twente. He currently acts as an area editor for three journals and is on the review board of several others. He has many business service awards including the lifetime achievement award for commercialization of Micro and Nano technology firms from MANCEF. He has been recognized as one of top seven researchers worldwide in Technology and Innovation Management in the world over the past ten (10) years and one of the top 5 researchers in Technology Entrepreneurship over the past 15 years. He has also been named as a Tech All Star from the State of New Mexico Economic Development Department. Finally, he is exceptionally proud of the Anderson School of Management service to the community award he was awarded. He earned his Ph.D. from RPI.

He has also written several books and has authored well over 100 archival academic and practitioner articles. He has won many other academic research awards as well. These include the best paper of the year paper in Technology Forecasting and Social change (2005). Further, he has many times served as a special issue editor for different journals in Technology and Innovation Management, General Management, Entrepreneurship and Technical fields. He has been a co-special issue editor for journals such as; TFSC, SPIE's JM3, JBE, ISBJ, IJBER, CIMJ, Technovation, and EMJ. Under his special issue editorship these special issues have generated best paper of the year (IEEE transactions in Engineering Management) and have generated several articles that are among the top downloaded articles. He is a member of the working group for the National Institute of Nanotechnology Education (NINE). He currently provides a column for an emerging technology focused (MEMS and Nanotechnology) industrial journal named Commercial Micro Manufacturing International The name of that column is "The Commercialization Corner." He is active in Janus Ventures Inc. a consulting firm. Finally, he was a manager at a division of a fortune 500 firm and a serial entrepreneur where he helped to attract tens of millions of dollars to those ventures.

General Information

CULTURAL VISIT TO "LA PEDRERA"

A visit to Casa Milà, popularly known as 'La Pedrera' (the stone quarry), a building that is a reference point in world architecture, allows you to understand and gain a deep knowledge of the work of Antoni Gaudí, the most famous catalan architect. The visit to La Pedrera covers different museum areas – the Espai Gaudí and the Pedrera Apartment – which, together with the Courtyard, the Exhibition Room and the Roof-Terrace, make up the tour of the building. The Espai Gaudí, in the attic, offers a broad view of his work, showing the most basic traits of his clearly visual and empirical way of understanding architecture through models, audiovisuals and objects.

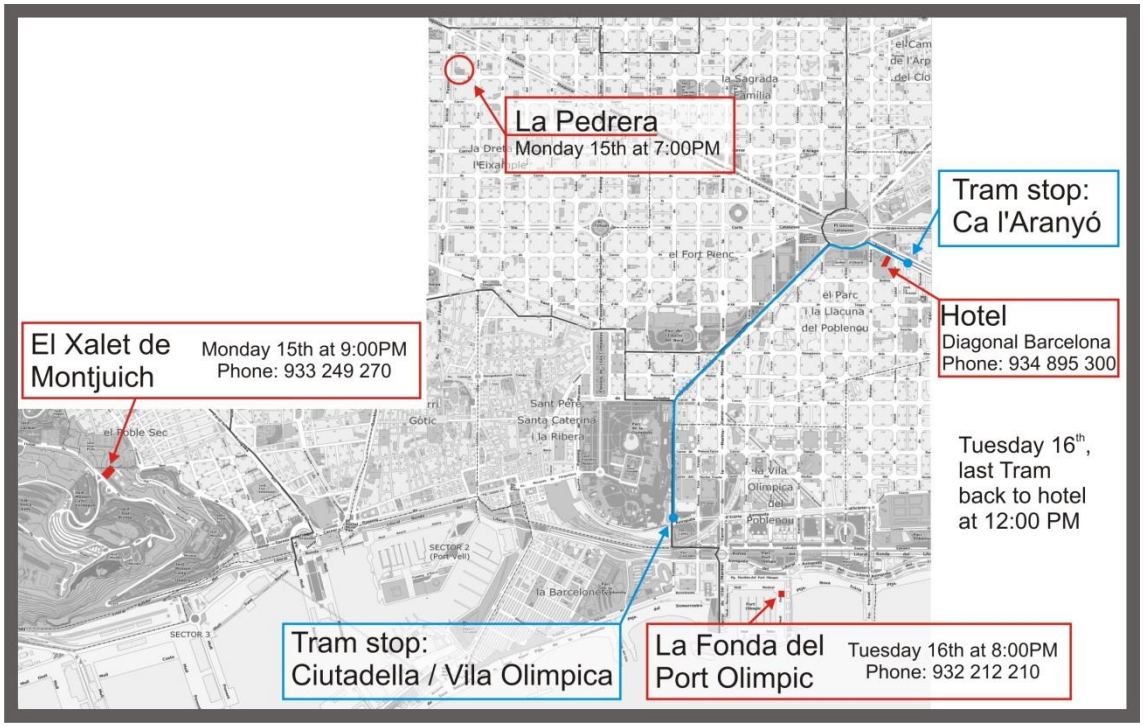
RESTAURANT "EL XALET DE MONTJUICH"

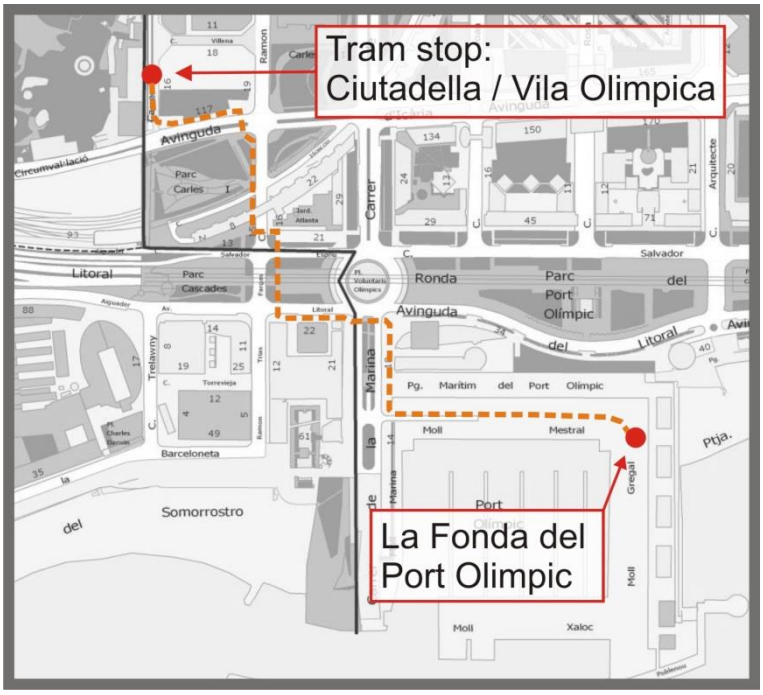
Panoramic View of Barcelona from the top of Montjuich Olympic Mountain

RESTAURANT "LA FONDA DEL PORT OLIMPIC"

La Fonda del Port Olímpic, both for its excellent location in the Marina "Port Olímpic", for its excellent Mediterranean cuisine is a landmark restaurant in Barcelona.

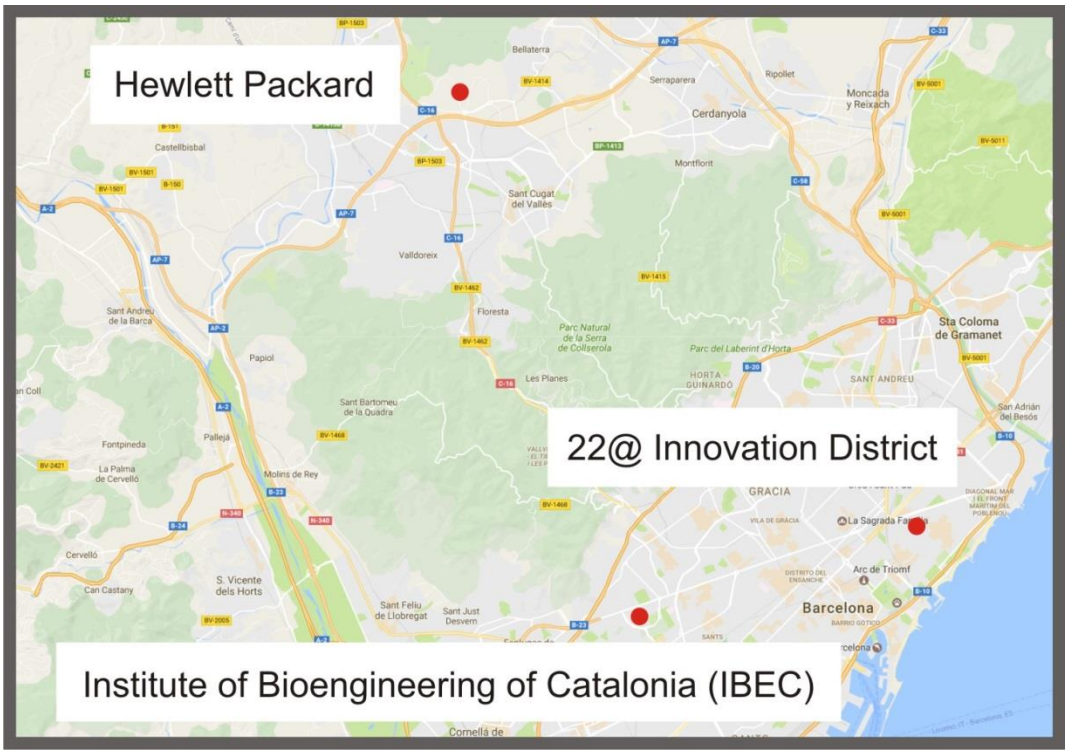
GENERAL INFORMATION



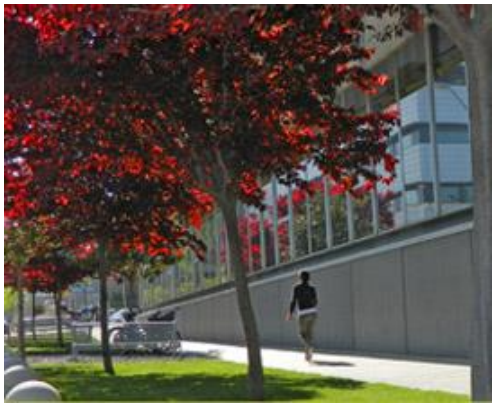


TECHNICAL TOUR

TIME	Description
08:45	Meeting Place: Lobby Hotel
09:30-10:45	Visit IBEC: Institute of Bioengineering of Catalunya (IBEC)
11:30-13:30	Visit Hewlett-Packard World R&D Center for 3D Printing
13:45 -14:45	Lunch near HP Sant Cugat.
14:45- 15:30	Transfer to 22@ Innovation District (Stop at Hotel Silken Diagonal)
15:30 -17:30	Presentation from the Barcelona Town Council and visit to pilot sites
18:00	End of Tour at Hotel Silken Diagonal



IBEC



The Institute for Bioengineering of Catalonia (IBEC) conducts excellent interdisciplinary research at the frontiers of engineering and life sciences in order to generate new knowledge by putting together fields like nanomedicine, micro-nanotechnologies, biophysics, biotechnology, tissue engineering and the applications of health information technology.

http://ibecbarcelona.eu/

HEWLETT-PACKARD

The international centre of R&D of Hewlett-Packard, situated in Sant Cugat of the Vallès (Barcelona) was set-up to lead the fourth industrial revolution by driving innovation in 3D and even 4D printing technology. HP's world headquarters in Sant Cugat del Valles is the company's largest office outside of the U.S.

www.hp.com

22@ INNOVATION DISTRICT

22@Barcelona project has transformed two hundred hectares of industrial land of Poblenou into an innovative district offering modern spaces for the strategic concentration of intensive knowledge-based activities. This initiative is also a project of urban refurbishment and a new model of city providing a response to the challenges posed by the knowledge-based society.

https://www.slideshare.net/barcelonactiva/barcelona-smart-city-tour-15080538