Hindawi
International Transactions on Electrical Energy Systems
Volume 2023, Article ID 9842047, 1 page
https://doi.org/10.1155/2023/9842047

*Retraction*

# Retracted: Informatization of Accounting System of Electric Power Enterprises Based on Sensor Monitoring and Cloud Computing

**International Transactions on Electrical Energy Systems**

Received 28 November 2023; Accepted 28 November 2023; Published 29 November 2023



This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

Wiley and Hindawi regret that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

## References

[1] X. Tie, "Informatization of Accounting System of Electric Power Enterprises Based on Sensor Monitoring and Cloud Computing," *International Transactions on Electrical Energy Systems*, vol. 2022, Article ID 3506989, 7 pages, 2022.

Hindawi
International Transactions on Electrical Energy Systems
Volume 2022, Article ID 3506989, 7 pages
https://doi.org/10.1155/2022/3506989





*Research Article*

# Informatization of Accounting System of Electric Power Enterprises Based on Sensor Monitoring and Cloud Computing

**Xiaohua Tie**

*Xi'An International University Business School, Xi'An, Shaanxi 710077, China*

Correspondence should be addressed to Xiaohua Tie; 1519640429@st.usst.edu.cn

Received 26 August 2022; Revised 10 September 2022; Accepted 22 September 2022; Published 29 September 2022

Academic Editor: Nagamalai Vasimalai



In order to promote, restrict, regulate, and balance the accounting work of electric power enterprises, the author proposes an electric power enterprise accounting system based on sensor monitoring and cloud computing. Through the method of integrating information technology on the basis of accounting computerization, through a sensor and modular design analysis, an accounting information management system model is formed. The accounting information management system based on cloud computing combines accounting and management functions. The system test results show that the accounting information management system is in a state of 480 concurrent users, the average response time of a data query is 4.3 seconds, and the average response time of a data access is 5.1 seconds. The average value of the execution data scale per second is 103.52. *Conclusion*. In order to further improve the accounting software of electric power enterprises, develop management accounting software, and effectively perform the functions of management accounting.

## 1. Introduction

Accounting uses results as the main point of measurement; the main goal is to improve the business; it uses special methods for companies and organizations; and it is an action that includes complete, continuous, and business management of organizations and other organizations. Registration, management, financial reporting, forecasting, decision-making, monitoring, and analysis, as well as social and business development, are part of the importance of business management. With the advent of the information age, traditional accounting has changed from manual bookkeeping, manual calculation, and manual verification to using computers to carry out corresponding work. However, these tasks are transferred from traditional manual to computer calculation, and only the part that needs manual calculation is handed over to the computer. The operation process, data entry, statistical methods, and other processes still require a lot of manual participation [1]. On this basis, accounting information technology is also based on the computer, but humans are used to calculate the target information and enterprise entities, and the actual operation process and work platform are still carried out in traditional accounting. In fact, in this accounting informatization process, the use of computers only stays with "computing." With the continuous popularization of computers, the functions are becoming more and more powerful, involving all aspects of society, and its main functions are developing towards informatization and intelligence, its main function can not only stay on "calculation," but can use various computer software, the manual tedious work is transformed into the operation of the computer [2]. Through the computer, the data are not only calculated but also various statistics and analyses are carried out to maximize the use of various functions of the computer. Accounting informatization mainly combines accounting and information technology. With the advent of the information society, corporate finance will cater to the trend of informatization, relying on computers to process increasingly complex corporate financial information flows and incorporating corporate management into the informatization system. When the network and communication means are highly developed and electronic equipment and mobile equipment are constantly updated, the foundation of accounting

informatization exists in a wide range of hardware and software environments. Information-based accounting can provide information to enterprise leaders in the network environment, increase the competitiveness of enterprises, and solve the "island" phenomenon in computerized accounting at the network level. Through the analysis and calculation of a large amount of information, it provides decision support for enterprise management. Existing enterprises mainly use accounting computerization to realize the main financial management and some accounting software to realize the overall audit of the enterprise, but in general, the accounting information standard has not been reached [3]. In accounting informatization, through information technology, network systems, and communication systems, general manual business processes are transformed into a series of software executions and protocol interactions on hardware such as computers, mobile devices, networks, and communications, and business processing is automated.

## 2. Literature Review

Scouse et al. and others conducted in-depth research on the formal meaning of cloud computing and its advantages and disadvantages and believed that the technical level and scientific theoretical basis of cloud computing development are the reasons for ensuring that cloud computing can be used in enterprises and achieve good results [4]. Hein et al. and others propose to serve the public with software, hardware, and postmaintenance, which can establish a new business management model and provide good development conditions for enterprises [5]. Jpc et al. and others conducted a study on the needs of enterprises in cloud computing, including a comprehensive analysis of enterprise data information, enterprise capital flow, management methods, etc., and sorted out a perfect evaluation method after the analysis [6]. Zhang et al. obtained the importance of cloud computing for future accounting information construction according to the theoretical research of reality, classified small and medium-sized enterprises by means of qualitative and quantitative cooperation, and then obtained the characteristics of various types of small and medium-sized enterprises. Then, according to various characteristics, find out the matching method of cloud computing technology and effective risk management[7]. Lv and Li have developed a cloud computing technology based on the service differential agreement, using the service differential agreement as the basic, according to the feedback questions put forward by users, in order to evaluate different levels of service for cloud computing providers. It is used as a reference for new companies when choosing cloud computing [8]. Arcos-Aviles et al. and others have studied different usage patterns of cloud computing in their paper, and based on the research results, they have drawn up corresponding executable programs [9]. Liu, C. et al., the study of small and medium enterprises, found that because the development of accounting information requires a lot of investment due to capital, management, and other problems, small and medium enterprises have difficulty creating and creating financial information, but because cloud computing can effectively manage investment costs, small and medium enterprises will often use cloud computing when creating financial information [10].

System testing is a process of comprehensive verification of the system by organically combining the design elements, operating environment, and external conditions (such as the network) of the accounting information system of electric power enterprises. Verification includes determining whether the system functions meet the usage requirements, whether the system performance meets the function needs, etc. Through system testing, it is possible to find out where the actual effect does not match the expected effect as early as possible, so as to carry out targeted repair and improvement and do the final check for the final realization of the system.

## 3. Research Methods

### *3.1. Overall Design of Accounting Information Management System*

*3.1.1. System Construction Background.* The design of the accounting information management system should be based on the perspective of development, adapt to the development of the times and the requirements of scientific financial management, recognize the responsibility and mission of accounting work, and be guided by the scientific concept of development, get rid of the shackles of the traditional financial management model, adopt reform and innovative management measures, change the extensive development thinking of extension and expansion, and promote the safe and stable progress of financial work.

*3.1.2. System Design Concept.* Establishing and implementing an accounting information management system that combines modern information technology and computer technology. Information mainly refers to accounting information resources, and computer technology mainly focuses on accounting information processing, referred to as information processing processor, which is the core part of the information management system [11, 12]. An accounting information system is a human-computer interaction management information system using modern information processing technology. Its application meets the requirements of enterprise accounting management and can effectively solve the problems encountered in accounting and management. The information is collected, stored, processed, analyzed, transmitted, and fed back through three parts: people, computer technology equipment, and operating procedures. Through the accounting information management system, a decision-making system can be established to help managers solve some diverse problems, including plan monitoring, budgeting, and cost management, in order to provide support for the leadership to formulate corporate development strategies. Therefore, the design of an accounting information management system mainly includes three modules. As shown in Figure 1.

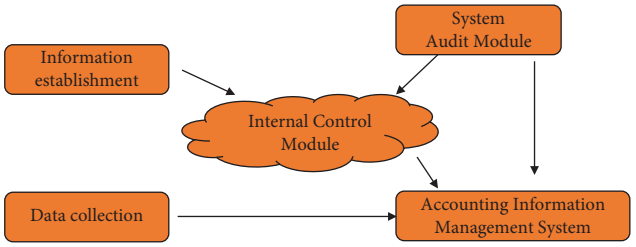


Figure 1: The module of accounting information management system.

### 3.2. Detailed System Design and Implementation

#### 3.2.1. Advantages of Accounting Information Management System

*(1) Informatization*. The accounting information management system is a management system constructed by using modern computer technology as a platform for building the foundation of information technology.

*(2) Open up*. With the development of the Internet, the accounting information management system has a high degree of automation in information processing and effectively realizes resource sharing. Through the system, relevant systems inside and outside the enterprise can exchange real-time data and obtain information from each other [13].

*(3) Intelligent*. The design of the system is mainly through the application system combined with human, computer, network, and software programs, which not only have the function of accounting but also have the function of control and management. It has the characteristics of intelligence and humanization.

*(4) Diversification*. Through the exchange of information between internal and external enterprises, the collection of information is diversified, the information channels are wide, and the amount of information is increased.

#### 3.2.2. Detailed Design

*(1) System hardware architecture*. The hardware architecture of the accounting information management system needs to include several parts, such as a server, a client, a browse browser, etc., as shown in Figure 2.

*(2) System UI page design*. In order to ensure the safety and efficiency of the management of financial information and to provide good services for accounting operations, it is necessary to create a clear and understandable UI operation interface, as shown in Figure 3.

#### 3.2.3. Detailed Design of the Application

*(1) Internal control module*. To improve internal control, when developing internal control for accounting, you must start with three things: data management, income and expenditure data, and customer management. [14].

(1) Basic data management mainly responsible for the collection and recording of sales, daily reports, accounting risks, and other information in accounting.

(2) Supervision of revenue and expenditure information collect data from relevant business systems and conduct analysis and processing to supervise and evaluate accounting revenue and expenditure.

(3) User information management record and analyze the performance of accounting staff to select, deal with violations, and ensure that accounting internal control management falls within the timeliness.

*(2) System audit module*. For the effective implementation of the internal control system, it is necessary to carry out an internal audit of the management system to achieve the safe and effective application of the system. After the traditional business control activities of enterprises are gradually embedded in computer programs, the effectiveness of business information will depend on the reliability of the information system, and the reliability of the information system will depend on the control and execution of the information system. Therefore, the accounting information management system should not only formulate the internal control system but also review the implementation of the internal control system through auditing activities, where relevant problems in the control system can be found, and timely improvement can make the information management system play the biggest role in the enterprise operation [15]. Information system audits mainly include auditing information technology management control; auditing data centers and data communication; auditing the system development process; and auditing system operation and maintenance. Information system auditing can ensure the effective operation of the internal control mechanism and achieve the ultimate goal of enterprise management informatization.

*(3) Network delay*. In order to prevent the influence of network changes on data transmission, network QoS management technology is introduced, and real-time monitoring is used to lay a good foundation for diffusion control. To control the network delay, you need to add a timestamp to the protocol and two fields to each packet: last received time (LRT) and current sent time (CST). After receiving a packet, the receiver calculates the local transmission time of the packet based on the LRT and SCT of the packet. At the same time, according to the last time reserved by the receiver (LST) and the time when the message is received, the delay of the receiver time can be reduced, and the packet network performance is slowed down.When *B*-end replies to *A*, it is shown as follows:

$$\begin{aligned} \text{LRT} &= TB + \Delta t1, \\ \text{CST} &= TB + \Delta t1 + \Delta t2, \end{aligned} \tag{1}$$

when end *A* receives the message from end *B*, its local is

$$\text{LRT} = TA + \Delta t1, \tag{2}$$

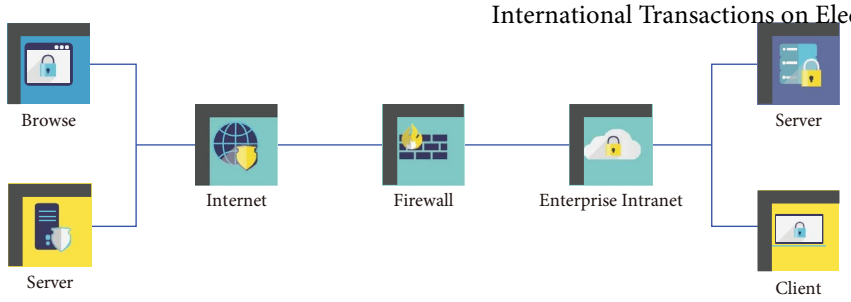


Figure 2: System hardware architecture diagram.

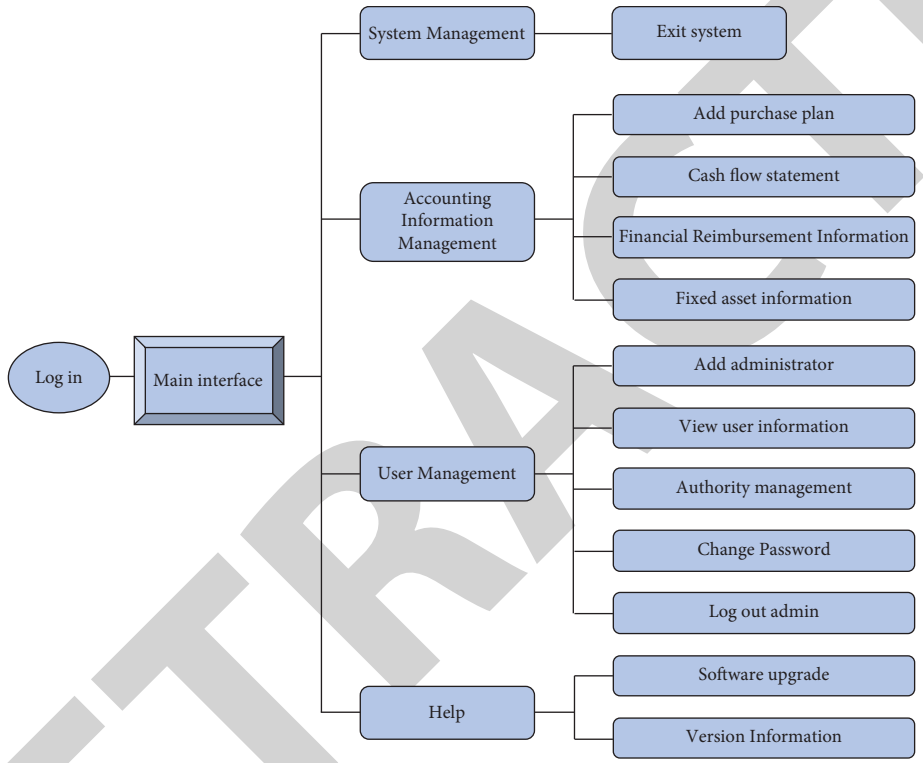


Figure 3: System UI page design.

and its current time is

$$\mathrm{CT} = TA + \Delta t1 + \Delta t2 + \Delta t3. \quad (3)$$

At this time, the two-way delay of packet sending can be calculated as follows:

$$\mathrm{CT} - \mathrm{LST} - (\mathrm{CST} - \mathrm{LRT}). \quad (4)$$

*3.3. Example Application of Accounting Information Management.* Haier Group uses the accounting information management system to carry out daily clearing of daily operating benefits, dynamically display the daily work budget, actuality, and gap, and make a correction plan to make sure the goal is achieved. In today's increasingly developed informatization, Haier Group adopts the business philosophy of Rendanheyi, which has comprehensively improved the closed-loop optimization of Haier Nissin and the quality of employees. Through the accounting information management system, Haier Group conducts budget and analysis of annual revenue and expenditure, scenario application, rolling forecast, etc., comprehensively runs through the cost budget of sales, production, procurement, and other businesses, pre-estimates the business results of the activity plan, and makes effective adjustments according to the plan to achieve strategic goals. Collect and analyze enterprise sales information data, risk information data, and daily report data through the internal control system. Use the income and expenditure supervision system to supervise and control the income and expenditure management system, income and expenditure status, etc. [16]. Carry out further implementation of the user's information report and the implementation of the system. The use of an information management system brings convenience to Haier Group's business operations, solves problems and inconsistencies in accounting, and contributes to

business development. The practice has proven that the system is safe and reliable, and it is worth supporting it in the work of the business.

## 4. Results Analysis

*4.1. Test Environment.* The introduction of the test environment of the accounting information management system is divided into two parts: hardware and software, as shown in Tables 1 and 2, respectively.

*4.1.1. Hardware Configuration.* The test hardware configuration of this research system should include servers and clients. Three rack servers and one client are arranged here; the main parameters are shown in Table 1.

*4.1.2. Software Configuration.* The test software configuration of this research system is based on hardware equipment, and the main parameters are shown in Table 2.

*4.2. Test Method.* The purpose of the accounting information management system test in this study is to eliminate potential problems in the operation of the system. The main tests are as follows:

(1) Test whether user system login, function access, etc. Meet the expected design security goals, one is whether authorized user access is normal; the other is whether illegal user access is blocked [17].

(2) Test whether the operation of the functional modules of the system meets the expected design and operation goals, such as basic operations such as additions, deletions, and changes, and data normative judgments.

(3) Test whether the data backup capability of the system based on the simulated environment meets the expected design reliability goals, one is whether the system automatically completes data backup in real time; the other is whether the damaged data of the system can be repaired and whether the repair time is short [18].

(4) Test whether the access capability of the system database meets the expected design efficiency goal, such as whether the access result can be quickly obtained by entering the access order number.

(5) Test whether the operation of the system function modules meets the expected design logic goals, such as payroll accounting, report analysis, system settings, etc.

(6) Test whether the system data storage and invocation meet the expected design accuracy goals, such as data reading accuracy.

(7) Make sure that the performance of the system based on the use of multiple sources can meet the requirements of design elements, such as response time and energy efficiency.

In order to determine the architecture and operation of the data management system as a whole, this section only introduces various test methods and describes their use in the management of the evidence.

*4.2.1. Integration Test.* This test is mainly to access the communication business between each module of the system and its completion. It is used to ensure correct data transfer between different modules [14, 19]. Carry out a specific integration test on the system through the communication of the capital revenue and expenditure function, payroll accounting function, and report management function of the accounting information management system.

*4.2.2. Effectiveness Test.* This test is used to confirm whether the actual performance of the system meets the expectations of developers or customers and how well it fits or matches. The author chose the Heihe test method to carry out specific verification and confirmation of the main modules of the system [20]. This system is designed and developed for the convenience of enterprise financial management workers, so operations such as report querying and processing in the system require fast operation speed and strong operability.

*4.2.3. System Test.* This test is to consider the comprehensive performance of the system from the perspective of the overall situation and results; it needs to rely on a certain test environment to obtain an overall test report about the system.

*4.3. System Performance Test.* As mentioned above, performance measurement, based on the use of high-level access points, evaluates the performance according to the desired design goals, such as time responsiveness and high performance. To complete the results of the physical performance evaluation, it can be seen that the data management system must meet the following requirements: response time for many users at the same time is less than 5 seconds. The main contents of performance testing include the selection of testing tools and the writing of test scripts.

The author of the data management uses EVEREST software to simulate the performance and gradually increases the number of users at the same time to bring the upper limit of the physical resistance and the response time approaches this limit.

The operation process of the performance test of the accounting information management system in this study is briefly described as follows: install EVEREST software, and then write and run different system operating performance test script languages; here, the unit of concurrent user pressure growth is defined as 30/second, and the average value is taken according to the test results, and the corresponding data recording is performed using the system's

Table 1: System test hardware configuration.

| Parameter/host | Application server | Web server | Database server | Client computer |
|---|---|---|---|---|
| Processor | Xeon xeon-silver | Xeon xeon-silver | Xeon xeon-bronze | Inteli5 |
| Memory capacity | 16G | 32 G | 8T | 16 G |
| Hard drive capacity | 2 ∗ 1T | 3 ∗ 2T | 1T | 512 G |
| Support system | WindowsServer | WindowsServer | WindowsServer | windows8 |

Table 2: System test software configuration.

| Host | System | Software |
|---|---|---|
| Application server | WindowsServer2012withSP2 | SQLServer2012; IIS7.0 |
| Web server | WindowsServer2012 | IIS7.0: NETFramework2.0 |
| Database server | WindowsServer2012 | SQLServer2012 |
| Client computer | Windows8 | InternetExplorer8.0; MicrosoftVisualStudio TeamFoundation |

Table 3: System stress test.

| Concurrent users | Query data average response time (seconds) | Save data average response time (seconds) | Minimum | The maximum value of data executed per second |
|---|---|---|---|---|
| 30 | 1.2 | 1.3 | 31 | 51 |
| 70 | 1.5 | 2.0 | 46 | 67 |
| 120 | 2.2 | 2.6 | 64 | 82 |
| 200 | 2.7 | 3.1 | 74 | 94 |
| 290 | 3.5 | 3.7 | 88 | 105 |
| 350 | 3.7 | 4.6 | 97 | 124 |
| 480 | 4.3 | 5.1 | 103 | 138 |

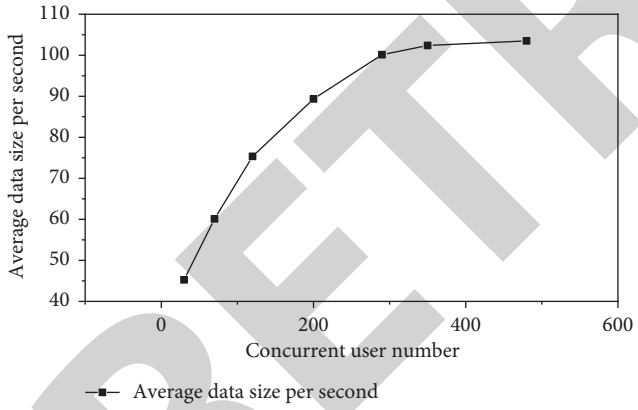


Figure 4: Average values under different concurrent users.

own tools [21]. The results of the performance test of the accounting information management system are shown in Table 3 and Figure 4 [22].

According to the data in Table 3 and Figure 4, the accounting information management system has 480 concurrent users, the average response time of an information query is 4.3, and the average response time of input data is 5.1 [23]. The average number of datasets processed per second is 103.52. Therefore, the results of performance evaluation are based on the desired goals and can be considered as indicators suitable for the business needs of enterprises [24].

## 5. Conclusion

Information management mode has changed the working mode of traditional enterprise management; through the process, financial management, cost management, income management, and expenditure of funds can be effectively managed, which reduces the investment of enterprises. With the continuous development of Internet technology and the emergence of cloud computing platforms, enterprise data management will be transformed to a cloud computing platform, and the biggest difference will be creating enterprise financial information management in the cloud environment. The author introduces the testing part of the accounting information management system, tests hardware conditions and software conditions through reasonable configuration, selects testing methods such as integration testing and effectiveness testing, and briefly describes the testing content. Finally, the test results are displayed in the functional test case table and the performance test data result in table, respectively. The results show that the accounting information management system has achieved the expected design goals.

## Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

## Conflicts of Interest

The author declares that there are no conflicts of interest.

## References


[1] J. Wang, D. Li, Z. Wang, and T. Wan, "Research on enterprise employee information system based on big data analysis," *Journal of Physics: Conference Series*, vol. 1748, no. 3, Article ID 032025, 2021.

[2] I. Made, L. M. Jaya, and I. M. Narsa, "The importance of forensic tax and accounting knowledge to prevent fraud in new normal era," *Hunan Daxue Xuebao/Journal of Hunan University Natural Sciences*, vol. 48, no. 2, pp. 101–112, 2021.

[3] B. Ali, R. A. Ahmed, J. A. Yaba, N. M. Hamawandy, and A. Ayoob, "The effects of computerized accounting system on auditing process: a case study from northern Iraq," *Solid State Technology*, vol. 63, no. 5, pp. 8564–8578, 2021.

[4] A. A. Scouse, S. S. Kelley, R. A. Venditti, and T. E. Mcconnell, "Evaluating sustainable product alternatives by combining life cycle assessment with full-cost accounting: a highway guardrail case study," *Bioresources*, vol. 15, no. 4, pp. 9103–9127, 2020.

[5] L. Hein, K. J. Bagstad, C. Obst et al., "Progress in natural capital accounting for ecosystems," *Science*, vol. 367, no. 6477, pp. 514-515, 2020.

[6] A. Jpc, A. Cec, B. Mg, B. Aw, and B. Jiz, "Accounting for cost heterogeneity on the demand in the context of a technician dispatching problem-sciencedirect," *European Journal of Operational Research*, vol. 287, no. 3, pp. 820–831, 2020.

[7] C. Zhang, J. He, C. Bai, X. Yan, J. Gong, and H. Zhang, "How to use advanced fleet management system to promote energy saving in transportation: a survey of drivers' awareness of fuel-saving factors," *Journal of Advanced Transportation*, vol. 2021, Article ID 9987101, 19 pages, 2021.

[8] X. Lv and M. Li, "Application and research of the intelligent management system based on internet of things technology in the era of big data," *Mobile Information Systems*, vol. 2021, Article ID 6515792, 6 pages, 2021.

[9] D. Arcos-Aviles, J. Pascual, F. Guinjoan et al., "An energy management system design using fuzzy logic control: smoothing the grid power profile of a residential electro-thermal microgrid," *IEEE Access*, vol. 9, no. 99, p. 25172, Article ID 25188, 2021.

[10] K. Liu, Q. Wang, Z. Luo, X. Zhao, and X. Zhang, "Planning mechanism design and benefit analysis of electric energy substitution: a case study of tobacco industry in Yunnan province, China," *IEEE Access*, vol. 8, p. 1, 2020.

[11] Z. Tang, Y. Xiao, Y. Jiao et al., "Research on short-term low-voltage distribution network line loss prediction based on kmeans-lightgbm," *Journal of Circuits, Systems, and Computers*, vol. 31, no. 13, 2022.

[12] R. M. Nordin, N. A. Jasni, N. A. Abdul Aziz, N. Hashim, Z. Ismail, and J. Yunus, "Construction safety management system at project level using system dynamic model (SDM)," *Engineering Journal*, vol. 25, no. 1, pp. 221–232, 2021.

[13] D. Arnott and S. Gao, "Behavioral economics in information systems research: critical analysis and research strategies," *Journal of Information Technology*, vol. 37, no. 1, pp. 80–117, 2022.

[14] K. Conboy, P. Mikalef, D. Dennehy, and J. Krogstie, "Using business analytics to enhance dynamic capabilities in operations research: a case analysis and research agenda," *European Journal of Operational Research*, vol. 281, no. 3, pp. 656–672, 2020.

[15] K. Muhammad, M. S. Obaidat, T. Hussain et al., "Fuzzy logic in surveillance big video data analysis: comprehensive review, challenges, and research directions," *ACM Computing Surveys*, vol. 54, no. 3, pp. 1–33, 2022.

[16] S. Zeng and X. M. Du, "Theoretical analysis and experimental research of non-cavitation noise on underwater counter-rotation propellers," *Progress in Computational Fluid Dynamics, An International Journal*, vol. 20, no. 1, pp. 51–58, 2020.

[17] R. Pansare, G. Yadav, and M. R. Nagare, "Reconfigurable manufacturing system: a systematic bibliometric analysis and future research agenda," *Journal of Manufacturing Technology Management*, vol. 33, no. 3, pp. 543–574, 2022.

[18] J. Fei, Q. Yao, M. Chen, X. Wang, and J. Fan, "The abnormal detection for network traffic of power IOT based on device portrait," *Scientific Programming*, vol. 2020, no. 9, 9 pages, Article ID 8872482, 2020.

[19] D. Ko, S. Y. Ha, S. Jin, and D. Kim, "Convergence analysis of the discrete consensus-based optimization algorithm with random batch interactions and heterogeneous noises," *Mathematical Models and Methods in Applied Sciences*, vol. 32, no. 06, pp. 1071–1107, 2022.

[20] Y. Wu, L. Liu, J. Zhou, C. Wu, and C. Xu, "Research on optimization of hedging ratio of thermal coal futures in thermal power enterprises based on delphi method," *Energy systems*, vol. 11, pp. 443–470, 2020.

[21] M. Zhang, Y. Tang, L. Liu, and D. Zhou, "Optimal investment portfolio strategies for power enterprises under multi-policy scenarios of renewable energy," *Renewable and Sustainable Energy Reviews*, vol. 154, Article ID 111879, 2022.

[22] A. A. Gibadullin, V. V. Sorokina, M. I. Sadriddinov, T. V. Petrusevich, T. B. Izzuka, and A. D. Kokurina, "Assessment of factors ensuring industrial safety of enterprises of the electric power complex," *IOP Conference Series: Materials Science and Engineering*, vol. 862, no. 6, Article ID 062029, 2020.

[23] G. Chenggong, J. Feng, L. Ying, and L. Yun, "Study on the construction of safety management system of Chinese electric power enterprises based on systematic thinking," *Journal of Physics: Conference Series*, vol. 1827, no. 1, Article ID 012060, 2021.

[24] Y. Li and X. Tu, "Optimize storage management system of electric power enterprises," *IOP Conference Series: Earth and Environmental Science*, vol. 692, no. 2, Article ID 022068, 2021.