# World Transactions on Engineering and Technology Education

## Editorial

Artificial intelligence (AI) as a discipline emerged more than half a century ago, but recent advances in AI applications have brought new challenges and new opportunities to modern-day academia. Concurrently, the onset of a global pandemic has forced educational institutions to introduce and implement, at a much larger scale than ever before, remote methods of education provision and research activities. On-line courses have become an every-day mode of instruction in many institutions. At the same time, these institutions have endeavoured to develop and implement appropriate methods for assessment of on-line curricular activities including laboratory, projects and examinations. How to ensure the reliability and efficiency of supervision, conduct, control and assessment of such remote academic activities, and how to leverage AI's potential to assist academia in this endeavour are some of the questions to debate.

The recent EADE Conference in Wrocław, Poland, was one forum for such a debate, with several presentations highlighting the wonders and traps of AI today and in the future. Apart from teaching/learning and research activities, including academic writing, AI may have a strong impact on other activities of academic staff, such as preparing submission and grant applications, administrative duties and even community engagement. All these activities are subject to scrutiny and assessment, and are being used for appraisals and promotions of individual academics, and more broadly for university assessments and rankings, both nationally and internationally. Hence, in the context of AI, it is crucial that academic integrity is preserved, and a clear delineation between the human effort and AI ingenuity is recognised and acknowledged. This is also important for publishers who must ensure that authorship is appropriately acknowledged, which may be challenging in relation to AI-created paper proposals!

I can imagine several benefits coming from the input of AI to the entire education/research system. However, as mentioned above, there are several drawbacks, and one has to be prepared for more AI-based quasi academic products created out of the blue (literally). Such incidents have already happened - leaving some of us astonished and bewildered.

I hope that this topic, and especially the preventive methods of ill-using AI applications will be subject for further discussion at forthcoming international meetings of the WIETE!

It is my pleasure to inform our readers that this issue of the World Transactions on Engineering and Technology Education (WTE&TE), designated as Vol.21, No.3, includes 10 articles coming from five countries with four articles from Indonesia, there articles from Poland and one article each from Kazakhstan, Slovakia and Turkey.

I wish to thank the authors of these articles for their willingness to share their research activities and achievements with our readers. It is my honour and privilege to acknowledge, with thanks, the support of the international referees, as well as members of the WIETE editorial team, consisting of Professor Andrew Nafalski, Dr Dianne Q. Nguyen, Professor Derek O. Northwood, Mrs Dorota I. Pudlowski, Associate Professor Arthur J. Swart and Professor Robert Špaček.

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