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## ABSTRACTS

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### Evaluating the climatic factors affecting road accidents - a case study in Poland

(pages 1-8)

**Piotr Gorzelanczyk**

Stanislaw Staszic State University of Applied Sciences in Pila, Podchorazych 10 Street, 64-920 Pila, Poland, EU,  
<https://orcid.org/0000-0001-9662-400X>, [piotr.gorzelanczyk@ans.pila.pl](mailto:piotr.gorzelanczyk@ans.pila.pl) (corresponding author)

**Martin Jurkovic**

Faculty of Operation and Economics of Transport and Communication, University of Žilina, Univerzitna 1, 010 26  
Žilina, Slovak Republic, EU, <https://orcid.org/0000-0001-7673-1350>, [martin.jurkovic@fpedas.uniza.sk](mailto:martin.jurkovic@fpedas.uniza.sk)

**Tomas Kalina**

Faculty of Operation and Economics of Transport and Communication, University of Žilina, Univerzitna 1, 010 26  
Žilina, Slovak Republic, EU, <https://orcid.org/0000-0003-0564-086X>, [tomas.kalina@fpedas.uniza.sk](mailto:tomas.kalina@fpedas.uniza.sk)

**Malaya Mohanty**

KIIT - Kalinga Institute of Industrial Technology, Patia, Bhubaneswar, Odisha 751024, India,  
[malaya.mohantyfce@kiit.ac.in](mailto:malaya.mohantyfce@kiit.ac.in)

**Keywords:** factors affecting road accidents, road accident, weather conditions.

**Abstract:** Globally, the number of traffic accidents is declining year. The epidemic has been the primary factor influencing its score in recent years. This figure is still quite high, though. Because of this, every attempt should be taken to lower the quantity of traffic incidents. The article's goal is to examine the likelihood that certain variables, which are dependent on weather, will have an impact on the quantity of traffic accidents. Ten measuring sites in Poland were chosen at random for this purpose, and the number of accidents at each location was examined. Based on the study, it can be stated that overcast and rainy days, together with favourable weather conditions, have the greatest impact on the number of traffic accidents. Furthermore, the likelihood of a traffic collision rises by 29% and 20%, respectively, in overcast and rainy skies. For this reason, special care should be taken to minimize road accidents.

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### The role of information in the development of new technologies

(pages 9-15)

**Martin Straka**

Warsaw School of Economics, SGH, Department of Logistics, al. Niepodległości 128, 02-554 Warszawa,  
Poland, EU, [mastr1861@gmail.com](mailto:mastr1861@gmail.com)

**Keywords:** information, development, new technologies and data processing, evolution, artificial intelligence.

**Abstract:** When developing a new technology, a large amount of information is needed both at the beginning and during the development and at the end of the development of a new technology, there is a large amount of data everywhere, information that creates a combination of highly necessary data with data that creates noise. The evolution of a new technology starts from one initial original idea, or with the help of partial or partial solutions it approaches the conclusion of what needs to be achieved through research. Experiments and information collection reach results not only after the information part, but also after the technical-technological part. Another important source of information is quantitative data obtained from books, magazines, old planning documentation, the Internet, various repositories, as well as using artificial intelligence tools. The article is devoted to the principled attitude of obtaining information and resources that are available and that are important for the development of a new technology from the initial data at the beginning to the data that is collected during the development process.

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## Supply chain management in dairy industries – future scope and its importance (pages 17-24)

**Panneerselvam Sivasankaran**

Department of Mechanical Engineering, Christ College of Engineering and Technology, Paris Nagar, Moolakulam, Puducherry 605010, India, sivasankaranpanneerselvam83@gmail.com (corresponding author)

**A. Sivakumar**

Department of Mechanical Engineering, Christ College of Engineering and Technology, Paris Nagar, Moolakulam, Puducherry 605010, India, principal@christcet.edu.in

**C. Subramanian**

Department of Mechanical Engineering, Christ College of Engineering and Technology, Paris Nagar, Moolakulam, Puducherry 605010, India, csmanianmec@gmail.com

**P. Chandru Deva Kannan**

Department of Mechanical Engineering, Christ College of Engineering and Technology, Paris Nagar, Moolakulam, Puducherry 605010, India, chandru4u1983@gmail.com

**Keywords:** supply chain management, time, cost, distance, demand and dairy industry.

**Abstract:** Supply networks are a major component of contemporary industrial systems. In its most basic form, supply chain management involves controlling the movement of materials and products from producers to consumers via an appropriate transportation network. The primary function of supply chain management is thought to be profitability. It aims to optimize the difference between what consumers pay and the cost of producing and delivering the product. Another goal is to strike the best possible balance between quality and manufacturing costs. From the source of raw materials to the final product reaching the client without delays, price increases, or subpar customer service, an efficient system is created through supply chain integration. This study aims to review the supply chain management of the dairy industry on a national and international scale by gathering fundamental data from credible publications worldwide. Time, cost, distance, and demand are the main key importance factors that are taken into consideration in this work for the dairy supply chain system.

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## Enhancing biomaterial performance: the advantages and applications of Collagen coating (pages 25-30)

**Darina Bacenkova**

Faculty of Mechanical Engineering, Technical University of Kosice, Department of Biomedical Engineering and Measurement, Letná 1/9, 042 00 Košice, Slovak Republic, EU, darina.bacenkova@tuke.sk (corresponding author)

**Marianna Trebunova**

Faculty of Mechanical Engineering, Technical University of Kosice, Department of Biomedical Engineering and Measurement, Letná 1/9, 042 00 Košice, Slovak Republic, EU, marianna.trebunova@tuke.sk

**Jana Cajkova**

Faculty of Mechanical Engineering, Technical University of Kosice, Department of Biomedical Engineering and Measurement, Letná 1/9, 042 00 Košice, Slovak Republic, EU, jana.cajkova@tuke.sk

**Keywords:** Collagen coating, biomaterials, surface modification, tissue engineering, regenerative medicine.

**Abstract:** Collagen, the primary structural protein in the extracellular matrix, has gained significant attention as a surface modification agent for biomaterials due to its exceptional biocompatibility, bioactivity, and ability to promote cellular adhesion and proliferation. Collagen coatings enhance the integration of synthetic and natural biomaterials with biological tissues, making them highly relevant in biomedical engineering, regenerative medicine, and implantable medical devices.

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This review explores the mechanisms by which collagen coatings improve biomaterial properties, including their role in modulating surface chemistry, hydrophilicity, and cellular interactions. Furthermore, we discuss various coating techniques, such as adsorption, covalent binding, and electrospinning, and their implications for optimizing material performance in biomedical applications. The advantages of collagen coatings in orthopedic, dental, and cardiovascular implants, as well as wound healing and drug delivery systems, are also examined. By highlighting the potential of collagen-functionalized surfaces, this article provides insight into the future directions of biomaterial innovation aimed at improving patient outcomes and medical device efficacy.

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## **Marine trader's method of payment and level of satisfaction towards infrastructural facilities of dry ports in India – an empirical study**

(pages 31-38)

**P. Gurusamy**

Department of Commerce, Nallamuthu Gounder Mahalingam College, NGM College, 90, Pollachi Palghat Road, Pollachi, 642001, Tamil Nadu, India, gurumiba@gmail.com

**Keywords:** sea and dry ports, marine trade, CONCOR and BOP, shipping industry, world trade and ministry of commerce and Industry.

**Abstract:** All commodities and services moved by sea require at least two seaports; the importance of seaports to the smooth operation of an economy cannot be overstated. Maritime transport is used for most of the domestic and international trade (import/export). Due to a shortage of contemporary equipment and human resources throughout India, the shipping industry is experiencing delays in the transportation process for both imports and exports. Further shipping industry personalities are facing financial challenges related to the overseas transaction between two or more countries due to the huge payment formalities in India. India's shipping industry one of the backbones of Indian economy. In near future, the ministry of commerce and industry must take considerable steps for improving the effective method of payments as well as marine traders level satisfaction towards developing infrastructural facilities in dry port for utilize the great opportunities of shipping industry earnings to strengthen the India's BOP position as well as economic position and export-import volume in the world trade market.

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## **Shaping sustainable agribusiness through ESG: a bibliometric study**

(pages 39-49)

**Matus Panko**

Department of Banking and Investment, Faculty of Economics, Technical University of Košice, Nemcovej 32, 040 01 Košice, Slovak Republic, EU, matus.panko@tuke.sk

**Jozef Glova**

Department of Banking and Investment, Faculty of Economics, Technical University of Košice, Nemcovej 32, 040 01 Košice, Slovak Republic, EU, jozef.glova@tuke.sk (corresponding author)

**Keywords:** ESG, corporate-social responsibility, sustainability, climate-smart business, bibliography.

**Abstract:** The integration of Environmental, Social, and Governance (ESG) principles has become increasingly important in the agribusiness sector, which faces significant challenges related to sustainability, resource management, and social responsibility. This study explores the motivations and implications of adopting ESG practices within agribusiness, highlighting how these practices can support both environmental stewardship and corporate resilience. This study provides a comprehensive bibliometric analysis of research publications concerning ESG from 2000 to 2023. The analysis aims to evaluate the current state of knowledge, identify prevailing trends, and uncover existing research gaps. Utilising a dataset comprising 3874 research publications retrieved from the Web of Science database, the findings indicate a substantial growth in ESG-related research, underscoring an increased global awareness of critical challenges. Through a

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review of relevant literature, the research analyses the role of ESG across three key pillars: the environmental impact of agricultural activities, social considerations such as fair labour practices and community engagement, and governance aspects related to transparency and accountability. The findings suggest that companies that prioritize ESG principles are better equipped to meet the growing expectations of stakeholders, including investors, consumers, and regulatory bodies, while also enhancing their competitive position in the market. Additionally, the study emphasizes the importance of climate-smart agriculture and effective governance in addressing the sector's complex challenges. Ultimately, the research underscores the critical role of ESG integration in promoting sustainable development and long-term viability for agribusinesses.

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