Editorial Preface

User-Oriented Organizational Collaboration, Analyses, and Optimization

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This regular issue of the Journal of Organizational and End User Computing (JOEUC) collects 10 articles.

The first paper, titled “The Moderating Effects of Leader-Member Exchange for Technology Acceptance: An Empirical Study Within Organization,” introduces Leader-Member Exchange (LMX) to better understand this missing piece of the leadership puzzle. Specifically, this research explores the role direct supervisors play in the acceptance process by end users based on the moderated model of LMX and supervisor influence. The empirical test results in the field setting show that LMX is a significant moderator for most of the technology acceptance variables within organizations. The study explores the role of the quality of the relationship between supervisors and employees as end users. It also highlights the role of LMX and supervisor influence as a conduit for the acceptance process among end users in the organization.

The second paper, titled “The Effects of Openness on Managerial Innovation in Cameroonian Companies,” uses the Binary Probit and Recursive Bivariate Probit models to reveal that openness plays a significant role in the adoption of managerial innovation by Cameroonian firms. Particularly, the authors found that when a company collaborates with other companies or organizations, its probability of adopting new managerial practices increases by 0.37 as compared to private companies. They also found that when a company collaborates with companies in other groups, its probability of adopting new managerial practices increases by 0.30 when compared to a company that only collaborates with companies of the same group.

The third paper, titled “Security Threat Modelling With Bayesian Networks and Sensitivity Analysis for IaaS Virtualization Stack,” presents an approach for carrying out sensitivity analysis on Bayesian attack graphs for IaaS virtualized environments. The authors have presented the theoretical concepts behind sensitivity analysis and ways to derive sensitivity indices using single parameter value changes. The proposed sensitivity analysis approach will be beneficial for selecting the optimal set of security countermeasures to be implemented by categorizing them based on the severity of their impact. In addition, it is also beneficial for cost analysis of various security subsystems that are implemented in the IaaS infrastructures.

The fourth paper, titled “Buying Through Social Platforms: Perceived Risks and Trust,” investigates an interesting and promising research topic, i.e., the purchase behaviors among social platform users. In concrete, this study focuses on a popular social platform WeChat that is distinct from other social platforms such as Facebook, Twitter, Pinterest or Instagram. The authors study which purchase behaviors are valuable to a social platform, how a social platform can profit from these purchase behaviors, and the actions a social platform could take to improve its practices. Research
outcomes indicate that the WeChat characteristics can positively or negatively affect purchase behaviors of users and may influence how a social platform is able to capture value from these behaviors.

The fifth paper, titled “Exploring the Factors Influencing the Use of Communication and Collaboration Applications,” has demonstrated that performance expectancy and technology self-efficacy are the most important predictors of user behaviors, followed by learning engagement and conscientiousness. This study has also revealed that which are the most used applications by Romanian students as communication and collaboration tools for learning and their attitude towards using them. The fact that the students’ and academics’ use of certain technologies are not always convergent should represent a starting point for future research, which should show possible ways to meet the expectations of both stakeholders, as well as the most efficient and beneficial teaching and learning technologies for them.

The sixth paper, titled “Assessing Public Opinions of Product Through Sentiment Analysis: Product Satisfaction Assessment by Sentiment Analysis,” provides a practical way to perform product evaluations by considering the sentiment words of the text posts uploaded to the social networking sites. It offers the product designers a tool to promptly determine the important design criteria for new product planning in the process of new product development by evaluating the user-generated content. The more the comments on a specific product model posted online, the more attention it attracts from the public. Improvement areas of the existing product model can be identified from the end users’ opinions without traditional product surveys, and this is a significant contribution to the rapid product development.

The seventh paper, titled “Modeling and Solution Algorithm for Optimization Integration of Express Terminal Nodes With a Joint Distribution Mode,” proposes an express terminal nodes optimization and integration model with detachable business for single customer clusters in order to improve the utilization rate of the network, reduce the operational cost of the nodes, and reduce the transportation cost between the nodes and customer clusters. The objective function of the model was to minimize the total cost. The results of proposed solution demonstrated that the cost was lower, the utilization rate was higher, and the integration effect was better compared to other solutions. It can also be seen from the results that the model and algorithm designed for this study were more suitable for situations where the supply of business provided by the nodes is far greater than the demand of business required by the customer clusters.

The eighth paper, titled “A Review of Consumer-to-Consumer E-Commerce Research Collaboration,” conducts a comprehensive and systematic review of the literature to explore the status of research on C2C e-commerce and show a full picture of this sector. The literature sample for this study included peer-reviewed English articles from 2002 to 2018. Based on the analysis towards 83 scientific articles, the authors draw the following conclusions. First, research on C2C e-commerce covers many disciplines with many articles published in journals from various fields. Second, in a highly competitive academic environment, the number of authors per article has been increasing. Third, research on C2C e-commerce has witnessed greater variety of topics, but the research sites tend to be more focused on countries like China and the US. Fourth, collaborative relationships for co-authoring papers on C2C e-commerce have shifted from domestic to international collaboration and collaboration within the same institution. Fifth, data-driven research is still the main type of research conducted on C2C e-commerce.

The ninth paper, titled “Factors Influencing Security Incidents on Personal Computing Devices,” proves that a user’s optimism can lead to a false sense of security even when an individual takes protective measures causing them to take risky behavior such as visiting less untrusted websites. Also, it shows that protection/prevention alone is not sufficient to guarantee security as individuals still experience security incidents. Hence, this paper supports the need for users to be educated in detection and responses to security incidents. Users are going to experience security incidents no matter how much protection they have on their computer.
The tenth paper, titled “Application of Artificial Intelligence in Precision Marketing,” insists that the development of artificial intelligence technology has greatly helped social productivity and economic growth. Compare to traditional marketing, artificial intelligence (AI) technology is applied to accurate marketing activities. Faced with these technological advances, the authors study the application of artificial intelligence technology for the precise new marketing model. The proposed advancement of artificial intelligence technology not only changed the way of marketing activities, but also enabled marketers to attract consumers more effectively. AI technology can accurately identify customer needs in a huge database to locate potential customers, meet customer needs, and establish a good relationship between marketers and consumers.

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