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2023 IEOM Awards – 6th Bangladeshi International Conference on Industrial Engineering and Operations Management

Dhaka, Bangladesh, December 26-28, 2023

Host: Chittagong University of Engineering and Technology (CUET), Bangladesh

Distinguished Academic Leadership Award

Prof. Dr. Engr. Mohammad Rafiqul Alam
Vice Chancellor
Chittagong University of Engineering & Technology (CUET)
Pahartoli, Raozan, Chittagong, Bangladesh

Prof. Dr. Muhammad Fazli Ilahi
Vice-Chancellor
Ahsanullah University of Science and Technology (AUST)
Dhaka, Bangladesh

Prof. Dr. Mohammad Rafiqul Islam
Vice Chancellor
Islamic University of Technology (IUT)
Gazipur, Bangladesh

Professor Malin Song
Vice President of Anhui University of Finance and Economics
School of Statistics and Applied Mathematics
Anhui University of Finance and Economics
Anhui, 233030, China

Distinguished Industry Leadership Award

Ahsan Khan Chowdhury
Chairman & CEO @ PRAN-RFL Group
Dhaka, Bangladesh

Dr. M Easin Ali
Chairman and Chief Consultant
Dhaka City Physiotherapy Hospital
Dhaka, Bangladesh

Distinguished Professor Award

Prof. Dr. Jamal Uddin Ahamed
Head, Department of Mechatronics and Industrial Engineering
Chittagong University of Engineering & Technology
Pahartoli, Raozan, Chittagong, Bangladesh

Outstanding Researcher Award

Dr. Syed Mithun Ali
Professor and Head of the Department, Industrial and Production Engineering.
Bangladesh University of Engineering and Technology (BUET)
Dhaka-1000, Bangladesh.

Dr. Sajal Chandra Banik
Professor
Department of Mechanical Engineering
CUET, Bangladesh

Outstanding Professor in Engineering Management

Dr. Shuang Ma
School of Economics and Management
University of Science & Technology Beijing
Beijing, China

Outstanding Professor in Supply Chain

Dr. Carman Ka Man LEE
Department of Industrial and Systems Engineering
The Hong Kong Polytechnic University
Hung Hom, Kowloon, Hong Kong

Outstanding Professor in Occupational Health and Safety

J Maiti, PhD
Professor and Head, Department of Industrial and Systems Engineering
Chairman, Center of Excellence in Safety Engineering and Analytics (CoE-SEA)
Department of Industrial Engineering and Management
Indian Institute of Technology Kharagpur
Kharagpur 721 302, West Bengal, India

Outstanding Academic Leadership Award

Dr. Md. Ehasanul Haque
Senior Assistant Professor & Head
Department of Industrial & Production Engineering
Faculty of Engineering
American International University-Bangladesh

Md. Raihan ul Masood
Associate Professor & Head
Northern University Bangladesh
Dhaka, Bangladesh

Dr. Muhammad Ahasan Habib
Associate Professor & Head of the Dept.
Industrial and Production ENGINEERING (IPE)
Bangladesh Army University of Science and Technology (BAUST)

Outstanding Professor in Business Management

Prof. Md. Mamun Habib, Ph.D.
Professor, School of Business & Entrepreneurship (SBE)
Independent University, Dhaka, Bangladesh

Outstanding Professor in Renewable Energy

Dr. Md. Quamrul Islam, Professor Emeritus
Dept. of Mechanical Engineering
Bangladesh University of Engineering & Technology (BUET)
Dhaka 1000, Bangladesh

Outstanding Curriculum Development Award

Prof. Dr. Engr. Ayub Nabi Khan
Pro Vice Chancellor
BGMEA University of Fashion & Technology
Nishatnagar, Turag, Dhaka-1230, Bangladesh

Outstanding Professor Award

Professor Qiwei Xie
School of Economics and Management
Beijing University of Technology
Beijing, 100124, China

Outstanding Professor in AI

Professor Latifur Khan
Professor, Department of Computer Science
University of Texas at Dallas (UT Dallas)
Dallas, Texas, USA

Outstanding Professor in Sustainable Manufacturing

Dr. Erwin Rauch
Professor and Endowed Chair for Sustainable Manufacturing
Institute of Industrial and Energy Engineering
Faculty of Engineering
Free University of Bolzano, Italy

Woman in Industry and Academy Award

Seema Chowdhury, CLSSMBB, PCAS, CLP
Director @ PRAN-RFL Group
Dhaka, Bangladesh

Lean Six Sigma Award

Dave Harry
Retired U.S. Naval Aviator
CEO of Process Whisperer® Consultants LLC
Greeneville, Tennessee, USA

Muhammad Mamun Mia
General Manager, Sinobangla Industries Limited
Dhaka, Bangladesh

Fahrial Alam
Senior Assistant Director at Walton Hi-Tech PLC
CEO at Gyre Engineering
Dhaka, Bangladesh

Industry 4.0 Award

Quazi Nazmul Hossain
Manufacturing Technology and Digital Transformation Specialist
Former General Manager, Group HoIT FCI Group and Apex Footwear Limited
Dhaka, Bangladesh

Industry Best Practice Award

Engr. Md Arifur Rahman
Deputy Director, Head of Supply Chain & CAPEX Project (Green Field Samsung Mobile, Fridge, TV, WM// Hyundai Car Manufacturing Factory)
Fair Group (Samsung / Hyundai Manufacturer)
Dhaka, Bangladesh

Industry Solutions Award

A S M Touhidul Islam M.Sc. (Research)
General Manager, Department of Production A Reputed Garments Manufacturing Company Adamjee EPZ, Narayanganj,
Dhaka, Bangladesh

S.M. Tofayel Ahmad
System Analyst (Joint Director)

Information & Communication Technology Department
Bangladesh Bank (The Central Bank of Bangladesh)
Head Office, 29th Floor, Annex-2 Building
Motijheel, Dhaka-1000, Bangladesh

Global Engineering Education Award

Dr. Abu Taher
Associate Professor and Chairman
Department of Industrial & Production Engineering
European University of Bangladesh
Mirpur-1, Dhaka, Bangladesh

Fatima Jahara
Senior Assessment Developer
Workera
Bangladesh

Global Business Management Education Award

Dr. Mohammad Saif Noman Khan
Associate Professor, Institute of Business Administration (IBA)
University of Dhaka
Dhaka, Bangladesh

Global Business Management Award

Md Touhidur Rahman Rad
Chief Business Officer
Walton Digi-Tech Industries Ltd. (Computer, IT & E-bike)
Dhaka, Bangladesh

Global Artificial Intelligence and Machine Learning

Dr. Tahsina Farah Sanam
Associate Professor in the Institute of Appropriate Technology
Bangladesh University of Engineering and Technology (BUET)
Dhaka, Bangladesh

Prof. Khondaker A. Mamun
Professor of Data Science and Digital Health
Director of AIMS Lab – Advanced Intelligent Multidisciplinary Systems Lab
United International University (UIU)
Dhaka, Bangladesh

Global Project Management Award

Md Fahad Chowdhury
Head of Customer Operations
Banglalink
Dhaka, Bangladesh

Global Supply Chain and Logistics Award

Mohammed Zia Uddin CSCM, FCILT
Supply Director, Bangladesh- Sri Lanka Cluster
Reckitt
Dhaka, Bangladesh

Entrepreneurship Award

Masum Kamal
President, SK Machinery International
Dhaka, Bangladesh

Innovation and Entrepreneurship Award

Hasnaeen Rizvi Rahman
Founder & CEO at Astha IT
Serial Entrepreneur
TEDx Speaker, Venture Builder
Startup Advisor, Technologist

Outstanding Young Professor Award

Dr. A. B. M. Mainul Bari
Assistant Professor, Department of IPE
BUET
Dhaka, Bangladesh

Outstanding Conference Service Award

Md. Monowar Wadud Hridoy, Assistant Professor, MIE, CUET
Sanjeeb Roy, Assistant Professor, Dept. of MIE, CUET
Md. Miraiz Hossain, Lecturer, MIE, CUET
S.M. Fahim Faisal, Lecturer, MIE, CUET
Tasnuva Jahan Nuva, Lecturer, MIE, CUET
Kazi Naimur Rahman, Lecturer, Dept. of MIE
Tasmia Binte Hai, Lecturer, Dept. of MIE, CUET

Outstanding Leadership Award

Md. Aqib Islam, MS
Director of IEOM Bangladesh Operations

Competition Winners

Undergraduate Student Paper Competition sponsored by Siemens

First Place

ID 53 Waste Reduction with Lean Manufacturing on Garment Production Line of PT XYZ
Aifa Raviva Surdadi, Ahmad, and Mohammad Agung Saryatmo, Department of Industrial Engineering, Universitas Tarumanagara, Jakarta, Indonesia

Second Place

ID 129 Numerical Investigation of Flax/Bamboo Fiber Reinforced Hybrid Composites under Tensile Load
Durjoy Roy, Md Tahmid Hasan, Md Shariful Islam and Md Arifuzzaman, Department of Mechanical Engineering, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh

ID 88 Drone Distribution Model for Emergency Medicine Distribution to Reduce Delivery Time and Costs: Case of the Peruvian Health Sector
David Kevin Jeness Senador and Pavel Alexander Flores Caycho, Facultad de Ingeniería, Carrera de Ingeniería Industrial, Universidad de Lima, Perú
Carlos-Augusto Lizárraga-Portugal, Research Professors, Facultad de Ingeniería, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

Third Place

ID 44 Application of Six Sigma Method on Improving the Quality of Plastic Sacks
Nandita Priya, Mohammad Agung Saryatmo and Lithrone Laricha Salomon, Department of Industrial Engineering, Tarumanagara University, Jakarta, Indonesia

ID 131 Optimizing Thermal Insulation Board: A Study on Physical and Mechanical Properties of Sandwich Board Made of Perlite, Polystyrene, and Formica Sheet
Mehedhi Hasan and G M Ismail Hossain, Department of Mechanical Engineering, Sonargaon University (SU), Dhaka-1205, Bangladesh
Md Aasef Azhar Khan, Department of Mechanical Engineering, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh
Md Ahatashamul Haque Khan Shuvo, Department of Mechanical Engineering, Sonargaon University (SU), Dhaka-1205, Bangladesh
Torikul Islam, Department of Biomedical Engineering, New Jersey Institute of Technology, Newark, NJ, USA
Md Tahmid Hasan, Department of Mechanical Engineering, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh

Undergraduate Research Competition sponsored by Daikin Applied

First Place

ID 155 Design, Fabrication and Performance Analysis of An Ergonomically Designed Self-Cleaning Dining Table

Syed Md Naieem, Samina Rahman Shuchi, Farhan Rahat Shaiket, Parsha Mohsina Promi, Jahanara Akter Trina and Adib Bin Rashid, Department of Industrial and Production Engineering, Military Institute of Science and Technology (MIST), Dhaka-1216, Bangladesh

Second Place

ID 166 Efficiency Improvement in Wood Beam Line Process using Lean Manufacturing Tools in Peruvian Sawmill Industry
José Manuel López-Acosta, Faculty of Engineering, Industrial Engineering Career, University of Lima, Peru
Juan Carlos Quiroz-Flores, Research Professor, Faculty of Engineering, Industrial Engineering Career, University of Lima, Peru

Third Place

ID 231 Forecasting Sales of Honda Motorcycles Using the Moving Average and Exponential Smoothing
Muhammad Deni Malik, Informatics Department, Faculty of Science and Informatics, University Jenderal Achmad Yani, Cimahi, Indonesia
Taqbir Hendro Pudjiantoro, Informatics Department, Faculty of Science and Informatics, University Jenderal Achmad Yani, Cimahi, Indonesia
Ade Kania Ningsih, Informatics Department, Faculty of Science and Informatics, University Jenderal Achmad Yani, Cimahi, Indonesia

ID 251 Real-Time Fabric Intelligence: A Modern Fusion of Machine Learning, Computer Vision, and IoT in Woven Textile Analysis
Md. Sadman Sakib, Department of Industrial and Production Engineering, Bangladesh University of Textiles (BUTEX), Tejgaon, Dhaka, Bangladesh

Graduate Student Paper Competition sponsored by Eaton

First Place

ID 35 Sustainable Supplier Selection for Agro-Food Industry of an Emerging Economy: A Fuzzy Topsis Approach
Mohaddis Hossain and Fatin Ihsan Hredoy, Department of Mechatronics and Industrial Engineering, Chittagong University of Engineering and Technology (CUET), Chittagong, Bangladesh
Jamal Uddin Ahamed, Head, Department of Mechatronics and Industrial Engineering, Professor, Department of Mechanical Engineering, Faculty of Mechanical Engineering, Chittagong University of Engineering and Technology (CUET), Chittagong, Bangladesh

Second Place

ID 34 Auxiliary Variables and Two-Step Iterative Algorithms in Object Detection: A Novel Approach
Md. Habibur Rahman, Yeasin Reza, Kawsar Alam Tanvir, Salma Akter and Afsana Akter, Department of Mathematics, University of Chittagong, Chittagong, Bangladesh

Third Place

ID 232 Experimental Investigation of Mechanical Properties of Various Natural Fiber-Reinforced Hybrid Composites
Md. Khakan Hasan Mim, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh
Md. Anash Mia, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh
Pranto Karua, Assistant Professor, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh

Masters Thesis Competition

First Place

ID 81 Effect of Alkali Treatment on Mechanical Properties of Non-woven Jute Fiber Reinforced Epoxy Composite
RajuAhammad, Md Arifuzzaman and Md Shariful Isalm, Faculty of Mechanical Engineering, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh

Second Place

ID 23 Analysis of personal relationships from a sentimental standpoint and support for mental health
Dr. Shubhangi D C, Department of computer science, Vishveshwaraya Technological University CPGS Kalaburagi, Karnataka, India
Dr. Baswaraj Gadgay, Department of Electronics and Communication, Vishveshwaraya Technological University CPGS Kaalburagi, Karnataka, India
Uzma Tarannum, Department of computer science, Vishveshwaraya Technological University CPGS Kalaburagi, Karnataka, India

Senior Design Project Competition sponsored by Tooling Tech Group

ID 195 Innovation of a Flame Freeze Connector Tool For Extinguishing Fire In Forest Fires Using The VDI 2221 Method
Alyssa Felicia Wijaya Yakup, Student of Industrial Engineering, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia
Frans Jusuf Daywin, Lecturer in Industrial Engineering, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia
Didi Widya Utama, Lecturer in Mechanical Engineering, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia

Second Place

ID 121 Designing Orthopaedic Seat Cushion
Ambrosius Milano, Lamto Widodo and Lina Gozali, Industrial Engineering Study Program Tarumanagara University, Indonesia

Human Factors and Ergonomics Competition sponsored by CINTAS

First Place

ID 27 An Ergonomic Analysis of Working Posture of Selected Brick Kiln Workers Using Rapid Upper Limb Assessment (RULA) and Rapid Entire Body Assessment (REBA) Method
Mohammad Iqbal, Md. Golam Mahmood and Md. Rashedul Islam, Department of Industrial and Production Engineering, Shahjalal University of Science and Technology, Sylhet, Bangladesh

Second Place

ID 150 Ergo Synergy: Modeling the Interplay of Environmental Ergonomic Factor, Workstation Design, and Physical Comfort on Productivity through Structural Equation Modeling
Hazel V. Agustin, Dr. Ryan Jeffrey Curbano and Dr. James Louie Meneses, Graduate School, Lyceum of the Philippines University, Batangas City, Philippines

Third Place

ID 249 Advancing Industrial Sustainability: A Multifunctional Ergonomic Sewing Machine Table for Enhanced Productivity and Worker Well-being
Md. Sadman Sakib, Department of Industrial and Production Engineering, Bangladesh University of Textiles (BUTEX), Tejgaon, Dhaka-1205, Bangladesh

Lean Six Sigma Competition sponsored by Tooling Tech Group

First Place

ID 56 Revolutionizing Healthcare System through Lean Thinking
Mohammed Raihan Uddin, Department of Industrial & Production Engineering, Bangladesh University of Textiles (BUTEX), Dhaka-1208, Bangladesh
Prof. Dr. Mohammad Asif Salam, Faculty of Economics and Business Administration, King Abdulaziz University, Jeddah, Saudi Arabia

Second Place

ID 36 Ranking the Critical Failure Factors to Lean Six Sigma Implementation in Dairy Processing Industry: A Bayesian BWM Approach
Ferdous Sarwar, Ph.D., Professor, Industrial and Production Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh.
Abhro Shome Pias and Omer Tahsin, Industrial and Production Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

Third Place

ID 30 Reduction of Changeover Time by Using the SMED Technique with the Assistance of Lean Manufacturing Tools in a Plastic Company
Rotan Kumar Saha, Md. Minhaj Uddin, Md. Mustafizur Rahman, Md. Tutul Islam and Md. Mukshitul Mumin, Department of Industrial and Production Engineering, Dhaka University of Engineering and Technology, Gazipur 1700, Bangladesh

Simulation Competition

First Place

ID 79 Optimizing Service Operations in Banking System: A Discrete Event Simulation Modeling Approach
Md. Asfaq Jamil, Department of Industrial Engineering and Management, Khulna University of Engineering & Technology (KUET), Khulna, Bangladesh
Md. Ahsanul Mobin, Department of Textile Engineering, Khulna University of Engineering & Technology (KUET), Khulna, Bangladesh
Oyshik Bhowmik, Lecturer, Department of Industrial and Production Engineering, National Institute of Textile Engineering and Research, Dhaka, Bangladesh

Second Place

ID 97 Study of CFD Simulations for Leak Detection in Gas Transmission Networks
Afsar Uddin, Nazmul Kader Chowdhury and Hamed Shahryar, Department of Mathematics, University of Chittagong, Chattogram, Bangladesh
Dr. Mohammad Jalal Ahammad, Professor, Department of Mathematics, University of Chittagong, Chattogram, Bangladesh

Third Place

ID 113 Computational Fluid Dynamics Simulation to Advance the Effectiveness Urban Drainage System Management
Mohammad Jalal Ahammad, Department of Mathematics, University of Chittagong, Chattogram-4331, Bangladesh
AVP science unit, NSRIC Inc. Ontario, Canada
Mr. Anwar Ahmad Siddiquee, Department of Mathematics University of Chittagong, Chattogram-4331, Bangladesh

Supply Chain and Logistics Competition

First Place

ID 149 Leveraging Digital Twins: A Framework for Sustainable Supply Chain of Perishable Goods in Bangladesh

Mohammad Jawadul Hoque Rohan, Sajid Hassan Sejan and Fairuj Homyra, B.Sc. in Industrial & Production Engineering (Ongoing), Department of Mechanical and Production Engineering, Ahsanullah University of Science and Technology, 141-142, Love Road, Tejgaon I/A, Dhaka-1208, Bangladesh

Dr. M. Azizur Rahman, Associate Professor, Department of Mechanical and Production Engineering, Faculty of Mechanical and Production Engineering.

Ahsanullah University of Science and Technology, 141-142, Love Road, Tejgaon I/A, Dhaka-1208, Bangladesh

Dr. Md. Shahnewaz Bhuiyan, Associate Professor, Department of Mechanical and Production Engineering, Faculty of Mechanical and Production Engineering, Ahsanullah University of Science and Technology, 141-142, Love Road, Tejgaon I/A, Dhaka-1208, Bangladesh

Second Place

ID 32 Optimization in Supply Chain Components to Design a Strategic Model and Research Opportunities to Enable Profitability: A Case Study

K. M. Sharif Ahmed and Joyanta Barman Shuvro, Singer Bangladesh Limited, Bangladesh

Third Place

ID 252 Weaving Sustainability: Enhancing Textile Supply Chains with IoT and RFID in Circular Logistics and Resource Reuse

Md. Sadman Sakib, Department of Industrial and Production Engineering, Bangladesh University of Textiles (BUTEX), Tejgaon, Dhaka-1205, Bangladesh

ID 120 Planning for Procurement of Raw Materials and Supplies for Small and Medium Enterprise

Christian, Lina Gozali and Lamto Widodo, Industrial Engineering Department, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia

COVID-19 Analytics Competition

First Place

ID 40 Automatic Detection Of COVID-19 And Other Pneumonia from Chest X-ray Images Using Convolutional Neural Networks and Collection of COVID-19 Affected Chest X-ray Images

Md. Tanvir Mahmud Prince, Muhammad Masud Karim, Fariha Sadeque and Mohammad Nahid Zahangir, Department of Electrical and Electronics Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka 1205, Bangladesh

Second Place

ID 151 Post Covid-19 Complications Detection Using ML Review Paper

Syed Mominin Islam Tamim, Student of American International University-Bangladesh (AIUB) and Jr. Software Engineer at Venus IT Ltd., Dhaka, Bangladesh

MD. Nadim Hasan, Student of American International University-Bangladesh (AIUB), Dhaka, Bangladesh

Md. Tafsimum Islam Tanzid, Student of American International University-Bangladesh (AIUB) and Jr. Software Engineer at Divergent Technologies Ltd., Dhaka, Bangladesh

Tanvir Ahmed, Lecturer, American International University-Bangladesh (AIUB), Dhaka, Bangladesh

Poster Competition

First Place

ID 156 Modeling and Design Analysis of Tesla Model S Powertrain with A Concentration Towards Battery Management System and Regenerative Braking

Captain Fahim Foysal Arnob, Abdullah All Mamun Anik and Mosammat Sadia Akter Moon, Department of Industrial and Production Engineering, Military Institute of Science and Technology (MIST), Dhaka Department of Mechanical Engineering, Military Institute of Science and Technology (MIST), Dhaka,

Department of Computer Science and Engineering, University of Chittagong, Chattogram, Bangladesh

Innovative Idea Competition

First Place

ID 250 Cost-Efficient IoT-Based Alert System for Timely Machine Maintenance in Textile Factories

Md. Sadman Sakib, Department of Industrial and Production Engineering, Bangladesh University of Textiles (BUTEX), Tejgaon, Dhaka-1205, Bangladesh