Guest Editorial Preface

Special Issue on Enabling Infrastructures and Algorithms for e-Health Applications

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Technology advancements in high-capacity communications as well as advancements in computer architectures, have enabled vast applications in eHealth domain. This way, massive reduction in costs of health sector is possible while at the same time increasing quality of each service since it is available online on cost effective platforms.

The special issue of the International Journal of E-Health and Medical Communications focused on Enabling Infrastructures and Algorithms for e-Health Applications aims to collect recent progress in new possible software and hardware architectures that support new applications, while also thinking of smart algorithms that can be run and implemented on heterogeneous platforms.

This issue recommended totally 5 papers to be published based on the standard reviewing process, where at least two constructive reviews and with guest editors comment have been received. Papers are split in two main groups focused mainly on enabling infrastructures for e-Health applications, and also algorithms that can help in processing of data for health applications.

In the work "Technological Trends for 5G Networks - Influence of E-health and IoT Applications", the author Jose Marcos Camara Brito gives deep review of requirements such as mobile broadband, low-latency and high reliability on 5G applications and scenarios that are crucial for Internet of Things (IoT) and e-Health applications.

In the work "Smartwatch as an Assistive Technology", the authors Marin Vukovic, Zeljka Car, Jasmina Ivsac Pavlisa, and Lidija Mandic, present the usage of smartwatch as assistive technology for people with various difficulties, since smartwatch niches are still revealing. Authors emphasize its abilities to provide communication and localization services and thus enable to monitor child/ persons with disabilities for purposes of increasing their safety.

In the work "Supporting Students Mental Health and Academic Success Through Mobile App and IoT", the authors Karolina Baras, Luísa Soares, Carla Vale Lucas, Filipa Oliveira, Norberto Pinto Paulo, and Regina Barros provide the study that examine students' well-being and mental health as well as student's perception of challenges and obstacles they face during their academic journey. Also, they present mobile application that acts as a complement to a successful tutoring project within the University. This application allows students to keep their schedules and deadlines in one place while incorporating a virtual tutor features, while also sending notifications, such as motivational phrases, time management guidelines, as well as relaxation tips.

In the work "A Comparative Study of FFT, DCT and DWT for Efficient Arrhytmia Classification in RP-RF Framework", the authors Tea Marasović, and Vladan Papić propose a novel framework that combines the theory of compressive sensing with random forests to achieve reliable automatic cardiac arrhythmia detection. Also, they evaluate FFT, DCT and DWT data transformations in order to extract significant features boosting the classification performance.

In the work "Integral Equation Formulations and Related Numerical Solution Methods in Some Biomedical Applications of Electromagnetic Fields", the authors Dragan Poljak, Mario Cvetković, Vicko Dorić, Ivana Zulim, Zoran Đogaš, Maja Rogić Vidaković, Jens Haueisen, and Khalil El Khamlichi Drissi review certain integral equation approaches and related numerical methods used in studies of biomedical applications of electromagnetic fields pertaining to transcranial magnetic stimulation (TMS) and nerve fiber stimulation. They present illustrative numerical results for the TMS induced fields and intracellular current distribution along the myelinated nerve fiber.

Also, but important, guest editorial team wish to thank EiC, prof. Joel J.P.C. Rodrigues for the kindness, and the full support during the process of building this Special Issue, which at the end lead to the its full success.

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Petar Šolić received the M.S. and Ph.D. degrees in computer science from the University of Split, Split, Croatia, in 2008 and 2014, respectively. During his undergraduate study in 2007, he was a member of the national winning team of the "Imagine Cup" competition representing Croatia in the "Software Design" category at the worldwide finals in Seoul, South Korea. He is currently with the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture (FESB), University of Split, as an Assistant Professor with the Department of Communication and Information Technologies. At the Scientific Novices Seminar held in 2015, he was awarded with the recognition for his previous scientific achievements. In 2016, he received National prize for Science. His research interests include information technologies and RFID technology and its application.

Luigi Patrono received his MS in Computer Engineering from University of Lecce, Lecce, Italy, in 1999 and PhD in Innovative Materials and Technologies for Satellite Networks from ISUFI-University of Lecce, Lecce, Italy, in 2003. He is an Assistant Professor of Computer Network at the University of Salento, Lecce, Italy. His research interests include RFID, EPCglobal, Internet of Things, Wireless Sensor Networks, and design and performance evaluation of protocols. He is Organizer Chair of the international Symposium on RFID Technologies and Internet of Things within the IEEE SoftCOM conference. He is Guest Editor of the Special Issue on RFID Technologies & Internet of Things. He is author of about 100 scientific papers published on international journals and conferences and four chapters of books with international diffusion.

Katarina Vukojević received her B.S. and M.S. degrees from the Faculty of Medicine of the University of Mostar in 2004 and 2008, respectively. Since 2006 she has been working at the Department of Anatomy, Histology and Embryology at the Faculty of Medicine in Split, where she also received a doctorate in 2009. She was visiting researcher from the University of Toronto, Canada (2009-2010) and Columbia University, USA (2013-2014). Her research interests are early human development, developmental plasticity and neoplasia, and medical education. She published about 40 scientific papers in these areas.

Mario Cvetković received the B.S. degree in electrical engineering from the University of Split, Croatia in 2005. In 2009 he obtained M.Phil degree from the Wessex Institute of Technology, University of Wales, UK. In December 2013, he received Ph.D. from University of Split, Croatia, for the thesis entitled "Method for Electromagnetic Thermal Dosimetry of the Human Brain Exposed to High Frequency Fields". In December 2010, he held a seminar to graduate and postgraduate students at the Technical University of Ilmenau, Germany, and in September 2014 he held a seminar at the Mälardalen University, Västerås, Sweden. He is a recipient of the "Best Student Paper Award", awarded at the 16th edition of the international conference SoftCOM 2008. At the Scientific Novices Seminar held in 2012, he was awarded with the recognition for his previous scientific achievements. To date he has published 38 journal and conference papers and two book chapters (CRC Press and Springer). He is currently working as a postdoc at the Faculty of electrical engineering, mechanical engineering and naval architecture (FESB), University of Split. His research interests are numerical modeling including finite element and moment methods, computational bioelectromagnetics and heat transfer related phenomena. He is a member and is also serving as a secretary of Working Group 2 of IEEE/International Committee on Electromagnetic Safety (ICES) Technical Committee 95 SC6 EMF Dosimetry Modeling.