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Editorial

This is the first issue of the year 2019. I wish all a productive and happy New Year. I would like to thank all the authors for their valuable contributions to this issue.

The first part this issue, 35-1(A), includes papers that address various topics in engineering education including: Conceptual Understanding, Engineering Design, Emotions, Student Perception, Student Veteran, Educational Technology, Capstone Design, Personality Traits, Aquaponics, Persistence, Classroom Engagement, Emotional Intelligence, Female Students, Building Information Modelling, Enrollment Patterns, Retention, Motivation, Engineer Identity, Gender Differences, Quality Function, Capstone Courses, Team Estimation Game, Cost Analysis, Verbal Feedback, Gateway Courses, Tutoring Systems, Teaching Quality, Collaborative Projects, and Self-Study Platforms. The contributions are by authors from numerous countries including: USA, Mexico, Kuwait, Serbia, Saudi Arabia, Korea, Turkey, Slovenia, Canada, and UK.

The second part, 35-1(B), is a special issue on Active Learning Experiences in Engineering Education. It is guest-edited by Professors, Francisco José García-Peñalvo, Hugo Alarcón, and Angeles Dominguez. I would like to express my gratitude to them for the effort and time they invested in this endeavor.

Over the past few years, several research projects were conducted and many papers and reports were published addressing the topic of engineering education in 2020. Topics included: the traits of the graduates, the needs of industry, delivery methods, structure of the curriculum, and structure of the institutions, among other topics. The year 2020 is no longer in the distant future and perhaps it is time this year to start examining the predictions of the past several years and extract lessons from them. I think such a research project would be worthwhile.

Speaking of predictions, some essayists and futurists are predicting, speculating, or hoping that Artificial Intelligence (AI) will replace professors in the not-so-far future; a university without human professors is a noble goal for them. Some are marketing the idea to the unsuspecting public as a method to reduce the cost of education as if the already inadequately paid professors were the reason for the high cost of education. The decision makers should be held accountable by the public to guarantee education at no cost if the human professors are to vanish from the classroom.

Artificial Intelligence typically refers to software that performs tasks that reflect human intelligence and of course the domain of education is among those tasks. The phrase Artificial Intelligence seems to be more acceptable to the human ear than saying replacing a human by a Robot, although robots in general include AI in addition to the ability to move or to chat, or both.

As always, some people like robot intervention and some don't. Those who like the idea don't agree on the role of robots in the future of education: tutoring only, assessment of exercises, grading or even more. Is it to help human professors and administrators or to replace one of them or both? If robots are to replace human professors, why not perform all actual engineering tasks rather than educating humans. Robots could learn to do so in a university for robots by robots. Perhaps this would occur when the decision makers figure out how taxes, including possibly robot income tax, could be collected or when the robots become the decision makers.

Ahmad Ibrahim