Editorial

A New Home for Xjenza Online

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Dear readers of Xjenza Online, as Editor, I am pleased to inform you that the release of the first issue of 2019 coincides with the launch of a brand new website for the journal, www.xjenza.org.

One of my main aims since I took over the responsibility of acting as Editor-in-Chief for Xjenza Online has been to continue to increase the journal's quality, visibility, availability and readership. The new website is not only going to achieve this, but it provides a completely new look and feel experience to all our readers, authors, expert reviewers, and members of the Editorial Board. It is not the first time when I mention the fact that the journal has evolved alongside the community it serves and has become the home to a rich and exciting scientific research. I hope that the new website will fully reflect this transformation of the journal over the years. The website also has its own manuscript submission and management system and an online article repository, thus meeting one of the indexing requirements set by internationally leading databases. Of course, this achievement would not have been possible without the assistance of the members of the Editorial Board of Xjenza Online, in general, and of Dr Sebastiano D'Amico, in particular; the hard work of the website developer, Giovanni Faraone; and, most importantly, the financial support of the Research, Innovation and Development Trust of the University of Malta.

As today's research is a global endeavour, so remains our focus in this issue of Xjenza Online, both in the original research we publish and in our news coverage.

The issue opens with an article co-authored by Zerafa, Galea and Sebu, which proposes a novel approach which uses mathematical modelling and deep neural networks to learn how to invert pseudo-spectral data for seismic waveforms. Needless to mention that deep learning techniques have recently gained great popularity for their widespread success in pattern recognition and computer vision, and they are now emerging as excellent tools for solving inverse problems and optimization of parameters.

The following article by Bellia and Lanfranco presents a preliminary assessment of the efficiency of drones in surveying land cover from large spatial scales of about $10\,\text{ha}$ to smaller ones of $1\,\text{m}^2$. Accurate land cover maps are a fundamental prerequisite for vegetation studies, ecological monitoring, geographical mapping, land use planning, etc. The data collection is generally carried out on the ground by a team of expert field workers, and the process is commonly time-consuming, effort-intensive and costly. This article suggests that consumer-level drones could become a versatile and viable tool for mapping, since they can be used for surveying land-cover at landscape scale as well as scales comparable to the dimensions of individual shrubs or trees.

Next, the article by Talay and Erkan from Yildiz Technical University, Turkey, illustrates the design of axial flux permanent magnet synchronous motors. This is yet another application of artificial neural networks to find the most efficient design parameters for the engine.

Then, Silvio Attard from Central Bank of Malta analyses the historic developments in the local tourism industry, focusing on the changing characteristics of demand and supply, especially since the recent surge in inbound tourism (5.3 visitors per inhabitant in 2017, the second highest ratio worldwide after Iceland) is largely driven by the increased air connectivity to and from Malta. The author is also sharing his own informed views on sustainable tourism and considerations in devising tourism policies.

The article by Tonna and Saliba is an overview of the research work related to the design of bone regenerations scaffolds made of iron alloys including proposed strategies for tailoring the corrosion, the analysis of mechanical and cytotoxic responses as well as the promising processing methods for the production of iron-

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based foam structures. Although *in vivo* trials of iron alloys are still rather limited, their consistent *in vitro* mechanical performance shows great promise for future applications in orthopedic and trauma surgery.

The last article by Borg and Di Giovanni reviews the existing scientific literature concerning the pathophysiological modifications of the endocannabinoid system in patients with Parkinson disease and its role as a potential target for pharmacological therapies aimed at ameliorating both motor and non-motor symptoms associated to this condition.

The issue concludes with a News article which promotes Malta's Science and Arts Festival 2019. This year the festival focuses on the theme 'The Science of YOU' probing the science of human development, and covers topics from personalized genomic medicine and bio banking to Artificial Intelligence and the Environment. It has to be noted that Malta organizes one of the largest celebrations of researchers around Europe and it is simply an event not to be missed by anyone!

Although we now have a new home, the main goals of the coverage remain the same: to serve the local professional scientific community, to publish high-quality original findings in a peer-reviewed environment, and to help early-career researchers to advance their scientific discourse in the community.