

DAY 1

Monday, 11 September



Welcome to IMBioC 2023!

Registration and Welcome Coffee

08:30 – 09:30
Room 1

Opening Ceremony

09:30 – 10:15
Auditorium

Plenary Session

Plenary Speaker: Professor Chris Van Hoof
“Prevention, Early Detection and Autonomous Therapeutics”

10:15 – 11:05
Auditorium

Coffee Break

11:05 – 11:25
Room 1

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Auditorium

PEF: EuMA Focused Session on Pulsed Electric Fields and their applications in Biomedicine

Chairs: Luciano Tarricone, Francesca Apollonio

Neuro-Functionalized Microdosimetric Models for Applications of Electroporation

A. Paffi (Sapienza University of Rome, Italy); L. Caramazza (Sapienza University of Rome & CLN2S at Sapienza, Fondazione Istituto Italiano di Tecnologia, Rome, Italy); M. Colella (La Sapienza University of Rome, Italy); N. Dolciotti (Sapienza University of Rome, Italy); S. Fontana (Sapienza University, Italy); F. Apollonio (ICEMB at Sapienza, University of Rome, Italy); M. Liberti (ICEMB at Sapienza University of Rome, Italy)

RISEUP Project: An Innovative Application of Microsecond Electric Pulses for Spinal Cord Injury Regeneration

G. Innamorati, G. Bergafora, C. Codazzi, and F. Camera (ENEA, Italy); C. Merla (ENEA SSPT Division of Health Protection Technologies, Italy); N. Dolciotti (Sapienza University of Rome, Italy); M. Colella (La Sapienza University of Rome, Italy); L. Caramazza (Sapienza University of Rome & CLN2S at Sapienza; Fondazione Istituto Italiano di Tecnologia, Rome, Italy); S. Fontana (Sapienza University, Italy); M. Pedraza (Centro de Investigación Principe Felipe, Spain); M. Sanchez Petitier (CNRS, France); P. Marracino (Rise Technology S. R. L. Rome, Italy); C. Consoles (Italian National Agency for new Technologies, Energy and Sustainable Economic Development (ENEA), Italy)

Optimization of Ablation Area and Electrode Positioning in High Frequency Irreversible Electroporation via Machine Learning

A. De Cillis (University of Salento, Italy); C. Merla (ENEA SSPT Division of Health Protection Technologies, Italy); G. Monti, Luciano Tarricone, and M. Zappatore (University of Salento, Italy)

Saddle Point-Based Description of the Propagating Pulse Dynamics in Skin Tissues and Phantoms Represented by Cole-Cole and Debye Models

C. Balictsis (Hellenic Telecommunications & Post Commission, Maroussi, Athens, 15125, Greece)

Room 2

BIO: Bio-Electromagnetics

Chairs: Abbas Omar, Emily Porter

Bone Tissue Chirality: A Feasibility Study in Microwave Sensing for Non-Invasive Health Assessment

A. Nafar (Shahid Beheshti University, Iran & KU Leuven, Belgium); J. Ebrahimi, K. Mohammadpour Aghdam, G. Vandenbosch (KU Leuven, Belgium); E. Mehrshahi (SBU, Iran); S. Karimian (Shahid Beheshti University Faculty of Electrical Engineering, Iran)

Comparison of Two Thermal Probe Technologies for the Dosimetric Investigations of RF Exposure Systems

B. Cerdan (LAAS-CNRS, France); K. Grenier (Laboratory of Analysis and Architecture of Systems (LAAS-CNRS, France); D. Dubuc (Laboratory of Analysis and Architecture of Systems (LAAS-CNRS) - University of Toulouse III, France); E. Flahaut (CRIMAT-CNRS, France)

Physics Inspired Artificial Neural Network Adaptation for SAR Prediction in Bio-EM Problems

H. Esmaeili, C. Yang, and C. Schuster (Hamburg University of Technology (TUHH), Germany)

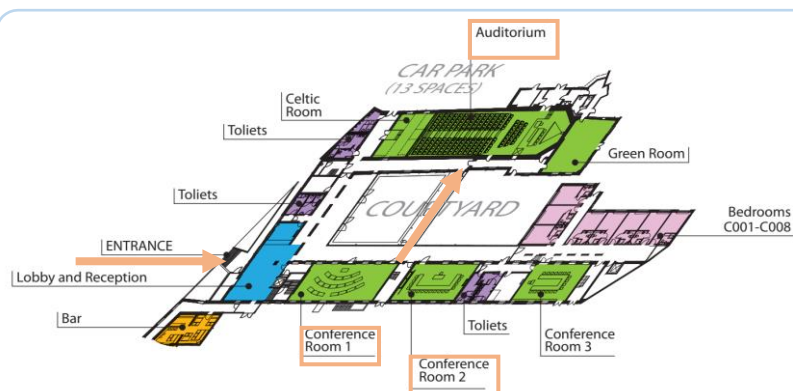
The Impact of Cold Storage on the Microwave Dielectric Properties of Normal Human Urine

S. B. Denton (The University of Texas at Austin, USA); E. Porter (University of Texas at Austin, USA)

12:45 – 13:45

Lunch

Floor Plan



Wi-Fi password: irishcollege

Exhibitors



Auditorium

Room 2

SS01: TC-28 Special Session on Planar RF & MW Devices for Biosamples Analysis and Manipulation
Chairs: Michal Cifra, Arnaud Pothier

CSS01: Sensors and Systems for Biomedical Applications
Chairs: Mauricio Perez, Paolo Colantonio

Invited Talk by Professor Jeroen Lammertyn (KU Leuven, Belgium)

Phantom-Based Evaluation of a Planar Microwave Sensor for Non-Invasive Intracranial Pressure Monitoring
M. D Perez (Uppsala University, Sweden & National Technological University, Argentina); E. Avetisyan, B. Manda (Uppsala University, Uppsala, Sweden); A. Monorchio (Pisa University, Sweden); A. Lewen, and Robin Augustine (Uppsala University, Sweden)

“Biosensing strategies for single cell screening in a microfluidic platform”

Flexible Microwave Biosensor for Liquid Characterization Inside Laboratory Containers
B. Harkinezhad (KU Leuven & University of Melbourne, Belgium); T. Markovic (University of Zagreb & University of Leuven, Croatia); K. Ghorbani (RMIT University, Australia); D. Schreurs (KU Leuven, Belgium)

On-Microscope Chips for Pulsed Electric Field Manipulation of Protein Structures
D. Havelka and M. Cifra (Institute of Photonics and Electronics of the Czech Academy of Sciences, Czech Republic)

Substrate-Integrated-Waveguide Based Microwave Differential Sensor With Additional Zero Point for Measuring Small Variations of Liquids
X. Song and S. Yan (Xi'an Jiaotong University, China); G. Vandenbosch (KU Leuven, Belgium)

Monitoring Intracellular Transformation Mechanisms Thanks to Dielectrophoresis Biophysical Analysis Performed at UHF Frequencies
E. Lambert (Xlim, University of Limoges, France); E. Barthout (CAPTuR-EA 3842, University of Limoges, France); N. Blasco (XLIM University of Limoges, France); H. Daverat (CAPTuR University of Limoges, France); T. Chetouane (XLIM - University of Limoges, France); M. Boutaud and C. Jemfer (CAPTuR - University of Limoges, France); B. Bessette (University of Limoges, France); C. Dalmy (XLIM - CNRS - Université de Limoges, France); F. Lalloue (University of Limoges, France); A. Pothier (Univ Limoges - CNRS - XLIM UMR7252, France)

Permittivity-Based Analysis by the Integration of Impedance Cytometry and Microwave Sensing
U. Tefek (Bilkent University, Turkey); B. Sari (Sabanci University, Turkey); H. Alhmoud and M. S. Hanay (Bilkent University, Turkey)

Advanced Thermal Imaging Can Resolve Short RF Pulse Effects in Tissue
D. van der Weide (University of Wisconsin - Madison, USA); D. Kendig (MicroSanj, USA); M. Shakouri (Microsanj LLC, USA); A. Shakouri (MicroSanj, USA)

System Considerations and Radar Transceiver for Breast Cancer Detection
M. Maier (Technische Universität Braunschweig, Germany); S. Wäsner (Institute for CMOS Design, Germany); V. Issakov (Technische Universität Braunschweig, Germany)

15:25 – 15:45

Coffee Break

EMIM01: Electromagnetic Imaging and Magnetic Resonance Imaging

Chairs: Shouhei Kidera, Milica Popović

Closely Fitted 16-Channel Breast Array for MRI
F. W Narongrit, T. Vishnu Ramesh, and J. V Rispoli (Purdue University, USA)

Conformal Occipital 18-Channel Receive-Only RF Coil for 3T MRI
W. Mathieu, M. Popović, and R. Farivar (McGill University, Canada)

Radar Image Enhanced Inverse Scattering Approach With Multi-Frequency Data for Microwave Breast Imaging
M. Nakajima and S. Kidera (University of Electro-Communications, Japan)

Improved Tissue Mimicking Materials for Shell-Based Phantoms in Breast Microwave Sensing
J. Krenkevich, G. Fontaine, T. Reimer and Stephen Pistorius (University of Manitoba, Canada)

Tutorial Session

Electromagnetic Fundamentals Underlying Health Impact of mm-Wave Radiations



15:45 – 17:00
Room 2

Professor Abbas Omar
(University of Magdeburg, Germany)

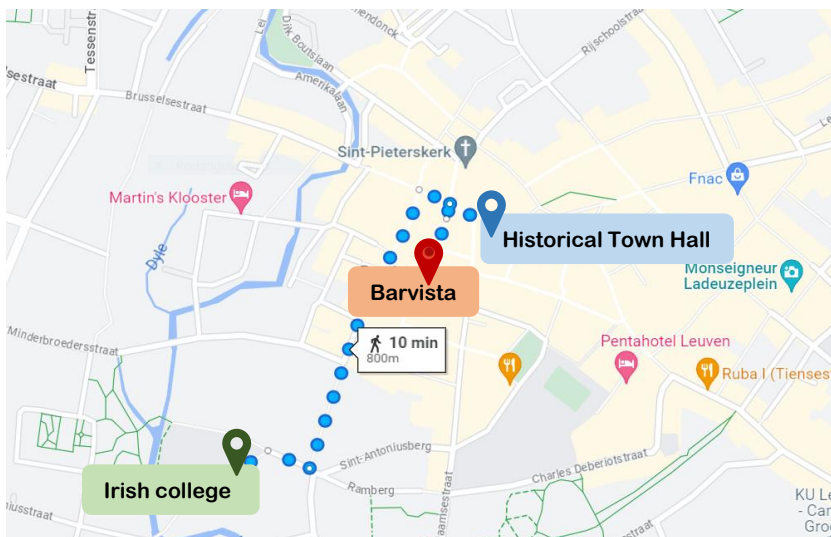
Social Events

18:30 – 19:30

Leuven Old Town Hall Reception
Location: Grote Markt

21:00 – 22:30

Young Professionals Event
Location: Barvista, Oude Markt 7/8



DAY 2

Tuesday, 12 September



Auditorium

SS02: TC-28 Special Session on Planar RF & MW Devices for Biosamples Analysis and Manipulation
Chairs: Michal Cifra, Francesca Apollonio

Rationale and Implementation of Microwave and subTHz Microfluidics
D. Havelka, J. Havlíček, P. Kurka, and M. Cifra (Institute of Photonics and Electronics of the Czech Academy of Sciences, Czech Republic)

Planar Microsystems for the Exposure of Biological Samples to Electromagnetic Fields
H. Tjhou and N. Tabcheh (University of Limoges, France); P. Leveque (University Limoges, CNRS, XLIM, France); C. Dalmy (University of Limoges, CNRS XLIM, France); D. Arnaud-Cormos (University of Limoges, CNRS, XLIM, France)

A Microfluidic Sensor Platform for Sub-THz Dielectric Spectroscopy in a SiGe BiCMOS Process Environment: Technology, Circuits, and Systems
C. Heine (Ulm University, Germany & IHP-The Leibniz Institute for High Performance Microelectronics, Germany); E. Can Durmaz (IHP-The Leibniz Institute for High Performance Microelectronics, Germany); M. Wietstruck (IHP, Germany); D. Kissinger (Ulm University, Germany)

CPW Transmission Line: An Enabling Technology in the Bioelectromagnetic Research
A. Paffi, L. Caramazza, C. Pisano, N. Dolciotti, M. Liberti, and F. Apollonio (Dept. of Information Engineering, Electronics and Telecommunication (DIET) Sapienza University of Rome Rome, Italy)

**Technical Talk by
Dr. Andreas Wien, IMST GmbH**

“Simulation of Electromagnetic Fields inside Body Models using EMPIRE XPU”



10:20 – 10:40

Coffee Break

10:40 – 11:25
Auditorium

Keynote Speaker: Professor Yongxin Guo
“Electromagnetics in Medicine: Current Status and Challenges of Wireless Power Transfer, Antennas and Wireless Sensing”

EMBCI: Focused Session on EM in Brain-Machine Interfaces
Chairs: Yongxin Guo, Fan Chen

Design of a Wideband Head Implantable Antenna for Brain-Computer Interface
S. Qiu, Y. Feng, H. Wang and Y. Guo (National University of Singapore, Singapore)

An Optimized Flower-Shaped Coil for Reducing the Energy of Transcranial Magnetic Stimulation
F. Chen and Yong-xin Guo (National University of Singapore, Singapore)

Electro Sensitivity for MRI-RF Induced Heating Evaluation of Active Implantable Medical Device
T. Long, C. Jiang and L. Li (Tsinghua University, China)

Advancing Brain-Machine Interfaces: High Data Rate Battery-Free Implants
Amin. Hasanvand (NTNU - Norwegian University of Science and Technology, Norway); A. Khaleghi (NTNU, Norway & OUS, Norway); C. Beguet (Blackrock Microsystems Europe GmbH, Norway); P. Wanda (Blackrock Microsystems Europe GmbH, Germany); I. Balasingham (Norwegian Institute of Science and Technology, Norway)

IEM: Interaction of Electromagnetic Fields
Chairs: Daniel van der Weide, Elena Rampazzo

Characterization of Glioblastoma Organoid Bio-Responses Upon 30.5 GHz Continuous Wave Exposure
E. Rampazzo (University of Padova, Italy); N. Karim (Bangor University Bangor, United Kingdom); L. Persano (University of Padova, Italy); R. Pinto, A. Casciati and M. Tanori (ENEA, Italy); G. Hodgkins (CREO Medical, United Kingdom); I. W. Davies (Bangor University, United Kingdom); A. Zambotti (ENEA Casaccia Research Centre, Italy); C. Paul Hancock (Bangor University and Creo Medical, United Kingdom); C. Palego (Bangor University, United Kingdom); G. Viola (University of Padova, Italy); M. Mancuso (ENEA, Italy); C. Merla (ENEA SSPT Division of Health Protection Technologies, Italy)

Disposable Non-Toxic Phantom Design for Microwave Breast Cancer Investigation
A. Eesuola and Paul Robert Young (University of Kent, United Kingdom)

Dual Mode Split Ring Resonator Sensing and Hyperthermia Array for Skin
Y. Gu (University of Wisconsin Madison, USA); D. van der Weide (University of Wisconsin - Madison, USA)

An Investigation of Multi-Path Electromagnetic Wave Propagation in Biological Tissue Stack-Ups
R. E. Jarvis and J. Metcalf (University of Oklahoma, USA); J. W. McDaniel (University of Oklahoma & Advanced Radar Research Center, USA)

Poster Presentation by Young Professionals (PhD Initiative)

12:45 – 13:40

Lunch



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Auditorium

Room 2

YP01: Young Professionals Focused Session on RF and Microwaves for Biomedical and eHealth Applications

Chairs: Giacomo Paolini, Ilona Piekarz

RAD: Radar and radio sensor applications for biomedical applications

Chairs: Jasmin Grosinger, Xuezhi Zeng

Importance of Antenna Array Positions in Classification of Microwave Bladder Fullness

E. Porter and A. Farshkaran (University of Texas at Austin, USA); S. B Denton (The University of Texas at Austin, USA); A. Santorelli (University of Texas at Austin, USA)

Pulse Wave Velocity Monitoring Using A mmWave Radar Network

E. Antolinos, F. N. Pérez-Fernández and J. Grajal (Universidad Politécnica de Madrid, Spain)

Development of Multi-Layer Tissue-Mimicking Breast Phantoms for Microwaves and Millimeter-Waves Imaging

S. Di Meo and A. Cannata (University of Pavia, Italy); C. Blanco Angulo (University Miguel Hernández of Elche, Spain); G. Matrone (University of Pavia, Italy); J. Maria Sabater (Miguel Hernandez University, Spain); R. Gutierrez Mazon and H. Garcia Martinez (University Miguel Hernández of Elche, Spain); E. Ávila Navarro (Miguel Hernández University, Spain); M. Pasion (University of Pavia, Italy)

Towards In-Home Quantitative Gait Assessment Using Millimeter-Wave Radar

X. Zeng (Chalmers University Technology, Sweden)

CSRR-Based Low Power Microwave Heater for PCR Applications

M. Martinic and . Schreurs (KU Leuven, Belgium); T. Markovic (University of Zagreb & University of Leuven, Croatia); B. K. J. C. Nauwelaers (KU Leuven, Belgium)

Wide-Angle Vital Signs Measurements by Adaptive FMCW Radar

P. Mehrjouseresh (Kuleuven, Belgium); O. Babarinde, R. El Hail and D. Schreurs (KU Leuven, Belgium)

Microwave Biosensors for Label-Free Bacteria Detection

I. Piekarz and J. Sorocki (AGH University of Science and Technology, Poland); S. Gorska (Polish Academy of Sciences, Poland); K. Wincza and Slawomir Gruszczynski (AGH University of Science and Technology, Poland)

Contactless Healthcare Monitoring System Performance Analysis of Multiple Devices

W. Alexander Taylor, A. Nioche, R. Murray-Smith, J. Cooper, Q. Abbasi and M. Ali Imran (University of Glasgow, United Kingdom)

Lab-In-An-Undergarment (LabUnder): A Smart Undergarment for Remote Health Monitoring Using Textile-Based I-Shaped Slot Yagi-Uda Antennas and Data Modulation

D.Vital (The University of Illinois Chicago, USA); S. Bhardwaj (University of Nebraska-Lincoln, USA); B. Smida (University of Illinois at Chicago, USA)

Integrating RF-Visual Technologies for Improved Speech Recognition in Hearing Aids

Z. Chen, T. Chong, Y. Ge, Q. H Abbasi and M. Ali Imran (University of Glasgow, United Kingdom)

15:20 – 15:40

Coffee Break

WIM01: Women in Microwaves Focused Session on Recent Scientific Achievement Exploiting Microwaves for IoT and Biomedical Applications

Chairs: Alessandra Costanzo, Mariella Särestöniemi

Presentation by



Say Phommakesone, Keysight Technologies
Dielectric Properties Measurement Using Radio Frequency (RF) Relates to Bio/Medical Research

Pulley-Type Split Ring Resonator for Improved Characterization of Lossy Liquid

M. Chavoshi (KU Leuven, Belgium); T. Markovic (University of Zagreb and KU Leuven, Croatia); D. Schreurs (KU Leuven, Belgium)

Presentation by



Auro Das, IMEC
“High Speed, Scalable Readout Interfaces for Nanopore-based Sensor Arrays for High Throughput Biomolecular Sensing”

Breast Tumor Monitoring Vest With Embedded Flexible UWB Antennas -The Proof-Of-Concept Evaluations With Realistic Phantoms

R. Dessai (University of Oulu, Finland); M. Särestöniemi (1) Research unit of Health Sciences and Technology, (2) Centre for Wireless Communications, University of Oulu; J. Reponen (University of Oulu, Finland); M. Sonkki (Eriscon Antenna Technology Germany, Germany); T. Samuli Myllylä and S. Myllymaki (University of Oulu, Finland)

Textile Inductive Resonant Wireless Link for Movement Recognition

G. Monti, A. Antonio Fracasso and L. Tarricone (University of Salento, Italy)

16:40 – 17:20
Auditorium

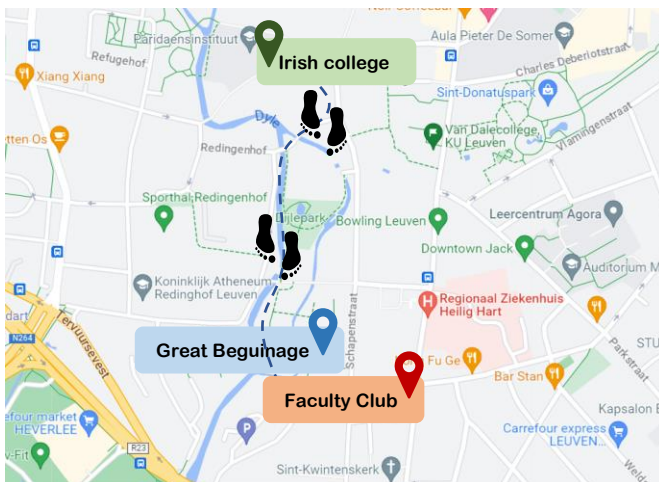
Keynote Speaker: Professor Jasmin Grosinger

“RF Design for Ultra-Low-Power Wireless Communication Systems”

19:00 – 21:00

Conference Dinner

Location: Faculty Club, Groot Begijnhof 14



Conference Group Photo

Time: 19:00 (Before the conference dinner)

Location: Entrance of Faculty Club

Local Tour

Explore the Historical Area in Leuven

Start: Main entrance of the Irish College at 17:50

Path: Alongside the river ‘De Dijle’, Past a 13th century mill, Through the large beguinage of Leuven, to Arrive finally at the Faculty Club

Duration: about 1 hour

DAY 3

Wednesday, 13 September



Auditorium

YP02: Young Professional Focused Session on RF and Microwaves for Biomedical and eHealth Applications

Chairs: Giacomo Paolini, Ilona Piekarz

Microstrip Gap Sensor for Dielectric Spectroscopy in Microfluidic Applications
A. Alati (Università Della Calabria, Italy); M. Lanuzza (University Of Calabria, Italy); G. Amendola (Università della Calabria, Italy); E. Armeri and L. Boccia (University of Calabria, Italy)

Design of an Interconnect Box for Dielectric Spectroscopy Using Disposable Samples
M. Mertens (KU Leuven & Polytechnique Montreal, Belgium); T. Markovic (University of Zagreb & University of Leuven, Croatia); R. Trouillon (Polytechnique Montreal, Canada); K. Wu (Polytechnique Montréal, Canada); D. Schreurs (KU Leuven, Belgium)

Modeling Liposome Electroporation by nsPEF: Towards Realism
L. Caramazza (Sapienza University of Rome & CLN25 at Sapienza, Fondazione Istituto Italiano di Tecnologia, Rome, Italy); A. Paffi (Sapienza University of Rome, Italy); M. Liberti (ICEMB at Sapienza University of Rome, Italy); F. Apollonio (ICEMB at Sapienza, University of Rome, Italy)

Broadband Dielectric Spectroscopy of Liquids Using Two-Wire Sensor Towards Their Content Analysis
J. Sorocki and I. Piekarz (AGH University of Science and Technology, Poland)

Effect of Realistic Body Models on Plane Wave Reflection at mmWaves
M. Colella (La Sapienza University of Rome, Italy); S. Di Meo and M. Pasián (University of Pavia, Italy); M. Liberti (ICEMB at Sapienza University of Rome, Italy); F. Apollonio (ICEMB at Sapienza, University of Rome, Italy)

Room 2

EMIM02: Electromagnetic Imaging and Magnetic Resonance Imaging II

Chairs: Shouhei Kidera, Mariella Särestöniemi

Clinical Validation of Back-Scattered Data Based Machine Learning Scheme for Microwave Breast Cancer Diagnosis
A. Ueda (The University of Electro-Communications, Japan); S. Kidera (University of Electro-Communications, Japan)

Microwave Breast Imaging System Characterization: Preliminary Healthy Volunteer Results
B. C. Besler, P. Mojabi, Z. Wang, S. N Price, Z. Lasemiemi, B. A. Besler, J. Bourqui, B. Doktor and E. Fear (University of Calgary, Canada)

A Data-Driven Method for Minimizing the Positioning Errors in Breast Microwave Sensing
J. Krenkevich, T. Reimer, G. Fontaine and S. Pistorius (University of Manitoba, Canada)

Parametric Design of a 3D-Printed Removable Common-Mode Trap for Magnetic Resonance Imaging
F.W Narongrit, T. Vishnu Ramesh and J. V Rispoli (Purdue University, USA)

10:10 – 10:30

Coffee Break

10:30 – 11:15
Auditorium

Keynote Speaker: Professor Changzhi Li

“Past, Present, and Future of Biomedical Radar Sensors”

WIM02: Women in Microwaves Focused Session on Recent Scientific Achievement Exploiting Microwaves for IoT and Biomedical Applications

Chairs: Alessandra Costanzo, Milica Popović

Novel Antenna Design for Surface Wave Suppression in Microwave Breast Screening
M. Mokhtari and M. Popović (McGill University, Canada)

A Conformal Wireless Power System for Battery-Free Implantable Optogenetic Treatment of Obstructive Sleep Apnea
E. Augello (Università di Bologna, Italy); G. Battistini, G. Paolini, S. Bastianini and G. Zoccoli (University of Bologna, Italy); A. Costanzo (DEI, University of Bologna, Italy)

The Challenge of 5G Technology: Cooperative Research, Innovative Techniques and Microscopic Models in Bioelectromagnetics
M. Liberti (ICEMB at Sapienza University of Rome, Italy); F. Apollonio (ICEMB at Sapienza, University of Rome, Italy); L. Caramazza (Sapienza University of Rome & CLN25 at Sapienza, Fondazione Istituto Italiano di Tecnologia, Rome, Italy); M. Colella (La Sapienza University of Rome, Italy); S. D'Agostino and N. Dolciotti (Sapienza University of Rome, Italy); S. Fontana (Sapienza University, Italy); A. Paffi and C. Pisano (Sapienza University of Rome, Italy)

Performing in Vitro Biological Assays to Evaluate the Impact of Electrochemotherapy Treatments
A. AE Calvel (LAAS-CNRS and IPBS, France); O. Peytral-Rieu and D. Dubuc (LAAS-CNRS and UPS, France); K. Grenier (LAAS-CNRS, France); M. Rols (CNRS IPBS, France)

CMB: Characterization and Modelling in Biomedical Applications

Chairs: Paolo Colantonio, Marco Mercuri

Machine Learning for Broadband Complex Permittivity Based Accurate Detection Technology
S. Li and H. Yuan (Beijing Institute of Technology, China); L. Wang (Xian Jiaotong University, China); M. Zhang (University of Stuttgart, China); J. Bao (University of Leuven, Belgium); L. Shao (Beijing Institute of Technology, China); M. Du (Tangshan Research Institute of BIT, China); L. Fang (Beijing Institute of Technology, China); B. K. J. C. Nauwelaers (KU Leuven, Belgium); L. Si and H. Sun (Beijing Institute of Technology, China); X. Bao (Beijing Institute of Technology & KU Leuven, China)

Free-Space THz Characterization of PC12 Cells
J. Mai (Polytechnique Montreal, Canada); H. Tissir (Polytechnique Montréal, Canada); H. Zhu (National Space Science Center, Chinese Academy of Sciences, China); R. Trouillon (Polytechnique Montreal, Canada); D. Schreurs (KU Leuven, Belgium); K. Wu (Polytechnique Montréal, Canada)

Complex Permittivity Extraction for Ethanol-Water Mixtures Characterization Using Artificial Neural Networks
M. Vandijck, M. Chavoshi, H. Ponsaerts (KU Leuven, Belgium); T. Markovic (University of Zagreb and KU Leuven, Croatia); D. Schreurs (KU Leuven, Belgium)

Finger Models: Example of Complex Geometry in Investigations on Microwave Skin Cancer Diagnosis
M. Popović and S. Shang (McGill University, Canada)

12:35 – 13:30

Lunch



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Auditorium

Room 2

CSS02: Sensors and Systems for Biomedical Applications

Chairs: Katia Grenier, Jasmin Grosinger

AP02: Antennas and Propagation for Biomedical Applications

Chairs: Hendrik Rogier, Mohammad H. Zarifi

A Double-Band Resonance Sensor for Complex Permittivity Characterization of Liquids

M. Du (Tangshan Research Institute of BIT, China); S. Li, L. Shao and H. Yuan (Beijing Institute of Technology, China); M. Zhang (University of Stuttgart, China); J. Bao (University of Leuven, Belgium); J. Ma (Beijing Institute of Technology, China); B. K. J. C. Nauwelaers (KU Leuven, Belgium); L. Si and H. Sun (Beijing Institute of Technology, China); X. Bao (Beijing Institute of Technology & KU Leuven, China)

Conformal Rat Head Wearable Antenna for Transcranial RF Stimulation

A. Qudidous (Chair for RF and Photonics Engineering Technische Universität Dresden, Germany); A. Bilal (EMPHASIS Research Center, University of Cyprus, Cyprus); C. Pitrís (KIOS Research and Innovation Center of Excellence, Cyprus); A. Odysseos (EPOS - IASIS, Cyprus); S. Izeckiel (University of Cyprus, Cyprus)

Low-Cost Portable Sensing System for Organic Tissue Detection and Differentiation

A. R Kovačević, N. Basta and S. V Savić (University of Belgrade, Serbia)

Kirigami Integrated Yagi-Uda Antenna for Strain Sensing in Biomedical Applications

A. Salim (The University of British Columbia, Canada); O. Nihsan (University of British Columbia, Canada); Mohammad H. Zarifi (The University of British Columbia, Canada)

Enhancing Measurement Specificity in Biological Samples With Differential Probing Analysis

A. M Llop Recha, D. Wisland, T. Sverre Lande and K. G Kjelgård (University of Oslo, Norway)

Experimental Procedure for Accurate Performance Evaluation of RFID Tag Placed on Human Tissue

N. R Rishani (Université Gustave Eiffel, France); S. Protat (Universite Gustave Eiffel & ESYCOM Lab, France); J. Laheurte (Université Gustave Eiffel & ESYCOM Lab, France); R. Gadhafi (University of Dubai, United Arab Emirates)

Highly Sensitive and Angular Stable All-Dielectric Cross-Polarization Conversion Based Biosensor

S. Nagini, C. DS

The Limits of Implantable Bluetooth Links in DIY Gel Phantoms: A Channel Gain Evaluation

M. Wagih and N. Bruce (University of Glasgow, United Kingdom)



Closing & Awards Ceremony

14:50 – 15:40, Auditorium

Thanks for Your Participation in IMBioC2023!

The **KU Leuven Library's** origins trace back to the early years of the university, evolving from professor-held book collections to a formal library in 1636. Despite setbacks, including fires during both World Wars, the library grew through acquisitions and donations. In 2017, it became KU Leuven Libraries, supporting and complementing the university's core functions. The carillon in the library tower has 63 bells with a total weight of 35 metric tons. The bass bell is called "the Liberty Bell of Louvain" and weighs seven metric tons. It enthusiastically announces the time each hour every day. The 1792 American engineers that died in Europe during the First World War are commemorated with this carillon.



Every September, Leuven Kermis occupies the square in front of the library, which may affect the beautiful view of the library. Nevertheless, it provides the great opportunity to enjoy some fairground attractions or Belgian fries in a cozy atmosphere.



Arenberg Castle The lords of Heverlee built a first castle here in the 14th century. In 1916 the duke of Arenberg donated the domain to the university. Today, this green domain on the outskirts of Leuven is owned by KU Leuven. It is the University's Science and Technology Campus.

This conference was made possible by:

