



## EDITORIAL

Over the last few years, the Latin American (LA) region, as the rest of the world, has experienced an exponential increase in the number of specialized conferences held by academic and professional organizations where multiple works of high relevance for local and international academic communities are being exposed [1]. Aware of those increasingly active research dynamics in the region, and as part of the recent changes in the publishing politics of Redin, which aim to increase the visibility and impact of the research and investigations published by the journal, the editorial committee of Redin has decided to accept the publication of extended versions of high quality conference papers in order to promote a greater dissemination of those works to a larger audience.

To access this benefit, the organizing committee of the conference must send a proposal to the Redin editorial committee, highlighting the impact and relevance of the topics included in the scope of the conference, along with statistics about submitted/accepted papers and attendees to the previous versions of the same conference. Applications must also include a scientific committee able to support the review process in the journal.

Papers published through this strategy must be firstly selected by the organizing committee of the conference and once they are submitted to Redin, they have to pass a regular peer review process in the journal. The papers must also include 50% of new content in comparison to the version published in the conference's proceedings, including significant and relevant new findings and results that justify the publication of the paper as an extended version.

Among the different fields of knowledge included in the scope of Redin, the area covered by the Information and Communication Technologies (ICTs), thanks to the boom, diversity and great impact of their applications, is one of the most active across the region. Therefore, a large number of high-level conferences whose scope is framed in ICTs are being organized in LA.

In this issue of Redin, five out of the ten articles are extended versions of papers that followed the previously described procedure and were formerly presented at the 13th International Conference on E-learning and Games, Edutainment 2019, that was held in Cali, Colombia last year. Edutainment is an international itinerant conference that has been active for a considerable amount of time and the 13th edition was the first time that this conference was held in Latin America. Moreover, the scope and quality

of the papers worth their inclusion in this special issue. Edutainment stands for education and entertainment and may include research issues of game-based learning but also the issues of learning experiences which may be gained from entertainment [2]. It takes advantage of all these concepts and ideas.

Recently, crises such as Covid-19 have evidenced the need and surge of novel interaction and collaboration mechanisms in education. This is evident from the editor's own experience lecturing and researching during the crisis. Indeed, even before the Covid-19 crisis, areas such as education have provided great challenges and opportunities for developing innovative solutions based on technology as education should promote motivating learning over traditional teaching [3].

Many concepts and ideas which support the development of novel methodologies have come out. Serious games are games designed with a primary purpose that goes beyond pure entertainment and take advantage of the engagement resulting from player enjoyment, allowing the advancement of training, education, health, public policies, strategy, mental calculation and decision-making, among others.

Gamification is the application of game design principles and the inclusion of game-elements in non-game contexts [4]. Computer games use technology and favor learning, discovery, and creativity. As digital games have had an extraordinary evolution during their short history, game development has made a lot of different devices popular as well as techniques that can be used in different kinds of applications that are not necessarily games. The potential of computer games and the technologies behind them in relevant tasks has been widely demonstrated. The papers included in this issue of Redin address some of the major challenges in the field and constitute an interesting showcase of the potential that these technologies might offer. In the following, we will expose some of the central ideas of the articles that readers will find in this issue.

As well known, Augmented Reality (AR) is a technology belonging to the virtual continuum which overlays digital content within the real world [5]. It has been used in popular games such as Pokémon Go and Minecraft. Similarly, the first paper integrates AR to create an edutainment experience which discusses the effects of applying AR technologies to support educational processes related to heritage. Heritage is relevant as it favors social wellbeing and sense of belonging.

The second paper describes how to use games to favor computational thinking. Computational thinking is relevant because it amplifies learners' skill sets so that they become excellent problem-solvers. Additionally, the third paper reviews the detection and semantical evaluation of similar entities in measurement projects as a key asset for real-time decision making. The authors state that this kind of measurement favors reusing knowledge and previous experiences.

The last two papers discuss two impressive systems, Satrelo and MaruGen which aim for the automatic or semi-automatic construction of games. Game creation is a complex interdisciplinary process. On the other hand, therapy requires specific games to be played by specific patients. What Satrelo proposes is a system where the therapist can formulate a therapy recipe that is automatically converted to a game which is coherent with the patient's needs using software product lines. Meanwhile, MaruGen proposes a L-System-based tool that creates complex rulesets from the use of formal grammar to the automation of game design.

Taking into account that Redin regularly covers different areas of engineering, this issue has been complemented with other valuable papers in the areas of civil, electronic, chemical and environmental engineering sciences. We hope the readers enjoy this edition as we enjoyed putting it forth.

## References

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