

## Guest Editorial: Computer Science and Information Systems Applied to Management, Innovation and Sustainability

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The special section Computer Science and Information Systems Applied to Management, Innovation and Sustainability is a selection of the best papers presented at the International Conference on Innovation and Sustainability (ICONIS) 2022. The main idea of this special section is to show different approaches to information systems in different areas and applications.

An information system (IS) collects, processes, stores, analyses, and disseminates information for a specific purpose and has become very relevant in all organizations; they are used in the operation and management of nearly all actions (Adeoti-Adekeye, 1997; Rainer et al., 2020), because of that, multiple methodologies have been developed. The main purpose of this IS is to support the business goal and organizational capabilities and help to make better decisions (Pearlson et al., 2024).

The special section consists of four papers.

The first one, “Natural Language Processing (NLP): A survey on models and applied practices” (authors: Santiago Canchila Corredor, Fernando Castello-Sirvent, Carlos Meneses Eraso, Javier Casanoves Boix), presents how NLP has evolved constantly because of its impact on day-to-day life, commercial life, and entrepreneurial endeavors. The papers aim to present an overview of the different NLP models. Also, guidance on what the future of NLP may look like is given.

The second paper, “MCclusteringSM: An approach for the Multicriteria Clustering Problem based on a Credibility Similarity Measure” (authors: Lugo Medrano Cesar, Gastelum Chavira Diego Alonso, Valdez Lafarga Octavio, Velarde Cervantes Jose Luis), presents a new algorithm to improve the multicriteria clustering problem by exploiting a fuzzy outranking relation through a direct algorithm. The proposed methodology was used in a credibility similarity measure to evaluate information, and different comparisons with other methods were made.

The third paper is “Analysis of the Countries’ business attraction with a fuzzy outranking method” (authors: Tanya Samantha Garcia-Gastelum, Pavel Anselmo Alvarez, Ernesto Leon-Castro, and Cristhian Ramon Uzeta-Obregon); since attracting investment is one of the countries’ goals to improve their competitiveness, investors must consider different elements before deciding. Based on that, this paper presents the ELECTRE-III methodology to rank the 190 countries considered in the Doing Business 2020 survey. A ranking indicating the best countries to invest in is presented among the main results.

Finally, the fourth article is about the incidence of some critical cognitive factors that prevent change of order in university students: uncertainty analysis (authors: Jose M. Brotons-Martinez, Ruben Chavez Rivera, and Jesus Ricardo Ramos-Sanchez). In this

paper, an analysis of the importance of emotional intelligence in the academic performance of undergraduate students, the paper aims to identify the critical cognitive factors that prevent change of order and process them through fuzzy cognitive maps. The Bar On test was applied to 160 regular students and 63 lagging students in three universities, two from Mexico and one from Spain. Among the main results, the authors found that ten items present the greatest distance between the groups and need improvement to improve student performance.

With these four articles, readers will get an idea of how different IS can help carry out organizational tasks, what new trends are, and how to analyze information to find new realities within organizational problems. Consider scenarios that, at first glance, are not considered and help make decisions that are appropriate to the decisions.