

Editorial

We are glad to publish this new issue of *Comunicações em Informática* one month earlier than usual. These papers were submitted during the year of 2020. Some of them are related to two thematic calls conducted with focus on Computing Education and on Virtual and Augmented Reality Groups. We would like to thank the associated editors that contributed to the success of these calls.

This edition presents fifth papers, thirteen submitted for thematic calls. The first two papers are the abstract “Using the Duolingo Tool to Support English Classes” relates a pedagogical and technological intervention with the Duolingo tool to support the English classes of a Brazilian high school. The authors observed a motivation improvement in students and suggest that this type of gamified intervention can be useful to help in memorizing words and increasing participation. The second paper is “Previsão em sistemas dinâmicos caóticos com ruído” and presents how to use dynamic systems with differential equations to model natural and artificial behaviors. The author demonstrates as example the Lorenz systems to show a way to develop algorithms that can simulate approximated solutions.

It is worth to mention that *Comunicações em Informática* had its first issue published in December of 2007. It is known by the Brazilian scientific community that Qualis, the Brazilian official system developed by CAPES with the purpose of classifying scientific production, has guided the publishing option of several researchers in Brazil. In 2017, the Qualis-CAPES had started a new quadrennium that is being concluded this year of 2020 with a new classification list. We received the notice that *Comunicações em Informática* will be listed in this next Qualis. This is a good new, but there is much work to be done! The goal now is to encourage authors to make their papers final versions in English language in order to enhance reach and impact of the papers published.

Finally, it is important to highlight the collaboration of the reviewers that make possible to this journal to provide constructive feedback for authors and also have allowed the approval of quality works. With this in mind, we would like to thank all reviewers and associated editors that have collaborated since 2017.

Liliane S. Machado
Editor in Chief

Special Section: Computing Education

This issue of *Comunicações em Informática* brings another special section Educomp – “Educação em Computação”. Research in this section includes current and important topics such as robotics, games and gamification.

Knowledge can be assimilated more effectively when it is possible to integrate the theoretical concept into practice. In this sense, games and robotics can be identified as strategies to enhance the learning process. In this proposal to align theory and educational practices, there is the gamification technique, which is using game-based mechanics, aesthetics and game thinking to engage and motivate, in order to stimulate actions that promote learning.

The articles in these lines contribute to the improvement of quality in the educational process with their experiences.

In this sense, this special section presents three articles with this focus. In the article “Tecnologia robótica e problem based learning aplicada para o ensino de lógica e programação”, the authors present activities with robotics for teaching programming logic and the importance of Problem Based Learning as an active methodology to promote learning. The article “ThinkTank: um jogo construtivista para ensino de pensamento computacional” shows the development of the game for teaching computational thinking and programming, based on block programming. The article “Improving Students' Motivation and Focus Through the Gamification in the Computer Science Peer Instruction Methodology (CSPI)” presents the initial assessment of the gamification adoption into the CSPI with positively impacts participants' motivation and focus.

We appreciate the dedication of the reviewers for the selection of these works in this special section. The suggestions, comments and analyses have ensured the quality of the journal's manuscripts.

We hope that the studies covered in the articles would encourage further researches in the field of Computer Education. A good reading to all!

Tháise K. L. Costa
Pasqueline D. Scaico
Guest Editors

Special Section: Virtual Reality Laboratories

This section brings papers submitted to the Labs presentation track of the XXII Symposium on Virtual and Augmented Reality. From ten works it is possible to research and development groups, laboratories and companies in Brazil and abroad that produce virtual reality, augmented reality and mixed reality. Some of them develop their projects in partnership with companies and make an interesting connection between scientific development and commercial products.

- HandOns is a company whose partner is the Compsi lab at Centro Universitário Eurípides de Marília (Univem), both in Brazil. They use virtual reality and augmented reality to create solutions for industry, market and health.
- Corollarium is a Brazilian company specialized in web and mobile development, image processing, virtual and augmented reality. Its expertise encompasses the full development process - from design, production and installation.
- labICE is an interdisciplinary laboratory at Federal University of São Paulo (Unifesp) in Brazil which has a multi-institutional basis for carrying out research projects in areas such as virtual reality, augmented reality, health, and distributed systems.
- The OE@FEUP is a laboratory at University of Porto in Portugal which has a set of experimental resources based on augmented reality, virtual reality and haptic systems to support education.
- MarineVerse is a company based in Australia that aims to promote and share the sport of sailing by virtual reality providing engaging, interactive sailing experiences that motivate people to try the real sport.
- LApIS is a research laboratory at University of São Paulo (USP) in Brazil which aims to develop multidisciplinary research involving computer science areas and other knowledge fields such as physiotherapy, psychiatry, radiology, and cardiology.
- Voxar Labs at Federal University of Pernambuco in Brazil develops multidisciplinary research in spatial computing, tackling the inner areas of extended reality, computer vision, and natural interaction.
- BioxLab is a design, testing and improvement of health application from the State University of Campinas (UNICAMP) in Brazil. Their focus is in assisting motor and neurofunctional recovery processes.

- LabTEVE is a research and development laboratory at Federal University of Paraíba (UEPB) in Brazil which has a multidisciplinary focus on virtual and augmented reality subjects such as training simulators and serious games for several areas.
- VISLab at Federal University of Rio Grande do Sul (UFRG) in Brazil develops projects mainly on rendering, and animation. Its main focus is on researches in human-computer interaction, with emphasis on non-conventional interaction.

These laboratories are places to work, have the formation and improvement of students (undergraduate, graduate, and post-doctoral levels) and professionals. We hope the reading of those works could inspire and stimulate new connections among researchers, industry, and developers. Enjoy!

Marcelo de Paiva Guimarães (Guest Editor)
Liliane S. Machado

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