



*Editorial*

**Cristiana Sebu\***

*Department of Mathematics, University of Malta, Msida, Malta*

Dear readers of Xjenza Online, as Editor, I am pleased to see continuous progress in the journal's quality, visibility, availability and readership. Over the years, the journal has evolved alongside the research community it serves. Since the first printed issue of the Xjenza in 1996, the journal has witnessed the progress of scientific effort across many disciplines. The Maltese islands are now the home to a rich and exciting scientific research as highlighted in this current issue.

As today's research is a global endeavour, so is our focus, both in the original research we publish and in our news coverage.

The issue opens with an article co-authored by Ian P. Cassar, one of the most active and enthusiastic promoters of Xjenza Online and a reliable Associate Editor since the relaunch of the journal in 2013. The authors, Ian P. Cassar (University of Malta) and Noel Rapa (Central Bank of Malta), derive the estimates of industry specific multipliers (i.e. output, value added, income and employment multipliers) using the data on Maltese economy's inter-industry transactions recorded in 2010 and published by the National Statistics Office of Malta in 2016. The study demonstrates that the activities related to accommodation and food services feature in the top 15 in almost all categories of multipliers under consideration, confirming the historic tendency for the tourism sector to feature as a key economic driver in Malta.

The following manuscript by Bonello et al. presents a review of studies investigating the dielectric properties of biological tissues for application in hyperthermia and microwave thermal ablation which are important treating modalities for a number of diseases, most notably tumours.

Next, it is a great honour for Xjenza Online to feature an extended view on an action observation and execution network by Professor Giacomo Rizzolatti and his collaborators Rozzi Stefano and Gerbella Marzio.

Professor Giacomo Rizzolatti is Professor Emeritus in Physiology at the University of Parma, an Affiliate Professor at the University of Malta, Dept. of Physiology and Biochemistry and Director of the Social and Motor Cognition Centre at the Italian Institute of Technology. Award winner and world-renowned neuroscientist, Professor Giacomo Rizzolatti received the 'Brain Prize' in 2014, a prestigious prize for brain research bestowed by the Grete Lundbeck European Brain Research Prize Foundation in Copenhagen. The study surprisingly reveals that although traditionally the motor nervous system was not thought to be involved in cognitive functions, there is now strong evidence to support that numerous cognitive functions, such as space perception as well as action and emotion recognition, not only require the activity of the motor system, but are also deeply embedded in it.

The paper by Maria Desira and Gillian M. Martin explores the level of awareness of the Maltese general public in relation to the existence and use of biobanks resources for biomedical and genomic research. The results show that the vast majority of the public does not know what the term 'biobank' means, and does not associate the term with biomedical or genomic research. Thus, there is great scope for increasing science communication and public awareness in relation to this type of research.

Then, Fenech et al. presents the results of a study on the biodiversity and ecology of biofilm and biomat forming organisms growing in different microhabitats around the Maltese islands. The effects of changes in environmental parameters on two of these microorganisms, a cyanobacterium and a microalga, were found to be strain specific. The results suggest that some of the strains of such microorganisms could be used as early indicators of climate change in particular habitats.

The research article by William Gatt from Central Bank of Malta presents the estimates of the Philips

\*Correspondence to: Cristiana Sebu (cristiana.sebu@um.edu.mt)

curve in the Maltese economy using data starting from mid-1960s. The analysis shows that over time the link between inflation and economic activity has weakened in Malta which is consistent with findings from other countries, and that there is an increase in the sensitivity of domestic inflation to import price shocks, owing to the increased openness and trade integration of the Maltese economy. The estimated variance of shocks to inflation was rather high in the 1980s, but has fallen greatly since then, peaking again only during the energy and food price shocks of 2007.

The last article by Bonnici et al. reviews the development of the sympathetic system of the heart and attempts to give insights into the possible explanations of referred pain distribution in clinical cardiology.

The issue concludes with a news article which reports on the success of the 36<sup>th</sup> European Seismological Com-

mission General Assembly which was hosted by the Department of Geosciences of the University of Malta and took place in Malta in September 2–7, 2018, at the Mediterranean Conference Centre, Valletta.

As you can see from above, Xjenza Online publishes manuscripts in one of many formats including short communications, research articles, review articles and original research reports featuring a wide range of applied and theoretical sciences of both local and international relevance. The Editorial Board is making great efforts to meet the indexing requirements set by internationally leading databases. However, 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.