SPECIAL ISSUE in Computers & Industrial Engineering
Human factors in industrial and logistic system design

Aims and Scope

Despite the opportunities the automation of industrial and logistic systems offers, many companies still rely on human work and manual materials handling in many areas. Most decision support models that were proposed in the past to assist managers in designing industrial and logistic systems have neglected the specific characteristics of human workers, which often led to unrealistic outcomes. To guarantee a high level of productivity and efficiency and to make sure that decision support models better reflect reality in daily operations, an interdisciplinary perspective is necessary that considers human factors in addition to economic aspects in designing industrial and logistic systems.

There seems to be a large gap in the literature concerning the integration of human factors into decision support models for industrial and logistic systems design. In addition, the impact of systems design parameters on the human operators has not been sufficiently analyzed. In general, human factors (perceptual, mental, physical and psychosocial) determine the performance of industrial and logistic systems to a large extent if human operators are employed. This aspect becomes more challenging in light of demographic changes such as the aging workforce and international differences amongst system operators in a global supply chain environment. These trends will put human factors-related issues in logistics – such as the risk of developing musculoskeletal disorders in labor-intensive work environments – on top of the agendas in many companies. In addition, the consequences of using innovative technical solutions to support the design of high reliability industrial and logistics processes is not yet fully understood in light of human performance and errors.

This special issue aims to publish innovative approaches for the integration of human factors into industrial and logistic systems design. Submissions should develop and analyze analytical models, present case studies on the integration of human factors into decision support models, or apply simulation approaches for designing and coordinating industrial and logistic systems to gain insights into the interaction of human factors and logistic systems design. Topics may include, but are not limited to:

- Human Factors in operations and logistics management
- Ergonomics methods for industrial systems design
- Quantitative assessment of injury risks in material handling operations
- The impact of demographic changes on industrial and logistic systems
- Human performance and error reduction in industrial systems design and management
- New technologies for increasing human performance and reducing human errors
- Social sustainability aspects in operations and logistics management
The editors of the special issue intend to publish a range of different topics and reserve the right to limit the number of papers included in any one topic.

Submission

Manuscripts should be submitted via Elsevier Editorial System http://ees.elsevier.com/caie/. Please indicate in the Article Type “SI: Human Factors”. Manuscripts should not have been previously published nor be currently under consideration for publication elsewhere. For Guide for Authors, please refer to the webpage: http://www.elsevier.com/wps/find/journaldescription.cws_home/399/authorinstructions.

Deadline

The submission deadline is February 29, 2016. The Special Issue is scheduled for publication in early 2017.

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