

ISE NEWSLETTER

DEPARTMENT OF INDUSTRIAL & SYSTEMS
ENGINEERING, IIT KHARAGPUR

Spring 2022

The Department of Industrial and Systems Engineering (ISE) was established in 1973 as the Industrial Management Centre and later elevated to a full-fledged department in the year 1983. With strong focus in research and innovation, together with academic programs tailored to address the needs of the present day technological evolution, ISE has emerged as a unique academic institution in the country. ISE offers the following degree programs:

- **B.Tech (4-year)** - B. Tech in Industrial Engineering.
- **Dual Degree (5-year)** - B.Tech. in Industrial Engineering and M.Tech in Industrial Engineering and Management.
- **Dual Degree (5-year)** - B.Tech in Manufacturing Science and M.Tech in Industrial Engineering and Management.
- **Dual Degree (5-year)** - B.Tech in Engineering Product Design and Manufacturing and M.Tech in Design and Quality Engineering, with Mechanical or Industrial Electronics verticals.
- **M.Tech (2-year)** - M. Tech in Industrial Engineering and Management.
- Master of Science (MS).
- Doctor of Philosophy (PhD).



Head of the Department:
Prof. J. Maiti

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Message from the Head of the Department

HOD's Desk

It is with great pleasure that I am presenting the current issue of our newsletter. Presently, we are taking great stride in implementing the ISE Future Readiness Program. The goal of this program is to strengthen the department's performance in the key areas, viz. research excellence, teaching, product development, industry outreach/branding, infrastructure and manpower in connection with the Institute of Eminence stature of IIT Kharagpur. To foster research excellence, a lecture series featuring eminent professors in different domains of ISE will be organized. Avenues to publish in the top tier journals (INFORMS journals, IISE Transactions) will be explored. To make our UG curriculum more cutting edge, it has been upgraded with new core courses such as "Statistical Learning with Applications" and electives such as "Large Scale Optimization", "Applied Reinforcement Learning and Optimization". In the spring semester, industry experts were invited to interact with students in several courses, this trend will continue in future.

To publicize our M Tech and PhD programs and attract interested candidates, webinars will be conducted showcasing the opportunities in the department. Students from across the country and the world will be able to participate in these webinars. To enhance industry connection, an industry practioner's lecture series will be organized in which eminent industry leaders will be invited in the department to share their experiences. Training programs jointly developed with industries are already being organized and will be given more importance in the coming year. To attract post-doctoral candidates, a doctoral research seminar series will be conducted starting next semester. This will also support the research excellence initiative. Finally, an international symposium from the department of ISE will be organized in December 2022, where eminent academicians, scholars and industry practioners will discuss the current trends and future directions of industrial engineering. I am positive, that together we are going to open up new opportunities, and reach new heights of excellence.



Prof. J. Maiti

*Head of the Department,
Department of Industrial &
Systems Engineering,
IIT Kharagpur*

Gold Award

IISE University Chapter #660

Gold Award for IISE University Chapter #660

The IISE University Chapter #660, which represents the students and scholars of the Department of ISE, IIT Kharagpur, has been awarded with the prestigious "**Gold Award**", for outstanding chapter performance in 2021-22, under the **Chapter Recognition Program** of the **Institute of Industrial and Systems Engineers (IISE)**. This feat is accomplished under the guidance of Prof. Sri Krishna Kumar. IISE is the world's largest professional society dedicated solely to the support of the profession of industrial and systems engineers. It is an international, nonprofit association, headquartered in Peachtree Corners, Georgia, USA that provides leadership for the application, education, training, research and development of the discipline of ISE.



Gaurav Kumar
President



Swati Patnaik
Secretary



Imran Haider
Membership
Director



Nikesh Nayak
Vice President



Aishwarya Dash
Treasurer



Ritwik Dash
Program Director

**Heartiest Congratulations to all the members of IISE University
Chapter #660!**

The student office bearers for the year 2021-22

Department Spotlight

Vishleshan 2022



This year, the Research Scholar Day (Vishleshan 2022) was celebrated in the hybrid mode. It took tremendous effort from the faculty members, research scholars, delegates and participants to make this event a success in the post-covid situation. The Doctoral Colloquium was jointly organized by the IISE University Chapter #660 and the Department of ISE, IIT Kharagpur, and

sponsored by Central Coalfield Limited, Aarti steels, Indian Iron & Steel Sector Skill Council and EMC limited. This year our director Prof. V. K. Tiwari inaugurated this auspicious event. Prof. Sankar Kumar Pal, Emeritus professor and distinguished scientist, Former director ISI Kolkata, was invited as the chief guest for the event. Former alumni Mr. Aravindan Srinivasan, Dr. Saman Alani Azar were the other keynote speakers whose presence made the event special.



- **Prof. Sankar K. Pal**, is a Distinguished Scientist and former Director of Indian Statistical Institute (ISI). He founded the Machine Intelligence Unit and the Center for Soft Computing Research: A National Facility in ISI, Calcutta. He spent his precious time with the scholars, guiding them towards the latest cutting-edge research in the field of Pattern Recognition.



- **Mr. Aravindan Srinivasan**, Head Asia Pacific, Manufacturing Engineering Supply Chain at Moog Inc. delivered keynote speech on manufacturing engineering capabilities in factory and supply chain environments. He has global work experience with deft in Project Management of manufacturing source change of products to low-cost countries.

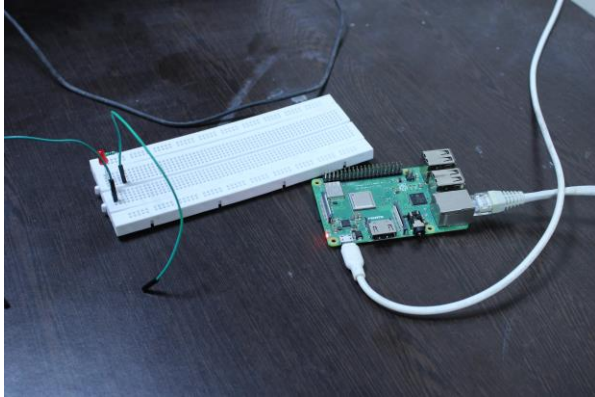
- **Dr. Saman Alani Azar**, Global AI/ML head, Ford Motors USA delivered keynote speech on quality prediction using AI/ML techniques in the automobile sector.

Department Spotlight

Workshop on Internet of Things

Pre-RS Day Workshop

An interactive "Workshop on Internet of Things (IoT)" was organized by the Department of Industrial and Systems Engineering & IISE University Chapter #660. Research scholars Mr. Sourav Bagchi, Mr. Satyajit Swain, and Mr. Subhadeep Barman from our department working under the supervision of Prof. Mamata Jenamani, conducted the workshop on 25th March 2022.



VISHLESHAN 2022

Doctoral Colloquium & Research Scholars' Day

Department of Industrial and Systems Engineering is going to conduct a

WORKSHOP on INTERNET OF THINGS (IoT)

By research scholars working in supply chain automation
Sourav Bagchi
Satyajit Swain
Subhadeep Bardhan

Under the supervision of
Prof. Mamata Jenamani
Department of Industrial and Systems Engineering,
IIT Kharagpur

Register now for Free

Organized by
INSTITUTE OF INDUSTRIAL & SYSTEMS ENGINEERS
IISE UNIVERSITY CHAPTER #660 IIT KHARAGPUR

6:00 PM to 8:00 PM
Friday, 25th March 2022

Competition

Best Poster Award

Mr. Subhadeep Bardhan (IIT Kharagpur) was awarded the best poster award for his poster on "An edge device for in-transit refrigerated container monitoring with application to Indian mangoes".

Best Paper Presentation Award (Oral)

Mr. Anand Ranjan (IIT Kharagpur) for his paper on "Optimal dynamic pricing and preservation technology investment for a centralised supply chain considering carbon emission".



VISHLESHAN 2022

Doctoral Colloquium & Research Scholars' Day

Key Highlights:

- Online workshop on Internet of Things (IoT)
- Oral Presentation

* Certificates to be provided for participation



Register now for free

OUR SPEAKERS



KEYNOTE SPEAKER
Mr. Anand Ranjan
Head, Asia Pacific
Manufacturing Engineering
Supply Chain, Moog Inc.



CHIEF GUEST
Dr. Sankar Kumar Pal (Padma Shri)
National Science Chair
Emeritus Professor,
Distinguished Scientist &
Former Director, ISI Kolkata



KEYNOTE SPEAKER
Dr. Saman Alani Azar
Global AI/ML Lead
Ford Motor Company, USA

Organized by



GOING LIVE !!!

SATURDAY, March 26TH 2022
9.30 AM Onwards IST

Reach Us
Prof. Jhadeshwar Maity
HOD, ISE Department
IIT Kharagpur

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Website: <http://www.iem.iitkgp.ac.in/>

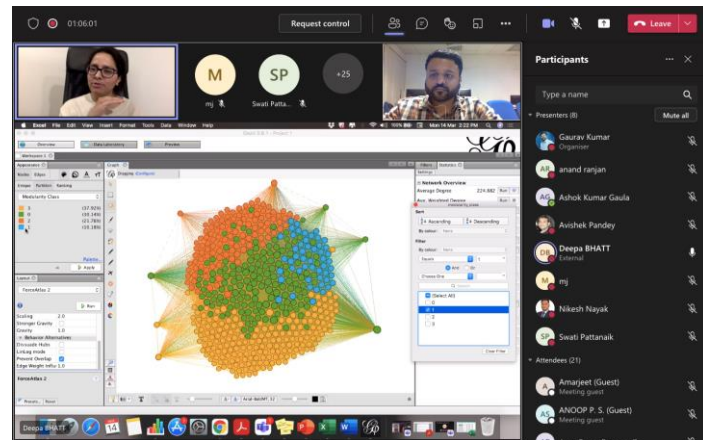


Workshops and Webinars

How to Conduct Literature Review

Workshop on “How to Conduct Literature Review”

A workshop on “How to Conduct Literature Review” was organized by Department of Industrial and Systems Engineering IIT Kharagpur & IISE University Chapter #660. Dr. Deepa Bhatt, Assistant Professor in Management, Entrepreneurship & Strategy, Montpellier Business School (MBS), France explained different angles on conducting the Literature review using Gephi software. The workshop was conducted on 14th of March 2022.



SPARC Programme

Training Course
on
Human Factors Engineering in Healthcare Systems
in collaboration with
IIT Kharagpur, India and Purdue University, USA
16th-20th May, 2022
Venue: Department of Industrial and Systems Engineering, IIT Kharagpur

About the Course
The Human Factors Engineering discipline has developed to encompass an increasing number and type of interactions between people and systems. The course is designed to teach both the fundamentals and applications of human factors and ergonomics in healthcare system.
The topics covered in this course are: human physiology and anthropometry, fatigue assessment, human information processing and control, assessment of environmental factors, and fundamentals of industrial product design including interface design.

Organizers
Prof P K Ray
Professor, Department of Industrial and Systems Engineering, IIT Kharagpur, India Co-PI
Prof V K Tewari
Professor, Department of Agricultural and Food Engineering, IIT Kharagpur, India Co-PI
Prof Denny Yu
Faculty, School of Industrial Engineering, Purdue University, USA
Prof V Aggarwal
Faculty, School of Industrial Engineering, Purdue University, USA

Programme Overview
Day 1
Information Centred Human Factors
Basic Concepts and Applications
Prof P K Ray, Prof D Yu, Prof V K Tewari, Prof V Aggarwal
Day 2
Human Body-centred Ergonomics
Basic Concepts and Applications
Prof D Yu, Prof V K Tewari, Prof V Aggarwal
Day 3
Organization Centred Human Factors
Basic Concepts and Applications
Prof S Gangopadhyay, Prof D Yu, Dr S Halder
Day 4
Applications of HFE in Healthcare Systems
Prof S Gangopadhyay, Prof D Yu, Dr S Halder
Day 5
Valedictory

Contact: pkr@vsgom.iitkgp.ac.in

SPARC Programme

In view of the emerging need of human-factors in healthcare system, a project titled “Human Factors Engineering in Healthcare Systems” is being undertaken under SPARC. This project is a collaboration between IIT Kharagpur, India and Purdue University, USA. The project is coordinated from India by Prof. P. K. Ray, of the Department of ISE as the Indian PI and Prof. V. K. Tiwari, Director of IIT Kharagpur as the Indian Co-PI. Their Purdue University counterparts are Prof. Denny Yu, and Prof. V. Aggarwal, respectively, from the School of Industrial Engineering. Eminent physicians Dr. Sandip

Halder (Dr. Gray’s Hospital, Elgin, UK), Professor Somnath Gangopadhyay (Department of Physiology, University of Calcutta, Kolkata, India), Professor Jhareswar Maiti (Head, Department of Industrial and Systems Engineering, IIT Kharagpur, India) delivered lectures on different topics related to human factors engineering. The lecture session focused on Information-centred Human Factors, Human Body-centred Ergonomics, Organisation-centred Human Factors, and Applications in Healthcare Systems.



SPARC

Industry Connect

Pre-Training Workshop

Pre-Training Workshop

The Department of Industrial and Systems Engineering (ISE), IIT Kharagpur, has successfully organized a Pre-Training workshop on "Project-based Training on Inventory Management for the Officials of Aarti Steels Limited" on 5th of March 2022. This was done in order to capture the experience of the plant and the company personnel working at different control points of the inventory and materials management systems.



Workshop on Project-Based Training Programme on Inventory Management

A workshop on "Project-based Training on Inventory Management for the Officials of Aarti Steels Limited" was successfully conducted during April 14th - 23rd 2022, at Aarti Steels Limited, Cuttack. Professor P. K. Ray, Professor B. Mahanty, and Professor J. Maiti delivered lectures on inventory management system. A number of interactive sessions were held during the workshop where the inventory management related problems of the company were discussed. The officials of Aarti Steels Limited were also given different projects to work on their current issues.

Workshop

ISE Industry Connect Series Expert Talk

ISE, IIT Kharagpur has started the ISE Industry connect Series, aiming to share the opportunities and technological developments in the industries with students, practitioners, academicians and research scholars. Under this Programme the first expert talk on "Technology development in DRDO: Opportunities for Engineers and Scholars" was delivered by Mr. Sameer Abdul Azeez, Group Director (technology management) at the naval Physical and Oceanographic Laboratory (NPOL), DRDO, Kochi. He has 20 years of experience in the areas of design, analysis, simulation, development and testing of sonar systems for the Indian Navy. His research interest includes ergonomics, system analysis, and technology management.

Industry Connect Series Expert Talk



Indian Institute of Technology
Kharagpur

ISE INDUSTRY CONNECT SERIES

EXPERT TALK ON

**TECHNOLOGY DEVELOPMENT IN DRDO:
OPPORTUNITIES FOR ENGINEERS AND SCHOLARS**

DATE: JUNE 16, 2022

TIME: 11.30 A.M.

VENUE: ISE DEPARTMENT SEMINAR HALL

Organized by
**Department of Industrial and Systems Engineering
IIT Kharagpur**



Sameer Abdul Azeez
Group Director
(Technology Management)
Scientist F
NPOL, DRDO
Kochi, Kerala

Department of Industrial and Systems Engineering, IIT Kharagpur, Kharagpur – 721302, West Bengal, India.

Phone: +91 (03222) 282271. email: jmaiti@iem.iitkgp.ac.in (Prof. J. Maiti, HOD, ISE),

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Website: <http://www.iem.iitkgp.ac.in/>



Student Spotlight

Student Activities

Kolkata International Quiz Festival

Baneswar Sarker (20IM91R01) took part in the Kolkata International Quiz Festival held at the Freemasons' Hall, Kolkata, organized by Xquizit. The festival featured Quizzers from across the nation and abroad and contained multiple Quizzes covering different topics. Baneswar and his team qualified for the **Gold Plate**, and secured the **third place** by a very close margin. The Quizmasters in the Grand KIQF: Gold Plate finals were Mr. Charanpreet Singh, co-founder and director of Praxis Business School Foundation and Mr. Atri Bhattacharya, Additional Chief Secretary and Director General, Administrative Training Institute, Government of West Bengal.



Bhandarkar Cup by Technology Students' Gymkhana

Shivam Singh (17IM30030), was awarded the (i) **Bhandarkar Cup** by Technology Students' Gymkhana for being the Best outgoing all-rounder who has performed with distinction, particularly in sports, (ii) Awarded the **Amrit Barman Memorial Award** for excellence in leadership, initiatives and organizational skills at IIT Kharagpur during the tenure as the Vice President, Technology Students Gymkhana in the year 2020-21, (iii) Awarded the **Alumni Cup** for being the best student who performed with distinction in Sports and Games throughout the year 2019-20.



Student Spotlight

Students Activities

Institute Blue Award

Shukur Mamud (17MF3IM22), a student of ISE and a resident of Azad Hall, IIT Kharagpur. He was the Captain of Azad Hall Weightlifting Team and **Officiating Captain of IIT KGP Weightlifting Team** for the academic year 2021-22. Under his tenure his team won weightlifting General Championship after seven years. He won the **Gold medal** (under 55 kg category) and **BEST WEIGHTLIFTER** with record breaking point in this year. He received the **Institute Blue Award** for excellent performance in the field of Sports & Games which is given to only sixteen players each year. In the month of April, he competed for the first time in the **West Bengal State Level Bodybuilding competition** where he ended up with the **Fifth position**.



Contact IISE Student Chapter, IIT Kharagpur

Facebook: <https://www.facebook.com/IISEKGP>

Linkedin: <https://www.linkedin.com/iise-university-chapter-iit-kharagpur-660/>

Twitter: <https://twitter.com/DeptIseiITKGP>

Instagram: @iise_iitkgp_660

YouTube: Subscribe- Industrial and Systems Engineering IIT Kharagpur

Alumni Focus

ISE Alumni

Building an ISE (IEM) Alumni Network

We, at the Department of ISE wish to stay connected with our alumni. Please follow us on the social media pages to get the latest updates on the department.

Facebook: <https://www.facebook.com/ISEIITKharagpur>

Linkedin: <https://in.linkedin.com/school/iitkgp.ise/>

We believe our strong alumni community can bring incredible value to our students and scholars. Their diverse experience can help the department in shaping the future course of actions, as well as support the students into making more informed career decisions. Moreover, ***we will be celebrating the Golden Jubilee of the Department of ISE in 2023.*** We sincerely appeal to all the members of the ISE alumni to participate in the grand celebration. This is why we are creating an alumni database. Please take a few minutes to fill up this google form <https://forms.gle/jqHRN6p1Y98heCun8>. We assure you, your information will remain confidential with us.

Featured Alumni

Mr. Aishwarya Kunal

Foreign Exchange & Commodities Advisor at Citi Private Bank, Singapore, (IITKGP-IEM, 2004 batch)

In this issue of ISE Newsletter, we are featuring our former student **Mr. Aishwarya Kunal**, who graduated with B.Tech in 2004 from ISE (then IEM). He is a veteran in the field of Wealth Management and is currently working as **Foreign Exchange & Commodities Advisor at Citi Private Bank, Singapore** in the capacity of Senior Vice President. Having joined Citi as a **Management Associate in 2007 in Chennai, India**, he has experienced the breadth of wealth management across Derivatives, Credits, Investment Finance, Risk and FX. Besides his analytical skills, he is well known for his ability to get things done in terms of scaling the business by multiple times. He has also won several awards at Citi for **leadership projects** and led several teams on multiple projects.



Q.1) Tell us some of the fond memories of your days in IITKGP.

My KGP journey started with our first batch introduction in the relatively smaller Seminar Room at IEM with various esteemed professors welcoming us to KGP in general and IEM in particular. We were a small batch of 14 across BTech and IEM Dual Degree. We also got a chance to interact with our seniors in that session and were able to establish a quick connection with them.

My fondest memories continue to remain my life at RK Hall where I got the opportunity to try my hand across **sports and leadership roles**. In my view, hall life is one of the best examples of teamwork be it the month-long preparations of **ILLU** or the continuous strive for GC. I still remember how hard we would practice for each event and turn up to cheer for our team. It is where I won **gold medals consecutively at three Inter Hall Athletics Meets** and also went on to **win gold at Inter IIT**.

Alumni Focus

ISE Alumni

RK won the **Athletics championship after 15 years** under my **captaincy** and the chants of “RK ka Tempo high hai!!” are still afresh in my heart. I was also the **G Sec Sports** for my hall and **KGP Captain for Athletics**. The 3 years at RK went by so fast that I would love to revisit the moments. The camaraderie that we shared being from the same hall was inspiring and kind of helped me in enhancing my teamwork skills. I learned to be firm while being humble.

Q. 2) How did ISE (IEM) of IITKGP prepare you for your career and overall personality development?

The reason I had chosen IEM over some of the other available courses was that it was supposed to be quite analytical and relevant which I feel is quite true. We did various courses ranging from **Time Study & Ergonomics to Operations Research & Genetic Algorithms**. The flexibility at KGP allowed me to also pursue a minor in Mechanical Engineering. In fact, I remember boasting about being one of the firsts to have completed the requirements of a minor degree at KGP :) Jokes apart, the small size of our batch and department enabled me to having close interaction with the faculty and batchmates. We could **use department resources quite effectively for our projects and experience**. I was also the IEM Student Secretary. I engaged heavily with my IEM seniors to understand what it is outside.

My intent was to pursue a core engineering job for which I landed at Maruti Suzuki. I worked for a year and then went on to pursue my **MBA at IIM Kozhikode**. I think, it was very important for me to have realized which path I wanted to take since immediately pursuing post-graduation on a scholarship abroad was one of the most lucrative and easiest options that each one of us had and spending some time on the job before my MBA did enable me to take an informed decision.

The enriching experience that I had in IEM did encourage me to seek newer opportunities which I sought within the umbrella of Citi, moving roles and geographies. Thus far, I have changed 7 roles in the last 15 years without changing company and I have a desire to seek more in the field of Banking.

Q.3) Tell us how our students can prepare to assume corporate leadership roles in future?

In my view there is hardly anything special that we need to do to assume **corporate leadership roles**, in fact each KGPIan is a leader in himself or herself. Key to growth is to “**remain comfortably uncomfortable and always challenge oneself in whatever one does**”. The opportunities would continue to grow exponentially and KGPIans would be ideally placed to make use of this hypergrowth. I am not sure about now but the spartan life that we led indeed prepared us for any hardships outside. The grit of IEM students is well known as many of our alumni are well placed in corporates as well as academia. In fact, quite a few have been **into entrepreneurship** as well and are doing pretty well. With the recent internet boom, KGP is no longer disadvantaged by the non-metro location. There is an efficient platform for our students to showcase their talent and seek opportunities digitally.

Q.4) What is your take on the relevance of the B.Tech in Industrial and Systems Engineering in the present corporate world?

ISE is even more important in today's world where we are moving towards **artificial intelligence and further efficiencies**. I think the right set of curricula can help equip the students for a more fulfilling corporate career. I remember we were **exposed to various courses from different departments** which helped us appreciate the breadth of knowledge the institute had to offer. In fact, I used my **OR notes**

Alumni Focus

ISE Alumni

during my MBA days as well and sailed through quite easily. The world is even faster than it was 18 years ago, and we have tools that can make life much easier. Hence it is important that the course continues to be forward compatible. Probably an immersion program with other universities in India or abroad, or some of the **SRIC projects** can help provide a different perspective at an early stage of one's career.

Q.5) What would be your advice to our undergraduate students who aim to pursue higher studies?

Pursuing higher studies is a good way of enriching oneself. It's ok to take a pause and reflect at times because you may not know what you want at that moment and it's completely fine to not know. The experiences unfold what our interests are and more importantly what our potential is. At the time of graduation, one is faced with multiple options and at these times it is important to seek quality advice. Career choice is quite important as it impacts both professional as well as personal lives. Graduation is one of the milestones post which we are exposed to the vulnerabilities of outside talent and as one of the **IEM professors told us, we don't know how big and competent that talent pool is.**

It's okay to experiment at any point in time. Be it during graduation or even 10 years later or may be 20 years after that. **We must have belief in our potential to take risks.** We are blessed to have spent our formative years at the institute and also have a huge alumni network that can be tapped on whenever required. A year or two invested in unravelling our interests is worth an investment.

Opportunities in higher studies are immense and it makes a big case to study at a good institute which can further stretch one's abilities. It is important that one gets feedback from seniors or peers while taking the next step in education.

Q.6) What would be your message to our current students?

I would like to put my message in bullet points for the current students as below:

- This is one of the best times in your life. Enjoy it as much as possible.
- Take time to take time outs.
- Build your network and strengthen the relationships.
- You are in one of the best institutes. You could involve yourself in extracurricular activities or academics or even both and try to make the best use of the resources at hand.
- Try multiple things and don't fear failure. As I believe, "If I don't, I won't. If I do, I could", it all starts with trying.

All the best!!

Publication Watch

ISE Publication

Below is the list of publications appeared in journals and conference proceedings from the Department of ISE in 2021-2022 (as of June 2022).

1. Gupta, A.K., Sai Pardheev, C.G.V., Choudhuri, S., Das, S., Garg, A., Maiti, J. (2022). A novel classification approach based on context connotative network (CCNet): A case of construction site accidents. *Expert Systems with Applications*, 202.
2. Singh, K., Maiti, J., Roychowdhury, S. (2022). A data-driven penalty-reward methodology for performance assessment of risk control systems. *Journal of Loss Prevention in the Process Industries*, 77.
3. Dhalmahapatra, K., Garg, A., Singh, K., Xavier, N.F., Maiti, J. (2022). An integrated RFUCOM – RTOPSIS approach for failure modes and effects analysis: A case of manufacturing industry. *Reliability Engineering and System Safety*, 221.
4. Roy, C., Misra, S., Maiti, J., Nait-Abdesselam, F. (2022). Diff-Price: Differential Pricing Scheme for Provisioning Safety-as-a-Service in Vehicular IoT Applications. *IEEE Transactions on Vehicular Technology*, 1 (1).
5. Roy, C., Misra, S., Maiti, J. (2022). D2C: Dynamic Decision Caching Mechanism for Provisioning Safety-as-a-Service in Road Transportation. *IEEE Systems Journal*.
6. Sarkar S., Ejaz N., Maiti J., Pramanik A. (2022). An integrated approach using growing self-organizing map-based genetic K-means clustering and tolerance rough set in occupational risk analysis. *Neural Computing and Applications*, 34, 9661-9687.
7. Dhalmahapatra K., Garg A., Singh K., Xavier N.F., Maiti J. (2022). An integrated RFUCOM RTOPSIS approach for failure modes and effects analysis: A case of manufacturing industry. *Reliability Engineering and System Safety*, 221.
8. Bhosale A. T., Roychowdhury S. (2022). A Survey of Cybersecurity Issues and Mitigation Techniques for Intelligent Vehicles (Communicated, under review). *IEEE Transactions on Transactions on Intelligent Transportation Systems*.
9. Saha S., Nielsen I. ., Sarmah S. P. (2022). Influence of strategic inventory on the equilibrium of two competing supply chains. *INFOR: Information Systems and Operational Research*, 60, 52-83.
10. Pant P., Sarmah S. P., Vishal H. (2022). Inventory Holding of Firm During COVID 19 Pandemic: A Data-Driven Analysis of Manufacturing Industry. *Management Research Review*.

Publication Watch

11. Reddy, K.N., Kumar, A., Choudhary, A., Cheng, T.C.E. (2022). Multi-period green reverse logistics network design: An improved Benders-decomposition-based heuristic approach. *European Journal of Operational Research*.
12. K. Dhalmahapatra, A. Verma, J. Maiti (2022). An integrated TRIZ coupled safety function deployment and capital budgeting methodology for occupational safety improvement: A case of manufacturing industry. *Process Safety and Environmental Protection*.
13. K. Dhalmahapatra, A. Garg, K. Singh, NF Xavier, J. Maiti (2022). An integrated RFUCOM–RTOPSIS approach for failure modes and effects analysis: A case of manufacturing industry. *Reliability Engineering & System Safety*, 221, 108333.
14. S. Das, A. Sarkar, O.B. Krishna, J. Maiti (2022). IoT-Based Laser Trip Wire System for Safety and Security in Industries. *Internet of Things*, 61-70.
15. Mahanty B., Mishra B., Thakkar J. J. (2021). A quantifiable quality enabled Servitization model: Benchmarking Indian Automobile Manufacturers. *International Journal of Production Research*, 59, 2667-2689.
16. Chauhan C., Sharma A., Singh A. (2021). A SAP-LAP linkages framework for integrating Industry 4.0 and circular economy. *Benchmarking: An International Journal*, 28, 1638-1664.
17. Banerjee S., Jenamani M., Pratihari D. K. A survey on influence maximization in a social network by Knowledge and Information Systems, (Accepted/In-Press).
18. Debroy A., Sarmah S. P. (2021). Benefits of Carrier Collaboration Under Incomplete Advance Demand Information: A Case of Indian Truckload Carriers. *Transportation in Developing Economies*.
19. Nageswara K., Kumar A. Capacity investment and Inventory planning for A Hybrid Manufacturing - Remanufacturing System in the Circular Economy. *International Journal of Production Research*, (Accepted/In-Press).
20. Sarkar S., Pramanik A., Maiti J., Reniers G. (2021). COVID-19 outbreak: A data-driven optimization model for allocation of patients. *Computers and Industrial Engineering*, 161.
21. Narayanan A., Jenamani M., Mahanty B. (2021). Determinants of sustainability and prosperity in Indian cities. *Habitat International*, 118, 102456.
22. Nayak N.C., Sahoo B.K., Jenamani M., Mohanty A.R., Chatterjee R.S. (2021). Does Convergence of Rural Development Schemes Improve Household Welfare? An Investigation of Mahatma Gandhi National Rural Employment Guarantee Act in Odisha, India. *Indian Journal of Labour Economics*, 64, 1023-1042.

Publication Watch

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