Invited session proposal

Title:

Behavioural Insights and Optimisation in Operations Management

Code 3a1sg

Session organizers:

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Aim & Scope:

Industry 4.0 has introduced widespread automation and digitalisation to many workplaces, yet human workers remain pivotal in many companies' operational strategies. At the same time, research into how human workers interact with their increasingly complex and demanding work environment has not kept pace with technological advancements. However, those behavioural insights are imperative for the design of productive human-centred work environments. For either practical or simplification purposes, traditional (optimization) models in Operations Management (OM) often overlook the complexities of human behaviour and/or use unrealistic (potentially artificially generated) behavioural data, leading to inaccuracies in predicting and improving operational outcomes. Moreover, the influence of this modelling practice on worker well-being should not be underestimated, as decision-making based on inaccurate models can result in suboptimal practices that negatively influence the physical and mental well-being of employees. Behavioural insights have, therefore, become increasingly essential in the understanding and optimisation of industrial operation systems, such as warehouses, assembly, and manufacturing plants. Nevertheless, more research is needed that focuses on the collection and/or use of empirical data.

The **objective of this session** is to investigate research practices which generate or make use of empirical data to provide valuable insights that contribute to the behavioural OM research stream in industrial contexts. Potential **fields of application** include warehousing, assembly lines, and manufacturing, although we remain open to extending these to other fields. We invite the application of **diverse methodological approaches**, including those focused on eliciting human behaviour and/or assessing human-centric outcome measures, such as experimental (either lab or field), observational, or qualitative studies. Moreover, methods that leverage empirical data as inputs for OM modelling – whether these data are self-collected or sourced from real-world entities – are also highly valued.

Keywords:

human-centric, empirical data, optimisation, warehousing, manufacturing, assembly lines, behavioural operations