

IMBioC 2020 VIRTUAL CONFERENCE PROGRAM

Tuesday December 15, 2020

Live keynote 1

Keynote 1	Water and its dielectric signature. New marker for biosensing	Yuri Feldman (The Hebrew University of Jerusalem, Department of Applied Physics)
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Tu1A-Q&A technical session Microscale biosensors 1 (Invited paper + 3 papers)

Tu1A - 1	Live invited paper - Microwaving a biological cell alive - Broadband label-free noninvasive electrical characterization of a live cell	James C. M. HWANG (Cornell University, USA)
Tu1A - 2	A Capacitive Microwave Sensor with Guard Electrodes for Biological Cell Characterization	Aleksandar Savić (Hamburg University of Technology, Germany); Arne F Jacob (Technische Universität Hamburg, Germany)
Tu1A - 3	Broadband Measurement Setup for Cell Electrorotation	Pawel Barmuta (KU Leuven & Warsaw University of Technology, Belgium); Tomislav Markovic (University of Leuven, Belgium); Camila Campos (imec, KU Leuven, Belgium); Rahul Yadav (Imec, Belgium); Ilya Ocket (IMEC & ESAT-TELEMIC, KU Leuven, Belgium); Wim van Roy (imec, KU Leuven, Belgium); Tim Stakenborg, Liesbet Lagae and Jan Genoe (Imec, Belgium); Dominique Schreurs (KU Leuven, Belgium)
Tu1A - 4	paper withdrawn	

Tu1B-Q&A technical session Biomedical devices for MRI systems (4 papers)

Tu1B - 1	Sub-Terahertz Antenna Array Packaged inBio-Compatible Polymer for Fully-Passive Subdermal Sensing	Alfredo Gonzalez (7395 W 31ave, USA); Elias A. Alwan and John L. Volakis (Florida International University, USA)
Tu1B - 2	Design and Characterization of a Metasurface Enhancement Plate for 3T MRI	Endri Stoja (Fraunhofer FHR, Germany); Simon Konstandin, Robin Niklas Wilke, Dennis Philipp and Reinhold Umathum (Fraunhofer MEVIS, Germany); Jürgen W Jenne (Fraunhofer MEVIS & Mediri GmbH, Germany); Diego Betancourt and Thomas Bertuch (Fraunhofer FHR, Germany); Matthias Günther (Fraunhofer Mevis, Bremen, Germany)
Tu1B - 3	PIN Diode Switching Speed for MRI Applications	Robert Caverly (Villanova University, USA)
Tu1B - 4	A Metamaterial-Based Cable Mantle for Shield Current Suppression in MRI Systems	Diego Betancourt and Endri Stoja (Fraunhofer FHR, Germany); Robin Niklas Wilke and Dennis Philipp (Fraunhofer MEVIS, Germany); Jürgen W Jenne (Fraunhofer MEVIS & Mediri GmbH, Germany); Reinhold Umathum and Simon Konstandin (Fraunhofer MEVIS, Germany); Thomas Bertuch (Fraunhofer FHR, Germany); Matthias Günther (Fraunhofer Mevis, Bremen, Germany)

Tu1C-Q&A technical session Biomedical radars 1 (3 papers)

Tu1C - 1	Remote Limb Movement Analysis During Sleep by Means of Bioradar	Lesya N. Anishchenko (Bauman Moscow State Technical University, Russia); Mikhail Bochkaev, Lyudmila Korostovtseva and Yurii Sviryayev (V. A. Almazov Federal North-West Medical Research Center, Russia)
Tu1C - 2	Physical Activity Recognition Using Continuous Wave Radar with Deep Neural Network	Yiyuan Zhang, Oluwatosin Babarinde, Bart Vanrumste and Dominique Schreurs (KU Leuven, Belgium)
Tu1C - 3	Noncontact Exercise Monitoring in Multi-Person Scenario with Frequency-Modulated Continuous-Wave Radar	Davi Valerio de Queiroz Rodrigues and Changzhi Li (Texas Tech University, USA)

Tu1D-Q&A technical session Electroporation and hyperthermia (4 papers)

Tu1D - 1	Planning Sine Waves Electroporation on Liposomes for Drug Delivery Application	Laura Caramazza (ICEmB at Sapienza, University of Rome & Center for Life Nano Science@Sapienza, Istituto Italiano di Tecnologia, Italy); Annalisa De Angelis (Center for Life Nano Science@Sapienza, Istituto Italiano di Tecnologia, Rome & ICEmB at Sapienza, University of Rome, Italy); Martina Nardoni (Sapienza University of Rome, Italy); Patrizia Paolicelli (Sapienza, University of Rome, Italy); Stefania Petralito (Sapienza University of Rome, Rome, Italy); Francesca Apollonio (ICEmB at Sapienza, University of Rome, Italy); Micaela Liberti (ICEMB at Sapienza University of Rome, Italy)
Tu1D - 2	Electroporation Modelling of Irregularly Nucleated Cell with Perinuclear Space	Michele Chiapperino (Polytechnic University of Bari, Italy); Pietro Bia (Elettronica Group, Italy); Claudio Maria Lamacchia (Polytechnic University of Bari, Italy); Alessandro Miani (University of Milan, Italy); Luciano Mescia (Polytechnic University of Bari, Italy)
Tu1D - 3	Comparison of Two Global Optimization Techniques for Hyperthermia Treatment Planning of Breast Cancer: Coupled Electromagnetic and Thermal Simulation Study	Divya Baskaran and Kavitha Arunachalam (Indian Institute of Technology Madras, India)
Tu1D - 4	MRSaIFE: Tissue Heating Prediction for MRI: A Feasibility Study	Simone Angela S Winkler (Weill Cornell Medicine & INGENUYX, USA); Isabelle Sanieur (Weill Cornell Medicine, USA); Akshay Chaudhari (Stanford University, USA); Fraser Robb (GE Healthcare Inc., Italy); J Thomas Vaughan (Columbia University, USA)

Wednesday December 16, 2020

We1A-Q&A technical session Microscale biosensors 2 (5 papers)

We1A - 1	Broadband Electrical Sensing of Nucleus Size in a Live Cell from 900 Hz to 40 GHz	Xiaotian Du, James C Hwang, Xiao Ma, Xuanhong Cheng and Caroline Ladegard (Lehigh University, USA)
We1A - 2	Detection of Single Gold Nanoparticle in Liquid with Nanopore-Integrated Microwave Resonators	Hadi Sedaghat Pishesh, Arda Secme, Dilara Uslu, Berk Kucukoglu and M. Selim Hanay (Bilkent University, Turkey)
We1A - 3	Single-substrate Microfluidic Systems on PET Film for mm-Wave Sensors	Mario Mueh, Philipp Hinz and Christian Damm (Ulm University, Germany)
We1A - 4	paper withdrawn	-
We1A - 5	Terahertz Microscopy in Silicon Technology	Richard Al Hadi (University of California, Los Angeles, USA); Yan Zhao (University of California at Los Angeles (UCLA), USA); James Hwang (Cornell University, USA); Mau-Chung Frank Chang (University of California, Los Angeles, USA)

We1B-Q&A special session Antennas and wireless power for biomedical applications (Invited paper + 2 papers)

We1B - 1	Live invited paper - RF in Medicine: Current Status and Challenges of Wireless Power and Antennas	Yong-xin Guo (National University of Singapore, Singapore)
We1B - 2	Application of Fundamental In-Body Radiation Limitations to Practical Design of Antennas for Implantable Bioelectronics	Denys Nikolayev (École Polytechnique Fédérale de Lausanne, Switzerland); Wout Joseph (Ghent University/IMEC, Belgium); Maxim Zhadobov (University of RENNES 1, France); Luc Martens (Ghent University - imec, Belgium); Ronan Sauleau (University of Rennes 1, France); Anja K. Skrivervik (EPFL, Switzerland)
We1B - 3	High-Efficiency WPT with Harmonics-Enabled Antenna Alignment	Yong-xin Guo (National University of Singapore, Singapore)
We1B - 4	Wearable Wireless Propagation and Radiation Control with Metamaterial Textiles	John Ho (National University of Singapore, Singapore); Xi Tian and Qihang Zeng (NUS, Singapore)

We1C-Q&A technical session Biomedical radars 2 (4 papers)		
We1C - 1	Wireless Health Monitoring with 60 GHz-Band Beam Scanning Micro-Doppler Radar	Muhammad S Rabbani and Alexandros Feresidis (University of Birmingham, United Kingdom (Great Britain))
We1C - 2	Obstructive Sleep Apnea (OSA) Events Classification by Effective Radar Cross Section (ERCS) Method Using Microwave Doppler Radar and Machine Learning Classifier	Farjana Snigdha (University of Hawaii, Manoa, USA); Shekh Md Mahmudul Islam and Olga Boric-Lubecke (University of Hawaii at Manoa, USA)
We1C - 3	Microwave Radar for Breast Health Monitoring: System Performance Protocol	Lena Kranold, Muberra Ozmen, Mark Coates and Milica Popović (McGill University, Canada)
We1C - 4	paper withdrawn	
We1D-Q&A special session Electroporation (Invited paper + 2 papers)		
We1D - 1	Live invited paper - Cell Membrane Electroporation: From Models to Medical Applications	Lluis M. Mir (CNRS UMR 8203, Laboratory of Vectorology and Anticancer Therapy, France)
We1D - 2	The Frequency Dependent Response of Sinewave Electroporation	Tomas Garcia-Sanchez (UMR 8203 CNRS-Institut Gustave-Roussy, France); Annalisa De Angelis (ICEMB at Sapienza University of Rome, Italy); Francesca Apollonio (University Sapienza of Rome, Italy); Micaela Liberti (ICEMB at Sapienza University of Rome, Italy); Lluis M. Mir (CNRS UMR 8203, Laboratory of Vectorology and Anticancer Therapy, France); Caterina Merla (ENEA SSPT Division of Health Protection Technologies, Italy)
We1D - 3	Evaluation of Cell Membrane Effects After 3D Multicellular Spheroids RF Exposure	Jelena Kolosnjaj-Tabi (CNRS IPBS, France); Geraldine Alberola (IPBS, France); Sylvain Auge and Amar Tamra (LAAS, France); David Dubuc and Katia Grenier (Laboratory of Analysis and Architecture of Systems (LAAS-CNRS), France); Marie-Pierre Rols (CNRS IPBS, France)
We2A-Q&A technical session Macroscale biosensors (5 papers)		
We2A - 1	Biosensor Based on a Resonant Technique for Aqueous Glucose Monitoring Using Standardized Medical Test Tubes	Mahdi Srour and Benjamin Potelon (Lab-STICC, UBO, France); Cedric Quendo (Lab-STICC - UBO Brest, France); Christian Person (IMT Atlantique, France); Jean-Luc Carré (CHRU Brest / UBO, France)
We2A - 2	Microwave-based Sensor Dedicated to the Characterization of Meat Freshness	Maréva Calvet-Chautard (LAAS CNRS, France); Katia Grenier (Laboratory of Analysis and Architecture of Systems (LAAS-CNRS), France); Patricio Jaque Gonzalez (LAAS CNRS, France); David Dubuc (Laboratory of Analysis and Architecture of Systems (LAAS-CNRS), France); Thierry Véronèse (Ovalie Innovation, France)
We2A - 3	Broadband Blood Glucose Monitoring Using Waveguides from RF to Millimeter Wave Frequencies	Ghita Yaakoubi khibza (Univ\ Grenoble Alpes, CEA-LETI, France); Cedric Dehos (CEA, France); Baudouin Martineau (CEA-LETI, France); Jose Luis Gonzalez Jimenez (Université Grenoble-Alpes/CEA-Leti, France)
We2A - 4	A Water Dependent Tissue Dielectric Model for Estimation of In-Vivo Dielectric Properties	Atif Shahzad and Muhammad Adnan Elahi (National University of Ireland, Galway, Ireland); Pdraig Donlon (National University of Ireland Galway, Ireland); Martin O'Halloran (National University of Ireland, Galway, Ireland)
We2A - 5	Comparative Study of Tissue-Mimicking Phantoms for Microwave Breast Cancer Screening Systems	Lena Kranold, Jasmine Boparai, Leonardo Fortaleza and Milica Popović (McGill University, Canada)
We2B-Q&A poster session Biomedical systems (4 papers)		
We2B - 1	A Random Tree Based Algorithm for Blood Pressure Estimation	Andrea Tiloca (Politecnico di Torino, Italy); Guido Pagana (Researcher under grant, Italy); Danilo Demarchi (Politecnico di Torino, Italy)
We2B - 2	Binary Phase-Shift Keying for Ultrasonic Intra-Body Area Networks	Justine Guedey (University of Bordeaux, France); Yann Deavl (ENSEIRB, France); Herve Lapuyade (University of Bordeaux & IMS Labs, France); Francois Rivet (University of Bordeaux, France)
We2B - 3	Feasibility of Distorted Born Iterative Method for Detecting Early Stage of Heart Failure	Semih Dogu (Istanbul Technical University, Turkey); Egemen Bilgin (MEF University, Turkey); Sulayman Joof and Mehmet Akinci (Istanbul Technical University, Turkey)
We2B - 4	Wearable Ultra Wideband Technology for Daily Activity Recognition	Richa Bharadwaj and Shiban K Koul (Indian Institute of Technology Delhi, India)
We2C-Q&A technical session Microwave imaging (Invited paper + 4 papers)		
We2C - 1	Live invited paper - Microwave Near-Field Imaging of Human Tissue: Hopes, Challenges, Outlook	Natalia K. Nikolova (Department of Electrical and Computer engineering at McMaster University, Canada)
We2C - 2	Monitoring Regional Hyperthermia via Microwave Imaging: a Feasibility Study	Hana Mózzerová (Czech Technical University in Prague, Czech Republic); Rosa Scapatucci (CNR-National Research Council of Italy, Italy); Jan Vrba (Faculty of Biomedical Engineering, Czech Technical University in Prague, Czech Republic); Lorenzo Crocco (CNR - National Research Council of Italy, Italy)
We2C - 3	Comparison of Reconstruction Algorithms for Brain Stroke Microwave Imaging	Valeria Mariano and Jorge A. Tobon Vasquez (Politecnico di Torino, Italy); Rosa Scapatucci (CNR-National Research Council of Italy, Italy); Lorenzo Crocco (CNR - National Research Council of Italy, Italy); Panagiotis Kosmas (King's College London, United Kingdom (Great Britain)); Francesca Vipiana (Politecnico di Torino, Italy)
We2C - 4	Microwave Beamforming for Non-Invasive Brain Stimulation	Javad Ebrahimzadeh (University of Uppsala, Sweden); Alireza Madannejad (Research Assistant, University of Tehran, Iran); Fatemeh Ravanbakhsh (Student, Islamic Azad University, Iran); Sajjad Sadeghi (University of Tehran, Iran); Mauricio D Perez (Uppsala University, Sweden & National Technological University, Argentina); Robin Augustine (Uppsala University, Sweden)
We2C - 5	Time Reversal Microwave Imaging of Realistic Numerical Head Phantom for Bone Flap Healing Follow-up	Javad Ebrahimzadeh (University of Uppsala, Sweden); Alireza Madannejad (Research Assistant, University of Tehran, Iran); Sajjad Sadeghi (University of Tehran, Iran); Roger Karlsson (Uppsala University, Sweden); Pramod K B Rangaiah (Researcher & Uppsala University, Sweden); Bappaditya Mandal (Uppsala University, Uppsala, Sweden); Mauricio D Perez (Uppsala University, Sweden & National Technological University, Argentina); Robin Augustine (Uppsala University, Sweden)
We2D-Q&A special session Microscale characterization techniques for high-frequency bioelectromagnetic investigations (4 papers)		
We2D - 1	Computational Microdosimetry at Cellular Level at Millimeter Wave Frequencies	Zain Haider (University of Rennes 1, France); Maxim Zhadobov (University of RENNES 1, France); Yves Le Dréan and Ronan Sauleau (University of Rennes 1, France)
We2D - 2	Enlightening the Effect of Radiofrequency on Live Cells in Real-Time with the Bioluminescence Resonance Energy Transfer and the Impedancemetry Techniques	Emmanuelle Poque (IMS Laboratory, France); Delia Arnaud-Cormos (University of Limoges, CNRS, XLIM, France); André Garenne (Bordeaux University, France); Florence Poulletier De Gannes, Annabelle Hurtier and Lagroye Isabelle (IMS Laboratory, France); Philippe Leveque (University Limoges, CNRS, XLIM, France); Yann Percherancier (CNRS & UMR5218, France)
We2D - 3	Evaluations of Biological Effects Induced by Electromagnetic Radiation Waves: How Biological Models of Increasing Complexities and the Knowledge of the Mechanisms of Electroporation Allow to Address the Biological Effects of High Power Electr	Marie-Pierre Rols, Jelena Kolosnjaj-Tabi, Flavien Pillat and Laure Gibot (CNRS IPBS, France); Alexandre Catriain and Thomas Chretiennot (CEA DAM, France); Elisabeth Bellard and Muriel Golzio (CNRS IPBS, France); René Vezinet (CEA DAM, France)
We2D - 4	Microscale Temperature Measurements Within Specific Exposure Systems for Real-Time Cellular Characterization	Amani Nefzi and Rosa Orlacchio (Xlim, University of Limoges, France); Lynn Carr (University of Bangor, France); Noelle Lewis (University of Bordeaux I, France); Yann Percherancier (CNRS & UMR5218, France); Philippe Leveque (University Limoges, CNRS, XLIM, France); Delia Arnaud-Cormos (University of Limoges, CNRS, XLIM, France)

We3A-Q&A special session RF/Microwave sensors for biomedical applications Special Session (4 papers)		
We3A - 1	Use of Coplanar Quarter-Wave Resonators for Glucose Sensing in Aqueous Solutions	Carlos G. Juan (Miguel Hernández University of Elche, Spain); Enrique Bronchalo (Universidad Miguel Hernandez de Elche (UMH), Spain); Benjamin Potelon (Lab-STICC, UBO, France); Jesús Álvarez-Pastor (Miguel Hernández University of Elche, Spain); Jose Maria Sabater (Miguel Hernandez University, Spain)
We3A - 2	Wireless Stress Sensor Based on Magnetoelastic Microwires for Biomedical Applications	Pilar Marín Marin (Universidad Complutense de Madrid, Spain)
We3A - 3	Electro-Inductive Wave Transmission Line Based Microfluidic Microwave Sensor	Marta Gil Barba (Universidad Politécnica de Madrid, Spain); Paris Véléz (Universitat Autònoma de Barcelona, Spain); Francisco Aznar-Ballesta and Arán Mesegar-Ruiz (Universidad Politécnica de Madrid, Spain); Jonatan Muñoz-Enano (Universitat Autònoma de Barcelona, Spain); Marcos Duque (Instituto de Microelectrónica de Barcelona IMB-CNM (CSIC), Spain); Ferran Martín (Universidad autónoma de Barcelona, Spain)
We3A - 4	Detection of a Macromolecule Denaturation with Microwave Dielectric Spectroscopy Based on Hydration Modifications	Katia Grenier (Laboratory of Analysis and Architecture of Systems (LAAS-CNRS), France); Genevieve Pratviel (LCC, France); David Dubuc (Laboratory of Analysis and Architecture of Systems (LAAS-CNRS), France)
We3B-Q&A technical session Biomedical systems (5 papers)		
We3B - 1	Toward an Energy-Autonomous Wearable System for Human Breath Detection	Giacomo Paolini, Michael Feliciani and Diego Masotti (University of Bologna, Italy); Alessandra Costanzo (DEI, University of Bologna, Italy)
We3B - 2	Feasibility Study on the Reading of Energy-Harvested Implanted NFC Tags Using Mobile Phones and Commercial NFC IC	Antonio Lazaro, Marti Boada, Ramon Villarino and David Girbau (Universitat Rovira i Virgili, Spain)
We3B - 3	Implementation of High-Frequency Dielectric Heating System for Breast Cancer Treatment	Supawat Kotchapradit and Thanaset Thosdeekoraphat (Suranaree University of Technology, Thailand)
We3B - 4	Recording Neural Spikes Using Wireless Neurosensing System	Carolina Moncion and Sathesh Bojja Venkatakrishnan (Florida International University, USA); Asimina Kiourti (The Ohio State University, USA); Jorge Riera Diaz and John L. Volakis (Florida International University, USA)
We3B - 5	Antenna Based RF Techniques for Intrabody Communication	Subhadeep Basu (Indian Institute Of Engineering Science and Technology Shibpur, India); Debasis Mitra (Indian Institute of Engineering Science & Technology, Shibpur, India); Bappaditya Mandal (Uppsala University, Uppsala, Sweden); Robin Augustine (Uppsala University, Sweden)
We3C-Q&A poster session Microwave sensing and imaging (6 papers)		
We3C - 1	Interaction of the Near-Field Microwave Wideband Sensor with Biological Tissues for Glucose Monitoring	Andrey Zapasnoy (National Research Tomsk State University, Russia); Victor Belichenko, Andrey Klokov, Aleksandr Mironchev, Aleksandr Gorst and Ksenya Zavyalova (National Research Tomsk State University Russia, Russia); Vladimir Yakubov (Tomsk State University & TSU, Russia)
We3C - 2	Two-Coaxial-Probes Method for Dielectric Spectroscopy of Two-Layered Materials Towards Biological Application	Masahito Nakamura (Nippon Telegraph and Telephone Corp. & NTT Device Technology Labs., Japan); Takuro Tajima and Michiko Seyama (Nippon Telegraph and Telephone Corp., Japan)
We3C - 3	Phaseless Microwave Breast Imaging: Preliminary Study and Coupling Medium Effects	Sandra Costanzo and Giuseppe Lopez (University of Calabria, Italy)
We3C - 4	Microfluidics-Integrated Microwave Sensors for Single Cells Size Discrimination	Arda Secme, Hadi Sedaghat Pisheh, Dilara Uslu, Ozge Akbulut, Tufan Erdogan and M. Selim Hanay (Bilkent University, Turkey)
We3C - 5	Microwave Bone Imaging: Experimental Evaluation of Calcaneus Bone Phantom and Imaging Prototype	Bilal Amin (National University of Ireland, Galway & Translational Medical Device Lab, Ireland); Colin Sheridan (National University of Ireland Galway, Ireland); Daniel Kelly (School of Medicine, National University of Ireland Galway, Ireland); Atif Shahzad, Martin O'Halloran and Muhammad Adnan Elahi (National University of Ireland, Galway, Ireland)
We3C - 6	Real-time Quantitative Analysis of L-Lysine Based on Radio Frequency Sensing	Kunal Wadhvani (International Institute of Information Technology Hyderabad, India); Sheena Hussaini (Nokia of America Corporation, USA); Azeemuddin Syed (International Institute of Information Technology Hyderabad, India)
We3D-Q&A technical session Bio effects (Invited paper + 3 papers)		
We3D - 1	Live invited paper - Non ionizing Radiation assessment in the French Ministry of Army	Rachid Jaoui (Direction Générale de l'Armement, Balma, France)
We3D - 2	Scrutinizing Effects of 75 GHz MMW Irradiation on Biological Functions of Yeast	Shailendra Rajput, Ayan Barbora, Konstantin Komoshvili, Stella Aronov, Jacob Levitan and Asher Yahalom (Ariel University, Israel)
We3D - 3	Optimal Active Length for Microwave Applicator with a Compact Choke: Surface Current Analysis	Shabeeb KP Ahamed (Indian Institute of Technology, Madras, Chennai, India); Kavitha Arunachalam (Indian Institute of Technology Madras, India)
We3D - 4	A Technique to Reduce SAR for an Implantable Antenna Using Metasurface	Soumyadeep Das (Indian Institute of Engineering Science and Technology (IIST), Shibpur & Graduate Student Member, IEEE, India); Debasis Mitra (Indian Institute of Engineering Science & Technology, Shibpur, India); Bappaditya Mandal (Uppsala University, Uppsala, Sweden); Robin Augustine (Uppsala University, Sweden)
Thursday December 17, 2020		
Th1A-Q&A WS session - WS - Evaluation of biological endpoints using innovative sensing and imaging approaches		
Th1A - 1	Quantitative Scanning Microwave Microscopy of the Evolution of a Live Biological Cell in a Physiological Buffer	James C. M. HWANG (Cornell University, USA)
Th1A - 2	Dielectric parameters extraction and modeling of brain cancer stem-like cell	Caterina MERLA (ENEA, Italy), Cristiano PALEGO
Th1A - 3	Microwaving biological cells for biological and medical sensing and monitoring	Katia GRENIER, David DUBUC (LAAS-CNRS, Toulouse, France)
Th1A - 4	Tracking compounds concentration in liquids: novel solutions to enhance sensitivity and perspectives on selectivity of the sensors	Benjamin POLETON (Lab-STICC, Brest, France)
Th1A - 5	High frequency Electromagnetic Fields sensing based on lab-on-chip technology for Cancer Stem Cells Isolation and Analysis	Claire DALMAY, Arnaud POTHIER (XLIM, Limoges, France)
Live keynote 2		
Keynote 2	Wireless electronic tattoos for personalized mobile sensing and therapeutics	Nanshu Lu (University of Texas at Austin)