Editorial

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Biographical notes: Akram Bennour is a Professor of Computer Science at Larbi Tebessi University, Algeria since 2009. He is also a research scientist at LAMIS Laboratory at the same university. He received his habilitation for research direction at Ooum-el Bouaghi University, Algeria in 2019. He received his PhD in Computer Science at Badji Mokhtar University of Annaba, Algeria in 2015 and 'Magister' degree at University of Annaba, Algeria in 2009. He obtained his engineering degree in Computer Science at Mentouri University of Constantine, Algeria in 2004. His research interests include, machine learning, artificial intelligence and pattern recognition, image processing, and medical imaging.

Abbas Cheddad is currently working as a Senior Lecturer at the Department of Computer Science and Engineering, the Blekinge Institute of Technology in Sweden. Prior to this, he was a researcher at the Umeå University and the Karolinska Institutet. He obtained his PhD with a distinction award from the Intelligent Systems Research Centre at the University of Ulster, UK, in 2010. His research interests include: computer vision, steganography, medical imaging, pattern recognition, imaging bio-markers characterisation and validation, algorithms for the computer-guided analysis of multi-dimensional microscopy-datasets, computational support for tissue-related target/biomarker discovery, development and analysis, and machine learning applications.

Yousri Kessentinni graduated in Computer Science Engineering from the National Engineering School of Sfax (ENIS) in 2003 and received his PhD degree from the University of Rouen, France in 2009. He was a postdoctoral researcher at ITESOFT Company and LITIS Laboratory from 2011 to 2013. Currently, he is an Assistant Professor at CRNS and the Head of the DeepVision Research Team. His main research areas concern: deep learning, document processing, data fusion, computer vision. He is certified as an official instructor and ambassador from the NVIDIA Deep Learning Institute. He is also a member of several scientific associations including GRCE and IAPR.

It is a matter of immense pleasure to introduce this special issue on 'Recent advances in intelligent systems and pattern recognition' which aims to provide an opportunity for researchers, professionals and academics in the field of intelligent systems and pattern recognition to share the recent advancements, latest solutions, scientific results and methods in solving intriguing problems in these areas.

It is initially based on the extended version of the best papers of the international conference on intelligent systems and pattern recognition 'ISPR'2020', which was successfully held at Hammamet, Tunisia on 16–18 October 2020.

During the recent years, a tremendous growth has been witnessed in the volume of research being carried out in

different areas of artificial intelligence and pattern recognition. The significant increase in these research areas is mainly due to the wide variety of applications that have evolved to meet the new challenges of today as well as the next few decades. 'ISPR'2020' was aimed at providing an interdisciplinary forum of discussion to share the recent advancements in different areas of intelligent systems and pattern recognition and was endorsed by the International Association of Pattern Recognition (IAPR). Authors of selected papers were invited to submit the extended versions and after a thorough and competitive paper review and selection process, the call for papers was also opened to external submissions to ensure the selection of good quality papers.

Five papers were selected to constitute this special issue.

In the first paper, Bhimagavni and Adilakshmi study the 'Structural refinement of manually created Bayesian network for prostate cancer diagnosis'.

The second paper by Ghazali et al. presents a 'Selection of statistical wavelet features using a wrapper approach for electrical appliances identification based on a KNN classifier combined with voting rules method'.

In the third paper, Daas et al. exploit the 'Finger vein biometric scanner design using Raspberry Pi'.

In the fourth one Frihia et al. investigated the 'Combination of a DAE-CNN and OC-SVDD for intrusion detection'.

The last paper titled 'Addressing long tail problem in music recommendation systems' was written by Sunitha and Adilakshmi. They presented a study of long tail problem in music recommendation systems.

The editors would like to take this opportunity to thank the referees for their time and efforts in reviewing the papers and providing constructive feedback to the authors within the short stipulated time. We are also thankful to the authors for their contributions as well as their patience during the review process. Finally, we are grateful to Dr. Valentina E. Balas, Editor-in-Chief, *IJCSysE* journal, for the timely guidance and support as well as for providing us with the opportunity to edit this special issue. In closing, it has been a privilege to work on this special issue and we hope that readers will find this collection of papers valuable and useful.