

# SmartCity360°

THE GATEWAY TO INNOVATION

5th EAI International Summit on

## SCIENCE AND TECHNOLOGIES FOR SMART CITIES

DECEMBER 4-6, 2019

BRAGA, PORTUGAL



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# SmartCity360°

THE GATEWAY TO INNOVATION

5th annual Smart City 360° Summit is an event featuring a full 360° perspective on Smart Cities, bringing researchers, industry representatives, as well as up-and-coming innovators under one roof to share insights, experiences, and to connect and collaborate.

Smart City 360° Summit promotes multidisciplinary scientific and industry collaboration to solve complex societal, technological and economic problems Smart Cities. As such, the main goals are to promote quality of life, work conditions, mobility and sustainability. With the urbanization phenomenon rising, those challenges assume a fundamental role in the effective infrastructures development and organization of future cities.

## WELCOME TO SMARTCITY 360° 2019!

Dear participants,

Among the many technological innovations we have witnessed in the recent past, Smart Cities continue to pose a set of pressing challenges, the solution of which may depend on the quality of life that citizens legitimately aspire to. Despite many pioneering projects that we will hear about at this event, it is not difficult to understand the concern of different funding entities to promote more activity in this area. Municipalities, universities, and companies are obligatory partners in this process and it will be with great expectation that the event will seek to create the ideal conditions to stimulate relationships, networks, and reflections on the challenges.

In this context, and on behalf of the entire team that made this event possible, I am especially pleased to welcome you, with the hope that you will enjoy and actively participate, to design the cities of the future.

Henrique Santos  
Summit Chair

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## Imrich Chlamtac

Senior Expert at European Commission—Innovating Cities

### Bio:

Prof. Chlamtac is the President of EAI, European Alliance for Innovation. He pioneered EAI as a global initiative for promoting growth of ICT-based economy and digital society.

EAI supports research and innovation worldwide with over hundred and fifty thousand subscribers worldwide through events, publications, and community collaboration.

Prof. Chlamtac's prior positions in Italy included CREATE-NET where he was the Founding President, Bruno Kessler Professor at the University of Trento, among the top ranked ICT institutions in Italy. Prof. Chlamtac also served as Associate Provost for Research and Distinguished Chair in Telecommunications at the University of Texas in Dallas, and Professor at Boston University, University of Massachusetts and Technion.

Prof. Chlamtac holds multiple academic and honorary appointments including the University of Trento, the Tel Aviv University, the Beijing University of Posts and Telecommunications, and the Budapest University of Technology and Economics.

Prof. Chlamtac's scientific recognitions include IEEE and ACM Fellowship, the ACM Award for Outstanding Contributions to Research on Mobility, the IEEE Award for Outstanding Technical Contributions to Wireless Personal Communications, New Talents in Simulation of SCS, Fulbright Scholarship, IEEE Distinguished Lecturer. He was listed in ISI Highly Cited.Com among the 250 most cited Computer Science researchers worldwide. Prof. Chlamtac is also included in the list of Notable People from the University of Minnesota where he received his PhD and holds an Honorary Citizenship in Slovakia where he was born.

Prof. Chlamtac published over four hundred refereed articles, and multiple books. He is the co-author of the first textbook on "Local Networks" (Lexington Books 1980), and IEEE Network Editor's choice and Amazon.com engineering books best-seller "Wireless and Mobile Network Architectures" (John Wiley & Sons 2000). As part of his contribution to the research community, Prof. Chlamtac founded the ACM SigMobile, serves as Editor-in-Chief of the Springer WINET and MONET journals, established ACM Mobicom and other leading conferences.

Prof. Chlamtac is a co-founder and past President of CONSIP Ltd, the first network emulator company, and of BCN Ltd, currently KFKI Ltd., one of the largest system integrator companies in Central Europe.



## Henrique M. Dinis Santos

SMARTCITY360° SUMMIT GENERAL CHAIR

### Bio:

Henrique M. Dinis Santos received his first degree in Electric and Electronic Engineering, from the University of Coimbra, Portugal, in 1984. In 1996 he received the PhD degree in Computer Engineering, from the University of the Minho, Portugal and the habilitation degree in 2013, by the same institution. Currently he is an Associate Professor at the Information Systems Department, University of Minho, being responsible for several graduate and postgraduate courses. The research work has been framed within ALGORITMI Research Centre, at the same university, where he is responsible by the supervision of several postgraduate students and the coordination of several R&D projects, mainly in the Information Security area – emphasis on Intrusion Detection, biometrical technologies and Information Security Management – and Computer Architecture area – emphasis on Computer Vision and Cloud Computing. He authored and co-authored several scientific publications in journals, conferences and books within his field of interests and co-authored a patent with an industrial partner, in 2012, in the biometric area. He is also the President of a national Technical Committee (CT 136) for information system security standardization, Vice President for Conferences and Workshops of IEEE Education Society, President of the Portuguese Association for Data Protection (APPD) and integrates frequently advice and scientific committees supporting civil, governmental and military organizations, concerning Information Security subjects. During the second semester of 1990, under an ERASMUS program, he was teaching at the University of Bristol, United Kingdom, where he was recognized as University Academic staff.





## PAULO CRUZ

Pro-rector: Quality of life and Infrastructures

### Bio:

Was born in Porto, Portugal, in 1964. He is married and has two daughters.

Graduated in Civil Engineering by the University of Porto in 1987; MSc in Structures by the University of Porto in 1991, and PhD in Construction Engineering by the Polytechnic University of Catalonia, Barcelona, in 1995; Habilitation in Structures by the University of Minho, in 2005.

Faculty member of the University of Minho since 1989, initially at the Civil Engineering Department, where he was Head of Department from 2003 to 2004. Dean of the School of Architecture from 2004 to 2011. Full Professor of Construction and Technology at the School of Architecture since 2008.

He teaches and researches in the field of Structures, privileging the articulation between Structures and Architecture. Coordinator of the Construction and Technology Laboratory of the School of Architecture, which explores innovative technological, constructive and structural solutions, and of the Advanced Ceramics R&D Lab at the Design Institute of Guimarães, the main objective of which is the application of additive manufacturing techniques to ceramic components.

Director of the Product Design Degree (2013-2017), of the Civil Engineering Master (2005-2007) and of the Civil Engineering Degree (1996-1999). Director of the Lab2PT – Landscapes, Heritage and Territory Laboratory, a R&D unit of the School of Architecture and of the Institute of Social Sciences (2015-2017). President of the UM-Cities Platform since 2016 and President of the Design Institute of Guimarães since 2015.

Supervisor of 15 doctoral theses concluded. He is the author of more than three hundred scientific publications and has a wide experience of participation and coordination of research projects.

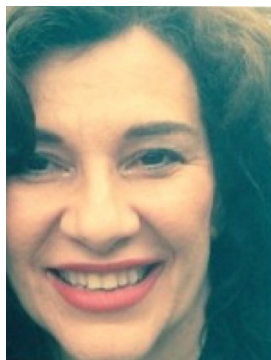
Founder and President of the International Association of Structures and Architecture since 2016. Chairman of several international conferences in this field (ICSA2010, ICSA2013, ICSA2016 and ICSA2019). Secretary to the Executive Committee of IABMAS – International Association for Bridge Maintenance and Safety, since 2001. Founder of ASCP – Portuguese Association for the Safety and Maintenance of Bridges and President since 2006.

Member of the Executive Board of the Fundação Cidade de Guimarães (2011-2013), institution devoted to the conception, promotion, execution, planning and development of the cultural programme of the European Capital of Culture – Guimarães 2012.

Associate Editor of the “Structure and Infrastructure Engineering” Journal by Taylor & Francis since 2005; member of the Editorial Board of the “Steel Construction” Journal by Ernst & Sohn, Wiley since 2011 and member of the Editorial Board of “Glass Structures & Engineering” Journal by Springer since 2016.

Representative of Portugal at CEN TC250 WG3 – Structural Glass (2010-2016) and at CEN TC250 SC11 – Structural Glass since 2016. Senior Member of the Order of Engineers (2002) and Expert in Structures (2003). Member of the National College of Civil Engineering (2010-2013). Member of the Scientific Council of Social Sciences and Humanities of the Fundação para a Ciência e Tecnologia (2013-2016).

In 2008 he was awarded the “Special Service Award” by IABMAS and the gold medal of the Wrocław University of Technology, Poland. In 2005 he was awarded the “Thomas Fitch Rowland” Award by the ASCE – American Society of Civil Engineers.



## MARIA YEROYANNI

Senior Expert at European Commission—Innovating Cities

### Bio:

Senior Expert for the policy R&I agenda 'Innovating Cities', working since 26 years in the European Commission, DG Research and Innovation. Dealt with Disaster Risks, Earthquake resistant constructions, construction sector, Land-use management, Desertification and Land Degradation, Urban metabolism, Renaturing Cities. Since 2014, Senior Expert for the policy R&I agenda on 'Innovating Cities' focusing on Sustainable Urban development, member of the editorial Board of the Commission Web site 'One Stop Shop for cities- Topic Page, coordinator of the intra-RTD group of officials working on urban issues (Innovating cities with systemic solutions, nature-based at the intersection of digital, technological, social etc.) to tackle issues of energy efficiency, urban mobility, health and well-being, social innovation, climate change and adaptation, urban coastal management, urban resilience, urban metabolism, urban waste, social innovation, circular economy.



## STEFAN FISCHER

Computer Science Professor, University of Lübeck, Germany

### Bio:

Stefan Fischer is a full professor in Computer Science at the University of Lübeck, Germany, and the director of the Institute for Telematics. He is also a Vice President of the university, responsible for technology transfer and digitization. He got his diploma degree in Information Systems and his doctoral degree in Computer Science from the University of Mannheim, Germany, in 1992 and 1996, respectively. After a postdoctoral year at the University of Montreal, Canada, he held positions at the International University in Germany as an assistant professor and at the Technical University of Braunschweig as an associate professor, until he joined Lübeck University in 2004. His research interest is currently focused on network and distributed system structures such as ad-hoc and sensor networks, Internet of Things, Smart Cities and nano communications. He has (co-)authored more than 200 scientific books and articles.



## ANTÓNIO CUNHA

DTx Colab

### Bio:

António M. Cunha is Full Professor of the Polymer Engineering Department of University of Minho, with research activity at IPC (Institute for Polymers and Composites). Author of 120 refereed ISI-WoS papers, 3 books (editor) and 4 patents. Dean of the School of Engineering of UMinho, 2005-09, Rector of University of Minho, 2009-17, and Chairman of the Portuguese Rectors Council, 2014-17. President of the Collaborative Laboratory on Digital Transformation, since 2108. Board member of CEIIA (Centre for Engineering and Product Development), since 2018, INL (Iberian Nanotechnology Institute), since 2012, MIT-Portugal Program, since 2013, Bosch-UMinho Partnership, since 2014, MACC (Minho Advanced Computing Centre), since 2018, and High Level Scientific Committee of the Atlantic International Satellite Launch Programme, since 2019. Member of the Portuguese Engineering Academy, Golden Insignia of the University of Santiago de Compostela, 2013, Medal of Scientific Merit of the Portuguese Ministry of Science, Technology and Higher Education, 2018, and Grã-Cruz (Great Cross) of the Portuguese Order of Merit of Public Education, 2018.



## PREDRAG K. NIKOLIC

Associate Professor, Cheung Kong School of Art and Design, Shantou University, China

### Bio:

Predrag K. Nikolic is Associate Professor at Cheung Kong School of Art and Design, Shantou University, in China. He is an interactive media designer, international digital media expert and a media artist who holds a PhD in Digital Media and an MBA. His research focuses on intelligent interfaces, robot creativity, AI aesthetics, machine-made content, design for behavioural changes and smart living environments. He mixes experiential reality, artificial intelligence, and responsive environments to engage an audience in new types of interactive experiences and media perceptions. His design and artworks, such as MIndCatcher, InnerBody, Ciklosol, Before & Beyond, Vroom, Robosophy Philosophy, Digital Lolipop, Botorikko were exhibited worldwide and presented at the Ars Electronica, SIGGRAPH, SIGGRAPH Asia, Technarte, Singapore Science Center, Hong Kong – Shenzhen Design Biennial, Maison Shanghai, etc.

Before joining Shantou University, professor Nikolic was Dean of the Faculty of Digital Production in Novi Sad, Visiting Professor at Bergen Academy of Art and Design Norway, Researcher at Aalto University Finland, Global Digital Director at Grey Worldwide, Global Digital Director at J. Walter Thomson Worldwide, Global Head of Digital at Ogilvy Greece, Head of Digital Marketing at Groundlink New York, Consultant at Yahoo and Managing Director at JadePremier London.

Predrag K. Nikolic has published numerous research papers in the field of artificial intelligence aesthetics, machine-made content, design for behaviour change, collective creativity, mix-experiential reality, multi-sensory interfaces in smart living environments, interactivity and interface design. He lectures at universities, international conferences, symposium and serves on many conferences committees.



## SERGIO M. SAVARESI

Professor in Automatic Control at Politecnico di Milano

### Bio:

Sergio M. Savaresi was born in Manerbio, Italy, on 1968. He received the M.Sc. in Electrical Engineering (Politecnico di Milano, 1992), the Ph.D. in Systems and Control Engineering (Politecnico di Milano, 1996), and the M.Sc. in Applied Mathematics (Catholic University, Brescia, 2000). After the Ph.D. he worked as management consultant at McKinsey&Co, Milan Office. He is Full Professor in Automatic Control at Politecnico di Milano since 2006. He is Deputy Director and Chair of the Systems&Control Section of Department of Electronics, Computer Sciences and Bioengineering (DEIB), Politecnico di Milano. He is Associate Editor of: IEEE Transactions on Control System Technology; European Journal of Control; Control Engineering Practice.

He is Member of the Editorial Board of the IEEE CSS. He is author of more than 500 scientific publications. His main interests are in the areas of vehicles control, automotive systems, data analysis and system identification, non-linear control theory, and control applications. He has been manager and technical leader of more than 400 research projects in cooperation with private companies. He is co-founder and partner of seven spin-off companies.





## BUD MISHRA

Professor, Courant Institute of Mathematical Sciences, New York University

### Bio:

An educator, an inventor as well as a mentor to technologists, entrepreneurs and scientists. Prof. Mishra founded the NYU/Courant Bioinformatics Group, a multi-disciplinary group working on research at the interface of computer science, applied mathematics, biology, biomedicine and bio/nano-technologies as well as Tandon-Online program on Bioinformatics Engineering. Prof. Mishra has industrial experience in Computer and Data Science (aiNexusLab, ATTAP, behold.ai, brainiad, Genesis Media, Pypestream, and Tartan Laboratories), Finance (Instadat, Pattern Recognition Fund and Tudor Investment), Robotics and Bio- and Nanotechnologies (Abraxis, Bioarrays, InSilico, MRTech, OpGen and Seqster). He is the author of a textbook on algorithmic algebra and more than two hundred archived publications. He has advised and mentored more than 35 graduate students and post-docs in the areas of computer science, robotics and control engineering, applied mathematics, finance, biology and medicine.

He holds 21 issued and 23 pending patents in areas ranging over robotics, model checking, intrusion detection, cyber security, emergency response, disaster management, data analysis, biotechnology, nanotechnology, genome mapping and sequencing, mutation calling, cancer biology, fintech, adtech, internet architecture and linguistics. Prof. Mishra's pioneering work includes: first application of model checking to hardware verification; first robotics technologies for grasping, reactive grippers and work holding; first single molecule genotype/haplotype mapping technology (Optical Mapping); first analysis of copy number variants with a segmentation algorithm, first whole-genome haplotype assembly technology (SUTTA), first clinical-genomic variant/base calling technology (TotalRecaller), first single molecule single cell nanomapping technology, etc.

Prof. Mishra is currently a professor of computer science and mathematics at NYU's Courant Institute of Mathematical Sciences, professor of engineering at NYU's Tandon School of Engineering, professor of human genetics at MSSM Mt. Sinai School of Medicine, visiting scholar in quantitative biology at CSHL Cold Spring Harbor Laboratory and a professor of cell biology at NYU SoM School of Medicine. Prof. Mishra has a degree in Science from Utkal University, in Electronics and Communication Engineering from IIT, Kharagpur, and MS and PhD degrees in Computer Science from Carnegie-Mellon University. He is a fellow of EAI, IEEE, ACM and AAAS, a fellow of National Academy of Inventors (NAI), a Distinguished Alumnus of IIT (Kharagpur), and a NYSTAR Distinguished Professor.

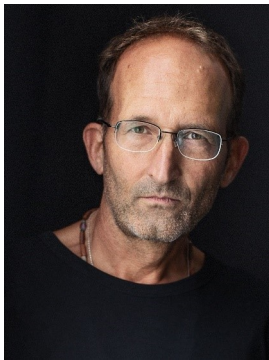


## ANA MOREIRA

Biologist, Entrepreneur and Ph.D. in Medical Sciences

### Bio:

Ana LÍdia is a Biologist, Entrepreneur and Ph.D. in Medical Sciences. She has conducted research in Biophysics and remains committed to developing interconnections between Life Sciences and other fields of knowledge. She is enthusiastic about new technologies and their contributions to Healthcare. Acted in the private sector in leadership positions in the Biotechnology segment. Focused on synergistically combining academic knowledge and the dynamic energy of Startups to generate innovation for the health sector and benefits to society, she founded her startup and is an active member of Brazil's entrepreneurial ecosystem. Guest speaker at several events, she shares her knowledge on the impacts of disruptive innovation on health and its market potential in Brazil.



## JOHN ZIB

Social Entrepreneur, Leader of CitizenCity

### Bio:

John Zib is a social entrepreneur building scalable sustainable urban media platforms that benefit society and the arts. Educated as an Industrial Engineer with a diverse and substantial career in global operations and product marketing, primarily in consumer electronics. Since moving to Europe for a second time, he became engaged in diverse field as a social entrepreneur; arts, academics, technology, governance, media theory, mediated urban environment, collective commons and digital social innovation. He uses business acumen to translate ideas and make new connections that grow opportunities for a socially responsible future. John has developed several opportunities in the arts and social landscape. He currently leads CitizenCity, an EIP-SCC initiative focused on citizen engagement and co-creation.



## SASU TARKOMA

Head of Department and Professor of Computer Science, University of Helsinki

### Bio:

Sasu Tarkoma is a Professor of Computer Science at the University of Helsinki and Head of the Department of Computer Science. He is also Director of the Helsinki Center for Data Science (HiDATA) and affiliated with the Helsinki Institute for Information Technology HIIT. He has authored 4 textbooks and has published over 200 scientific articles. He has seven granted US Patents. His research has received a number of Best Paper awards and mentions, for example at IEEE PerCom, ACM CCR, and ACM OSR. As an example flagship research project, he is leading the MegaSense project, which aims at deploying a wide array of urban air-monitoring stations and employing the data within prediction models.



## RUI PEDRO HENRIQUES

IrRADIARE, Science for Evolution

### Bio:

Rui Pedro Henriques has an MSc in Electrical and Computer Engineering by the Faculty of Science and Technology of the New University of Lisbon. During the academic course he was interested in the area of collaborative networks, having subsequently worked on energy optimization of buildings and electric bill, area in which he still works. In other areas he actively participates in the development of web platforms leveraging on interoperability mechanisms and network administration. He has also worked on air quality monitoring where he managed the team and actively developed the Web core and also modules for the use and dissemination of the results of the atmospheric dispersion model. He has also worked in the research and development of solutions for the consolidation and optimization of the supply chain of biomass using GIS information.

Since long he has dedicated particular interest to the monitoring of environmental and energy variables associated to buildings, from the implementation of the solution for the sensors and gateway of data to the platform of data collection and analysis with the use of spatial and temporal databases. In this area he has also done the co-orientation of some dissertations to obtain master's degree. More recently he is also involved in the development of LPWAN networks, namely LoRaWAN, for large scale sensor networks deployment and ensuing BigData analysis. He is working at IrRADIARE, Science for Evolution, Lda, since October 2005 where he is technology director.



## LANCE LEVERETTE

Innovation Management Consultant

### Bio:

Lance Leverette is an innovation management consultant working to bridge the gap between science and the market. His services include coaching, teaching, and consulting based on a market focused methodology that guides innovators from idea to implementation.

For the last four years he has developed and applied these methods learned working for companies in the US and the UK toward innovation coming from academia and tech centers across Europe. This includes European Union funded projects, working with SME's and tech centers to pursue new markets, and working with start-up companies on how to position their technologies. He has several published market reports and works across a variety of industries.

Lance has worked in strategic marketing and market analysis for leading developers and distributors of precision industrial products in the United States including AJ Oster (a division of Global Brass and Copper with sister company Olin Brass), Barnes Aerospace (an aerospace original equipment manufacturer), and Zeus Industrial Products (a developer of high performance polymer products). At Zeus he led in the development of the market entry strategy of their newly developed PTFE electrospun nanofiber line for industrial applications, market research for high performance polymer applications, as well as conducting numerous business cases for medical device components.





## VALERIÀ PAÜL

LECTURER AT THE UNIVERSITY OF SANTIAGO DE COMPOSTELA

### Bio:

Valerià Paül is since early 2015 Interim Lecturer at the University of Santiago de Compostela, with the Official Accreditation by the Spanish Ministry of Education for eligibility for tenure Senior Lecturer positions at Spanish universities (2014). Previously, he was Ass/Professor at the University of Western Australia (2014-2015). Other previous occupations include Post-doctoral positions achieved through publicly competitive applications sponsored by the Galician Government at the University of Santiago de Compostela (2008-2013); and Post-Doctoral Researcher at the Institut d'Estudis Territorials (Universitat Pompeu Fabra and Catalan Government, 2007-2008). He is graduated in Geography (University of Barcelona, 2001), with Honours, University of Barcelona Special Award for Bachelor Studies (2002) and 1<sup>st</sup> National End of University Studies Award (2002), conferred by the Spanish Ministry of Education, and graduated with Honours for his PhD (2006), University of Barcelona Special Award for Doctoral Studies (2007). His main research lines are regional planning and management, focussing on open spaces, protected and mountain areas and development; historical and cultural geography of landscape; agriculture, food and rural studies; political geography; and tourism (specifically, cultural, natural and rural tourism, and in protected areas). He has participated in a dozen of projects earned by public competitive applications, usually working on inter-disciplinary rural and regional studies; these projects have been funded by the European Union and the Australian, the Spanish, the Galician and the Catalan governments. He has more than 20 papers in peer-reviewed journals (classified in JCR SSCI and/or SCOPUS) and he has presented more than 100 papers at national and international conferences, including several keynote addresses. He is member of the Editorial Board of two prestigious journals: Land Use Policy and Boletín de la Asociación Española de Geografía. He currently holds the position of Director of the Euro-Regional Studies Centre (CEER). CEER is a foundation consisting of the six public universities of Galicia and Northern Portugal.



## MIGUEL BANDEIRA

PROFESSOR OF GEOGRAPHY AND PLANNING, ARCHITECTURE,  
SOCIOLOGY AND HISTORY DEGREES

### Bio:

Professor of Geography and Planning, Architecture, Sociology and History degrees; PhD supervisor (Geography, Sociology and Architecture) and MSc Supervisor (Heritage and Tourism, Engineering and Sociology), at the University of Minho.

Membro da Direção da Associação Portuguesa de Habitação Municipal; da Associação Portuguesa de Municípios com Centro Histórico; Presidente da Assembleia Geral da TUB – E.M.; Presidente do Conselho de Administração da Bragahabit – E. M.; Vogal do Conselho de Administração da Biblioteca Lúcio Craveiro da Silva; Presidente da Mesa da Assembleia Geral do Theatro Circo, E. M. e Vice-Presidente do Conselho de Curadores da Fundação Bracara Augusta.



## ISABEL FERREIRA

FULL PROFESSOR, SECRETARY OF STATE FOR INTERIOR  
VALORISATION – GOVERNMENT OF PORTUGAL

### Bio:

**Isabel Ferreira** was Full Professor, Vice-President at the Polytechnic Institute of Bragança (Portugal), Director of the Mountain Research Centre (CIMO) and Mentor of the Collaborative Laboratory MORE- Mountains of Research. She was the President of the Scientific Council of Natural and Environmental Sciences of the Portuguese Foundation for Science and Technology (FCT), Portugal and member of the Steering Committee “Strategic Basic Research” of Foundation Flanders (FWO). Isabel Ferreira was the Coordinator of the National and Iberian Mountain Research Networks and has integrated the Experts Commission for the European Programs H2020 and Horizon Europe.

She obtained her Degree in Biochemistry (1996) at the University of Porto (Portugal); Master in Sciences (1999), PhD in Sciences- Chemistry (2003), and “Aggregation” in Sciences- Chemistry (2011) at the University of Minho (Portugal).

She was awarded by different institutions such as Calouste Gulbenkian Foundation (2001), Food I&DT and ISPROF (2013) for the achievements in helping the Portuguese Science to progress, COTNH (2014) for international cooperation, Women in Science (2016) by *Ciência Viva*, merit medal of Bragança (2017), IACOBUS publication (2018) and European Union (2019) in the Social Innovation Competition.

She has been the Associate Editor of Food & Function, Editor-in-Chief of Antioxidants, Guest Editor of the topical collection “Bioactive compounds” in Molecules, and serves in the editorial board of Food and Chemical Toxicology, Industrial Crops and Products and the book series Advances in Food and Nutrition Research.

Her scientific work includes the edition of 4 international books and the publication of 60 international book chapters, over 600 papers in refereed journals and national and European patents, most of them resulting from the technology transfer to the industry, and being in the basis of the creation of spin-offs of the Polytechnic Institute of Bragança. She is a highly cited scientist (top 1%) awarded by Clarivate Analytics in 2015, 2016, 2017, 2018 and 2019, one of the most important indicators of the research quality. She has been also the principal investigator of several national and international funded research projects and has supervised several post-doc, PhD and master students. She has been evaluating international research projects (e.g., H2020, Eurostars, ERA-NET ARIMNet 2 and LEAP-Agri from EU and for National Science Foundations of Austria, South Africa, Chile, Croatia, Denmark, Czech Republic, Poland, Switzerland, United Arab Emirates and Argentine).



## PAULO PEREIRA

FULL PROFESSOR FROM THE DEPARTMENT OF CIVIL ENGINEERING  
(DEC) OF THE EEUM

### Bio:

Paulo Pereira, has been re-elected as Director of the Centre for Territory, Environment and Construction (CTAC) of the EEUM on the 13th December.

Professor Paulo Pereira's appointment as Director of CTAC follows a first mandate. The new Director will perform functions during the triennium 2016-2019.

To Paulo Pereira, the re-election is an opportunity that aims "the commitment to consolidate and strengthen this centre, which can only be achieved with work", he refers. "Our centre is classified as «good», but we want to go further. I believe that, globally, looking at the same point, we will be able to affirm ourselves and seek another classification for the centre", he believes.

Paulo Pereira completed his bachelor degree in Civil Engineering in 1980 at the University of Porto and his PhD also in Civil Engineering at the University of Minho. He is a professor and researcher in the area of transport and develops his activity in the DEC of the EEUM. He was President of the EEUM from 2010 to 2013. He also founded and chaired the International Society for Maintenance and Rehabilitation of Transport Infrastructures (iSMARTi), from 2004 to 2012. He is a member of the American Society of Civil Engineers (ASCE) and member of the Scientific Commission of the PhD Programme in Civil Engineering of the UMinho since 2009. Paulo Pereira supervised more than a dozen masters' theses and 12 doctoral theses, having published over 235 papers in national and international scientific journals of recognised merit. The CTAC seeks to deliver cross-disciplinary science in sustainable development of cities and territory. The applied R&D methodologies include computer simulation, laboratory testing, physical modelling and field works.





## DAGMAR CAGÁNOVÁ

INSTITUTE OF INDUSTRIAL ENGINEERING AND MANAGEMENT  
FACULTY OF MATERIALS SCIENCE AND TECHNOLOGY STU

### Bio:

Dagmar Caganova, assoc. prof. in Industrial Engineering, acts as Ambassador/ Representative for Foreign Affairs at Institute of Industrial Engineering and Management at the Faculty of Materials Science and Technology (MTF) in Trnava, the Slovak University of Technology (STU) in Bratislava, Slovakia. She is also the co – founder of the European Alliance for Innovation in Slovakia, management committee member of E-COST (European Collaboration in Science and Technology) TN 1301 Sci Generation, the executive committee member in Danubius Academic Consortium (academic network for Integral Innovation), steering committee member of Danube strategy PA 7 Knowledge society- science, research, innovation and ICT for the Slovak Republic. Her professional interests, research topics and international collaborations are mainly focused on Intercultural and Innovation Management, Human Resource Management, Mobility and Smart Cities, International Relationships and Gender Diversity. She is the member of journal editorial boards, organiser, steering committee member of many domestic and international summits and conferences. She also acts as tutor on PhD study programme and has participated in solving 35 domestic and international scientific and educational projects in various project schemes. At present, she acts as project head for MTF in H2020 project „Linking Research and Innovation for Gender Equality“ with acronym CALIPER. She is Special Issue journal editor and co-editor of books Internet of Things, IoT Infrastructures 2014, part 2 and Smart City 360, 2015, 2018 published by Springer. To date she has published more than 270 publications, 7 scientific monographs, 8 papers in current content journals, 33 papers in databases WOS and 35 in databases SCOPUS and has over 350 citations, 117 of them in quotation databases WOS and SCOPUS, WOS h-index 6 and SCOPUS h-index 5.

## MOHD SHAHRIZAL SUNAR



INSTITUTE DIRECTOR, INSTITUTE OF HUMAN CENTERED ENGINEERING  
(IHUMEN) UNIVERSITI TEKNOLOGI MALAYSIA, MALAYSIA

### Bio:

Professor Dr Mohd Shahrizal Sunar is the Director of the Institute of Human Centered Engineering (iHumEn) and Founding Director of Media and Game Innovation Centre of Excellence (MaGICX), Universiti Teknologi Malaysia. He obtained his PhD from the National University of Malaysia in 2008. His major field of study is real-time and interactive computer graphics and virtual environment. He received his MSc in Computer Graphics and Virtual Environment from The University of Hull, United Kingdom and BSc degree in Computer Science majoring in Computer Graphics from Universiti Teknologi Malaysia. He served as an academic member at Computer Graphics and Multimedia Department, Faculty of Computer Science and Information System, Universiti Teknologi Malaysia since 1999. Since 2009, he had been given responsibility to become the Head of Department and leading the Virtual, Visualisation and Vision research group (UTM ViCubeLab). Dr Shahrizal is an active professional member of ACM SIGGRAPH, IEEE Computer Society and International Association of Engineers (IAENG). He is also a member Malaysian Society of Mathematics and Science (PERSAMA) and Exco Member of Malaysian Muslim Scientist Association (PERINTIS). He serves to the government as Malaysia Qualification Agency (MQA) panel of assessor in the field of Computing and Multimedia since 2005. The current research program that he leads is Augmented Reality, Virtual Reality, Gamification, User Interaction and Creative Content Technology. He had published numerous articles in high-impact refereed journals, conference proceedings and technical papers including an article in magazines. Dr Shahrizal had invented a number of innovative products to be commercialised from his research. He was also mentoring technology startup companies and entrepreneurs in his related field. MaGICX becomes a subsidiary company of UTM joint-venture with Iskandar Regional Development Authority (IRDA) where he is the Chief Executive Officer. Dr Shahrizal is one of Ministry of Higher Education CEO@Faculty Programme 2.0 Fellow who attached with Petronas.

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### **KEYNOTE DAY - 4TH OF DECEMBER**

🕒 08:00

📍 ALTICE FORUM, BRAGA

#### **REGISTRATION**

🕒 09:00

📍 ALTICE FORUM, BRAGA

👤 **IMRICH CHLAMTAC**  
**HENRIQUE M. DINIS SANTOS**  
**PAULO CRUZ**  
**MIGUEL BANDEIRA**

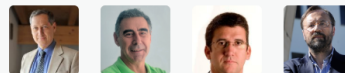
#### **WELCOME SPEECH**

**Imrich Chlamtac**

**Henrique M. Dinis Santos**

**Paulo Cruz**

**Miguel Bandeira**



🕒 9:30

📍 ALTICE FORUM, BRAGA

👤 **MARIA YEROYANNI**  
**ANTÓNIO CUNHA**  
**STEFAN FISCHER**

#### **OPENING SESSION**

**Maria Yeroyanni**

**António Cunha**

**Stefan Fischer**



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### **KEYNOTE DAY - 4TH OF DECEMBER**

🕒 10:30

#### **COFFEE BREAK**

🕒 11:00

📍 ALTICE FORUM, BRAGA

👤 [PREDRAG K. NIKOLIC](#)  
[SERGIO M. SAVARESI](#)  
[BUD MISHRA](#)

#### **INVITED SPEAKERS SESSION**

**Predrag K. Nikolic**

**Sergio Savaresi**

**Bud Mishra**



🕒 12:30

#### **LUNCH BREAK**

🕒 14:00

📍 ALTICE FORUM, BRAGA

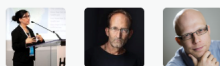
👤 [ANA MOREIRA](#)  
[JOHN ZIB](#)  
[SASU TARKOMA](#)

#### **INVITED SPEAKERS SESSION**

**Ana Moreira**

**John Zib**

**Sasu Tarkoma**





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### **KEYNOTE DAY - 4TH OF DECEMBER**

🕒 15:00

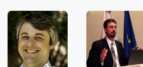
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**LANCE LEVERETTE**

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Rui Pedro Henriques

Lance Leverette



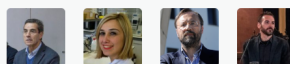
🕒 16:00

#### **COFFEE BREAK**

🕒 16:30 - 17:30

👤 **PAULO PEREIRA**  
**ISABEL FERREIRA**  
**MIGUEL BANDEIRA**  
**VALERİA PAÜL**

#### **PANEL SESSION**



🕒 20:00-23:00

📍 CAIS DE GAIA, DOURO RIVER

#### **SOCIAL EVENT AND GALA DINNER**

Social Event and the Gala Dinner will take place at the [Herança Magna](#)

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### **INTSYS 5TH OF DECEMBER/ ROOM 1**

**INTSYS Session 1: Modelling** 09:00 - 10:30



Session Chair: A. L. Martins

**Coffee Break** 10:30 - 10:50

**INTSYS Session 2: Optimization** 10:50 - 12:30



Session Chair: E. Unlu

**Lunch** 12:30 - 13:30

**INTSYS Session 3: Tracking and Prediction** 13:30 - 15:00



Session Chair: F. Krebs

**Coffee Break** 15:00 - 15:20

**INTSYS Session 4: Visualization** 15:20 - 16:50



Session Chair: D. Panovski

**Coffee Break** 16:50 - 17:10

**INTSYS Session 5: Sensing** 17:10 - 18:40



Session Chair: F. Ramos



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### **SESC 5TH OF DECEMBER/ ROOM 2**

**SESC Session 1** 09:00 - 11:00



Session Chair: João L. Afonso and Vitor Monteiro

**Coffee Break** 11:00 - 11:30

**SESC Session 2** 11:30 - 13:00



Session Chair: Gabriel Pinto and João L. Afonso

**Lunch** 13:00 - 14:00

**SESC Session 3** 14:00 - 15:30



Session Chair: João L. Afonso and Gabriel Pinto

**Coffee Break** 15:30 - 16:00

**SESC Session 4** 16:00 - 17:30



Session Chair: Vitor Monteiro and Gabriel Pinto

### **SESC 6TH OF DECEMBER/ ROOM 2**

**SESC Session 5** 09:00 - 11:00



Session Chair: João L. Afonso and Vitor Monteiro

**Coffee Break** 11:00 - 11:30





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### **S-CUBE 5TH OF DECEMBER/ ROOM 3**

**Registration** 08:30 - 09:00

**Opening** 09:00 - 09:10

**Session 1** 09:10 - 11:00



Session Chair: José A. Afonso

**Coffee Break** 11:00 - 11:30



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### **SC4LIFE 5TH OF DECEMBER/ ROOM 3**

**Opening Session** 09:00 - 09:30

**Session 1** 11:30 - 13:00



Cities and Territory, Session Chair: Paulo Pereira, Keynote Speech: Fillipo Prático Title: LIFE E-VIA: Electric Vehicle noise control by assessment and optimisation of tyre/road interaction

**Lunch** 12:30 - 13:30

**Session 2** 14:00 - 15:30



Information and technologies, Session Chair: Paulo Novais

**Coffee Break** 15:30 - 16:00

**Session 3** 16:00 - 17:30



Citizen-centre needs, Session Chair: Rita Ribeiro



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### **INTETAIN 6TH OF DECEMBER/ ROOM 1**

#### **Keynote - Professor MOHD SHAHRIZAL SUNAR**

08:45 - 09:30

Trends and Challenges in Augmented Reality and Virtual Reality

#### **Intetain Session 1: Technology as Tool for New Sensory Experiences** 09:30 - 10:30

Session Chair: Prof. MOHD SHAHRIZAL SUNAR, PhD

**Coffee break** 10:30 - 10:50

#### **Intetain Session 2: Opportunities for Artificial Intelligence in Society of Future** 10:50 - 12:00

Session Chair: A/Prof. DAGMAR CAGANOVA, PhD

#### **Intetain Session 3: E-platform for Improving Collaboration among Universities and Industrial Enterprises in the Area of Education** 12:00 - 13:00

Session chair: A/Prof. DAGMAR CAGANOVA, PhD.

**Lunch** 13:00 - 14:00



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### **URB-IOT 6TH OF DECEMBER/ ROOM 1**

**Urb-IoT Session 1** 14:00 - 15:30



Sensing Methods, Session Chair: Philipp M. Scholl

**Coffee Break** 15:30 - 16:00

**Urb-IoT Session 2** 16:00 - 17:30



Environmental Sensing, Session Chair: Matthias Budde





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### **HEALTHYIOT 6TH OF DECEMBER/ ROOM 2**

#### **HealthyIoT Session 1** 11:30 - 13:00



IoT for Health sensors & systems, Session Chair: Michela Papandrea

#### **Lunch** 13:00 - 14:00

#### **HealthyIoT Session 2** 14:00 - 15:30



IoT for Health applications and solutions - I

#### **Coffee Break** 15:30 - 16:00

#### **HealthyIoT Session 3** 16:00 - 17:30



IoT for Health applications and solutions - II, Session Chair: Bogdan Bercean



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### **SMARTGOV 6TH OF DECEMBER/ ROOM 3**

**Opening Session** 09:00 - 09:15

**Keynote** 09:15 - 09:45

Soumaya Ben Dhaou, Title: Smart governance for smart sustainable cities and settlements.

**SmartGoV Session 1** 09:50 - 11:10



Framing and measuring Smart Cities, Session Chair: Lorenzo Madrid

**Coffee Break** 11:10 - 11:30

**SmartGov Session 2** 11:30 - 13:00



Smart Governance applications, Session Chair: Luís Soares Barbosa

**Lunch** 13:00 - 14:00



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# HELIOENERGIA SP. Z O.O.



The mission of the Helioenergia company is to make Smart Cities a reality.

In our innovative Helioenergia laboratory we create professional SilverCon products: from silver nanopowders and paints to electrically conductive pastes. We have also created a technology of thermal silver plating – the only alternative to galvanic silver plating. Our pastes, used in the production of conductive paths and layers, ensure high surface adhesion and low resistance.

Our company successfully implements research projects from the field of thick-layer materials and photovoltaics. Our main lines of action include the support of photovoltaics, which allows the focusing of more light on solar cells and the integration of photovoltaics with architecture, construction and vehicles.

Our latest project is the fully independent Helio Smart Shelter. Its design was created by Gwidon Idziak, Aldona Kret and Katarzyna Janicka from Derstone x Off-Teoria.

## About Helio Smart Shelter

The first step towards smart city. Helio bus shelter was designed to fit into the architecture of modern metropolises powered by information. Thanks to the innovative usage of solar energy, Helio Smart Shelter has low power consumption, is fully independent and stays environment and user friendly. E-ink screens provide passengers with all sorts of valuable information. The construction is modular and can be upgraded with additional technologies.

## About in Portuguese

A missão da companhia Helioenergia é transformar a visão de Cidades Inteligentes em realidade.

No moderno laboratório Helioenergia, fabricamos produtos especializados SilverCon: de nanopós de prata e tintas a pastas. Desenvolvemos a tecnologia de prateamento térmico, que é a única alternativa disponível ao prateado galvânico. Nossas pastas para impressão de circuitos condutivos por métodos de impressão oferecem aderência excepcional e baixa resistência

Nossa empresa implementa com sucesso projetos de pesquisa na área de tecnologia de materiais de filmes espessos e energia fotovoltaica. Como a principal direção de atividade, adotamos o suporte fotovoltaico luminescente, que permite focar mais luz nas células solares e integrar a energia fotovoltaica à construção e aos veículos.

Um dos projetos mais recentes que implementamos é a parada totalmente autônoma do Helio Smart Shelter. A empresa de design e os designers Gwidon Idziak, Aldona Kret e Katarzyna Janicka são responsáveis pelo design da parada Derstone x Off-Teoria.

## Sobre o Helio Smart Shelter

O primeiro passo para cidades inteligentes. A parada Helio Smart Shelter foi projetada para se encaixar na arquitetura das metrópoles modernas carregadas por informações. Graças ao uso inovador da energia solar, o Helio consome pouca energia, é totalmente autônomo e permanece ecológico e fácil de usar. As telas de tinta eletrônica fornecem aos passageiros uma variedade de informações valiosas. A construção é modular e pode ser enriquecida com outras tecnologias

# DOSEBITS POLAND



CangoSket is the future shopping basket, which is both a checkout and payment terminal. It has a large, integrated screen that helps shopping by showing shopping list and placement of a selected product. Shopping basket also has entertainment function and helps with choice of healthy products.

CangoSket makes everyday shopping easy and saves our time, as the payment for purchased products is made through our basket so you do not waste your time standing in a line at the checkout

# BIT S.A.



BIT company exists from December 2010 and covers three main business branches defined as: Security, IT and ICT.

Now, we want to introduce the idea of new product group named SmartBIT City: complex amenities of modern, innovative city of the future which comprise of intelligent components of urban infrastructure (pv powered), such as bus stop canopies, solar benches or infokiosks. Furthermore, our concept will come with dedicated application for interactive communication between citizens and municipal institutions and for management of urban infrastructure's additional functionalities by citizens.

BIT company covers three main business branches: Security, IT and ICT.

Now, we are introducing new product group named SmartBIT City: intelligent components of urban infrastructure, e.g. solar benches, as well as dedicated application.



## **RnMonitor: an IoT-enabled Platform for Radon Risk Management in Public Buildings**

Martins, Pedro (Instituto Politécnico de Viana do Castelo); Lopes, Sérgio I. (Instituto de Telecomunicações); Pereira, Felisberto (Instituto de Telecomunicações); Curado, António (Instituto Politécnico de Viana do Castelo)

## **Smart City Bundle**

Santos, Ricardo (DigitalSign SA); Santos, Henrique (Universidade do Minho)

## **SafeCity - A platform for Safer and Smarter Cities**

Fernandes, Bruno (Department of Informatics, ALGORITMI Centre, University of Minho, Braga, Portugal); Neves, José (Department of Informatics, ALGORITMI Centre, University of Minho, Braga, Portugal); Analide, Cesar (Department of Informatics, ALGORITMI Centre, University of Minho, Braga, Portugal)

## **An interactive location system for smart places**

Coitos, Bruno (ISCTE – Instituto Universitário de Lisboa); Garrido, Nuno (Instituto de Telecomunicações (IT-IUL)); Serrão, Carlos (Information Sciences, Technologies and Architecture Research Center (ISTAR-IUL))

Herança Magna™ Show & Traditional Dinner, gastronomic show whose stage in an old Port Wine cellar. Located in Cais de Gaia, Douro River and prime area of the region, extolling the customs and traditions of the city of Porto.

### TRANSPORTATION

Shuttle service will be provided from Braga to the venue and back.

Leaving from Braga: 19h approx.

Coming back to Braga: 23 - 24h approx.



### DIRECTIONS



### ADDRESS

Antiga calçada das freiras  
Cais de Gaia, Porto  
GPS: n 41.13473 w -8.61827

Tel: +351 910 557 181  
Email: [info@happydiscover.pt](mailto:info@happydiscover.pt)

# EAI 360° Summits



**SmartSociety360°** THE GATEWAY TO INNOVATION   **SmartHealth360°** THE GATEWAY TO INNOVATION   **SmartCity360°** THE GATEWAY TO INNOVATION

**EAI 360° Summits** are interdisciplinary events that feature a full 360° perspective on technology, bringing the academic community and innovators from three key EAI scope areas, **Smart Health**, **Smart Cities** and **Smart Societies**, three co-centric spheres of activities that lie at the core of humanity's successful future.

EAI 360° Summits presents an excellent platform to **meet, connect, network, share insights** and **collaborate** with some of the brightest minds that are shaping the future.

EAI 360° Summits promote a holistic approach on prospects for technologies, policies and multidisciplinary scientific collaboration to solve complex societal, technological and economic problems through keynote speeches, interactive panels and discussions, scientific paper presentations and innovative demos and exhibitions showing the state-of-the-art.

**Learn | Network | Plan | Collaborate | Strategize**

**[www.smartcity360.org](http://www.smartcity360.org)**  
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# EAI Community Benefits

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Thanks to community collaboration and crowdsourcing, EAI members enjoy full service **from idea creation to publication** and recognition with more fairness and transparency.



- Collaborative research and mentorship via **Smart Submit**
- Visibility and fair review through **Community Review**
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- **Fast Proactive Publication** process in Open Access EAI Transactions
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**Learn more at [www.eai.eu](http://www.eai.eu)**

We would like to express our sincere gratitude to our partners.  
Thank you for all your support and assistance.



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building culture



## NEXT EDITION

6th EAI International Summit on

# SCIENCE AND TECHNOLOGIES FOR SMART CITIES

2020

VIANA DO CASTELO, PORTUGAL

**Thank you for participating at EAI conference and  
We hope to see you again!**

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RESEARCH MEETS INNOVATION

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- Become a Mentor or find Co-Authors

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- Pick and choose what you want to review

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