

Mission Statement

IOTA is published in association with the SAFEDUCATE Research and Development Centre of Excellence. This journal provides an enterprising international forum for the industry – academia exchange and diffusion of the erstwhile studies on advances in all functional areas of Industrial Engineering and Management, both in the logistic and e-commerce sectors. The main objective of the journal is to act as an instrument for research which contribute to the breakthrough of supply chain management practices with in societies and businesses globally. Driven by the industry challenges, this premier journal shall promote the cause of Supply Chain Management among the young researchers, combining domain exploration with real-world practical industrial application. The applicability of engineering and management research does not misprice from a prominence on sound methodology. This approach is going to establish IOTA amongst respected publications in the field of industrial engineering and supply chain management.

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From the CEO's Desk

“It gives me immense pleasure to announce the launch
of a new initiative by Safeducate in association with its
promoter company
Safexpress Pvt.Ltd.
The ‘Research &
Development’ wing has
been launched to scale
the supply chain and
advance towards the
future. Safeducate
strongly believes in
promoting young
researchers to aid the
cause of skilling in
supply chain management.
The initiative seeks to
promote cutting edge research
and develop new verticals of supply chain to optimize
operations and enhance efficiency in business.”



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Editorial

"Once you have mastered time, you will understand how true it is that most people overestimate what they can accomplish in a year—and underestimate what they can achieve in a decade!": Tony Robbins

Welcome to the decadal Second Volume of IOTA, International Journal of *Industrial Operations & Transportation Assignments* (IJIS)!

As the above saying goes, SAFEDUCATE is trying to achieve its goal by planting tree in research and innovation avenues in the last one decade by publishing quality research works through APJMRI. We will continue to pursuit our quest for knowledge in achieving these goals in coming volumes as well. I would like to thank our research contributors, reviewers, advisory board members, academicians and other stakeholders for their support. Without their help and guidance, we could not have achieved this success of pre-release. As you are aware, IOTA is a quarterly, double-blind, peer-reviewed refereed journal, published from SAFE Online Library; we need to submit revised research papers in a time bound manner. Here, I would like to give due credit in advance to our reviewers, whose participation and contribution will play an important role in meeting deadlines for our first issue. Without your support, we could not expedite the publication process. I would like to thank again our reviewers for their valuable suggestions and timely review comments that helped IOTA's quality and thus, helped

it to have a wide reach among readers. Those authors, whose articles have been accepted in this upcoming issue, please do contact us with your updated profile so that you could be a valued addition to our reviewers' panel from various backgrounds of **Industrial Engineering** and **Supply Chain Management**. As this is the decadal first issue of IOTA, we tried to address our readers' long-standing demands and have incorporated a special section on Finance. From the next volume onwards, we also plan to include special sections on the remaining management subjects, especially on Human Resource, Marketing, Operations and other management areas. We would like to thank all the authors for their contributions, and even those whose scholarly works has not been selected this time. But don't get disheartened. It's because either due to similarity of research topics or the articles need some rewriting. We do hope that the selected articles will contribute immensely in the fields of management and help to initiate further research. Enjoy reading but do feel free to drop me emails with your queries, suggestions and comments.



Shisam Bhattacharyya
Editor

DESCRIPTION

Iota reports on **developments** in current and emerging issues of **Industrial Engineering** and **Supply Chain Management**, including the latest research results and applications. Original contributions in a form of research articles and review articles describe the state of the art in specific fields or functions of engineering and management science, while there are shorter critical assessments of particular management techniques. *IOTA is stimulating reading and an important source for practicing managers, specialists in management services, operational research workers and management scientists, management consultants, academics, students and research personnel throughout the world.* The material published will be of high quality and relevance, written in a manner which makes it accessible to this entire wide-ranging readership. Preference will be given to papers with implications to the practice of management. Submissions of purely theoretical papers are discouraged. The review of material for publication in the journal reflects this aim.

Incorporating Optimization and Business Analytics Applications

We seek submissions related to the use of optimization and Business Analytics models and techniques to address practical optimization and Business Analytics challenges. Of particular interest are papers that present effective and contemporary modeling and solution approaches for a novel application area, as well as those papers that contain breakthroughs on solving established problems in application domains of considerable interest.

AUDIENCE

Practicing Managers, Specialists in Management Services, Operational Research Workers, Management Scientists, Management Consultants, Academics, Students and Research Personnel.

ABSTRACTING AND INDEXING

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Keyword List

Air transport

Allocation

AHP

Application

Artificial intelligence

Automobile industry

Bidding

Branch and bound

Capacity analysis

Case study

Chance constraints

Combinational analysis

Computing

Containers

Cost benefit analysis

Cost models

Crew scheduling

Cutting stock problem

DEA

Decision making process

Decision support systems

Deterministic demand

Dynamic programming

Econometrics

Education

Efficiency

Energy

Environmental studies

Expert systems

Facility layout

Flexible manufacturing

Flow-shop

Forecasting

Fuzzy sets

Game theory

Goal programming

Graph theory

Group decisions

Health service

Heuristics

History of OR

Information systems

Information theory

Integer programming

Inventory control

Job shop scheduling

Just-in-time

Learning

Line balancing

Location

LP / MILP / DP / NP

Maintenance

Management

Management of science/technology

Manufacturing

Marketing

Markov chain

Materials handling

Mathematical programming

MIS

Multi-criteria

Newsboy problem

Nonlinear programming

Operational/OR

Operations management

Optimization

OR education

Philosophy of OR

Planning and control

Probability

Product life cycle

Production

Production planning and control

Project management

Queuing

Rail transport

Reliability

Replacement

Resource management

Risk

Routing

Scheduling

Search procedure

Sensitivity analysis

Sequencing

Set covering

Simulation

Spanning tree

Statistics

Stochastic programming

Telecommunications

Time series

Timetabling

Travelling salesman

Value chain

Vehicle scheduling