Editorial

Luis Kun¹

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The purpose of our Special Issues is multiple. Not only our audience includes and represents interest areas for Biomedical and Clinical Engineers as well as Medical Physicists but as mentioned in our original Introductory Editorial¹ where we expressed that the views of other multidisciplinary and interdisciplinary professionals were welcome. We also realized that in addition to the different topics of interest, in many instances, the different geographical areas of the world, may have different requirements and or perspectives on a given topic, i.e., developed versus developing nations use of certain technologies, affordability, access, etc. This year, 2020 (Volume 10) we already had in the 1st Issue of January the following Special Issues: Special issue: International Conference on Medical and Biological Engineering (CMBEBIH 2019) and Special issue: Internet of Medical Things in E-Health. Also in Volume 10, March 2020 we had the following Special Issues: Special Issue: CNIB 2018 - Technologies to Improve Health from the meeting in Leon, Mexico and the Special Issue: Global Issues in Clinical Engineering, from the world congress in clinical Engineering earlier in Sao Paulo, Brazil.

1 Introduction to the New Special Issue MEDICON2019: Models and Technologies for Promoting Patient Empowerment: from Algorithms to p-Health Solutions

The 15th Mediterranean Conference on Medical and Biological Engineering and Computing, MEDICON2019, was organized for the first time in Portugal, September 26 to 28, 2019, and was hosted

by the UNESCO World Heritage University, the University of Coimbra.

MEDICON2019 provided a common platform for the cross fertilization of ideas, and to help shape knowledge and scientific achievements by bridging complementary disciplines into an interactive and attractive forum under the special theme of the conference that was “Improving healthcare through holistic patient empowerment”. Patient empowerment has emerged as a new paradigm that positions the patients at the heart of the health system and encourages them to be actively involved in managing their own healthcare needs. Effective patient empowerment requires a holistic approach, combining multiple dimensions of needs and patient contexts. Medical and Biological Engineering, as well as Computing, are disciplines at the heart of patient empowerment. Research and development in these areas are impacting the science and technology by advancing fundamental concepts in translational medicine and understanding in human physiology, function and behavior at multiple levels. This is leading to improved tools and techniques for the detection, prevention, treatment and management of diseases.

The meeting attracted thousands of participants (see picture below) and was a complete success. As the meeting was being planned, I invited Jorge Henriques, Miguel Castelo-Branco and Paula Oliveira to be Co-Guest Editors of a Special Issue for our Journal - *Models and Technologies for Promoting Patient Empowerment: from Algorithms to p-Health Solutions*. Towards the end of the meeting we held a special: “Meet the Editors” session where the three of us met with dozens of interested individuals in

¹ Bos, L., Kun, L. Just another journal? No, a different one!. *Health Technol.* 1, 1–4 (2011). <https://doi.org/10.1007/s12553-010-0001-9>

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participating. Many of the details regarding writing, submitting, reviewing, editing, the peer-review process, etc. were discussed.

Picture 1. Some of the participants of the MEDICON 2019 in Coimbra, Portugal are posing for a picture, during a visit to the famous historical library located in the academic city of Coimbra, at the International School of the University of Coimbra (Palácio da Universidade). Its construction started in 1717, and was completed in 1728

After a selection process, based on excellent presentations, some of the authors were papers were among the finalists. The following titles and authors with their

respective articles are introduced here. These submitted articles were accepted after peer-review and are part of this Special Issue.

Paper Titles	Authors
[1] Modelling whole heart electrical activity for ischemia and cardiac pacing simulation*	Biasi, N., Tognetti, A.
[2] Smart socks: new effective method of gait monitoring for systems with limited number of plantar sensors	Oks, A., Katashev, A., Eizentals, P. et al.
[3] Smart shirt system for compensatory movement retraining assistance: feasibility study	Eizentals, P., Katashev, A., Oks, A. et al.
[4] Characterization of the retinal changes of the 3 × Tg-AD mouse model of Alzheimer's disease	Ferreira, H., Martins, J., Nunes, A. et al.
[5] Increasing levels of insulin secretion in bioartificial pancreas technology: co-encapsulation of beta cells and nanoparticles containing GLP-1 in alginate hydrogels	Crisóstomo, J., Araújo, F., Granja, P. et al.
[6] A novel approach to keypoint detection for the aesthetic evaluation of breast cancer surgery outcomes	Gonçalves, T., Silva, W., Cardoso, M.J. et al.
[7] A-scan ultrasonic system for real time automatic cataract detection	Petrella, L., Pinto, C., Perdigão, F. et al.
[8] Sexual dimorphism of the adult human retina assessed by optical coherence tomography	Nunes, A., Serranho, P., Quental, H. et al.
[9] Machine learning prediction of susceptibility to visceral fat associated diseases	Aldrainli, M., Soria, D., Parkinson, J. et al.
[10] An eradication agent acting on a binary cell population model: mathematical analysis	Branco, J.R., Ferreira, J.A., de Oliveira, P., Pena, G
[11] Machine learning models for the prediction of acuity and variability of eye-positioning using features extracted from oculography	Improta, G., Ricciardi, C., Cesarelli, G. et al.
[12] Diagnostic value of Apparent Diffusion Coefficient lesion texture biomarkers in breast MRI	Tsarouchi, M., Vlachopoulos, G., Karahaliou, A., Costaridou, L
[13] Can recurrent neural network enhanced EEGNet improve the accuracy of ERP classification task? An exploration and a discussion	Zhao, H., Yang, Y., Karlsson, P., McEwan, A

*Correction statement published

Dr. Jorge Henriques

Dr. Miguel Castelo Branco

Dr. Paula Oliveira

I would like to thank Dr. Jorge Henriques, Dr. Miguel Castelo Branco, and Dr. Paula Oliveira for their effort in putting together this Special Issue, making sure in addition to the peer-review, 'that all papers were accurate and well translated.

NOTE: On September 27, 2019, at MEDICON 2019, 15th Mediterranean Conference on Medical and Biological Engineering and Computing in Coimbra, Portugal after my Invited Keynote: *Prevention Engineering: Evolving Challenges for Biomedical and Clinical Engineering*, (<http://www.medicon2019.org/member/luis-kun/>) it was announced that all the papers of this Special Issue would be available for free downloads (as it has been customary) for a period of one month at the Springer's website

Best wishes to all and stay safe.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no competing of interests.

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