

## Editorial

Nowadays, students are used to utilize virtual learning environments with several kinds of activities to learn new topics, collaborate with peers, solve exercises, do homework and much more. The pandemic of the year 2020 make all of us get used to participate virtually in all kinds of activities, for students the most important is to continue their learning process. Today many learning activities are performed in virtual environments and students of all educational levels use electronic and mobile devices to access educational technology.

Artificial intelligence (AI) has influenced a wide range of activities, and as a result, people is doing things differently. Many activities that people used to do manually or plan ahead now are solved dynamically as needed, like getting a route in a map to go from one place to another.

IA is part of new platforms and applications that are emerging in education to enable students to study in different setting such as home or schools. A very important example today is the use in home or schools of the ChatGPT application to produce texts such as essays, papers or source code using several programming languages.

On the other hand, to create modern learning environments that capture students' attention, researchers need to add such technologies to tailor the material presented to students according to their needs.

In this volume, we present extended versions of seven research works in some fields of intelligent learning systems. In WILE 2022, our goal is to offer researchers an opportunity to show their work exploring new ways of applying AI techniques in the development of educational systems. The papers presented in WILE 2022 were carefully chosen by the editorial board based on three reviews by the specialists of the Technical Committee. The extended versions were additionally reviewed. To select the papers to be published the reviewers considered the originality, scientific contribution to the field, soundness, and technical quality of the papers.

Many people participated in WILE 2022, we appreciate the support of RedICA (Conacyt Thematic Network in Applied Computational Intelligence) members that were part of the Technical Committee as well as members of Mexican Society for Artificial Intelligence (SMIA Sociedad Mexicana de Inteligencia Artificial). As every year MICA 2022 was the appropriate host for this event. Last, but not least, we thank Centro de Investigación en Computación-Instituto Politécnico Nacional (CIC-IPN) for their support in preparation and publication of this volume.

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