
Editor's Foreword

Management and logistics are the sciences in the field of human activity, whose development is closely linked with advances in information technology. Historically, that the first use of scientific methods of management and logistics occurred in the military activities as a military management and logistics. Further, with the development of modern society, the scientific methods of management and logistics are penetrating all spheres of human activity. The Oxford English dictionary defines logistics as: "...the branch of military science having to do with procuring, maintaining and transporting material, personnel and facilities." There is a definition of logistics as a branch of engineering that involves the creation by means of high-tech information man-machine systems, using scientific methods of management.

Currently, there are logistics management, third-party logistics, warehouse management system, business logistics, manufacturing logistics. Solving problems in these fields is possible only through knowledge of the market activity of counterparts and use of the results of interdisciplinary research. The following studies are focused on solving problems in the above fields of management and logistics.

Cluster analysis in flexible production systems is a main theme of the first paper (**Lucjan Kurzak**). Cluster analysis, as a technique which allows comparing and grouping objects with similar functions, can be a helpful tool to support flexible production systems. Such production systems are controlled by computers, are characterized by a complex structure and ease of adaptation to rapidly changing market requirements.

An analysis of financial standing in joint-stock companies of telecommunications sector is main focus of the next work, where the author presents the results of empirical investigations of financial standing in joint-stock companies from telecommunications sector (**Marlena Grabowska**). The analysis was carried out on the basis of the following ratios: liquidity, return and debt ratio.

Harmonization of scanning the business environment and IT in manufacturing companies using the method of modeling structural equations is presented in the paper by **Dorota Jelonek**. Studies were designed to confirm the thesis about the positive impact of the harmonization process of scanning the business environment and IT on productivity in industrial companies. The survey, conducted among 99 small and large businesses is used to verify the thesis.

Statistical analysis of the extent of the use of information technology systems for the enterprise management is presented in the paper by **Agata Mesjasz-Lech**. The objective of the analysis is to determine the extent of the use of information technology logistics management systems in enter-

prises across individual voivodships. The application of the theoretical base of information technology for the analysis of the results of research conducted by the methods of statistical analysis is also presented. The branches and voivodships with the highest degree of information technology systems for the implementation of logistics processes have been identified.

Evaluation methods for measuring the price risk on the basis of functions of success is the intention of article by **Wioletta Skrodska**. It describes how to manage the financial risks. Reverse testing methodology is necessary to select and evaluate the quality of models price risk. The author presents some typical statistical methods based on the function of success, as well as the advantages and disadvantages of these methods. Particular attention is paid to modeling of the Monte Carlo method with the function of the relative ligament in the methodology for estimating the risks.

The aim of the next study is to present a new approach for analyzing the effect of temperatures, wind speed and HDD index on the variability of the daily electric energy demand in Silesian region (**Aneta Włodarczyk, Marcin Zawada**). Specific nature of the time series used in this paper concerning the electric energy consumption and the weather variables, such as temperature or heating degree day index, requires application of a special class of models — ARFIMAX—GARCH.

IT systems supporting finance and accounting is the topic of the article which contains analyses of IT needs of mid-sized companies in the field of financial and accounting software (**Elzbieta Wysocka**). Activities undertaken on particular stages of acquiring new IT system and associated problems and the most relevant requirements, which should be met by financial and accounting software used to keep the books of accounts, were also discussed.

Collective computational processes in the management of investments with a cellular automaton is the subject of the study in the next paper (**Agnieszka Ulfik**). This paper presents the simulation component selection portfolio using the theory of Markowitz in the environment of parallel computing networks - cellular automata. The simulation confirmed the thesis that cellular automata can be used to select the components of effective portfolio of investments in the stock market, based on the classical model of Markowitz.

The problems of optimization of investment with the use of a portfolio analysis of investments should be classified as complex in the computational sense problem. In the next article (**Aleksandr Katkow**) the innovation processes of realization the more effective algorithms, based on the use of chaotic iterative processes, are examined. The portfolio analysis problem in the parallel computational environment coupled map lattice is investigated.

The aim of the latter article is to present practical ways to assess the useful properties of academic sites to identify key strengths and weaknesses, and problems occurring in the information architecture and interface design site. The study was conducted on the basis of heuristic analysis (**Joanna Kwiatkowska**).

This special issue will be of interest to professionals working in the field of modern IT techniques in management and logistics.

Prof. M. NOWICKA-SKOWRON, Poland

Doc. Eng., PhD R. VOKOROKOSOVÁ, Slovak Republic

Prof. A. KATKOW, Poland