



Dear readers,

From the first editorial of the year, I would like to wish the entire community of production Engineering 1 2019 full of hope and achievements. I believe that as a scientific community we have much to contribute to the improvement of national production systems in the direction of new levels of excellence.

The first edition of 2019 opens the year of the Online Production magazine with 15 articles that well represent our area and related disciplines.

The first article analyzes the sustainability efficiency of eight companies, from various segments, through the methodology Data Envelopment Analysis (DEA) in view of the parameters: Invoicing, number of employees, dimensions-general, economic, social and environmental. The following article, on the other hand, proposes a linear programming model for optimizing the aggregate planning of the manufacturing of items of an industry in the metalmechanc sector (set of family of drills). The model aims to maximize the contribution margins of the products, respecting the constraints of productive capacity and demand fulfillment for multi-period planning. The third article carries out a bibliometric study on the relationship between public transport and sustainability. The fourth article proposes to develop and validate a failure prediction system, based on the Monte Carlo method, to assist the maintenance management process. The fifth article analyzes the performance of the FRAM (Functional Resonance Analysis Method), through a case study, to solve problems in a hospitalization unit of a university hospital. The proposed improvement actions as a result of the application of the FRAM were evaluated according to the criteria of difficulty of implantation, the possibility of replication, the time required for application of the method, the number of involved, the need for Capacity and the total number of opportunities for improvement identified.

The sixth article presents a bibliometric study on the application of the sustainability barometer in Brazil. The seventh article aims to analyze types of physical arrangements through the simulation of discrete events and the operational indicators of the Theory of Constraints (TOC). The following article proposes to verify the extent to which logistics professionals verify and analyze their total cost and service levels and know their trade-offs. The research method used was a case study in a multinational in the area of fragrances and cosmetics. Article 9 proposes to evaluate to what extent the process management initiatives of the Federal University of Tocantins (UFT), through the fundamentals of Business process Management (BPM) need to be improved from the analysis of the criteria of people and Processes. The

tenth article aims to evaluate the environmental conditions and the thermal discomfort of workers with exposure to low artificial temperatures. For this, a wireless sensor network was used to simultaneously measure body temperature in different regions of the body of workers exposed to low temperatures and to measure the environmental conditions that influence the assessment of discomfort Thermal.

The next article analyzes the use of performance indicators of processes in the management and decision making in the process of development of cotton cultivars. Article 12 proposes to identify and quantify the metals present in solid wastes from a steel process, article thirteen presents an algorithm based on the metaheuristic CRO (Chemical Reaction Optimization) to determine the location of the smallest Possible number of electric vehicle charging stations. The following article proposes to present, by means of a case study, the benefits and challenges in the application of the Lean Production system. In a hydraulic equipment industry located in the region of Campinas/SP. Finally, our fifteenth article aims to propose and analyze, through the application of the value Flow mapping tool and simulation, the adoption of CPS (Cyber-Physical Systems) in the flow of a coil production line of laminated film.

The content of the articles evidences the growing scientific and practical relevance of research in the field of production engineering. It is also evident the constant concern with the resolution of real problems in several regions, which results in the increase of competitiveness and sustainable development in Brazil. As always, we hope that this collection of articles, which reflects the state of the art of production engineering, can contribute to the enrichment of their learning.

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