

ORGANIZER



Dhaka, Bangladesh

6th Industrial Engineering and Operations Management Bangladesh Conference

HOST UNIVERSITY



**Chittagong
University of
Engineering and
Technology (CUET)**

Venue: KIB, Farmgate, Dhaka

December 26–28, 2023

Sponsors and Partners



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Organizer



IEOM Society

"Achieving and Sustaining Operational Excellence"

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Industrial Engineering and Operations Management Society International

IEOM Society International, 21411 Civic Center Dr., Suite 205, Southfield, Michigan 48076, USA
Phone: 1-248-450-5660, Email: info@ieomsociety.org

Welcome to 6th Industrial Engineering and Operations Management Bangladesh Conference, Dhaka, Bangladesh, December 26 - 28, 2023

To All-Conference Attendees:

On behalf of the IEOM Society International, we would like to welcome you to the **6th Industrial Engineering and Operations Management Bangladesh Conference** during December 26-28, 2023. Host is Chittagong University of Engineering & Technology, Bangladesh. The conference aims to provide a forum for academics, researchers and practitioners to exchange ideas and recent developments in the field of industrial engineering and operation management. The conference is also expected to foster networking, collaboration and joint effort among the conference participants to advance the theory and practice as well as to identify major trends in Bangladesh.

This conference will address many of the industrial engineering and operations management issues concerning the operations excellence and Industry 4.0:

1. Prof. Dr. Engr. Mohammad Rafiqul Alam, Vice Chancellor, Chittagong University of Engineering & Technology (CUET), Chittagong, Bangladesh
2. Prof. Dr. Jamal Uddin Ahamed, Head, Department of Mechatronics and Industrial Engineering, Chittagong University of Engineering & Technology, Pahartoli, Raozan, Chittagong, Bangladesh
3. Dave Harry, Retired U.S. Naval Aviator, CEO of Process Whisperer® Consultants LLC, Greeneville, Tennessee, USA, ASQ certified Six Sigma Black Belt and A PMI certified PMP®
4. Professor Eldon Caldwell, Industrial Engineering Department Engineering School, University of Costa Rica
5. Dr. Jihong Yan, Ph.D., Professor in Industrial Engineering, Deputy Dean of School of Mechatronics Engineering, Head of intelligent Manufacturing Scientific Research Team, Harbin Institute of Technology, Harbin, China
6. Dr. J Maiti, PhD, Professor and Head, Department of Industrial and Systems Engineering, Indian Institute of Technology Kharagpur, Kharagpur 721 302, West Bengal, India
7. 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
8. Dr. A. K. M. Nurul Amin, Professor, Department of Industrial and Production Engineering (IPE), Military Institute of Science & Technology (MIST), Dhaka, Bangladesh
9. Dr. M Easin Ali, Chairman and Chief Consultant, Dhaka City Physiotherapy Hospital, Dhaka, Bangladesh
10. Prof. Dr. Engr. Ayub Nabi Khan, Pro Vice Chancellor, BGMEA University of Fashion & Technology, Turag, Dhaka, Bangladesh
11. Dr. Erwin Rauch, Professor, Endowed Chair for Sustainable Manufacturing, Institute of Industrial and Energy Engineering, Faculty of Engineering – Free University of Bolzano, Italy
12. Professor Qiwei Xie, School of Economics and Management, Beijing University of Technology, Beijing, 100124, China
13. 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
14. Dr. Shuang Ma, School of Economics and Management, University of Science & Technology Beijing, Beijing, China
15. Albert Wee Kwan Tan, PhD, Associate Professor and Academic Program Director, Online Master in Business Administration, Asian Institute of Management (AIM), Manila, Philippines
16. Isabela Bonatto, Ph.D., Environmental Consultant, Solid Waste Management and Circular Economy Expert,
17. Dr. Anthea Amadi-Echendu, Senior Lecturer, Department of Operations Management, University of South Africa, Pretoria, South Africa
18. Dr. Ahad Ali, Ph.D., Associate Professor and Director of Industrial Engineering, Lawrence Technological University, Southfield, Michigan, MI 48075, USA and Executive Director of IEOM Society International
19. Prof. Vitor Mendes Caldana, Federal Institute of Sao Paulo (IFSP) – Sorocaba Campus Sorocaba, Sao Paulo, Brazil
20. Prof. Dr. Ir. Wahyudi Sutopo, Dean for Human Resources, Finance, and Logistics, Faculty of Engineering, UNS and President, IEOM Indonesia Chapter & Director, IEOM Asia Pacific Operations
21. Dr. Carman Ka Man LEE, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong
22. Ms. Regine A. Tejada, Department of Industrial Engineering and Operations Research, University of the Philippines Diliman, Philippines
23. Professor Latifur Khan, Professor, Department of Computer Science, University of Texas at Dallas (UT Dallas), Dallas, Texas, USA
24. Ferdous Sarwar, PhD, Professor and Head, Department of Industrial & Production Engineering, Bangladesh University of Engineering and Technology, Dhaka 1000, Bangladesh
25. 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
26. Dr. Sajal Chandra Banik, Professor, Department of Mechanical Engineering, Chittagong University of Engineering & Technology (CUET), Chittagong, Bangladesh

The IEOM Society would like to express our deep appreciation to our sponsors, university partners, organization partners, authors, reviewers, keynote speakers, panelists, the local committee, and the many volunteers who have given so much of their time and talent to make this unique IEOM Bangladesh conference an overwhelming success.



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



Prof. Dr. Md. Mizanur Rahman, Past head, MIE Chittagong University of Engineering & Technology, Pahartoli, Raozan, Chittagong, Bangladesh



Dr. Ahad Ali
Conference Co-Chair
Associate Professor and Program Director of BSIE and MSIE
Lawrence Technological University
Executive Director, IEOM Society



Professor Don Reimer
Program Co-Chair
Chief Operating Officer, IEOM Society
Adjunct Professor at Lawrence Technological University, USA

Keynote Speakers

Wednesday, December 27, 2023

Morning Keynotes (Bangladesh Time)

Welcome Address by Host VC: 8:00 – 8:10 am (December 27)



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

Prof. Dr. Engr. Mohammad Rafiqul Alam is the Vice Chancellor of the Chittagong University of Engineering & Technology (CUET). He has 39 years of experience in teaching and various administrative roles. Prof. Alam graduated from the then Chittagong Engineering College (currently, CUET) in 1979, with a BSc in Electrical & Electronic Engineering degree. He started his career at the same institution in 1982. Prof. Dr. Mohammad Rafiqul Alam also worked as the Dean of the ECE faculty, Controller of Examination (additional charge), Director of IET, Head of EEE, SPM of HEQEP Project, and Course Coordinator at CUET. He also worked as a member and expert member of different committees, boards, and bodies. He is a Fellow with the Institution of Engineers, Bangladesh and the Ex-Chairman and Ex-Vice Chairman (academic & HRD) of Institution of Engineers, Bangladesh, Chittagong Centre. He is currently serving as the President of the Association of Universities of Bangladesh (AUB).

Host Keynote Address: 8:10 – 8:30 am (December 27)

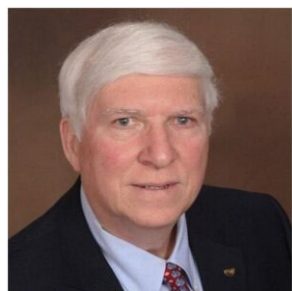


Prof. Dr. Jamal Uddin Ahamed
Head, Department of Mechatronics and Industrial Engineering
Chittagong University of Engineering & Technology
Pahartoli, Raozan, Chittagong, Bangladesh

Dr. Jamal Uddin Ahamed is a Professor and Head of Department of Mechatronics and Industrial Engineering, Faculty of Mechanical Engineering at Chittagong University of Engineering and Technology (CUET), Chittagong, Bangladesh. Dr. Ahamed was EX-Dean, Faculty of ME, CUET. He received his B.Sc. from Chittagong University of Engineering and Technology (CUET), M.Sc. from Bangladesh University of Engineering and Technology (BUET) and Ph.D. from University of Malaya, Malaysia. His field of interest is in Heat transfer, Thermal engineering, Fluid Dynamics, Automotive air conditioning, Energy, exergy analysis of vapor compression system, Nano technology in Refrigeration and air conditioning system, Effect of nano fluid in refrigeration heat transfer performance. He has supervised many under-graduate and post-graduate students in these areas. Moreover, he has published many journal papers, book chapters and conference articles in these areas.

supervised many under-graduate and post-graduate students in these areas. Moreover, he has published many journal papers, book chapters and conference articles in these areas.

Opening Keynote (Keynote I): 8:30 – 9:00 am (December 27)



Dave Harry
Retired U.S. Naval Aviator
CEO of Process Whisperer® Consultants LLC, Greenville, Tennessee, USA
ASQ certified Six Sigma Black Belt and A PMI certified PMP®

Dave is a retired U.S. Naval aviator and currently CEO of Process Whisperer® Consultants LLC. He teaches LSS classes for TMG Inc of Newport News, VA. Prior to TMG, Dave was a Six Sigma and Productivity Consultant for the University of TN Center for Industrial Services. Dave is a “Kata Geek” and also an ASQ certified Six Sigma Black Belt. He is active in ASQ Sections and the ASQ Lean Enterprise Division Communications. In addition to ASQ, he also holds Black Belt Certification through Rolls-Royce and Northrop Grumman. He is a seasoned ASQ International Team Excellence Awards (ITEA) Judge. Dave is also currently on the Lean Division Board with the Institute of Industrial and Systems Engineers (IISE). Dave is on the Conference Advisory Committee for ASQs

2019 L&SS Conference in Phoenix as well as the Conference Committee for the IISE Engineering 2018 Lean Six Sigma Conference in Atlanta. A PMI certified PMP®, Dave also holds Lean Bronze Certification (LBC) through the SME/ASQ/AME/Shingo Institute Alliance and he holds three Master's Degrees in management related fields. In addition to ASQ, PMI and IISE, Dave is also a member of the Society of Manufacturing Engineers (SME), the Association of Manufacturing Excellence (AME) and the American Production and Inventory Control Society (APICS). Dave lives in Greenville TN.

Keynote II: 8:30 – 9:00 am (December 27)



Professor Eldon G. Caldwell Marin, Ph.D., Sc.D, Dr.Ed. – IEOM President, 2023-2025
Professor, Industrial Engineering Department
Engineering School
University of Costa Rica
San Jose, Costa Rica

Eldon Caldwell is full professor/Cathedricus of the University of Costa Rica, Central America; member of the IEOM Society Academy of Fellows and member of the IEOM Society Global Council. Also, he has been recognized by the IEOM Society with the “Outstanding Service Award” for his career of over 30 years as an educator, researcher and promoter of development of industrial engineering and as “Distinguished Professor” by IEEE Computer Society, USA. Dr. Caldwell earned his B.Sc. and Master degree in Industrial Engineering at University of

Costa Rica and he earned a Master degree in Service Marketing, as well in Financial Analysis at Interamerican University of Puerto Rico; M.Sc. Health Management Systems at UNED, Costa Rica and a M.Sc. Operations Management at ITESM, México. Finally, he earned three doctoral

degrees: 1-Ph.D. in C.Sc. / Industrial Engineering, Autonomous University of Central America; 2- Ph.D. (Sc.D.) in Robotics and Automation, University of Alicante, Spain; and 3-Ph.D. (Dr. Ed.) in Education at the University of Costa Rica, developing the "Theory of Socio-educational Exergy-Anergy and Entropy". He is author of many scientific articles and two books: "Marketing of Social Products & Services", UCR Publications; and "Lean Manufacturing: Fundamentals and techniques for cycle time reduction", Kaikaku Ins. Press, USA. Dr. Caldwell served as Director of Industrial Engineering Department at Engineering School of University of Costa Rica, Operations Manager at MASECA, CA; Lean Manufacturing Project Manager at Eaton Corp. Costa Rica, General Manager at Quirós & Cia-Bandag Inc. and General Manager at Lean Systems Intl., USA. He has more than 30 years of experience as advisor and consultant in Operations Management, Lean Manufacturing and Lean Logistics at Interamerican Bank for Development, WHO, UN, World Wide Bank, Coca-Cola, Ministry of Health, Costa Rica, Honduras, Panamá, Costa Rican Institute for Electricity, RTC- Perú, Young Electrical Signs, Nevada, USA, AirCare Inc., Reno, Nevada, Plan International-Honduras, Bournes Co., DOLE Co. and many others. In addition, Dr. Caldwell currently serves as Director of the Central America Robotics and Industry 4.0 Challenge Contest (ROBOTIFEST) and General Manager at Kaikaku Institute Latin America.

Keynote III: 9:30 – 10:00 am (December 27)



Jihong Yan, Ph.D.
Professor in Industrial Engineering
Deputy Dean of School of Mechatronics Engineering
Head of intelligent Manufacturing Scientific Research Team
Harbin Institute of Technology
Harbin, China

Dr. Jihong Yan is a Professor (since 2005) in Mechanical Engineering at Harbin Institute of Technology (HIT), she is also the deputy dean of School of Mechatronics Engineering and head of intelligent manufacturing scientific research team at HIT. She received her PhD degree from Harbin Institute of Technology in 1999. Then she joined Tsinghua University (from 1999 to 2001), the University of Wisconsin (from 2001 to 2004) and Pennsylvania State University (from 2004 to 2005) as a postdoctoral researcher. Dr. Yan is the vice chairman of Production System Committee of Chinese Mechanical Engineering Society, and chairman of Industrial Engineering Professional Committee of the Mechanical Engineering Society of Heilongjiang Province. As a PI, Dr. Yan has worked on and accomplished 15 projects in intelligent manufacturing and sustainability related areas, funded by the NSF of China (NSFC), NSF-NSFC joint-project funding, National key R&D program, National High-tech project, EPSRC project

(UK), High-tech funding from industries, etc. Prof. Yan chaired/co-chaired 5 international conferences in recent 3 years. She has authored and co-authored over 150 research papers and published 3 books.

Keynote IV: 10:00 – 10:30 am (December 27)



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

Keynote Speech Title: Safety, Risk and Economics – A Data Analytics Approach

Dr. Jharieswar Maiti, P C Mahalanobis distinguished Educator and Suresh and Vidya Nair Chair Professor, is a full Professor in the Department of Industrial and Systems Engineering (ISE) at Indian Institute of Technology (IIT) Kharagpur. He is currently the head of ISE and is also the founder chairman of the Centre of Excellence in Safety Engineering and Analytics (CoE-SEA) at IIT Kharagpur. He has more than 23 years of experience in teaching, research, and consulting, guided 22 PhD students and executed over 35 funded projects. He authored over 200 publications and is currently serving in the Editorial Board of Safety Science, International Journal of Injury Control and Safety Promotion, and Safety and Health at Work. Prof Maiti carries out inter- & multidisciplinary research on the interfaces of engineering, management science, AI and statistics including analytics, where the research embodies (i) solving engineering and socio-technical problems in safety, risk, quality, reliability, and ergonomics, (ii) development of methodologies/models with innovative engineering and management science approaches, (iii) development of novel tools and techniques using advanced statistics, data analytics, AI and machine learning, and (iv) application of advanced technologies including AI and virtual reality. He authored the text book "Multivariate Statistical Modeling in Engineering and Management", published by CRC Press, T&F Group and three edited books, published by Springer. He has been consistently listed in the top 2% researchers in the world by Stanford University ranking for the last several years. Prof Maiti works with world leading companies like Tata Steel Limited, Adani Group, Coal India, Haldia Petrochemicals, etc. and conducted over 25 training programs for industry professionals. He is Member of several societies including Royal Statistical Society, Institute of Engineers (India), INFORMS, Institute of Industrial and Systems Engineering, IEEE, etc.

Keynote V: 10:30 – 11:00 am (December 27)



Engr. Md Arifur Rahman
Mechanical Engineer (Bangladesh University of Engineering and Technology)
Deputy Director, Head of Supply Chain & CAPEX Project (Green Field Samsung Mobile, Fridge, TV, WM// Hyundai Car Manufacturing Factory)
Head of Supply Chain, Samsung India Electronics Pvt. Ltd. (Bangladesh Branch)
Head of Supply Chain, Bayer CropScience Ltd. Bangladesh.
Senior Manager- Procurement (Strategic Sourcing & Project), Holcim Cement (Bangladesh)
Consultant Engineer, Unilever Bangladesh Ltd.

Engineer Md Arifur Rahman is Deputy Director, Head of Supply Chain & CAPEX Project (Green Field Samsung Mobile, Refrigerator, Television, Washing Machine, SMT and Hyundai Car Manufacturing Factory) in Fair Group.

He is Mechanical Engineer graduated from Bangladesh University of Engineering and Technology . He was work on Samsung India Electronics Pvt. Ltd. (Bangladesh Branch) as Head of Supply Chain . He was work on Bayer CropScience Ltd. Bangladesh as Head of Supply Chain . He was work on Holcim Cement (Bangladesh) as Senior Manager- Procurement (Strategic Sourcing & Project). . He was work on Bangladesh Steel Re-Rolling Mill in Supply Chain Department . He was work on Unilever Bangladesh Ltd, as Consultant Engineer. He has experience on overall direction, coordination, implementation, execution, control and completion of specific projects ensuring consistency with company strategy, commitments and goals – Successfully completed USD 200 million project (Samsung Project USD 140 million + Holcim Cement Project USD 40 million + ERP Project Implementation i.e. SAP, Master Plan –MP2 + Hyundai Passenger Car Manufacturing Project USD 20). He has experience on New Business / Project Feasibility Analysis & Business Development, Project Budgeting & ROI Calculation and Cost Benefit Analysis & Product Costing (Landed Cost, Depreciation & Financial Impact on CAPEX, Factory Fixed Cost & Semi variable Cost Analysis), Factory Margin, and Channel Margin & MRP Fixing. He is very experience in Project & Operational Supply Chain, Demand Planning & Production Planning , Raw material Planning, Inventory Management (Raw Material & Finished Goods), Procurement (Direct or Indirect Material), Foreign & Local procurement , Commercial (SRO, HS Code, LC , Custom Clearance, C&F agent handling, Pre-shipment inspection , Banking), Inbound Logistic & Distribution (outbound logistic), Contract Management & Production. He is Certified ISO 9001 Internal Auditor and Certified in Project Management.

Keynote VI: 11:00 – 11:30 am (December 27)



Dr. A. K. M. Nurul Amin
Professor, Department of Industrial and Production Engineering (IPE)
Military Institute of Science & Technology (MIST)
Dhaka, Bangladesh

Dr. A. K. M. Nurul Amin is currently working as a Professor of Industrial and Production Engineering Depart of MIST. He completed his Ph.D. in 1982 and Masters in MFG in 1979 from the former USSR with CGPA of 5.00/5.00. He passed his SSC in 1969 and HSC in 1972 from FCC standing 14th and 2nd respectively in the combined merit lists of the Comillah Board. He joined IPE department of BUET as an Assistant Professor in 1983 after completion of his Ph.D. and served BUET for 15 years in different academic and administrative position including the Head of the IPE department. He joined as Faculty Member of Manufacturing and Materials Engineering department of International Islamic University Malaysia (IIUM) in 1997 taking sabbatical leave from BUET. He left BUET in 2001 taking early pension to serve IIUM for a total of over 19 years in different academic and administrative positions. He returned back to Bangladesh in 2016 and joined AUST as a professor where he served for 2 years as Professor

and Head of the MPE department. He left AUST in 2018 and joined as a Professor of the IPE department of MIST in 2019 where he is currently posted. He supervised 6 (six) PhD theses, 38 (Thirty Eight) Master's theses and a large number of undergraduate theses. He has published 274 (Two hundred and Seventy Four) referred journal and conference proceeding papers, 11 (Eleven) Books, and 41 (Forty One) Book Chapters. He is the Chief Editor/Editor of 5 (Five) Books including the book entitled 'Titanium Alloys' published by Intech Publisher. He has 3 (three) granted Malaysian patents and 2 (two) more pending decision. He is currently the Executive Editor of MIST International Journal of Science and Technology (MIJST), which is a fully online journal. He completed 21 (twenty One) Funded National and Local Research Projects while at IIUM and currently conducting a funded research project at MIST. He is a Life Fellow of the Institution of Engineers, Bangladesh and Life Member, Bangladesh Association for Advancement of Science, Bangladesh.

Keynote VII: 11:30 am – 12:00 pm (December 27)



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

Education

- University of Dhaka (BPT- 2008)
- Gono Bishwabiddalay (MPT- 2012)
- MS (GGW- 2015) DU, MPH (Epidemiology)

Consultant of Physiotherapy, Health-Columnist, Health-Editor, Health-Anchor, Health Researcher, & Philanthropist.

Founder Chairman - Dhaka City physiotherapy Hospital (DCPH)

Founder Chairman – Soraar Biswas Foundation (SBH)

Consultant & Head of Dept.(Physiotherapy) - Proactive Medical College Hospital (PAMCH)

Editor – Monthly Shasthokotha

Health page incharge – Daily manobkontho

Health Editor – Daily Sangbad Diganta

Health Columnist at Different Daily Newspaper of Bangladesh (eg. Daily Jugantor, Daily Bangladesh Protidin, Daily janakantha, Daily Amader shumoy, Daily Inqilab, Daily independent etc.)

Ex-Anchor – Doctor's on call (Health Program of Jamuna Television)

District Chairperson (2018 - 19) – Lion Club International, District 315, A2, Bangladesh.

President – Lion Club of Dhaka Capital, District 315, A2, Bangladesh.

Borad member – JCI (Junior Chamber International) Dhaka Young

Member - Global Goodwill Ambassador (GGA)

Awarded

2012, Shadinona Sanshad Sanmanona.

2013, Atish Dipangkar gold medel

2014, Human Right Peace Award

2015, Best young Physiotherapist in Bangladesh

2015, Sher-e-Bangla A.K Fazlul Haque Award

2016, Justice Mahub Morshed Memorial Award
2017, Mother Teresha Award

Activities

Established - Dhaka City physiotherapy Center (DCPC) in 2008
Established - Dhaka City physiotherapy Hospital (DCPH) in 2010
Established - Soraar Biswas Foundation (SBH) in 2012
Established - Dhaka City Diagnostic Center (DCDC) in 2015
Established - Monthly Shastho kotha in 2017

Keynote VIII: 12:00 – 12:30 pm (December 27)



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

Prof. Dr. Engr. Ayub Nabi Khan currently holds the position of Pro Vice Chancellor of BGMEA University of Fashion & Technology. Dr. Khan obtained his bachelor degree in Textile Technology from the University of Dhaka. He obtained MSc and PhD degree in Textile Technology from the University of Manchester Institute of Science & Technology UMIST, Manchester, UK. under Commonwealth Scholarship and fellowship plan.

Prof. Khan became the first Pro Vice Chancellor of BGMEA University of Fashion & Technology (BUFT), Bangladesh on November 01, 2012. He has 28 years long service experience in teaching, research and industry. He rendered his service for more than 20 years in different universities of home and abroad. Before joining he was Principal of country's first Public Private Partnership educational institute named National Institute of Textile Engineering & Research (NITER) an affiliated Institute of University of Dhaka run by Bangladesh Textile Mills Association. Under his able leadership this institute became a viable organization which was in a dilapidated condition for a long time. He was faculty member of department of textile engineering, at Southeast University, Primeasia University and Ahsanullah University of Science & Technology (AUST). He worked as adjunct faculty member of mechanical engineering department of BUET, DUET, Manchester University, UK. He was research supervisor & external examiner of MSc & PhD students of different universities of home and abroad. He has been nominated as Syndicate member of the Bangladesh University of textiles (BUTex) by the Chancellor and His Excellency the Honourable President of the People's Republic of Bangladesh.

He is a specialist in syllabus and curriculum development at tertiary level education institutions. He has developed course curriculum and updated syllabus of textile engineering of public and private universities of Bangladesh like Primeasia University, Northsouth University, Southeast University, Dhaka University of Engineering & Technology (DUET), Bangladesh University of Engineering & Technology (BUET), Mawlana Bhasani Science & Technology University, Bangladesh University of Textiles (BUTex). Textile Expert of Ministry of Textiles & Jute, GOB; Public Service Commission, University Grant Commission.

Dr. Khan is a specialist in yarn manufacturing process, product process development and quality improvement, and bears sound knowledge on crisis management, productivity improvement, and has outstanding motivational capability. Dr. Khan is currently lecturing on textile fibres, yarn manufacturing engineering, textile quality control, technical textiles, fabric manufacturing, and textile & garments compliance.

Dr. Khan has also long service career as managerial and CEO position in different textile organization like Bangladesh Textile Mills Corporation, BEXIMCO Group and J.K. Group. He was the 1st engineer of a group to produce 'Lycra Core' yarn, 'Polyester Core' yarn and 'Slub' yarn in Bangladesh. He also worked as technical consultant for different textile mills of the country. He worked as a National Expert (Spinning, Weaving), under EU/UNIDO funded project named Bangladesh Quality Support Programme (BQSP). Currently working as Project Coordinator of "CSR, SRHR and Innovative Leadership in the RMG sector in Bangladesh", NICHE/BGD/199, Funded by NUFFIC, Netherland.

Prof. Khan is a life member of different professional & educational bodies like life registered graduate of the University of Dhaka; UMIST Alumni, University of Manchester, UK.; Institute of Textile Engineers & Technologists, Bangladesh. He is a life fellow of Institute of Engineers, Bangladesh (IEB).

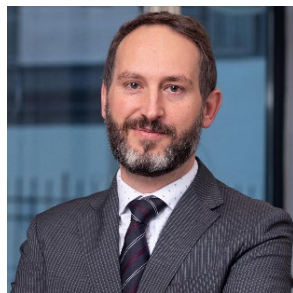
Prof. Khan was awarded 'Fellowship' of The Textile Institute, International, UK in 2010. He is the Chairman of the Textile Institute, Bangladesh Section, Manchester, UK.

He received Ekushey Padak-2016 from Bangladesh Education Observers Society for his contribution in the field of Textile Education of Bangladesh. Dr. Khan is the first recipient of Textile Institute UK Holden Medal Award winner of Education.

Dr. Khan believes education comes fourth and has become a necessity for human beings after food, cloth and shelter in this competitive world. Education is able to provide solutions to all problems; it promotes good habits and awareness about corruption, terrorism, and other social issues among us. And when its comes to matter of university, it produces enlightened leaders who will think of what is good in terms of the country as a whole not just in terms of profits for themselves.

Dr. Khan has more than 26 years of experience in the fields of teaching, education planning and management, industrial consultancy, project management, research, process, product & technology development. He is currently working as the Project Coordinator of CSR, SRHR and Innovative leadership in the RMG sector in Bangladesh, NICHE/BGD/199, Funded by NUFFIC, Netherlands.

Dr. Khan authorizes more than 30 research publications, published in recognized journals of home and abroad. He also authorizes one text book titled 'Principles of Short Staple Spinning' for undergraduate students.

Keynote IX: 12:30 – 1:00 pm (December 27)

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

Erwin Rauch received his B.Sc. in Logistics and Production Engineering from the Free University in Bolzano (Italy). He also holds a M.Sc. in Mechanical Engineering from the Technical University Munich (TUM) and a M.Sc. in Business Administration from the TUM Business School. He obtained his Ph.D. degree in Mechanical Engineering from the University of Stuttgart with summa cum laude. Before starting his career as Assistant Professor at the Free University of Bolzano he spent 10 years in Industry as Consultant and Associate Partner at a management consultancy. Currently he is an Endowed Professor for Smart and Sustainable Manufacturing at the Free University of Bolzano. In addition he is the Head of the Smart Mini Factory laboratory for Industry 4.0 as well as the new established Sustainable Manufacturing Lab at NOI Techpark Bruneck. He is also the author of over 200 scientific contributions and an expert/member of various associations and organisations. Dr. Rauch is Editor in Chief of Production & Manufacturing Research, a Scopus indexed Q1 Journal of Taylor & Francis and serves in several Editorial Boards of peer-reviewed journals. He is Third Mission delegate for the Faculty of Engineering as well as member of the Scientific Advisory Board of Fraunhofer Italia Research.

Wednesday, December 27, 2023

Evening Keynotes (Bangladesh Time) 6:00 – 9:00 pm

Keynote X: 6:00 – 6:30 pm (December 27)

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

Keynote Speech Title: Efficiency Analysis and Fair Distribution in Connectome Reconstruction

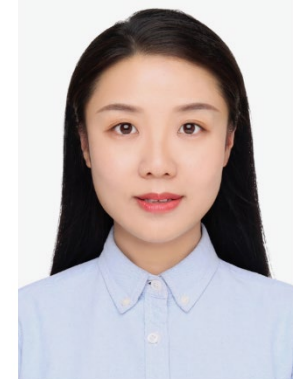
Xie Qiwei is a professor at Beijing University of Technology and a specially appointed expert of the China Association for Science and Technology. He has been selected as one of the “Highly Cited Scholars” by Elsevier. He serves as a editor for important journals such as Journal of Systems Science and Mathematical Sciences, Frontiers in Robotics and AI. He is also a member of the Risk Management Branch of Chinese Society of Optimization, Overall Planning and Economic Mathematics. Professor Xie has led a sub-project of a national major project, a youth project funded by the National Natural Science Foundation, and a general project funded by the National Natural Science Foundation. He has also participated in a national major project and a project supported by the Beijing Municipal Science and Technology Commission. He has published over 100 related research papers in well-known journals. His current research mainly focuses on data envelopment analysis, data mining, and in particular, resource allocation problems such as the allocation of pollutant discharge rights, carbon emissions, and financial resources.

Keynote XI: 6:30 – 7:00 pm (December 27)

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

Title: Effects of rising and extreme temperatures on production factor efficiency: Evidence from China’s cities

Dr. Prof. Malin Song currently holds the position of Vice President of Anhui University of Finance and Economics. He has been selected as one of the “Highly Cited Scientists” by Clarivate, one of the “Highly Cited Scholars” by Elsevier, and one of the top 2% of the world’s top scientists for many consecutive years. He has been selected as one of the national leading talents, cultural celebrities of the Central Propaganda Department and “four-batch” talents, selected as one of the national One Million Talents project, and awarded as a young and middle-aged expert with outstanding contributions, enjoying the State Council’s special allowance, and selected as one of the Ministry of Education’s New Century Outstanding Talents Support Program, etc. His main research interests are resource economics and statistics. He has published more than 300 papers in top-notch journals and has been awarded more than 40 times with first, second, and third prizes at provincial and ministerial levels as well as the China Economic Review Best Paper Award.

Keynote XII: 7:00 – 7:30 pm (December 27)

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

Keynote Speech Title: Joint operations decision-making optimization involving substitute products based on Stackelberg game and nested PSO

Dr. MA Shuang is a Lecturer at the School of Economics and Management, University of Science and Technology Beijing, China. Her research is focused on mass customization, product family design and optimization, supply chain management and optimization, and supply chain perspective on additive manufacturing, healthcare services, etc. Dr. Ma obtained her Ph.D. degree in Management Science & Engineering from the Tianjin University in China. Her work has appeared in the Journal of the Operational Research Society, International Journal of Production

Research, IEEE Transactions on Engineering Management, Expert System with Applications, Advanced Engineering Informatics, etc. as well as various conference proceedings.

Keynote XIII: 7:30 – 8:00 pm (December 27)


Albert Wee Kwan Tan, PhD
Associate Professor
Academic Program Director, Online Master in Business Administration
Asian Institute of Management (AIM)
Manila, Philippines

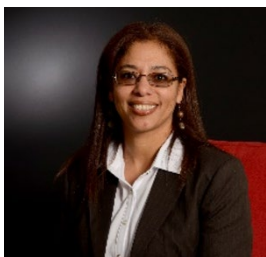
Prof. Albert Tan joins the AIM faculty as an Associate Professor and Academic Program Director of the Online MBA program. He has a combined 32 years of industry practice and teaching experience in Australia, Singapore, China, Dubai, Indonesia, Malaysia, and Vietnam. Most recently, he was a visiting professor at NUS-Singapore, MIT SCALE Network, Wollongong-Dubai, Curtin-Australia as well as in Indonesia and Vietnam. Prof. Tan was conferred a Bachelor in Information Technology in 1996 by the University of Southern Queensland. He also obtained a Master in Business Studies from the University of Ireland in 1998 and a PhD in Operations Management from Nanyang Technological University in 2005. He is also certified Fellow in Production and Inventory Management (CPIM-F) from APICS.

Keynote XIV: 8:00 – 8:30 pm (December 27)


Isabela Bonatto, Ph.D.
Environmental Consultant
Solid Waste Management and Circular Economy Expert

Keynote title: *Solid waste management, circular economy and plastic pollution: solutions and opportunities in Brazil and Kenya.*

Isabela Bonatto, a Brazilian biologist, holds an MBA in Environmental Management, as well as a Master's and a Doctorate in Environmental Engineering, which included a period of study at Duke University in North Carolina, USA. With a wealth of experience in urban solid waste and circular economy consultancy, Isabela brings forth a deep understanding of sustainability, recycling, reverse logistics, socio-environmental projects, waste data collection and technical research. Her commitment lies in formulating comprehensive strategies for efficient urban solid waste management and advocating for the adoption of circular economy principles, particularly within the realm of corporate sustainability and the packaging sector. As a consultant, she actively advises and supports companies and institutions in the implementation of sustainable practices and the management of socio-environmental projects, advocating for conscious decision-making and the establishment of businesses that align with sustainable values and practices. Over the course of her career, Isabela has collaborated with distinguished organizations such as UNEP, Tetra Pak, SGS, and CEMPRE, in addition to several international NGOs, which has enhanced her comprehensive understanding of global environmental and sustainable issues. Furthermore, her dedication to education and research is evident in her engagement in diverse academic programs and environmental sustainability-focused courses. Residing in Kenya since 2021, Isabela has dedicated her efforts to spearheading various socio-environmental projects, specifically focused on WASH (Water, Sanitation, and Health) initiatives and the advancement of circular economy principles. She actively seeks to optimize solid waste management opportunities for both corporations and local communities, thereby gaining a nuanced understanding of the complex environmental challenges that exist within diverse cultural and geographical landscapes. Moreover, her ongoing commitment extends to championing projects that bolster climate resilience, foster community engagement, tackle the issue of period poverty, empower girls and women, and promote the utilization of reusable sanitary pads within the humanitarian sector. Isabela firmly believes in the transformative potential of socio-environmental initiatives and the profound impact that collaborative partnerships can have in shaping a more sustainable and equitable world.

Keynote XV: 8:30 – 9:00 pm (December 27)


Dr. Anthea Amadi-Echendu
Senior Lecturer
Department of Operations Management
University of South Africa
Pretoria, South Africa
Director, Society of Operations Management in Africa (SOMA)

Anthea Amadi-Echendu is a senior lecturer at the University of South Africa. She holds a Master of Commerce degree from the University of South Africa and a Doctor of Philosophy degree from the University of Pretoria. Anthea has authored various national and international book chapters, conference papers and published several journal papers and was co-editor of a book. She holds directorships of the Society of Operations Management in Africa (SOMA) and Destiny Environmental and Infrastructure Development (Pty) Ltd. Anthea is also a founder member of SOMA. She has more than 15 years' industry experience on various levels.

Thursday, December 28, 2023

Evening Keynotes (Bangladesh Time)

Keynote XVI: 8:30 – 9:00 am (December 28)



Prof. Dr. Ir. Wahyudi Sutopo, ST., M.Si, IPU
Vice Dean for Human Resources, Finance, and Logistics, Faculty of Engineering, UNS
Head of Industrial Engineering and Techno-Economics (RITE) Research Group, UNS
Head of Industrial Relations & Commercialization Div., CoE for Electrical Energy Storage Technology, UNS
President, IEOM Indonesia Chapter & Director, IEOM Asia Pacific Operations

Wahyudi Sutopo is a professor in industrial engineering and Head of Industrial Engineering and Techno-Economics Research Group, Universitas Sebelas Maret (UNS). He is also a researcher for the Centre of Excellence for Electrical Energy Storage Technology UNS. His educational background is the profession of engineer (Ir) from the UNS in 2018; Doctor (Dr, 2011) in industrial engineering & management & bachelor of industrial engineering (S.T., 1999) from Institut Teknologi Bandung; master of management (M.Si., 2004) from Universitas Indonesia. He is a member of the Institute of Indonesian Engineers and an Executive Professional Engineer. He is also a member of ISLI, IISE, and IEOM.

His research interests include logistics & supply chain engineering, economic engineering & cost analysis, and technology commercialization. He has developed a research roadmap in the field of study "*Industrial Engineering and Techno-Economics of Energy Storage (ES) and Electric Vehicles (EV) Applications*" as an effort to study the field of Industrial Engineering, especially Supply Chain Engineering which is integrated with multi/interdisciplinary approaches into the Technology Commercialization Process. He has received more than 45 research grants. Industrial engineering knowledge acquisitions were contributed to achieve impact excellence in teaching, research, and innovation. He is a copyright holder/inventor for 16 IPRs; the author of 13 books, and more than 194 Scopus-indexed articles (H-index-13). He has special attention to improving the quality of industrial engineering education. He was the general chair of the Indonesian Industrial Engineering Higher Education Institution Cooperation Agency/BKSTI (2017-2020) & secretary of the Advisory Body of BKSTI (2023-2026). His additional assignment is to be an Assessor of BAN-PT & LAM TEKNIK as well as an evaluator of IABEE. He also took the role of advancing the industrial engineering discipline for the betterment of humanity through IEOM Society.

Keynote XVII: 9:00 – 9:30 am (December 28)



Prof. Vitor Mendes Caldana
Federal Institute of Sao Paulo (IFSP) – Sorocaba Campus
Sorocaba, Sao Paulo, Brazil

Began the academic career with a technician course in Electronics from Liceu de Artes e Ofícios (1999) followed by an undergraduate degree in Electronic Engineering from Universidade Presbiteriana Mackenzie in 2004. In 2016, finished the Masters course in Industrial Engineering with the Quality of Engineering Education and its Relation to Regional Development as his area of research. As a technical profession, from 1999 until 2016, started in Caltronic Automação Industrial, a service-based company in Brazil that represents American and European automation equipment for the printing industry, and finished as Service and Projects Manager, serving not only Brazil but the whole of South America with services performed also in USA and China. During the professional career took several courses in USA and Europe to Automation and dedicated equipment maintenance. In 2016 left the company for full-time dedication to IFSP. In 2014 began his teaching career in FIEB as a substitute teacher for the Technical Course of Electronics. In 2016 moved to IFSP to start the electronics Technical Course in the city of Sorocaba and has been engaged with this project since. In this 4,5 years taught a variety of courses in electronics. In 2018 began his Research Group in Industry 4.0 and is currently working with colleagues in this research area as well as the project for the PhD.

Keynote XVIII: 10:00 – 10:30 am (December 28)



Ahad Ali, Ph.D.
Associate Professor and Director of Industrial Engineering Program
Director, Graduate Certificate in Lean Six Sigma
A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering
Lawrence Technological University, Southfield, Michigan, MI 48075, USA
Executive Director of IEOM Society International

Ahad Ali is an Associate Professor and Director of Industrial Engineering Programs (BSIE & MSIE), Director of Graduate Certificate in Lean Six Sigma and Director of Smart Manufacturing and Lean Systems Research Group, A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering at the Lawrence Technological University, Southfield, Michigan, USA. He established Siemens Electro-Matic Industrial Engineering Lab at LTU in 2019. Dr. Ali was the primary author of the ABET self-study report of the BSIE Program at LTU in 2022. He earned

B.S. in Mechanical Engineering from Khulna University of Engineering and Technology (KUET), Bangladesh, Masters in Systems and Engineering Management from Nanyang Technological University, Singapore and Ph.D. in Industrial Engineering from University of Wisconsin-Milwaukee, USA. Dr. Ali was Assistant Professor in Industrial Engineering at the University of Puerto Rico – Mayaguez, Visiting Assistant Professor in Mechanical, Industrial and Manufacturing Engineering at the University of Toledo and Lecturer in Mechanical Engineering at the Bangladesh Institute of Technology, Khulna. He received an Outstanding Professor Award of the Industrial Engineering Department, University of Puerto Rico -Mayaguez, (2006-2007). He has published 60 journal and 150 conference papers. Dr Ali has conducted research projects with Chrysler, Ford, DTE Energy, New Center Stamping, Whelan Co., Delphi Automotive System, GE Medical Systems, Harley-Davidson Motor Company, International Truck and Engine Corporation (ITEC), National/Panasonic Electronics, and Rockwell Automation. His research interests include manufacturing systems modeling, simulation and optimization, intelligent scheduling and planning, artificial intelligence, predictive maintenance, e-manufacturing, and lean manufacturing. He supervised 11 doctoral students. Dr. Ali has involved with many international conference committees. He is the Founder of IEOM Society International and serving as an Executive Director. Dr. Ali serves as a Conference Co-Chair of the International Conference on Industrial

Engineering and Operations Management and organized events in Dhaka, Kuala Lumpur, Istanbul, Bali, Dubai, Orlando, Detroit, Rabat, UK, Bogota, Paris, Washington, DC, Pretoria, Bangkok, Pilsen, Toronto, Costa Rica, Sao Paulo, India, Riyadh, Manila and Sydney. He is a member of IEOM, INFORMS, SME and IEEE.

Keynote XIX: 10:00 – 10:30 am (December 28)


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

Keynote speech title: Online Purchase decision analysis with Biosensor data

Dr LEE Ka Man is currently an associate professor in the Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University, Hong Kong. She is the program leader of BSc(Hons) Enterprise Engineering with Management and scheme leader of BSc(Hons) scheme in Logistics and Enterprise Engineering. She obtained her PhD and BEng degree from The Hong Kong Polytechnic University. Her main research areas include Industrial Engineering, Enterprise Resource Planning (ERP), Logistics and Supply Chain Management, Industrial Internet of Things (IIoT), Wireless Sensor and Actuator Network (WSAN), Cloud Computing and Big Data Analytics. As of now, Dr Lee has published over 200 articles in various international journals and seminars. She was awarded Silver Medal in the 47th International Exhibition of Inventions of Geneva in 2019 and Outstanding Paper Award of Emerald Network Awards in 2019. Dr Lee also serves as the Lab-in-Charge of PolyU's Cyber-Physical Systems Laboratory.

Keynote XX: 10:30 – 11:00 am (December 28)


Ms. Regine A. Tejada
Assistant Professor
Department of Industrial Engineering and Operations Research
University of the Philippines Diliman
Philippines

Regine A. Tejada is an Assistant Professor of the Department of Industrial Engineering and Operations Research at the University of the Philippines Diliman. She earned her master's and bachelor's degrees in Industrial Engineering from the same university. Her research interests include production systems, information systems, assignment models, and transportation systems, specifically active mobility. She has taught courses on facilities systems design, systems and procedures, industrial materials and processes, and production systems. She is also a member of Move As One Coalition, an organization that advocates for a safer, more humane, and more inclusive public transportation system in the Philippines. Through this organization, she was able to initiate transport-related projects at her university.

Keynote XXI: 11:00 – 11:30 am (December 28)


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

Title: Semi-Supervised Learning, Generative AI and Scalable Spatio-Temporal Graph Neural Networks for Social Good

Dr. Latifur Khan is currently a full Professor (tenured) in the Computer Science department at the University of Texas at Dallas, USA where he has been teaching and conducting research since September 2000. He received his Ph.D. degree in Computer Science from the University of Southern California (USC) in August of 2000. In addition, he received his bachelor degree in Computer Science and Engineering (CSE) from Bangladesh University of Engineering and Technology (BUET) with first class honors (2nd position). Dr. Khan is a fellow of IEEE, IET, BCS, and an ACM Distinguished Scientist. He has received prestigious awards including the IEEE Technical Achievement Award for Intelligence and Security Informatics, IEEE Big Data Security Award, and IBM Faculty Award (research) 2016. Dr. Khan has published over 300 papers in premier journals and prestigious conferences. Currently, Dr. Khan's research focuses on big data management and analytics, data mining and its application to cyber security, and complex data management including geospatial data and multimedia data. His research has been supported by grants from NSF, NIH, the Air Force Office of Scientific Research (AFOSR), DOE, NSA, IBM, and HPE.

Keynote XXII: 11:30 am – 12:00 pm (December 28)


Ferdous Sarwar, PhD
Professor, Department of Industrial & Production Engineering
Bangladesh University of Engineering and Technology
Dhaka 1000, Bangladesh

Dr. Ferdous Sarwar is a Professor and Past Head at Department of Industrial & Production Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh. His areas of expertise include: 12 years of engineering research experience, 10 years of engineering project management experience, 4 years of experience focused on manufacturing, research, and development of microelectronic components, hands-on experience in flip chip, SMT, MEMS, laser processing, photolithography, wire bonding, and die attach process,

strong background in SPC techniques, DOE, APQP, QFD, FMEA, DMAIC & Six-Sigma methods and experience in selection and characterization of materials for microelectronics manufacturing such as TEM, SEM, FESEM and XRD. Dr. Sarwar has published papers in conferences and journals. He received Bachelor of Science (BS) and Master of Science (MS) in Industrial and Production Engineering from Bangladesh University of Engineering and Technology, Bangladesh and Doctor of Philosophy (PhD) in Manufacturing Engineering from North Dakota State University, USA.

Keynote XXIII: 12:00 – 12:30 pm (December 28)



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

S.M. Tofayel Ahmad (Noman) is now working as System Analyst (Joint Director) at Bangladesh Bank, Dhaka. Before joining to Bangladesh bank he was a lecturer of CSE department of Northern University Bangladesh. He is the former Lecturer of Prime University Bangladesh, Microland IICE (NU), Ideal College (NU), New Model College (NU), etc. He is Former Assistant Programmer, MolCT.

He is now adjunct faculty member of Prime University, Northern University, NAPD, Bangladesh Bank Training Academy (BBTA), Bangladesh Institute of Bank Management (BIBM), ICAB – The Institute of Chartered Accountants of Bangladesh (ICAB), National Institute of Banking Technology (NIBT) and some other reputed Institutions in Bangladesh. He is one of the famous key note speakers of Bangladesh for 4IR, CPS, Cloud Computing, Information Security, ICT Security Policy & Guidelines, etc. He has attended in many training, workshop on ICT Risk management, ICT Security, ICT Policy/Act/Guidelines, Cyber Security, BCR/DRP, IS Audit & Compliance, eCommerce, eGovernance, Embedded System, Reconfigurable computing, Instrumentation system in home and abroad. Mr. Ahmad has written many books including three text books for BTEB. He has written (1) Multimedia and its Application (Text Book), BTEB (2) Data Structure And Algorithm (Text Book), BTEB, (3) Operating System & System Programming, (Text Book), BTEB, (4) Computer Engineering Knowledge, March, 2016, (5) Tautology (Guide Book) in 4 Vol. For CSE students.

Mr. Ahmad has edited several ICT related guidelines, policies, frameworks for banking sector of Bangladesh including (1) “Guidelines on Cloud Computing for Banks, NBF, PSO, PSP, MFS, etc., Vol 01, 2023”; (2) “Cyber Security Framework for Banks, NBF, PSO, PSP, MFS, etc.”; (3) “Guideline on ICT Security For Banks and Non-Bank Financial Institutions, Version 3.0, May 2015 Bangladesh Bank”; (4) “ICT Security Policy for Bangladesh Bank & Some Commercial Banks, Bangladesh”; & BCP & DRP for Bangladesh Bank & Schedule Bank; (5) “Core Banking Solutions Features and Control Guidelines for Banks”, etc.

Mr. Ahmad was awarded as the Best Researcher of IEOM2012 by IEOM Society International, USA in 2012 for one of his research papers. He published 23 research papers in National/ International Journal/ Proceedings in IEEE, ACM, Scopus, IEOM, etc. on Embedded System, Reconfigurable Computing, Cloud Computing, Cyber Physical System, Security Operation Center(SOC), VAPT, Central Bank Digital Currency (CBDC), eCommerce /eBusiness, Financial Engineering and ICT Security & Risk management. He was nominated as Track Chair of Financial Engineering, E-Business/E-Service/e-Commerce/ Engineering Education, Cyber Security for many international conferences.

Mr. S. M. Tofayel Ahmad is ISO Certified Lead Auditor (ISMS, ISO27001) & JICA-ITEE Certified Master Trainer (ToT). He was the Vice President of Bangladesh Computer Society (BCS) for 2012-2014 period. His main key work area is ICT Security Guideline & Policy, ICT Risk Management & Emergency Response, Ensuring compliance of Cloud Computing, 4IR, Cyber Security. Information System Audit & Compliance, Information Security/Cyber Security, Business Continuity and Disaster Recovery Management, eProcurement Management, Backup Management, Financial Engineering and providing ICT Security Training. ICT Audit, Inspection and Compliance.

He achieved M.Sc Engg.(ICT) from Bangladesh University of Engineering and Technology (BUET). He has also attended many professional courses in home and abroad including DLIS from University of Indonesia and DESOS from University Tunku Abdul Rahman (UTAR), Malaysia. He is one of the UNO, UNESCO and ICTP Scholars. Mr. Ahmad has visited many countries including India, Indonesia Malaysia, Singapore, Philippines, Turkey (Istanbul), Soudi Arabia, etc. for Academic, Training, Tour and Conference purposes.

Keynote XXIV: 12:30 – 1:00 pm (December 28)



Dr. Sajal Chandra Banik
Professor
Department of Mechanical Engineering
Chittagong University of Engineering & Technology (CUET)
Chittagong, Bangladesh

Dr. Sajal Chandra Banik is a Professor in the Department of Mechanical Engineering at Chittagong University of Engineering & Technology (CUET), Bangladesh. He graduated in Mechanical Engineering from Bangladesh University of Engineering and Technology (BUET), Bangladesh in 1998. He obtained his M.Sc. in Mechatronics degree from Technical University of Hamburg-Harburg (TUHH), Germany in 2005. He was awarded PhD degree (Robotics and Artificial Intelligence) from Saga University, Japan in 2009. He has served also as a visiting professor

for one year at Veltech University, Avadi, Chennai, India. His research fields are robotics, mechatronics systems and Industry 4.0. He has participated in NASA's 4th Annual Lunabotics Mining Competition-2013, Kennedy Space Center, Florida, USA. By this time, he has acquired professional and organizational experiences like Dean, Head, Provost, Higher Education Quality Enhancement Project's (HEQEP) Manager, UG/PG/PhD student's Supervisor, National Consultant for '4IR Based Future Skills' project under a2i. He has also organized several International Conferences as Conference Chair/Secretary. He is also Co-editor/reviewer for several renowned international journals. He is a Fellow of IEB and member of ASME and Advisor of ASME, CUET branch. He has published more than 110 research papers including IEEE, Scopus, and Springer journals. Currently, he is also the Director, Directorate of Research & Extension, CUET.

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44th IEOM Global Engineering Education – Plenary Speakers

Wednesday, December 27, 2023

Wednesday, December 27, 2023
02:30 – 4:00 pm – Zoom Meeting Room 3 – (Virtual)

Session Chair: Prof. Md Mahbulul Haque PhD (UK) CText FTI, DIU

Speaker I: 2:30 – 2:45 pm (December 27)



Dr. Md. Ehasanul Haque
Senior Assistant Professor and Department Head
Industrial & Production Engineering
Faculty of Engineering
American International University-Bangladesh (AIUB)
Dhaka, Bangladesh

Dr. Md. Ehasanul Haque is working as a Senior Assistant Professor at the Department of Industrial and Production Engineering (IPE) in American International University-Bangladesh (AIUB). He was born in Rajshahi, Bangladesh and spent my early and late childhood. Dr. Haque have completed his study in school, college and university from his home town. He earned both Bachelor of Science and Masters from the Department of Materials Science and Engineering, University of Rajshahi, Bangladesh with high distinction. Dr. Haque have achieved “Gold Medal Award” for outstanding performance in Bachelor provided by the University of Rajshahi and NST fellowship for conducting research in Masters provided by the Ministry of Science and Technology. He went to Japan for completing PhD degree under the “Monbukagashu” (MEXT) scholarship funded by Japan Government and successfully completed in due time. “University President Award” has been presented for achieving outstanding performance in his research activities. Teaching is his one and only passion. Dr. Haque loves to be involved in basic research activities related to Photonics, Nanotechnology and Nanofabrication, Electrochemistry, Thin Film, Study of Different Materials Properties, Alloy Formation and Study of Microstructure and so on.

Speaker II: 2:45 – 3:00 pm (December 27)

Fatima Jahara
Senior Assessment Developer
Workera
Bangladesh

Speaker III: 3:00 – 3:15 pm (December 27)

ID 117 Rural community-based tourism: A potential solution to promote sustainable development in Bangladesh

Md. Mehedi Hasan, Department of Tourism and Hospitality Management, European University of Bangladesh
Abu Taher, Department of Industrial and Production Engineering, European University of Bangladesh
Md. Shohel Rana, Department of Business Administration, European University of Bangladesh

Speaker IV: 3:15 – 3:30 pm (December 27)

ID 118 A study on satisfaction of employees in the construction engineering firms in Bangladesh

Md. Monam Uddin, Department of Business and Accountancy, Lincoln University College, Malaysia
Md. Shohel Rana, Department of Business Administration, European University of Bangladesh
Abu Taher, Department of Industrial and Production Engineering, European University of Bangladesh

Speaker V: 3:30 – 3:45 pm (December 27)

ID 119 Impact of green entrepreneurship on sustainable development: An ex-post empirical study in the field of engineering sector in Bangladesh

Md. Shohel Rana and Dr. Farzana Alam, Department of Business Administration, European University of Bangladesh, Bangladesh
Dr. Abu Taher, Department of Industrial and Production Engineering, European University of Bangladesh

Speaker VI, Wednesday, December 27, 2023, 2:45 – 3:00 pm

ID 167 Nature based Solutions (NbS) to protect industry from river erosion

Md. Lutfor Rahman, Water Resources Experts, AGS Quality Actions Limited, Bangladesh

Artificial Intelligence and Machine Learning – Plenary Speakers

Wednesday, December 27, 2023

Wednesday, December 27, 2023
04:00 – 6:00 pm – Zoom Meeting Room 3 – (Virtual)

Session Chair: Abdullah All Mamun Anik, Military Institute of Science & Technology, Dhaka
4:00 pm – Speaker I



Souva Majumder

Doctoral Scholar On AI, CSE Department, BUET Dhaka
M.Tech IIT Kharagpur
Director of Apollonius Computational Business Solutions OPC Pvt. Ltd, India

Title of the talk: Strategic AI for Industrial Engineers

Souva Majumder, is the Founder & Director of Apollonius Computational Business Solutions Pvt. Ltd, Kolkata. Apollonius is a dedicated AI & Data Science Think Tank company established in Kolkata. He is also the 1st Indian national to pursue PhD in Computer Science & Engineering on Artificial Intelligence at Bangladesh University of Engineering & Technology, Dhaka.

With the visionary activities of Apollonius, Now Apollonius is the No.1 AI Lab in Kolkata for specialized Training on Industrial AI, AI for Social Good & Trustworthy AI. Apollonius is mentored by the world's leading AI Scientists & Data Scientists from IBM Research USA, IBM Experts Lab San Francisco, IIM Ahmedabad, IIT Kanpur, IIT Kharagpur, MIT USA, IIM Udaipur and many top tier Universities & research Labs.

Souva, is an Alumnus of IIT Kharagpur, he did his MTech in Industrial & Systems Engineering. After spending few years in Industry and academia, he ventured in his journey of Entrepreneurship with a Vision of "AI for All". Under his guidance Apollonius developed the World's 1st Multilingual AI conversational agent for spreading awareness about the COVID-19 & Dengue Fever. The Initiative of Apollonius helped more than 10 thousand people during initial days of COVID-19 Outbreak. His work was granted Copyright by Government of India and was featured in the Annual magazine of Department of Science & Technology, GOI.

He has given talk on various aspects of AI, at various seminar across the world, to name a few, he has delivered talk at IIT Kharagpur, IIT Jodhpur, Nirma University, University of Calcutta, S4DS, JIS University, BioConsol 2021.

Souva, is the only India to have the distinguished certificate of AI/ ML Operationalization Engineer by IBM Experts Lab USA. In a short span of 3 years, Souva & His Team have mentored more than 400 + Professionals & students on AI, Data Science & Analytics and successfully organized Faculty development Programme for more than 450 Professors of more than 25+ Colleges.

Souva is an enthusiasts of AI for Engineering processes. And he is one of the researcher for the Vision of AI for Industrial Modernization such as Steel Industry, Mining Industry, Power Sector & Manufacturing Sector.

4:15 pm – Speaker II



Abu Anas Ibn Samad

Founder and CEO
Sigmind.ai Limited
Dhaka, Bangladesh
Bachelor in Science, Bangladesh University of Engineering and Technology
Highly Commended Entrant, Global Undergraduate Awards, Ireland
Engineering Panel Judge, Global Undergraduate Awards, Ireland
Author in IEEE and SAE Conference Papers

Presentation Title: Towards Safer and Smarter Cities: Harnessing Computer Vision for Smart Traffic Solutions in AI-Enabled Smart Cities

Abu Anas Ibn Samad is deeply passionate and highly motivated technology entrepreneur and academic researcher with architecture-level thinking and framework-level execution capability combining 12+ years of hands-on experience and field expertise with academic and professional excellence. He has a fervent commitment to driving advancements in the realm of artificial intelligence and computer vision. As the Founder and CEO of Sigmind.ai Limited, a burgeoning AI-focused startup in Bangladesh, he leads the charge in harnessing Computer Vision technologies to bolster public safety and expedite industrial automation. His innovative edge AI solutions translate visual data into actionable insights, facilitating informed decision-making and swift responses. As a researcher, he has authored numerous technical papers and published internationally in prestigious conferences such as SAE World Congress and IEEE AI for Industry. He was the first Highly Recommended Entrant from Bangladesh in Engineering category on the Global Undergraduate Awards which is the world's largest pan-discipline academic awards program. He also served as a judge in the program two times. As a keynote speaker at various global conferences, such as the International Data Science Summit and AI and IoT Virtual Career Conference, he fervently inspires budding AI and IoT startups and developers. His commitment to fostering diversity and empowerment is evident through his role as a course mentor for the Women Techpreneur Program, aiming to nurture future female leaders in the ICT industry. He has also served as a judge in Student to Startup program by the ICT Division Bangladesh to score and mentor emerging student startups from different universities across Bangladesh. He also served as Course Mentor in various industry-academia collaborations like Deep Learning Workshop in DIU as a Faculty Development program (FDP) in association with Daffodil International University (DIU) and SIGMIND.ai.

Abu Anas is not confined by geographical borders. His participation as a startup delegate in international platforms, including the Entrepreneurship World Cup, Startup Village, Indiasoft etc reflects his global perspective and his drive to engage in collaborative innovation. For his active roles in fostering innovations for societal changes, I have been awarded locally and internationally including National ICT Awards, Entrepreneurship World Cup, APICTA Awards etc. He also actively delegated his knowledge to various flagship events worldwide in Russia, Dubai, Vietnam, Turkey, India etc. He was the mentor of AI for Improving Road Safety program from Bangladesh to engage and delegate volunteers across South Asia to guide and mentor while developing AI-enabled road safety solutions. With a wide spectrum of skills, including computer vision, mechatronics, and narrow/deep machine learning, Abu Anas has undertaken impactful projects like Watchcam Vehicle Analytics System and TrafficFlow, demonstrating his adeptness at architecting AI-powered solutions for real-world challenges. Guided by a passion to advance humanity through technological innovation, Abu Anas Ibn Samad stands as a dynamic force in the world of technology entrepreneurship.

4:30 pm – Speaker III**Dr. Tahsina Farah Sanam**

Associate Professor in the Institute of Appropriate Technology
Bangladesh University of Engineering and Technology (BUET)
Dhaka, Bangladesh

Talk Title: Tackling Healthcare Inequality with Inclusive AI

Dr. Tahsina is currently serving as an Associate Professor in the Institute of Appropriate Technology at Bangladesh University of Engineering and Technology. Dr. Sanam completed her Ph.D. from the Department of Electrical and Computer Engineering, Rutgers University, New Jersey in 2020. She earned both her M.Sc. degree in Electrical and Electronics Engineering in 2012, and B.Sc. degree in Electrical and Electronics Engineering in 2009 from Bangladesh University of Engineering and Technology. Her research areas lie at the intersection of applied machine learning, signal processing, and cyber physical systems with a focus on smart city, intelligent systems, and environment sensing & monitoring.

Dr. Sanam's primary research focus is to exploit artificial intelligence, advanced statistics and machine learning techniques to make homes and offices beyond smart. The Internet of Things (IoT) has shifted from an emerging idea into an established industry in its own right – one that smart cities will be an integral part of. Smart city projects leverage IoT, AI, and networking to make urban living more efficient and convenient through everything from smart traffic lights and data-driven energy efficiency schemes, smart hospitals, to electric vehicle (EV) charging stations and interactive kiosks that offer free broadband. In the approach of the Smart Cities Mission, the objective of Dr. Sanam's research is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. The focus is on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model which will act like a lighthouse to other aspiring cities. With that aim, her goal is to establish an independent research career in Bangladesh with multidisciplinary collaborations in the field of smart city development leveraging the advanced Internet of Things (IoT) and Artificial intelligence (AI) technologies to make sensor-based systems smarter, trustworthy, and easier to use. She is currently in charge of the research laboratory named 'Cyber Physical Intelligence' at IAT, BUET as the Lab Director. The Cyber Physical Intelligence (CPI) Laboratory's overarching mission is to propose novel sensing paradigms to transform raw sensed heterogeneous data into valuable information (by giving semantic meaning to the collected data) and, finally, into knowledge through information fusion and integration. The paradigms will apply to those distributed systems that need to timely react to sensor information with an effective action such as cyber-physical systems, which feature a tight combination of, and coordination between, the system's computational and physical elements. The significance of the research is to leverage the acquired knowledge to broaden the potential of cyber physical systems in several dimensions, including smart healthcare, e-commerce, augmentation of human capabilities, understanding of human activities, smart medical waste management and smart traffic management, to name a few.

4:45 pm – Speaker IV**Tareq Mohammad Faruqi**

Lecturer & Program Coordinator
City University Bangladesh
Dhaka, Bangladesh

5:00 pm – Speaker V**Abdur Rahman Nayeem**

Teaching Assistant at Bangladesh University of Engineering and Technology
Past President of the IEOM AUST Student Chapter

5:15 pm – Speaker VI

**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

Khondaker A. Mamun received his Ph.D. in Computer and Biomedical Engineering from University of Southampton, UK. After that he worked as a Postdoctoral Research Scientist in the University of Toronto, Toronto, Canada. Currently he is a Professor of Data Science and Digital Health at the United International University (UIU), Dhaka, Bangladesh. Prof. Mamun is the Founder and Director of AIMS Lab at UIU, where his team actively performs R&D on the applications of 4IR technologies like, artificial intelligence, big data and internet of things in large scale intelligent system, healthcare, disabilities, education and brain computer interface (BCI). He established Bangladesh's first BCI lab at UIU. Recently, Prof. Mamun established Institute of Research Innovation, Incubation and Commercialization (IRIIC) at UIU. He has published more than 200 articles and holds patents. He has invented and implemented a number of intelligent systems, digital healthcare and rehabilitations

service delivery model and mobile based solutions for Bangladesh. His research and innovation have also been featured in a local and international news, also recognized internationally and by the government of Bangladesh. He received National Award from Honorable Prime Minister Sheikh Hasina for his contribution to Autism. In 2022, Prof. Mamun presented "Digital Bangladesh Award 2022" for his significant contribution for building Digital Bangladesh by Honorable Prime Minister Sheikh Hasina.

Prof. Mamun is the founder of CMED Health, a university research to commercialization that are working to create health inclusion for UHC through digital health ecosystem. CMED Health is currently serving over 2.5 million people in Bangladesh. He contributed to introduce first Deep Brain Stimulation surgery for Parkinson's patients in Bangladesh in collaboration with NINS and Prof. Tipu Z. Aziz, University of Oxford, UK. Prof. Mamun is the member WHO/ITU Focus Group on AI for Health, Digital Health Strategy 2020-2025 for the GoB, MTR of 4th HPNSP, MOHFW; Innovation Ecosystem Development, Hi-Tech Park, ICT Division; Industry Accademia Collaboration, UGC, MOE. He contributed to design and implement digital GP model with referrals for urban and rural areas of Bangladesh. He is also worked as a consultant for WHO, Unicef, ADB and World Bank on digital system design and implementation. His team also awarded innovation grants for BMGF and other agencies.

Talk Title: Building Digital Health Ecosystem to Achieve Universal Health Coverage

Abstract

Healthcare is a basic need of humans. However, it is one of the biggest challenges in Bangladesh and many developing countries, where many people are not getting good healthcare due to lack of infrastructure, systems and resources. On the other hand, healthcare is about to enter a period of rapid transformation by utilizing Fourth Industrial Revolution (4IR) technologies. Longevity and the advance of new technologies and discoveries – as well as innovative combinations of existing ones – are among the many factors pushing patient empowerment, which is fundamentally changing how we prevent, diagnose and cure diseases. Rapid growth of digital technology plays a big role in the healthcare system and helps to predict future health consequences and utilize preventive measures to protect it and improve quality of living. The Digital Health Ecosystem triggered by a fusion of technologies that is blurring the lines between the physical, digital and biological spheres. The potential for merging physical, digital and biological systems certainly has far-reaching potential for healthcare provision. The talk will discuss the way forward of building Digital Health Ecosystem towards Smart Bangladesh. It also discusses the implementation experience of Digital Health Inclusion that is transforming the healthcare landscape in Bangladesh using comprehensive multi-layered scalable digital healthcare platform by connecting people with health services, early diagnosis, health education & referrals for intervention to achieve Universal Health Coverage (UHC).

5:30 pm – Speaker VII

**Abdullah Ali Mamun Anik**

Engineer in the discipline of Industrial & Production Engineering (IPE)
 Graduated from Military Institute of Science & Technology (MIST)
 Dhaka, Bangladesh

Abdullah Ali Mamun Anik is an Engineer in the discipline of Industrial & Production Engineering (IPE) from Military Institute of Science & Technology (MIST), Bangladesh. He served as a peer reviewer in both Elsevier (Expert Systems with Applications, Q1 Journal, United Kingdom, August-2023) and 7th International Conference on Computer Science and Application Engineering (CSAE-2023, Wuhan, China, August-2023). In recognition of his prior unique research endeavors as an overseas applicant, the MMSE conference authority waived the whole entrance cost, or \$530 USD for his research work entitled "IoT Driven Sophisticated Robot Leveraging RFID Identification" and invited him as a keynote speaker in the 9th International Conference on Advances in Machinery,

Materials Science and Engineering Applications (MMSE2023), organized by ISAE-SUPMECA, France and China University of Geosciences (Wuhan) on 29-30 July 2023 in Wuhan, China. He served as a "Session Chair (IoT and IT)" in the 4th South American International Conference on Industrial Engineering and Operations Management held in Lima, Peru, May 8-11, 2023. He have received IEOM Best Paper Award (Modeling & Simulation)-2023 in the 13th International Conference on Industrial Engineering and Operations Management, Manila, Philippines for the research work, "Solar Technology Enabled Operational Robot: An Interconnected Cybernetics System with (IoV) and Multidisciplinary Implementation for An Intelligent Robot Control and Monitoring System". In 2022, he was a keynote speaker in the "IoT, Robotics, Automation, Artificial Intelligence- BCSIR Perspective" seminar, held in BCSIR, Ministry of Science & Technology- Bangladesh and also shared his thoughts about "Robotics, Artificial Intelligence, Machine learning, Internet of Things and Industrial Revolution 4.0". He shared his contemplation in the "5th International Conference on Industrial & Mechanical Engineering and Operations Management -IMEOM" as a "Global Engineering Education Speaker". Over 1000+ applicants around the whole world, top 55 candidate was finally selected for MIT Innovation Leadership Bootcamp (October-December, 2022), Massachusetts Institute of Technology (MIT), Cambridge, U.S.A and he was one of them who was selected for this prestigious event from Bangladesh. He also selected for Junior Research Fellow, Bangladesh Space Research and Remote Sensing Organization- SPARRSO, Ministry of Defence, Bangladesh. There, his research work entitled "Design and Fabrication of An Intelligent MARS Rover Curiosity Robot". He has completed his undergraduate thesis work on 'IoT Based Mechanized Industrial Automation Robot'. For completing this research work, he received "MIST Research Grant- 2021" from MIST authority. He solved the global supply chain case competition case on "FMCG Products" and received 60% Scholarship from ISCEA in

2021. He and his team members business case solution took their team in the Global Hult Prize Competition "On Campus 2020 & 2021" Final. His research work entitled "IoT Based Mechanized Robot; An Integrated Process Involving Multipurpose Control, Automation and Surveillance System" has been published in the "15th IEEE International Conference on Service Operations and Logistics, and Informatics, SOLI-2021", Singapore. It achieved the prestigious "Best Paper Award-2021, Singapore" and was declared as a "Global Winning Team" in that International Conference out of 84 finally selected teams for live camera presentation around the whole world. He have received MIST Best Engineering Project (ME Faculty) Award from respected "Education Minister of Bangladesh" on 27 January 2020 for the engineering project 'A Multifunctional Robotic Crutch". He also received MIST Commandant's Commendation Certificate for Best Engineering Project, Prestigious MIST Medal and MIST Achiever's Award from MIST Commandant on February 2020 for extracurricular activities & specialization in microcontroller, robotics & IoT. He served as Executive Director(Research & Development), MIST Innovation Club(March 2020- March 2021) and contributed some innovative works in the research and development area. He presented his several research work in IEEE, IEOM, ICMEAS, MIST-2022, Institution of Engineers, Bangladesh- IEB, Bangladesh Council of Scientific and Industrial Research-BCSIR Congress & Military Institute of Science & Technology- MIST, Bangladesh. He shared his successful journey in the IEEE YESIST12 Grand Finale 2022 at SVCE, Bengaluru, India. Some of his achievements in the field of robotics and automation area in the national and international arena are 1st Runner Up(International Conference on Energy and Power, Dhaka-2022), Poster Paper Presentation, 1st Runner Up(Engineering Project Showcasing), Onurono, MIST Biomedical Engineering Festival-2022, 1st Runner Up(Engineering Project Showcasing), Chittagong Science Carnival 2.0, University of Chittagong-2022, Semi-Finalist in the Boost Invention to Innovation Challenge 2021, University of Alabama, U.S.A for the engineering project, "AI Assisted Car with UAV", Outstanding Performance in the "Joyjatra'50 Techfest, 2021, BRAC University for the engineering project, "Smart Unmanned Autonomous Car", 2nd Runner Up(Engineering Project Showcasing), ULAB EEE Fest, University of Liberal and Arts, Dhaka-2019, Semi-finalist, 1st Runner Up(Both robo soccer and engineering project showcasing), BAIUST Robo Fest, Bangladesh Army International University of Science and Technology, Cumilla Cantonment-2019. His research interests are including Robotics & Automation, Sensor, IoT, Embedded System, Artificial Intelligence, Renewable Energy, Material Science, Autonomous and Remote Sensing Systems, Autonomous Robot, Computational Intelligence, Control Engineering, Wireless Communication System, Unmanned Vehicle. He is a member of IEEE, IEOM, ESAB & IEB.

Lean Six Sigma and Operations Excellence

Wednesday, December 27, 2023

Wednesday, December 27, 2023
4:00 – 6:00 pm – Zoom Meeting Room 4 – (Virtual)

Session Chair: Fahrial Alam

Speaker I:



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

Speaker II:



Md. Al Arafat Hossain
Assistant General Manager Operations
Gildan
Bangladesh

Speaker III:



Abdur Rauf
Planning Manager
Epyllion Group
Dhaka, Bangladesh

Speaker IV:



Muhammad Mamun Mia
General Manager, Sinobangla Industries Limited
Ex: Avery Dennison, r-Pac Bangladesh, Pride Group, Apex Holdings Limited
Lean Six Sigma Black Belt, Six Sigma Management Institute Asia
Certified Production Management Professional, AOTS Kansai Kenshu Center, Japan
Masters in Engineering, Bangladesh University of Science & Technology (BUET)
Masters in Business Administration, Jahangirnagar University (JU)
Bachelor in Engineering, Shahjalal University of Science & Technology (SUST)

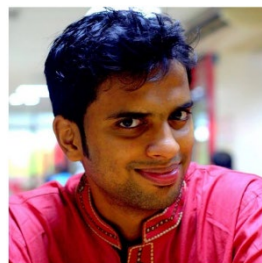
The title of talk: State of the art of Lean Six Sigma and its implementation in the Flexible Packaging Industry.

Mr. Muhammad Mamun Mia currently serves as General Manager at Sinobangla Industries Limited, which is the largest and pioneer joint venture Flexible Intermediate Bulk Container (FIBC) and Woven Polypropylene (WPP) bags manufacturing plant in the country. In his role, he is responsible for overseeing the site's operational performance and ensuring that the business meets its financial, quality, service, safety, employee relations and supply chain management goals. As a board member of Sinobangla Industries Limited, he also plays a key role in making critical business decisions. Mr. Muhammad Mamun Mia holds a Bachelor of Engineering degree in Industrial & Production Engineering from Shahjalal University of Science & Technology, a Master's Degree in Operations Management from Bangladesh University of Science & Technology, and a Master of Business Administration degree with a major in Marketing from Jahangirnagar University. He is a certified operations management professional and has nearly 14 years of experience in the fortune-listed MNC & reputed Local Manufacturing industry in Bangladesh. He has undergone extensive training both at home and abroad, including being a Certified Lean Six Sigma Black Belt from Dr Mikel J Harry Six Sigma Management Institute, USA, and trained in "Production Management" from AOTS Kansai Kenshu Center, Osaka, Japan. He also has Project Management Professional certification, CQI-

IRCA certified ISO 9001: 2015 Quality Management System Lead Auditor certification, and Internal Auditor Training on IMS and BRCGS issue 6 for Packaging Materials. Mr. Muhammad Mamun Mia has helped guide his current and previous organizations in their journey towards Operational Excellence, Lean Manufacturing, Six Sigma Implementation, and soft skills development. He is a member of the Bangladesh AOTS Alumni Society (BAAS) and Dr Mikel J Harry's Six Sigma Management Institute (SSMI).

Speaker V:

Shazal Mahmud
Lean Practitioner, Industrial Engineer
Head of Industrial Engineering
Myanmar GIGI Leather Goods Manufacturing Company Ltd.
Dhaka, Bangladesh

Speaker VI:

Ripon Kumar
Manager (Head of Manufacturing Unit- Nutrition)
Nestle Bangladesh
Gazipur, Bangladesh

Speaker VII:

Radwan Ahmed Rahat
Assistant Manager, Process Improvement & Lean
FCI Group
Dhaka, Bangladesh

Speaker VIII:

Md. Forhad Hossain
Production Manager
Dabur Bangladesh Private Limited.
Ex: Samsung Electronics, Marico Bangladesh Ltd., Road Master Motors
CSSBB from ASQ, Bs.C in IPE from BUET, EMBA in SCM from NSU

Talk title: Operations Excellence in Today's Dynamic Business Landscape.

Md. Forhad Hossain is a recognized expert in the field of Six Sigma and Operations Excellence, with a proven track record of driving organizational success through streamlined processes, continuous improvement, and strategic leadership. As a Certified Lean Six Sigma Black Belt from global leading organization like American Society for Quality, he has developed lean culture and delivered lot of strategic projects in various renowned MNCs in Bangladesh. With 11.5 years of experience in relevant industry & sectors, Forhad Hossain has developed a deep understanding of the critical role that Operations Excellence plays in achieving sustainable growth and competitive advantage. He is passionate about optimizing operational processes, enhancing customer experiences, and fostering a culture of innovation earning acclaim within teams. He has shared his learnings at various industry conferences, workshops, and webinars in renowned universities, earning acclaim his ability to inspire and guide organizations toward Operations Excellence.

14th IEOM Global Business Management and Project Management - Plenary Speakers

2:30 – 4:00 pm, Wednesday, December 27, 2023
Zoom Meeting Room 4 – (Virtual)

Session Chair: Prof. Dr. Engr. Md. Mamunur Rashid, BIM

Speaker I:



Engr. Abdul Halim Shabuj, PRINCE2®, CSCM™
Former Manager, CSI Constructions Limited, Bangladesh
Former Project Manager, Kaymonto & Partners, Bangladesh
Instructor of Microsoft Project & Primavera P6, PMTech Consulting Bangladesh
CEO, PMTC- Planning & Management Training Consultancy, Bangladesh

Talk Title: *Why Time & Cost Increase in Projects & How We Can Control it?*

Mr. Abdul Halim Shabuj is a certified Project Management and Supply Chain Management Professional. He completed a few professional certifications in project management and Supply Chain Management. In project management, he completed PRINCE2 Foundation & PRINCE2 Practitioner from AXELOS, UK, and in Supply Chain Management he completed CSCM (Certified Supply Chain Manager) from ISCEA, USA. Apart from that Mr. Shabuj completed a Bachelor of Science degree in Civil Engineering from IUBAT- International University of Business Agriculture & Technology and a Master degree in Business Administration from Bangladesh University of Professionals (BUP).

Mr. Shabuj has more than 10 years of experience in different sectors such as Mobile Tower Construction, Telecommunication, Interior Fit-Out, and Building Construction. He worked as a Project Management Consultant at HSBC Bank, Citibank N.A. Unilever Bangladesh & IFC Bank on behalf of Kaymonto & Partners and he also worked with different gov't projects as a Project Planning and Implementation Manager.

Mr. Shabuj is a Member of IEB (The Institution of Engineers, Bangladesh), a Professional Member (PM) of BOLD – Bangladesh Organization for Learning & Development, and a Member of the Society of Quantity Surveyors Bangladesh (SQSB). He is an instructor of Microsoft Project & Primavera P6.

Speaker II:



Engr Md Atikur Rahman
Operations Director
Starlit Homes Ltd
Dhaka, Bangladesh

Talk Title: *Quality, Efficiency and Time Management in Construction Projects*

Md Atikur Rahman is graduated from KUET in Civil Engineering and completed Masters in Business Administration from IIUC. He is also trained in management & leadership in business. He has also been completed a course on 'Leadership & Change Management' from Institute of Business Administration, Dhaka University.

Mr. Rahman has rigorous experience in operations management of real estate business and presently he is a director of Starlit Homes Ltd & CDC Properties Ltd. He has comprehended technical & professional expertise in dealing business & corporate management for 20 years.

Mr. Rahman was an elected council member, Dhaka center & Life fellow of IEB and a member of BSTQM (Bangladesh Society for Total Quality Management). He involved with various social & professional activities.

Speaker III:



Md Fahad Chowdhury
Head of Customer Operations
Banglalink
Dhaka, Bangladesh

Speaker IV:



Prof. Dr. Engr. Md. Mamunur Rashid
Head, Production Management Division
Bangladesh Institute of Management (BIM)
4, Sobhanbag, Dhanmandi, Mirpur Road
Dhaka-1207, Bangladesh

Dr. Rashid is Bangladeshi National, Author, Researcher, Academician, Mechanical Engineer, Lawyer, Trainer and Consultant in the field of Occupational Health Safety, TQM, Supply Chain Management, Project Management, Production and Operations Management, Technology Management and Productivity for the last 29 years. He was born on November 1, 1970. He has been serving as a Senior Management Counsellor (Associate Professor) and Head/Chairman of Production Management Division at Bangladesh Institute of Management (BIM), Dhaka since 16 February 2004. He had been serving as a Professor of Industrial Engineering of King Saud University, KSA from September 18, 2016 to July 17, 2017 (on lien from BIM). As a faculty he has been facilitating for the Graduate and Professional training program around 100 in the areas of TQM, HRM, Compliance of ISO 9001:2015, SA8000, WRAP, ISO 14001:2015, OHSAS 18001:2007, Productivity and Competitiveness, Project Management with MS Project-2013, PMP preparation Course, Project Financial Analysis and Management, Integrated Management System, Supply Chain Management and Industrial Safety Management at BIM and outside of BIM. He also worked as adjunct faculty @ 11 universities i.e. Jahangirnagar University, BUP, AUST, IEB, DIU (three), BOU, IBAISU, BUBT, BUET, IPM, DIPTI, IUT, Planning Academy and Research Team Member for OHS and productivity improvement project of AUST-AAU for RMG in Bangladesh. Prior to this job he worked as a Mechanical Engineer of Jamuna Fertilizer Company, Bangladesh for around seven years. He obtained BSc in Mechanical Engineering degree from RUET (erstwhile BITR) on November 27, 1993 with First Class 8th position, MSc in Mechanical Engineering degree from BUET on December 28, 1996, MBA degree from BOU in 2004, LL. B (NU), LLM(BUP) and MSS in IRLS with 1st class 1st from ISWR, DU. He completed a Diploma in Computer Science and Applications (BOU), a PGD in Human Resource Management (IPM) and a Post Graduate Diploma in Marketing Management (BIM). He also completed Management Accounting, Project Management, Technology Management, Safety and Maintenance Management, Information Technology in Business and Artificial Neural System courses in Graduate level study at Industrial and Production Engineering Department of BUET and attended around 100 short courses training program both local and abroad like-Singapore, Nepal and India, Malaysia and Thailand. He has publications in renowned Journals (33); International Conferences (27) and a book on Industrial Health Safety and Welfare. He also obtained a Doctor of Engineering in Manufacturing Engineering degree under the Bangabandhu Fellowship program of GoB at Kitami Institute of Technology, Japan on March 18, 2013. He was also awarded the Scholarship from class IX-X, HSC, BSc Engineering and MSc Engineering degree from GoB. His journals are indexing almost all Universities of the world. He supervised 300 Safety Audits through students and safety related term papers/projects around 200. He is a member of the following professional organization/body: IEB, JSPE, BSME, BSTD, IPM and BCS. For more details kindly visit his profile at LinkedIn and Facebook. He is also a member of Google Scholar, Academia.edu and Scribd.

43rd IEOM Global Industry Solutions and Industry 4.0 – IoT - Plenary Speakers

Thursday, December 28, 2023

Distinguished Speakers on IoT

Thursday, December 28, 2023
2.30 - 4.00 pm, Zoom Meeting Room 4 – (Virtual)

Speaker I:



Mr. Suresh Aluvihara
Researcher in Agricultural Soil Science
Agricultural Research Institute
University of Peradeniya, Sri Lanka

Mr. Suresh Aluvihara completed his postgraduate degree in the year 2023 from Department of Chemical and Process Engineering, University of Peradeniya, Sri Lanka which is well recognized university in the world. His postgraduate research disciplines were Environmental Engineering, Material Engineering, Water Treatments, Pollution Control Engineering and Chemical Engineering. He received his first degree in the year 2017 from a recognized government university in Sri Lanka under the disciplines of Earth Science and relevant scopes. According to his research and academic profile, he has done more than 75 research publications in reputed journals, international research conferences and international workshops as the full papers, conference proceedings and abstracts while obtaining a large number of citations. When considering his contribution in conference works, he participated in a large number of international research conferences under the roles of keynote speaker, invited speaker, featured speaker, guest speaker, moderator and organizing committee member in both online and in person mode. At present he is serving as a researcher in Agricultural Soil Science while joining with an Agricultural Research Institute. In the consideration of his additional research and associated experiences, currently he is giving his services for a few of research journals as an editor and reviewer in his research interests. Nowadays he is conducting a few of research works as the leading investigator in Earth Engineering, Chemical Engineering and Water Engineering disciplines. Furthermore, he received some awards in best young scholar and best young scientist in a few of world recognized awarding schemes and he received some competitive opportunities for the participation in international research conferences and training workshops.

Speaker II:



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

Quazi Nazmul Hossain is a Manufacturing Technology and Digital Transformation Specialist. He is a former General Manager & Group Head of IT at FCI and Apex Group. He earned a bachelor's degree from the National University of Bangladesh and a master's degree from the AMC Business and Engineering Institute, Bangalore, India. Mr. Hossain has 25 years' experience in the IT Sector for diversified industries such as manufacturing, Retail, and Financial Institutions. He is also a Motivated Technology Leader adept at Improving Business and System Availability, Reliability, security, and Scalability. His Entrepreneurial Spirit, Strong Business Acumen, and record of Success in Delivering Technology and Enterprise Solutions to Operations, Cost Management, and Risk Reduction issues. He Accomplished many Technological Projects like IoT, ERP, RFID, AI, OMNICHENEL RPA, and Cloud Computing to transform his past organizations Digitally. Mr. Hossain represented Local Private Sector for the workshop on Open Data Readiness for Bangladesh hosted by World Bank and Government of Bangladesh. He has been trained on Trending Technology locally and abroad. Mr. Hossain actively participated in various Seminars and workshops like CeBET, CITE, Oracle World Conference, IFS World Conference, and SAP Customers Meet on Industrial Technologies in the USA, Australia, Singapore, Malaysia, Sri Lanka, China, India, and Bangladesh. He also Worked as a freelance Technology consultant for various local and multinational organizations.

Speaker III:



Mr. Md. Abdullah Al Mahmud
Founder & CEO, Thriving Skills Limited Assistant Professor of MIS
Manarat International University
Dhaka, Bangladesh

Mr. Md. Abdullah Al Mahmud is Assistant Professor of MIS at the Manarat International University, Dhaka. He served as Coordinator of MBA Program, Department of Business Administration, MIU. Mr. Mahmud received BBA and MBA degree from the University of Dhaka. He is the founder of the Thriving Skills Limited, skills focused self-education platform in Bangladesh. He is skilled in Analytical Skills, Lecturing, Decision-Making, Instructional Design, Data Science, Blockchain Technology, Digital Marketing and Public Speaking. Mr. Mahmud received numerous professional certifications from IBM, Google, LinkedIn Learning, Udemy and many more. Mr. Mahmud launched digital promotional platform of MIU and play vital role in bringing ERP in the organization. Mr. Mahmud has exposed his leadership capacity by organizing Seminars and Leadership Development Program. He has introduced and organized university's first talent search competition "Scholar of MIU" and first presentation competition "MIU Master Presenter". His recent research activities include Business Professionals' Digital Competency in the Fourth Industrial Revolution Era, Digital Competency focused higher education for achieving SDG, Effects of Handheld devices on millennials reading habit, Challenges to implement Information Systems in the Business Organization, Perceptions of Blockchain Technology by Banking Professionals and many others. Mr. Mahmud served as a Humanitarian in Global Goodwill Ambassador. Mr. Mahmud demonstrated his research contribution in distinguished National Conferences in divergent Universities and International Conferences in India, Nepal, Bhutan and Malaysia.

23rd IEOM Global Supply Chain and Logistics

Thursday, December 28, 2023

4.00 - 6.00 pm, Zoom Meeting Room 4 – (Virtual)

Session Chair: Prof. Md. Mamun Habib, Ph.D.

Speaker I:



Prof. Md. Mamun Habib, Ph.D.

Professor, SBE, Independent University, Bangladesh
Visiting Scientist, University of Texas – Arlington, USA
Adjunct Professor, UNIRAZAK, Malaysia
Visiting Professor, Beijing Wuzi University, China
Visiting Professor, UCSI, Malaysia; PUP, Philippines

Talk Title: The Latest Trends of Supply Chain Management in the Post-Pandemic Era

Prof. Dr. Md. Mamun Habib is a Professor at the School of Business & Entrepreneurship (SBE), Independent University, Bangladesh (IUB). He is the Visiting Scientist at the Dept. of Industrial Engineering of the University of Texas – Arlington, USA. He is also the Adjunct Professor at Unirazak, Malaysia; UCSI, Malaysia; Beijing Wuzi University, China and PUP, Philippines. He is involved in Ph.D. supervision locally and internationally. He has more than 22 years of experience in the field of teaching, training, workshop, consultancy, and research. Dr. Habib published about 200+ research papers, including Conference Proceedings, Journal articles, and book chapters/books. Among them, more than 75 articles are Web of Science and Scopus Indexed. He serves as the Editor-in-Chief/Editor/Editorial Board Member of more than 50 journals. He delivers Keynote speeches at 80+ international conferences in various countries of the world. He conducted 200+ Webinars/Workshops locally and internationally. He accomplished his Ph.D. and M.S. with outstanding performance in Computer & Engineering Management (CEM) from Assumption University, Thailand. His core research areas are supply chain management, production & operations management, research methodology, and educational management. Prof. Habib is an active member of different professional organizations, including IEEE (Senior Member); IEOM (President, SCM Technical Division); Chartered Fellow (FCILT), and CILT International (UK) just to name a few. Finally, He is involved with QS World University Ranking/Times Higher Education Ranking as an academician.

Speaker II:



Abdullah Ali Safe Khan CSCM™

Supply Chain Lead
Rancon Trucks and Buses Ltd
Rancon Agro limited (Rancon Auto Division II)
Dhaka, Bangladesh

Speaker III:

Dr. Muhammad Ahasan Habib

Associate Professor & Head of the Dept.
Department of Industrial and Production Engineering (IPE)
Bangladesh Army University of Science and Technology (BAUST)
Saidpur, Bangladesh

Speaker IV:

Panel Speakers

Industry 4.0 Panel

Thursday, December 28, 2023

8.00 - 9.30 am, Zoom Meeting Room 5 – (Virtual)

Panel Chair



Dr. Tahsina Farah Sanam

Associate Professor in the Institute of Appropriate Technology
Bangladesh University of Engineering and Technology (BUET)
Dhaka, Bangladesh

Dr. Tahsina is currently serving as an Associate Professor in the Institute of Appropriate Technology at Bangladesh University of Engineering and Technology. Dr. Sanam completed her Ph.D. from the Department of Electrical and Computer Engineering, Rutgers University, New Jersey in 2020. She earned both her M.Sc. degree in Electrical and Electronics Engineering in 2012, and B.Sc. degree in Electrical and Electronics Engineering in 2009 from Bangladesh University of Engineering and Technology. Her research areas lie at the intersection of applied machine learning, signal processing, and cyber physical systems with a focus on smart city, intelligent systems, and environment sensing & monitoring. Dr. Sanam's primary research focus is to exploit artificial intelligence, advanced statistics and machine learning techniques to make homes and offices beyond smart. The Internet of Things (IoT) has shifted from an

emerging idea into an established industry in its own right – one that smart cities will be an integral part of. Smart city projects leverage IoT, AI, and networking to make urban living more efficient and convenient through everything from smart traffic lights and data-driven energy efficiency schemes, smart hospitals, to electric vehicle (EV) charging stations and interactive kiosks that offer free broadband. In the approach of the Smart Cities Mission, the objective of Dr. Sanam's research is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. The focus is on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model which will act like a lighthouse to other aspiring cities. With that aim, her goal is to establish an independent research career in Bangladesh with multidisciplinary collaborations in the field of smart city development leveraging the advanced Internet of Things (IoT) and Artificial intelligence (AI) technologies to make sensor-based systems smarter, trustworthy, and easier to use. She is currently in charge of the research laboratory named 'Cyber Physical Intelligence' at IAT, BUET as the Lab Director. The Cyber Physical Intelligence (CPI) Laboratory's overarching mission is to propose novel sensing paradigms to transform raw sensed heterogeneous data into valuable information (by giving semantic meaning to the collected data) and, finally, into knowledge through information fusion and integration. The paradigms will apply to those distributed systems that need to timely react to sensor information with an effective action such as cyber-physical systems, which feature a tight combination of, and coordination between, the system's computational and physical elements. The significance of the research is to leverage the acquired knowledge to broaden the potential of cyber physical systems in several dimensions, including smart healthcare, e-commerce, augmentation of human capabilities, understanding of human activities, smart medical waste management and smart traffic management, to name a few.

Global Engineering Education Panel Assessment and Accreditation – Student Learning

Thursday, December 28, 2023

2.30 - 4.00 pm, Zoom Meeting Room 5 – (Virtual)

Panel Honorary Chair



Prof. Dr. Jamal Uddin Ahamed

Head, Department of Mechatronics and Industrial Engineering
Professor, Department of Mechanical Engineering
Chittagong University of Engineering & Technology
Pahartoli, Raozan, Chittagong, Bangladesh

Dr. Jamal Uddin Ahamed is a Professor and Head of Department of Mechatronics and Industrial Engineering, Faculty of Mechanical Engineering at Chittagong University of Engineering and Technology (CUET), Chittagong, Bangladesh. Dr. Ahamed was EX-Dean, Faculty of ME, CUET. He received his B.Sc. from Chittagong University of Engineering and Technology (CUET), M.Sc. from Bangladesh University of Engineering and Technology (BUET) and Ph.D. from University of Malaya, Malaysia. His field of interest is in Heat transfer, Thermal engineering, Fluid Dynamics, Automotive air conditioning, Energy, exergy analysis of vapor compression system, Nano technology in

Refrigeration and air conditioning system, Effect of nano fluid in refrigeration heat transfer performance. He has supervised many under-graduate and post-graduate students in these areas. Moreover, he has published many journal papers, book chapters and conference articles in these areas.

Panel Chair



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

Dr. Abu Taher is an Associate Professor at European University of Bangladesh. His research interests include Waste Management, Solar Cell, Catalysis, Nano-materials and Neno-technology. He earned his PhD from Inha University, South Korea; MSc and BSc from University of Rajshahi, Bangladesh. He was a Faculty member at Inha University, South Korea.

Selected Publications:

- Mymuna Sabrina, Most. Sayima Siddika, Abu Taher, M. Azizul Islam, Bilkis Jahan Lumbiny: Dye and Preservative Efficacy Screening of Some Synthesized Substituted Chalcones through their Bioactivity, Journal of Multidisciplinary Engineering Science and Technology, 2021 (April-2021), 8, 13858-13862.
- Abu Taher, Md. Abu Bin Hasan Susan, Noorjahan Begum, Ik-Mo Lee: Aminefunctionalized metal-organic framework-based Pd nanoparticles: highly efficient multifunctional catalysts for base-free aerobic oxidation of different alcohols, New J. Chem., 2020, 44, 19113-19121.
- Abu Taher, Dong Wook Kim: Pyrene-Tagged Alcoholic Ionic Liquids as Phase Transfer Catalysts for Nucleophilic Fluorination, Bull. Korean Chem. Soc., 2020, 41, 1140-1146.
- Abu Taher, Bilkis Jahan Lumbiny, Ik-Mo Lee: A facile microwave-assisted Knoevenagel condensation of various aldehydes and ketones using amine-functionalized metal organic frameworks, Inorganic Chemistry Communications, 2020, 119, 108092.

Women in Industry and Academia Panel Diversity and Inclusion Panel sponsored by Ford Motor Company

Thursday, December 28, 2023
4.00 - 5.40 pm, Zoom Meeting Room 5 – (Virtual)

Panel Chair



Annesha Ahmed, PMP
Director, Strategy and Business Development
Diesel Power Services Limited
Dhaka, Bangladesh

- PMP (Project Management Institute, USA), MBA in International Business (Dhaka University), BSc in CSE (BRAC University), Mandarin Language Efficient (IML-Dhaka University)
- 16+ Yrs. experience in Business Development Strategy, Project Management, Marketing, Business Research and Consultancy in Power Generation and CMMI Level 5 ITES companies.
- Currently working as Director, Strategy and Business Development, Diesel Power Services Limited, 30+ years old off Grid power supply management company with 80% of area coverage in Bangladesh.
- Involved in Volunteering with Project Management Institute since 2013. Currently leading PMI Bangladesh Chapter as President.

Panel Co-Chair



Kazi Nusrat Islam
Lecturer in Mathematics
Basic Science Department
Primeasia University
Banani, Dhaka-1213, Bangladesh
Assistant Editor of IEOM Society International

Kazi Nusrat Islam is a Lecturer of Mathematics at Northern University Bangladesh, Ashiyan City, Dhaka, Bangladesh. Additionally, she is working as an Assistant Editor in an International Society of Industrial Engineering and Operations Management. She also worked as a Lecturer at Primeasia University, Banani, Dhaka, Bangladesh. She earned Bachelor of Science and Master of Science in Mathematics and Applied Mathematics respectively from Khulna University (KU), Bangladesh, under Science Engineering and Technology School. Also, she was the

Director of Program/ Activities of Industrial Engineering and Operations Management (IEOM) student chapter in Khulna University (2019- 2020). In 2022, she was honored with the National Science and Technology (NST) Fellowship, a prestigious accolade bestowed by the Ministry of Science and Technology in Dhaka, Bangladesh. Her academic prowess was also acknowledged through the Khulna University Academic Merit Scholarship in 2021, following a consistent track record of excellence that earned her the Undergraduate University Merit Scholarship from 2016 to 2020. At the 5th Industrial Engineering and Operations Management Bangladesh Conference in 2022, she was the recipient of the outstanding conference service award from IEOM Society International, USA. She has some journal and conference papers, and also attended different conferences as well as several webinars. She has lifetime membership of Bangladesh Society for Mathematical Biology (BSMB), Dhaka, Bangladesh, and full membership of Organization for Women in Science for the Developing World (OWSD), Trieste, Italy. Her research interests include mathematical Modeling with ODEs, Mathematical Biology, Mathematical Ecology, Mathematical Sociology, and epidemiology.

Parallel Sessions

All Times are in Dhaka, Bangladesh Time

Tuesday, December 26, 2023 - Competitions

Room 1	
8:00 am – 11:00 am	Undergraduate Student Paper Competition sponsored by Siemens
11:00 am – 1:00 pm	Graduate Student Paper Competition sponsored by Eaton Corporation
1:00 pm – 2:30 pm Lunch and Prayer Break	
2:30 pm – 4:30 pm	Human Factors and Ergonomics Competition sponsored by CINTAS Senior Design Project Competition sponsored by Tooling Tech Group Supply Chain and Logistics Competition
5:30 pm - 8:30 pm	Lean Six Sigma Competition sponsored by Tooling Tech Group Masters Thesis Competition Undergraduate Research Competition sponsored by Daikin Applied High School STEM Competition and COVID19 Competition

8:00 am – 1:00 pm, Wednesday, December 27, 2023 – Morning Sessions

Morning Keynotes – Room 1	
8:00 am	Welcome Address - Prof. Dr. Engr. Mohammad Rafiqul Alam, Vice Chancellor, Chittagong University of Engineering & Technology (CUET), Bangladesh
8:10 am	Host Keynote - Prof. Dr. Jamal Uddin Ahamed, Head, Department of Mechatronics and Industrial Engineering, Chittagong University of Engineering & Technology, Pahartoli, Raozan, Chittagong, Bangladesh
8:30 am	Opening Keynote - Dave Harry, Retired U.S. Naval Aviator, CEO of Process Whisperer® Consultants LLC, Greeneville, Tennessee, USA, ASQ certified Six Sigma Black Belt and A PMI certified PMP®
9:00 am	Professor Eldon Caldwell, Industrial Engineering Department Engineering School, University of Costa Rica
9:30 am	Dr. Jihong Yan, Ph.D., Professor in Industrial Engineering, Deputy Dean of School of Mechatronics Engineering, Head of Intelligent Manufacturing Scientific Research Team, Harbin Institute of Technology, Harbin, China
10:00 am	Dr. J Maiti, PhD, Professor and Head, Department of Industrial and Systems Engineering, Indian Institute of Technology Kharagpur, Kharagpur 721 302, West Bengal, India
10:30 am	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
11:00 am	Dr. A. K. M. Nurul Amin, Professor, Department of Industrial and Production Engineering (IPE), Military Institute of Science & Technology (MIST), Dhaka, Bangladesh
11:30 am	Dr. M Easin Ali, Chairman and Chief Consultant, Dhaka City Physiotherapy Hospital, Dhaka, Bangladesh
12:00 pm	Prof. Dr. Engr. Ayub Nabi Khan, Pro Vice Chancellor, BGMEA University of Fashion & Technology, Turag, Dhaka, Bangladesh
12:30 pm	Dr. Erwin Rauch, Professor, Endowed Chair for Sustainable Manufacturing, Institute of Industrial and Energy Engineering, Faculty of Engineering – Free University of Bolzano, Italy
1:00 - 2:30 pm – Lunch and Prayer Break	

2:30 – 5:30 pm, Wednesday, December 27, 2023 – Afternoon Sessions

	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6
2:30 – 4:00 pm	AI	Business Management and Case Studies	Global Engineering Education	Global Business Management and Project Management	Technical Presentations	Technical Presentations
4:00 – 6:00 pm	SCM	Energy	Global AI + ML	Global Lean Six Sigma and Operations Excellence		Technical Presentations

6:00 pm – 9:00 pm, Wednesday, December 27, 2023 – Evening Keynotes

Room 1	
6:00 pm	Professor Qiwei Xie, School of Economics and Management, Beijing University of Technology, Beijing, 100124, China
6:30 pm	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
7:00 pm	Dr. Shuang Ma, School of Economics and Management, University of Science & Technology Beijing, Beijing, China
7:30 pm	Albert Wee Kwan Tan, PhD, Associate Professor and Academic Program Director, Master in Business Administration, Asian Institute of Management (AIM), Manila, Philippines
8:00 pm	Isabela Bonatto, Ph.D., Environmental Consultant, Solid Waste Management and Circular Economy Expert.
8:30 pm	Dr. Anthea Amadi-Echendu, Senior Lecturer, Department of Operations Management, University of South Africa, Pretoria, South Africa

Thursday, December 28, 2023 – Morning Keynotes

Morning Keynotes – Room 1	
8:30 am	Prof. Dr. Ir. Wahyudi Sutopo, Dean for Human Resources, Finance, and Logistics, Faculty of Engineering, UNS and President, IEOM Indonesia Chapter & Director, IEOM Asia Pacific Operations
9:00 am	Prof. Vitor Mendes Caldana, Federal Institute of Sao Paulo (IFSP) – Sorocaba Campus Sorocaba, Sao Paulo, Brazil
9:30 am	Dr. Ahad Ali, Ph.D., Associate Professor and Director of Industrial Engineering, Lawrence Technological University, Southfield, Michigan, USA and Executive Director of IEOM Society International
10:00 am	Dr. Carman Ka Man LEE, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong
10:30 am	Ms. Regine A. Tejada, Department of Industrial Engineering and Operations Research, University of the Philippines Diliman, Philippines
11:00 am	Professor Latifur Khan, Professor, Department of Computer Science, University of Texas at Dallas (UT Dallas), Dallas, Texas, USA
11:30 am	Ferdous Sarwar, PhD, Professor and Head, Department of Industrial & Production Engineering, Bangladesh University of Engineering and Technology Dhaka 1000, Bangladesh
12:00 pm	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
12:30 pm	Dr. Sajal Chandra Banik, Professor, Department of Mechanical Engineering, Chittagong University of Engineering & Technology, Chittagong, Bangladesh
1:00 – 2:30 pm - Lunch and Prayer Break	

Thursday, December 28, 2023 – Afternoon Sessions

	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6
2:30 – 4:00 pm	Modeling and Simulation	Information Systems and IoT	Technical Presentations	Global Industry Solutions	Global Engineering Education Panel	Technical Presentations
4:00 – 6:00 pm	Optimization	Human Factors and Safety	Sustainability and Quality	Global Supply Chain and Logistics	Diversity and Inclusion Panel Sponsored by Ford Motor Company / WIIA	Technical Presentations
7:00 pm – 9:00 pm Awards and Competition Winners Announcements						

December 26, 2023 (Tuesday)

8:00 – 11:00 am, December 26 (Tuesday)

Room 1

Undergraduate Student Paper Competition sponsored by Siemens

Session Chairs:

S. M. Fahim Faisal, Lecturer, Department of Mechatronics and Industrial Engineering, CUET

Nusrat Sultana, Lecturer, Department of Mechatronics and Industrial Engineering, CUET

ID 88 Drone Distribution Model for Emergency Medicine Distribution to Reduce Delivery Time and Costs: Case of the Peruvian Health Sector

David Kevin Jensp 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

ID 92 Application of Brewer Spent Grain from the Beer Industry as a Unique Substrate for the Cultivation of Pleurotus ostreatus mushrooms

Alejandro S. Lozano Rocha and Piero E. Aguilar Luna, Facultad de Ingeniería, Carrera de Ingeniería Industrial, Universidad de Lima, Perú
Carlos-Augusto Lizárraga-Portugal, Research Professor, Facultad de Ingeniería, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

ID 39 Structural Diagnosis, Analysis and Proposals for the Guinea Pig (Cavia Porcellus) Meat Market in the Andean Region

Akemi Milary Bazan-Sambrano, Víctor André Franco-Quiñonez and Marcos Fernando Ruiz-Ruiz, Carrera de Ingeniería Industrial, Facultad de Ingeniería, Universidad de Lima, Perú

ID 15 Supply Chain Management, an advancement of RMG growth in Bangladesh

S.H. Sakib and MD. Shahidul Islam, Department of IPE, Shahjalal University of Science and Technology, Sylhet, Bangladesh

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 45 Quality Improvement of Ceramic Insulator with Six Sigma Method

Chelvy Pricilia, Lithrone Laricha Salomon and Mohammad Agung Saryatmo, Department of Industrial Engineering, Universitas Tarumanagara, Jakarta, Indonesia

ID 46 Analysis of Overall Equipment Effectiveness on Production Machines Using Autonomous Maintenance

Theo Richard, Mohammad Agung Saryatmo and Lithrone Laricha Salomon, Department of Industrial Engineering, Tarumanagara University Jakarta, Indonesia

ID 47 Analysis of Production Processes on Heat Resistant Products Using FMEA & FTA Methods To Improve Product Quality

Fadel Ramadhan, Helena Juliana K, Lithrone Laricha Salomon and Mohammad Agung Saryatmo, Industrial Engineering Study Program, Tarumanagara University, Indonesia

ID 50 Sustainable Value Stream Mapping to Increase Effectiveness and Efficiency in PE-Type Plastic Pellet Companies

Chika Gabriela Keren, Lithrone Laricha Salomon and Wilson Kosasih, Department of Industrial Engineering, Faculty of Engineering, Universitas Tarumanagara, Jakarta, 11440, Indonesia

ID 52 Application of Six Sigma to Reduce Quality Costs in The Production Division with T-shirt and Collared Shirt Products at PT. TKM

Tharisyia Sanrio Putri, Ahmad, and Mohammad Agung Saryatmo, Department of Industrial Engineering, Tarumanagara University, Jakarta, Indonesia

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

ID 57 Ergonomics and Industry 4.0 - Review and Prospectives in Bangladesh

Mohammad Iqbal, Professor, Department of Industrial and Production Engineering, Shahjalal University of Science and Technology, Sylhet, Bangladesh
Md Annin Hasan and Md Anas Sikdar, Department of Industrial and Production Engineering, Shahjalal University of Science and Technology, Sylhet, Bangladesh

ID 77 Analysis of Performance Measurement Using the Balanced Scorecard dan Objective Matrix Method at PT XYZ

Louis Cassilas Setiawan, Mohammad Agung Saryatmo and Lithrone Laricha Salomon, Department of Industrial Engineering, Tarumanagara University Jakarta, Indonesia

ID 80 Sustainable Agricultural Supply Chain Management: A Strategic Roadmap for Development in Bangladesh's Diverse Terrain

Quazi Monjur E-Elahi, Md Sanadiule Shorif Ullash and Rawnak Labiba Noor, Department of Mechanical and Production Engineering, Ahsanullah University of Science and Technology (AUST), Dhaka, Bangladesh

ID 111 Road Smoothness Measurement Using Arduino-Based Vibration Sensor Device: A Case Study in Dhaka City

Mohammad Alinoor, BGMEA, University of Fashion & Technology (BUFT), Bangladesh

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 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 (BME), New Jersey Institute of Technology, Newark, NJ, USA
 Md Tahmid Hasan, Department of Mechanical Engineering, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh

ID 194 Perceived Impact of Mandatory SIM Card Registration to Cybersecurity and Data Privacy Among Engineering Students in Technological Institute of the Philippines

John Michael V. Dela Cruz, Bryant Anthony G. Islao, Guiller E. Lalan, Stephen Shadrach P. Marcos, and Michael John B. Valerio, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines – Quezon City, Cubao, Quezon City, Philippines
 Maricar M. Navarro, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines – Quezon City, Cubao, Quezon City, Philippines

ID 198 Multivariate Regression Analysis of Sleep Deprivation Through Academic Performance of Architecture Students

Mart Lorenz R. Agravante, John Rei C. Garchitorea, Johanh Gabrielle C. Julian, Carl Joseph C. Quintana, Miguel G. Tabirao, Maricar Navarro, and Juan Miguel Dinglasan, Industrial Engineering Program, College of Engineering and Architecture, Technological Institute of the Philippines, Quezon City, Philippines

ID 248 Textile Industry Revolution: Affordable IoT-Integrated SIMS for Efficient Warehousing

Md. Sadman Sakib, Md Mehedi Hasan Mojumder, Abid Easanul Alam, Ahmed Muhiminul Haider, Shiful Islam Bappi, Ashiqur Rahman, Al Muntasir, Al Muntasir, Department of Industrial and Production Engineering, Bangladesh University of Textiles (BUTEX), Tejgaon, Dhaka-1205, Bangladesh

11:00 am – 1:00 pm, December 26 (Tuesday)**Room 1****Graduate Student Paper Competition sponsored by Eaton**

Session Chairs:

Tasnuva Jahan Nuva, Lecturer, Department of Mechatronics and Industrial Engineering, CUET
 Kazi Naimur Rahman, Lecturer, Department of Mechatronics and Industrial Engineering, CUET

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

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

ID 91 A CFD Approach for Stokes' First Problem

Nusrat Jahan, Anwar Ahmad Siddiquee and Mohammad Jalal Ahammad, Department of Mathematics, University of Chittagong, Chattogram, Bangladesh

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

2:30 – 5:30 pm, December 26 (Tuesday)**Room 1**

Session Chairs:

Md. Miraiz Hossain, Lecturer, Department of Mechatronics and Industrial Engineering, CUET
 Tasmia Binte Hai, Lecturer, Department of Mechatronics and Industrial Engineering, CUET

Human Factors and Ergonomics Competition sponsored by CINTAS**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

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

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

Senior Design Project Competition sponsored by Tooling Tech Group**ID 121 Designing Orthopaedic Seat Cushion**

Ambrosius Milano, Lamto Widodo and Lina Gozali, Industrial Engineering Study Program Tarumanagara University, Indonesia

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

Supply Chain and Logistics Competition**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

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 Homayra, 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

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

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

5:30 – 8:30 pm, December 26 (Tuesday)

Room 1

Session Chairs:

Monwar Wadud Hridoy, Assistant Professor, Department of Mechatronics and Industrial Engineering, CUET

Sanjeeb Roy, Assistant Professor, Department of Mechatronics and Industrial Engineering, CUET

Lean Six Sigma Competition sponsored by Tooling Tech Group**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

Masters Thesis Competition**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

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

Undergraduate Research Competition sponsored by Daikin Applied**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

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

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
 Tacbir 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

COVID-19 Analytics Competition

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

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

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

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

December 27, 2023 (Wednesday)

8:00 am – 1:00 pm, December 27 (Wednesday)

Room 1

Keynotes

Moderator – Welcome and Keynotes I-IV: Sanjeeb Roy, Assistant Professor, Department of Mechatronics And Industrial Engineering, CUET

8:00 am Welcome Address

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

8:10 am Host Keynote

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

8:30 – 9:00 am Opening Keynote (Keynote I)

Dave Harry
 Retired U.S. Naval Aviator
 CEO of Process Whisperer® Consultants LLC, Greeneville, Tennessee, USA
 ASQ certified Six Sigma Black Belt and A PMI certified PMP®

9:00 – 9:30 am (Keynote II)

Professor Eldon G. Caldwell Marin, Ph.D., Sc.D, Dr.Ed. – IEOM President, 2023-2025
Professor, Industrial Engineering Department
Engineering School
University of Costa Rica
San Jose, Costa Rica

9:30 – 10:00 am (Keynote III)

Jihong Yan, Ph.D.
Professor in Industrial Engineering
Deputy Dean of School of Mechatronics Engineering
Head of intelligent Manufacturing Scientific Research Team
Harbin Institute of Technology
Harbin, China

10:00 – 10:30 am (Keynote IV)

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

Keynote Speech Title: Safety, Risk and Economics – A Data Analytics Approach

Moderator – Keynotes V-IX: Tasmia Binte Hai, Lecturer, Department of Mechatronics And Industrial Engineering, CUET

10:30 – 11:00 am (Keynote V)

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

11:00 – 11:30 am (Keynote VI)

Dr. A. K. M. Nurul Amin
Professor
Department of Industrial and Production Engineering (IPE)
Military Institute of Science & Technology (MIST)
Dhaka, Bangladesh

11:30 am – 12:00 pm (Keynote VII)

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

12:00 – 12:30 pm (Keynote VIII)

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

12:30 – 1:00 pm (Keynote IX)

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

AI

Session Chair: Basit Mahmud Shahriar

ID 14 Performance Analysis of Bidirectional Associative Memory (BAM) and Feed Forward Multilayer Error Back-Propagation Network (BPN) (Neural Network) for Alphabetic Character Recognition by Applying Digital Image Processing and Neural Network

Mainur Rahman Tarafder, IICT, BUET

ID 20 Potential and Challenges of Artificial Intelligence (AI) and Future Consequences

Commodore Khandakar Akhter Hossain, (E), NUP, ndc, psc, PhD, BN, Commodore Superintendent Dockyard and Chairman, BN Dockyard Technical Institute, Chattogram, Bangladesh

ID 26 Machine Learning model for Healing analysis of Human Injury

Shubhangi D C, Professor, Department of Computer Science, Visvesvaraya Technological University CPGS Kalaburagi, Karnataka, India
Baswaraj Gadgay, Department of Electronics and Communication, Visvesvaraya Technological University CPGS Kalaburagi, Karnataka, India
Bhagyashree, Department of Computer Science, Visvesvaraya Technological University CPGS Kalaburagi, Karnataka, India

ID 152 Predicting Post-COVID Complications of Bangladeshi People Using Machine Learning: Insights, Models, and Future Directions

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

ID 105 Computer Vision based Automated Attendance System using Face Recognition

Abu Salman Shaikat, Bharti School of Engineering and Computer Science, Laurentian University, Canada
Molla Rashied Hussein, Department of Computer Science and Engineering, University of Asia Pacific, Dhaka, Bangladesh
Rumana Tasnim and Ahmed Farhan, Department of Mechatronics Engineering, World University of Bangladesh, Dhaka, Bangladesh
Ahsan Md. Sajid Khan, Bharti School of Engineering and Computer Science, Laurentian University, Canada
Anowar Hossain Mokhtar and Md Mizanur Rahman, Department of Mechatronics Engineering, World University of Bangladesh, Dhaka, Bangladesh

ID 107 Investigating Critical Factors for Implementing Safety Measures in RMG Industry Using ISM-MICMAC

Basit Mahmud Shahriar, Lecturer, Department of Industrial and Production Engineering, Military Institute of Science and Technology (MIST) Faculty of Mechanical Engineering, Dhaka, Bangladesh
Department of Industrial and Production Engineering (IPE), Bangladesh University of Engineering and Technology (BUET), Dhaka – 1000, Bangladesh
Md. Sajib Milki, Lecturer, Department of Industrial Engineering (IE), BGMEA University of Fashion & Technology (BUFT), Dhaka – 1230, Bangladesh
Department of Industrial and Production Engineering (IPE), Bangladesh University of Engineering and Technology (BUET), Dhaka – 1000, Bangladesh

ID 87 Numerical Narratives: Statistical Analysis of Healthcare Institutions in Bangladesh

K. M. Tahsin Kabir, Md. Moynul Islam and Mian Mohammad Rassel, Undergraduate Students in Computer Science and Engineering (CSE), American International University-Bangladesh (AIUB), Dhaka 1229, Bangladesh
Md. Mortuza Ahmmmed, Associate Professor, Department of Mathematics, American International University-Bangladesh (AIUB), Dhaka 1229, Bangladesh

2:30 pm – 4:00 pm, December 27 (Wednesday)

Room 2

Business Management and Case Studies

Session Chair: Shakil Quayes

ID 31 Automatic ABO Blood Group Classification Based on Image Processing Techniques

Md Tasnimul Hasan, Tanvir Mahmud, Farhan Tanvir Rifat and Asir Intisar Khan, Department of Electrical and Electronic Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

ID 58 The Role of Retention of Borrowers and Female Mangers in Microfinance Lending

Shakil Quayes, Professor, Department of Economics, University of Massachusetts Lowell, 113 Wilder Street, Lowell, MA 01854, USA

ID 5 Industrial Productivity Improvement Techniques at Northern Agro Services Ltd: A Case Study

Durlave Roy, PGD Industrial Management, Bangladesh Institute of Management, Bangladesh

ID 89 Finding Out the Issues behind Predicament of Sugar Industry in Bangladesh: A Case Study on Rajshahi Sugar Mills

Tabassum Afrin, Nayan Chakraborty and Md. Rakibul Islam, Department of Industrial & Production Engineering, Rajshahi University of Engineering & Technology (RUET), Rajshahi-6204, Bangladesh

ID 86 Community Empowerment Consideration On-Site Location Selection Using AHP and TOPSIS Methods

Yoga Satria and Djoko Sihono Gabriel, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Depok, 16424, Indonesia

ID 122 Revolutionizing Industry: Unveiling Engineered Bamboo Mass Production for Sustainable Economic Growth in Bangladesh

Md. Tariqul Islam, Postgraduate Student, Department of Civil Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Manshib Tazowar, Postgraduate Student, Department of Civil Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Mohd Salman Mazhar, Senior Research Assistant, Bureau of Research, Testing and Consultation (BRTC-BUET), Dhaka, Bangladesh

2:30 pm – 4:00 pm, December 27 (Wednesday)**Room 3****Global Engineering Education**

Session Chair: Prof. Md Mahbubul Haque PhD (UK) CText FTI, DIU

Speaker I, Wednesday, December 27, 2023, 2:30 – 2:45 pm

Dr. Md. Ehasanul Haque
Senior Assistant Professor and Department Head
Industrial & Production Engineering
Faculty of Engineering
American International University-Bangladesh (AIUB)
Dhaka, Bangladesh

Speaker II, Wednesday, December 27, 2023, 2:45 – 3:00 pm

Fatima Jahara
Senior Assessment Developer
Workera
Bangladesh

Speaker III, Wednesday, December 27, 2023, 3:00 – 3:15 pm

ID 117 Rural community-based tourism: A potential solution to promote sustainable development in Bangladesh

Md. Mehedi Hasan, Department of Tourism and Hospitality Management, European University of Bangladesh
Abu Taher, Department of Industrial and Production Engineering, European University of Bangladesh
Md. Shohel Rana, Department of Business Administration, European University of Bangladesh

Speaker IV, Wednesday, December 27, 2023, 3:15 – 3:30 pm

ID 118 A study on satisfaction of employees in the construction engineering firms in Bangladesh

Md. Monam Uddin, Department of Business and Accountancy, Lincoln University College, Malaysia
Md. Shohel Rana, Department of Business Administration, European University of Bangladesh
Abu Taher, Department of Industrial and Production Engineering, European University of Bangladesh

Speaker V, Wednesday, December 27, 2023, 3:45 – 3:00 pm

ID 119 Impact of green entrepreneurship on sustainable development: An ex-post empirical study in the field of engineering sector in Bangladesh

Md. Shohel Rana and Dr. Farzana Alam, Department of Business Administration, European University of Bangladesh, Bangladesh
Dr. Abu Taher, Department of Industrial and Production Engineering, European University of Bangladesh

Speaker VI, Wednesday, December 27, 2023, 2:45 – 3:00 pm

ID 167 Nature based Solutions (NbS) to protect industry from river erosion

Md. Lutfor Rahman, Water Resources Experts, AGS Quality Actions Limited, Bangladesh

2:30 pm – 4:00 pm, December 27 (Wednesday)**Room 4****Global Business Management and Project Management**

Session Chair: Prof. Dr. Engr. Md. Mamunur Rashid, BIM

Speaker I

Engr. Abdul Halim Shabuj, PRINCE2®, CSCM™
Former Manager, CSI Constructions Limited, Bangladesh
Former Project Manager, Kaymonto & Partners, Bangladesh
Instructor of Microsoft Project & Primavera P6, PMTech Consulting Bangladesh
CEO, PMTC- Planning & Management Training Consultancy, Bangladesh
Talk Title: Why Time & Cost Increase in Projects & How We Can Control it?

Speaker II

Engr Md Atikur Rahman
Operations Director
Starlit Homes Ltd
Dhaka, Bangladesh

Talk Title: Quality, Efficiency and Time Management in Construction Projects

Speaker III

Md Fahad Chowdhury
Head of Customer Operations
Banglalink
Dhaka, Bangladesh

Speaker IV

Prof. Dr. Engr. Md. Mamunur Rashid
Head, Production Management Division
Bangladesh Institute of Management (BIM)
4, Sobhanbag, Dhanmandi, Mirpur Road
Dhaka-1207, Bangladesh

2:30 pm – 4:00 pm, December 27 (Wednesday)

Room 5

Technical Presentations

Session Chair: Md. Asfaq Jamil

ID 22 Optimizing Weight Fractions and Chemical Treatments to increase The Shore Hardness of Woven E-Glass, Woven Jute, and Kenaf Hybrid Composite Laminates
Amartya Biswas, Mahbubur Rahman, Ibrahim Uddin Bhuiyan and Md. Mashuk, Mushfiqul Moula, Department of Mechanical and Production Engineering
Ahsanullah University of Science and Technology (AUST), Dhaka, Bangladesh

ID 37 Investigating Musculoskeletal Disorders and Risk Factors in Selected Bakeries: A Case Study in Sylhet Bangladesh
Dr. Engr. Mohammad Iqbal, Md Al Hadi and Mohammad Abir Hossain Rimon, Department of Industrial and Production Engineering, Shahjalal University
of Science and Technology, Sylhet, Bangladesh

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

ID 6 Assessing the Implementation Challenges of Industrial IoT for Electronics Manufacturing Industry of Bangladesh
Subrata Talapatra and Ali Al Mamun, Department of Industrial Engineering and Management, Khulna University of Engineering & Technology
Khulna-9203, Bangladesh

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

2:30 pm – 4:00 pm, December 27 (Wednesday)

Room 6

Technical Presentations

Session Chair: Rotan Kumar Saha

ID 17 Key Parameter Identification of Linear Congruential Method in Random Number Generation
Polash Kumar Gupto and Abul Mukid Md. Mukaddes, Department of Industrial and Production Engineering, Shahjalal University of Science and
Technology, Bangladesh

ID 24 Derivation of 3-Degree Breakdown of Overall Operational Efficiency (OOE) to Identify the Main Factor of Non-Efficiency in RMG/Footwear Industry
Md Muhibur Rahman, Department of Industrial & Production Engineering, Shahjalal University of Science & Technology, Sylhet

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

ID 41 Investigation of the Effect of Cutting Parameters on Surface Roughness in Dry Turning of Hardened Steel Using the Taguchi Method
Rotan Kumar Saha, Md. Touhiduzzaman, Golap Hossain, Md. Mustafizur Rahman, Narayan Chandra Roy, Md Shazzad Hossain, Md. Tutul Islam, Md
Atikur Rahman and Mohammad Sohel, Department of Industrial and Production Engineering, Dhaka University of Engineering and Technology, Gazipur
1700, Bangladesh

ID 101 The Categorization of Surface Irregularities Presents on the Hot-Rolled Steel Strip, Encompassing Six Distinct Types of Surface Anomalies, Achieved through the Implementation of Vision Transformer
Naimur Asif Borno and Anik Ghosh, Department of Mechatronics Engineering, Rajshahi University of Engineering & Technology (RUET), Rajshahi,
Bangladesh

Durjoy Datta Mazumder, Department of Materials Science & Engineering, Rajshahi University of Engineering & Technology (RUET), Rajshahi, Bangladesh

ID 103 A Comprehensive Review on Materials Used in Various Specialized Areas and Disciplines of Dentistry: Analyzing Their Economic Feasibility and Biocompatibility

Durjoy Datta Mazumder, Department of Materials Science & Engineering, Rajshahi University of Engineering and Technology (RUET), Rajshahi, Bangladesh

ID 84 Experimental Design of an Energy Saving Egg Incubator System using Fuzzy-PID Controller

Md. Mizanur Rahman, Nur Mohammad, Robin Barua, Md. Tazul Islam and Aklima Akter Akhi, Institute of Energy Technology, Department of Electrical and Electronic Engineering, Department of Mechanical Engineering, Department of Statistics, Chittagong University of Engineering & Technology, Chattogram, Bangladesh
Jahangir Nagar University, Bangladesh

4:00 pm – 6:00 pm, December 27 (Wednesday)

Room 1

Supply Chain Management

Session Chair: Md. Sajib Milki

ID 16 Assessing Supply Chain Risk Management Strategies in Industries of Bangladesh Using House of Risk (HoR) And TOPSIS Methods

Md. Ariful Islam, Rifat Anwar and Tanzibul Islam, Department of Industrial and Production Engineering (IPE), Rajshahi University of Engineering & Technology, Rajshahi, Bangladesh

ID 43 Circular Supply Chains in Bangladesh Agriculture: Feasibility and Viability Assessment

Abu Fatin Md Muhtasimul Islam, Graduate Engineer, Department of Industrial and Production Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Md Raian Tahsin, Graduate Engineer, Department of Industrial and Production Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
MD Kashfin, Lecturer, Department of Industrial Engineering, BGMEA University of Fashion and Technology (BUFT)
Manshib Tazowar, Research Assistant, Bureau of Research, Testing and Consultation (BRTC-BUET), Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

ID 54 Customer demand Forecasting to reduce the raw material shortage and opportunity cost

Narinthon Sathanasaowaphak, School of Industrial Engineering, Institute of Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand

ID 164 Machine Learning Techniques in Vehicle Routing Problem

Yousra Omari Alaoui, Phd student, University Moulay Ismail Meknes, Morocco
Mustapha Oudani and Kenza Oufaska, TICLab Laboratory, LERMA Laboratory, International University of Rabat Rabat, Morocco
Khalid El Yassini, IA Laboratory, Faculty of Sciences Moulay Ismail University Meknes, Morocco

ID 104 Assessing Barriers to Circular Supply Chain Management in the Plastic Industry of Bangladesh

Md Simran Sadid, Md. Arafat Hossain Emu, Quazi Monjur E-Elahi and Jannatul Ferdoush Oishe, Department of Mechanical and Production Engineering Ahsanullah University of Science and Technology (AUST), Dhaka, Bangladesh

ID 116 Exploring the Barriers of Circular Supply Chain Implementation in Electric Battery Industry: A Perspective of Developing Country

Md. Sajib Milki, Department of Industrial Engineering, BGMEA University of Fashion and Technology, Dhaka-1230, Bangladesh
Department of Industrial and Production Engineering, Bangladesh University of Engineering and Technology, Dhaka-1000, Bangladesh
Md. Ariful Islam, Department of Industrial & Production Engineering, Rajshahi University of Engineering & Technology, Rajshahi-6204, Bangladesh

ID 228 Efficiency-Driven Cost Optimization of Apparel Supply Chain Using Data Envelopment Analysis

Imtiajur Rahman, Department of Industrial & Production Engineering, ShahJalal University of Science & Technology, Sylhet, Bangladesh
Dipon Roy, Department of Industrial Engineering, Southern Illinois University Edwardsville, Edwardsville, IL 62026, USA

4:00 pm – 6:00 pm, December 27 (Wednesday)

Room 2

Energy

Session Chair: Sajid Hassan Sejan

ID 85 Valorisation of Piggery Sludge to Biogas to Bio Solids Through Anaerobic Digestion

M. M. Manyuchi, Department of Operations and Quality Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
T.N. Mutusva, Department of Mathematical Sciences, School of Industrial Sciences and Technology, Harare Institute of Technology, Zimbabwe
N. Sukdeo, Department of Operations and Quality Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

ID 93 Impact of Base Beam Length on Piezoelectric Cantilever Energy Harvesters: A Numerical Investigation

Md. Mohiuddin, Lecturer, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh
Kazi Mostafijur Rahman, Professor, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna,

Bangladesh

Zahir U. Ahmed, Head, Department of Mechanical Engineering, Professor, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh

Riaz Ahmed, Associate Professor, Department of Mechanical Engineering, University of Wisconsin, Green Bay, Wisconsin-54311, United States

ID 99 Sustainable Water Purification: A Solar-Driven High Pressure Seawater Membrane Filtration System

Sajid Hassan Sejan, Arman Hossain Apu and Fairuz-Al-Nafiz, 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

ID 125 Study the Effect of Wire Mesh Screen on Solar Chimney Assisted Natural Ventilation System

Md. Mizanur Rahman, Naheen Ibn Akbar, Rezwana Salehen, Rumana Tasnim and Salim Sadman Bishal, Department of Mechatronics Engineering World University of Bangladesh, Avenue 6 & Lake Drive Road, Sector: 17/H, Uttara, Dhaka – 1230, Bangladesh

Mohammad Mashud, Professor, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh

ID 126 Examine How a Turbine Ventilator Affects Chimney Performance

Md. Mizanur Rahman, Enamul Hoq, Md. Sadatuzzaman Saigoto, Protik Barua and Farhan Mahbub, Department of Mechatronics Engineering, World University of Bangladesh, Avenue 6 & Lake Drive Road, Sector: 17/H, Uttara, Dhaka – 1230, Bangladesh

Mohammad Mashud, Professor, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh

ID 127 Investigate How Inlet Geometry Affects Vortex Power

Md. Mizanur Rahman, Mustafizur Rahman, Masud Rana, Ahmed Farhan and Md. Sohail Rana, Department of Mechatronics Engineering, World University of Bangladesh, Avenue 6 & Lake Drive Road, Sector: 17/H, Uttara, Dhaka – 1230, Bangladesh

Mohammad Mashud, Professor, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh

ID 98 Investigation of Optimum Numerical Algorithm for Leak Detection in Gas Transportation and Distribution Line

Hamed Shahryar, Afsar Uddin and Nazmul Kader Chowdhury, Department of Mathematics, University of Chittagong, Chattogram, Bangladesh

Dr. Mohammad Jalal Ahammad, Professor, Department of Mathematics, University of Chittagong, Chattogram, Bangladesh

4:00 pm – 6:00 pm, December 27 (Wednesday)

Room 3

Global AI + ML

Session Chair: Abdullah All Mamun Anik, Military Institute of Science & Technology, Dhaka

4:00 pm – Speaker I

Souva Majumder

Doctoral Scholar On AI, CSE Department, BUET Dhaka

M.Tech IIT Kharagpur

Director of Apollonius Computational Business Solutions OPC Pvt. Ltd, India

Title of the talk: Strategic AI for Industrial Engineers

4:15 pm – Speaker II

Abu Anas Ibn Samad

Founder and CEO

Sigmind.ai Limited

Dhaka, Bangladesh

Bachelor in Science, Bangladesh University of Engineering and Technology

Highly Commended Entrant, Global Undergraduate Awards, Ireland

Engineering Panel Judge, Global Undergraduate Awards, Ireland

Author in IEEE and SAE Conference Papers

Presentation Title: Towards Safer and Smarter Cities: Harnessing Computer Vision for Smart Traffic Solutions in AI-Enabled Smart Cities

4:30 pm – Speaker III

Dr. Tahsina Farah Sanam

Associate Professor in the Institute of Appropriate Technology

Bangladesh University of Engineering and Technology (BUET)

Dhaka, Bangladesh

Talk Title: Tackling Healthcare Inequality with Inclusive AI

4:45 pm – Speaker IV

Tareq Mohammad Faruqi

Lecturer & Program Coordinator

City University Bangladesh

Dhaka, Bangladesh

5:00 pm – Speaker V

Abdur Rahman Nayeem
Teaching Assistant at Bangladesh University of Engineering and Technology
Past President of the IEOM AUST Student Chapter

5:15 pm – Speaker VI

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

Talk Title: Building Digital Health Ecosystem to Achieve Universal Health Coverage

5:30 pm – Speaker VII

Abdullah All Mamun Anik
Engineer in the discipline of Industrial & Production Engineering (IPE)
Graduated from Military Institute of Science & Technology (MIST)
Dhaka, Bangladesh

4:00 pm – 6:00 pm, December 27 (Wednesday)

Room 4

Global Lean Six Sigma and Operations Excellence

Session Chair: Fahrial Alam

Speaker I

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

Speaker II

Md. Al Arafat Hossain
Assistant General Manager Operations
Gildan
Bangladesh

Speaker III

Abdur Rauf
Planning Manager
Epyllion Group
Dhaka, Bangladesh

Speaker IV

Muhammad Mamun Mia
General Manager, Sinobangla Industries Limited
Ex: Avery Dennison, r-Pac Bangladesh, Pride Group, Apex Holdings Limited
Lean Six Sigma Black Belt, Six Sigma Management Institute Asia
Certified Production Management Professional, AOTS Kansai Kenshu Center, Japan
Masters in Engineering, Bangladesh University of Science & Technology (BUET)
Masters in Business Administration, Jahangirnagar University (JU)
Bachelor in Engineering, Shahjalal University of Science & Technology (SUST)

The title of talk: State of the art of Lean Six Sigma and its implementation in the Flexible Packaging Industry.

Speaker V

Shazal Mahmud
Lean Practitioner, Industrial Engineer
Head of Industrial Engineering
Myanmar GIGI Leather Goods Manufacturing Company Ltd.
Dhaka, Bangladesh

Speaker VI

Ripon Kumar
Manager (Head of Manufacturing Unit- Nutrition)
Nestle Bangladesh

Gazipur, Bangladesh

Speaker VII

Radwan Ahmed Rahat
Assistant Manager, Process Improvement & Lean
FCI Group
Dhaka, Bangladesh

Speaker VIII

Md. Forhad Hossain
Production Manager
Dabur Bangladesh Private Limited.
Ex: Samsung Electronics, Marico Bangladesh Ltd., Road Master Motors
CSSBB from ASQ, Bs.C in IPE from BUET, EMBA in SCM from NSU
Talk title: Operations Excellence in Today's Dynamic Business Landscape.

4:00 pm – 6:00 pm, December 27 (Wednesday)

Room 5

Panel on Industry 4.0

Panel Chair

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

Panel Speakers

4:00 pm – 6:00 pm, December 27 (Wednesday)

Room 6

Technical Presentations

Session Chair: Shuvra Majumder

ID 12 Electro-Hydraulic Power Steering System for an Automobile

Robin Barua, Md. Mizanur Rahman, Md. Tazul Islam, Syed Masrur Ahmmad, Saswata Dutta and Rasel Sen, Institute of Energy Technology, Department of Mechanical Engineering, Department of Electrical and Electronic Engineering, Chittagong University of Engineering and Technology (CUET), Chattogram, Bangladesh
Premier University, Chattogram, Bangladesh

ID 95 Navigating Lean Practice Challenges; Enhancing Efficiency in Lead Time Reduction within Bangladesh's Pharmaceutical Industry

Mohammad Jawadul Hoque Rohan, Md. Arafat Hossain Emu, Quazi Monjur E-Elahi and Israt Ara Hossain, Department of Mechanical and Production Engineering, Ahsanullah University of Science and Technology (AUST), Dhaka, Bangladesh

ID 158 Interrelation of Lipoprotein(a) Concentrations with The Intensity of Recurrent Coronary Strokes in CAD patients with Assorted LDL-C Levels

Hasnim Naznin Hima, Intern Doctor, Bangabandhu Sheikh Mujib Medical College Hospital, Faridpur, Dhaka, Bangladesh
Foyez Ahmad, Department of Mechanical and Production Engineering, Islamic University of Technology (IUT), Board Bazar, Gazipur, Dhaka, Bangladesh

ID 76 A Comparative Study between Unit Production System and Progressive Bundle System in Apparel Production

Sajid Hossain, MD. Mahmudul Hasan, Bebe Fatema Bristy, Binu Sejuti Dey and Umme Habiba Saima, Department of Industrial & Production Engineering, Faculty of Textile Management & Business Studies, Department of Apparel Engineering, Faculty of Fashion Design & Apparel Engineering Bangladesh University of Textiles (BUTEX), 92 Shaheed Tajuddin Ahmed Avenue, Tejgaon Industrial Area, Dhaka - 1208, Bangladesh
Dr. Mahmuda Akter, Associate Professor & Head, Department of Apparel Engineering, Faculty of Fashion Design & Apparel Engineering, Bangladesh University of Textiles (BUTEX), 92 Shaheed Tajuddin Ahmed Avenue, Tejgaon Industrial Area, Dhaka - 1208, Bangladesh
Sazid Elahi, Assistant Professor, Department of Apparel Engineering, Faculty of Fashion Design & Apparel Engineering, Bangladesh University of Textiles (BUTEX), 92 Shaheed Tajuddin Ahmed Avenue, Tejgaon Industrial Area, Dhaka - 1208, Bangladesh

ID 96 Designing of an Automatic Object Identifier Based on Probabilistic Machine Learning: An Experimental Study

Md Kamrul Hasan Chowdhury and Basudeb Biswas, Department of Mechanical Engineering, Rajshahi University of Engineering and Technology Rajshahi, Bangladesh
Spandan Basak Payel and Md. Tanvir Siraj, Department of Mechanical Engineering, Bangladesh University of Engineering and Technology Dhaka, Bangladesh
Debashis Biswas, Department of Electrical Engineering, National Institute of Technology, Silchar, India

ID 153 A Comparative Analysis of Bangladesh's Energy Emissions: Implications for Carbon Neutrality and Sustainability

Shuvra Majumder, Institute of Energy Technology, Chittagong University of Engineering and Technology, Chattogram, Bangladesh
Spandan Basak Payel and Md. Tanvir Siraj, Department of Mechanical Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

6:00 pm – 9:00 pm, December 27 (Wednesday)**Room 1**

Keynotes

Moderator: Tasnuva Jahan Nuva, Lecturer, Department of Mechatronics And Industrial Engineering, CUET

Keynote X, Wednesday, December 27, 2023, 6:00 – 6:30 pm

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

Keynote Speech Title: Efficiency Analysis and Fair Distribution in Connectome Reconstruction

Keynote XI, Wednesday, December 27, 2023, 6:30 – 7:00 pm

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

Keynote Speech Title: Effects of rising and extreme temperatures on production factor efficiency: Evidence from China's cities

Keynote XII, Wednesday, December 27, 2023, 7:00 – 7:30 pm

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

Keynote Speech Title: Joint operations decision-making optimization involving substitute products based on Stackelberg game and nested PSO

Keynote XIII, Wednesday, December 27, 2023, 7:30 – 8:00 pm

Albert Wee Kwan Tan, PhD
Associate Professor
Academic Program Director, Master in Business Administration
Asian Institute of Management (AIM)
Manila, Philippines

Keynote XIV, Wednesday, December 27, 2023, 8:00 – 8:30 pm

Isabela Bonatto, Ph.D.
Environmental Consultant
Solid Waste Management and Circular Economy Expert

Keynote title: Solid waste management, circular economy and plastic pollution: solutions and opportunities in Brazil and Kenya.

Keynote XV, Wednesday, December 27, 2023, 8:30 – 9:00 pm

Dr. Anthea Amadi-Echendu
Senior Lecturer
Department of Operations Management
University of South Africa
Pretoria, South Africa
Director, Society of Operations Management in Africa (SOMA)

December 28, 2023 (Thursday)

8:00 am – 1:00 pm, December 28 (Thursday)**Room 1**

Keynotes

Moderator: S. M. Fahim Faisal, Lecturer, Department of Mechatronics And Industrial Engineering, CUET

Keynote XVI, Thursday, December 28, 2023, 8:00 – 9:00 am

Prof. Dr. Ir. Wahyudi Sutopo, ST., M.Si, IPU
Vice Dean for Human Resources, Finance, and Logistics, Faculty of Engineering, UNS
Head of Industrial Engineering and Techno-Economics (RITE) Research Group, UNS
Head of Industrial Relations & Commercialization Div., CoE for Electrical Energy Storage Technology, UNS
President, IEOM Indonesia Chapter & Director, IEOM Asia Pacific Operations

Keynote XVII, Thursday, December 28, 2023, 9:00 – 9:30 am

Prof. Vitor Mendes Caldana
Federal Institute of Sao Paulo (IFSP) – Sorocaba Campus
Sorocaba, Sao Paulo, Brazil

Keynote XVIII, Thursday, December 28, 2023, 9:30 – 10:00 am

Ahad Ali, Ph.D.
Associate Professor
Director, Bachelor of Science in Industrial Engineering
Director, Master of Science in Industrial Engineering
Director, Graduate Certificate in Lean Six Sigma
Director, Smart Manufacturing and Lean Systems Research Group
Coordinator, Siemens Electro-Matic Industrial Engineering Lab
A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering
Lawrence Technological University
Southfield, Michigan, MI 48075, USA
Executive Director of IEOM Society International

Moderator: Kazi Naimur Rahman, Lecturer, Department of Mechatronics and Industrial Engineering, CUET

Keynote XIX, Thursday, December 28, 2023, 10:00 – 10:30 am

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

Keynote speech title: Purchase decision analysis with Biosensor data

Keynote XX, Thursday, December 28, 2023, 10:30 – 11:00 am

Ms. Regine A. Tejada
Assistant Professor
Department of Industrial Engineering and Operations Research
University of the Philippines Diliman
Philippines

Keynote XXI, Thursday, December 28, 2023, 11:00 – 11:30 am

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

Title: Semi-Supervised Learning, Generative AI and Scalable Spatio-Temporal Graph Neural Networks for Social Good

Moderator: Tasnuva Jahan Nuva, Lecturer, Department of Mechatronics And Industrial Engineering, CUET

Keynote XXII, Thursday, December 28, 2023, 11:30 am – 12:00 pm

Ferdous Sarwar, PhD
Professor and Head
Department of Industrial & Production Engineering
Bangladesh University of Engineering and Technology
Dhaka 1000, Bangladesh

Keynote XXIII, Thursday, December 28, 2023, 12:00 – 12:30 pm

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

Keynote XXIV, Thursday, December 28, 2023, 12:30 – 1:00 pm

Dr. Sajal Chandra Banik
Professor
Department of Mechanical Engineering
Chittagong University of Engineering & Technology (CUET)
Chittagong, Bangladesh

Effect of Industry 4.0 and AI in Future Skill Demand: Perspective to Bangladesh

1:00 – 2:30 pm – Lunch and Prayer Break

2:30 pm – 4:00 pm, December 28 (Thursday)

Room 1

Modeling and Simulation

Session Chair: R. K. B. M. Rizmi

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

ID 108 Overall Thermal Assessment of Water and Nanofluid as Cooling Fluids in CPU Cooling

R. K. B. M. Rizmi, Department of Mechanical Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka 1000, Bangladesh
A. K. Din Mohammad, Department of Information Technology, Jahangirnagar University, Savar, Dhaka-1342, Bangladesh
MD. Mahbubur Rahman Khan, Department of Agriculture, Sher E Bangla Agricultural University, Khaled Mosharraf Avenue, Dhaka 1207, Bangladesh

ID 112 Numerical Optimization of Volume Fraction of Nanofluid For Conjugate Mixed Convection in A Lid Driven Partitioned Square Cavity

R. K. B. M. Rizmi and Sadman Akib Tamim, Department of Mechanical Engineering, Bangladesh University of Engineering and Technology (BUET)
Dhaka 1000, Bangladesh

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

ID 114 Computational Investigation of Heat Transfer Through Varied Fin Plate Geometries: A Comparative Study and Algorithm Development

Nazmul Kader Chowdhury, Afsar Uddin and Hamed Shahryar, Department of Mathematics, University of Chittagong, Chattogram, Bangladesh
Dr. Mohammad Jalal Ahammad, Professor, Department of Mathematics, University of Chittagong, Chattogram, Bangladesh

ID 130 Effect of Magnetic Field on Free Convection Flow of Nanofluid within a Wavy top Cavity with an Obstacle

Mohammad Mahfuzul Islam, Department of Mathematics, Dhaka University of Engineering and Technology Gazipur-1700, Bangladesh
Md. Abdul Alim, Department of Mathematics, Bangladesh University of Engineering and Technology Dhaka-1000, Bangladesh
Md. Mahmud Alam, Department of Mathematics, Dhaka University of Engineering and Technology Gazipur-1700, Bangladesh

ID 238 Elucidating Characteristics of Porous Twisted Tape Inserts on Heat Transfer in Internal Pipe Flow of Heat Exchanger

Md Radwanul Kabir, Joy Ganguly and Md Sanney UI Alam, Department of Mechanical Engineering, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh

2:30 pm – 4:00 pm, December 28 (Thursday)

Room 2

Information Systems and IoT

Session Chair: Md Mizanur Rahman, Department of Mechatronics Engineering, World University of Bangladesh

ID 100 Unlocking the Potential of Digital Technologies to Support Industrial Symbiosis: A literature review

Ahmed Mehrem and Bernd Noche, Institute of Transport Systems and Logistics, Factory of Engineering, University of Duisburg-Essen, Forsthausweg 2, 47057 Duisburg, Germany

ID 124 Design and Development of a Module-based EduKit for Teaching and Learning with PIC Microcontroller

Muhammad Sheikh Sadi, Bangladesh University of Engineering and Technology, Bangladesh

ID 2 Performance Analysis of Bidirectional Associative Memory (BAM) and Feed Forward Multilayer Error Back-Propagation Network (BPN) (Neural Network) for Alphabetic Character Recognition by Applying Digital Image Processing and Neural Network

Mainur Rahman Tarafder, IICT, BUET

ID 109 Applying project management to digital marketing platforms

Professor Afaf Bensghir, MADEO Laboratory, High School of Technology, Med First University, Morocco

Leila BAKHTI, PhD Student, MADEO Laboratory, High School of Technology, Med First University, Morocco
 Professor ERRAMDANI Mohammed, MATSI Laboratory, High School of Technology, Med First University, Morocco

ID 21 Evaluation of Internet of Things (IoT) as Global Technology and Future Consequence

Commodore Khandakar Akhter Hossain, (E), NUP, ndc, psc, PhD, BN, Commodore Superintendent Dockyard and Chairman, BN Dockyard Technical Institute, Chattogram, Bangladesh

ID 106 IOT and GSM Integrated Automated Water Pump Controlling System for Prevention of Water Wastage

Rumana Tasnim, Ahmed Farhan, Rezwan Us Saleheen, Md Zonayed, Enamul Hoq, Farhan Mahbub and Md Mizanur Rahman, Department of Mechatronics Engineering, World University of Bangladesh
 Molla Rashied Hussein, Department of Computer Science and Engineering, University of Asia Pacific

2:30 pm – 4:00 pm, December 28 (Thursday)

Room 3

Technical Presentations

Session Chair: Ekramul Haque, American International University-Bangladesh (AIUB), Dhaka 1229, Bangladesh

ID 148 Perception of Generative AI by Business Professionals

Md. Abdullah Al Mahmud, Assistant Professor of MIS, Coordinator, MBA Program, Manarat International University, Bangladesh

ID 146 Transparency in House Rent of Dhaka: An Explainable AI Based Predictive Framework

Taeef Najib, Sidetrek, Dhaka, Bangladesh.
 Fahim Muntasir, BRAC University, Dhaka, Bangladesh
 Wasif Al Wazed, Rajshahi University of Engineering & Technology, Rajshahi, Bangladesh

ID 83 Enhancing Security and Privacy in SIM Card Readers: A Comprehensive Analysis and Mitigation Strategies

Salmuna Sajjad Mishi, World University of Bangladesh, Dhaka, Bangladesh

ID 169 The Impact of the Fourth Industrial Revolution and Machine Learning on Employee Skill Sets for Sustainable Survival in the Retail Industry

Md. Habibur Rahman, Department of Mathematics, University of Chittagong, Chittagong, Bangladesh
 Md Aminul Islam, School of Engineering, Computing, and Mathematics, Oxford Brookes University, UK
 Yamin Hossain, Department of computer science and engineering, VIT-AP University, Andhra Pradesh, India
 Rejwan Bin Sulaiman, Lecturer, University of Northumbria, UK
 Abdullah Hafez Nur, Department of Electronic and Telecommunication Engineering, International Islamic University Chittagong

ID 82 Beyond the Gridlock: A Comparative Study of HTMS and ATMS in Achieving Sustainable Traffic Solutions for Dhaka City

Ibrar Amin, Ishrakul Tahmid and Faiza Mahmood Aroni, Undergraduate Students in Computer Science and Engineering (CSE), American International University-Bangladesh (AIUB), Dhaka 1229, Bangladesh
 Md. Mortuza Ahmmed, Associate Professor, Department of Mathematics, American International University-Bangladesh (AIUB), Dhaka 1229, Bangladesh

ID 90 Statistical Modeling of Air Quality Determinants in Urban Dhaka

Mst. Nadiya Noor and Ekramul Haque, Undergraduate Students in Computer Science and Engineering (CSE), American International University-Bangladesh (AIUB), Dhaka 1229, Bangladesh
 Md. Mortuza Ahmmed, Associate Professor, Department of Mathematics, American International University-Bangladesh (AIUB), Dhaka, Bangladesh

2:30 pm – 4:00 pm, December 28 (Thursday)

Room 4

Global Industry Solutions and Industry 4.0

Session Chair: Mr. Md. Abdullah Al Mahmud

Speaker I

Mr. Suresh Aluvihara
 Researcher in Agricultural Soil Science
 Agricultural Research Institute
 University of Peradeniya
 Sri Lanka

Speaker II

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

Speaker III

Mr. Md. Abdullah Al Mahmud
 Founder & CEO, Thriving Skills Limited Assistant Professor of MIS

Manarat International University
Dhaka, Bangladesh

Speaker IV

ID 236 Strategic Energy Management: Exploring the Benefits of ISO 50001 Implementation through Case Study

Faria Haque Pushpo and Md. Kutub Uddin
Department of Mechanical Engineering
Khulna University of Engineering and Technology (KUET)
Khulna, Bangladesh

Speaker IV

ID 42 Feasibility of Employing Prestressed Precast Concrete Pavement with Welded Wire Mesh: A Sustainable Solution

Md. Tariqul Islam, Postgraduate Student, Department of Civil Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Manshib Tazowar, Postgraduate Student, Department of Civil Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Mohd Salman Mazhar, Senior Research Assistant, Bureau of Research, Testing and Consultation (BRTC-BUET), Dhaka, Bangladesh
Dr. Ishtiaque Ahmed, Professor, Department of Civil Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

2:30 pm – 4:00 pm, December 28 (Thursday)

Room 5

Global Engineering Education Panel

Panel Honorary Chair

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

Panel Chair

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

Dr. Abu Taher is an Associate Professor at European University of Bangladesh. His research interests include Waste Management, Solar Cell, Catalysis, Nano-materials and Neno-technology. He earned his PhD from Inha University, South Korea; MSc and BSc from University of Rajshahi, Bangladesh. He was a Faculty member at Inha University, South Korea.

Panel Speaker I

Panel Speaker II

Panel Speaker III

Panel Speaker IV

2:30 pm – 4:00 pm, December 28 (Thursday)

Room 6

Technical Presentations

Session Chair: Md Wahidul Hoque, Deputy Director, Security, Chittagong Port Authority, Bangladesh

ID 48 Development and Analysis of Rechargeable Smart-Shoe for Visually Impaired People

Pranta Dutt, Mahmud Alam Pranto, Firoz Ahmed Chowdhury and M S Rabbi, Department of Mechanical Engineering, Chittagong University of Engineering and Technology, Chattogram-4349, Bangladesh

ID 196 Experimental Study on the Mechanical Properties of Woven Jute Fiber/Human Hair Reinforced Hybrid Composite

Md Shahriar Ali, Masuka Mahnur Oishy, Md Shariful Islam and Md Arifuzzaman
Department of Mechanical Engineering
Khulna University of Engineering and Technology (KUET)
Khulna, Bangladesh

ID 197 A Numerical Investigation of a Horizontal Spiral Coil Ground Heat Exchanger (HSGHE) for a Geothermal Heat Pump Using Variable Fin Characteristics

Md Aasef Azhar Khan, Department of Mechanical Engineering, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh
Merajul Islam, Department of Mechanical Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

G M Ismail Hossain, Department of Mechanical Engineering, Lecturer, Sonargaon University, Dhaka, Bangladesh
Torikul Islam, Department of Biomedical Engineering, New Jersey Institute of Technology, Newark, NJ, USA

ID 233 Development of Functional Jute Fabric for Food Packaging

Md. Moslem Uddin
Technological Research Wing, Bangladesh Jute Research Institute,
Manik Mia Avenue, Dhaka-1207

Md. Abdus Shahid
Department of Textile Engineering
Dhaka University of Engineering and Technology (DUET),
Gazipur-707

Mst. Aleya Nasreen
Microbiology and Biochemistry Department
Technological Research Wing, Bangladesh Jute Research Institute,
Manik Mia Avenue, Dhaka-1207

Mir Akmam Noor Rashid
Dyeing and Printing Division
Technological Research Wing, Bangladesh Jute Research Institute,
Manik Mia Avenue, Dhaka-1207

ID 234 Implementation of TQM, Service Innovation, and Risk Management in the Public Services Sector: The Case of Ministry of Industry Indonesia

Zakiyah Ash-Shofi, T Yuri M Zagloel
Industrial Engineering Department, Faculty of Engineering
University of Indonesia
Salemba 10430, Indonesia

ID 235 AI Based Paperless Container Delivery System: A Model For Smart Chittagong Port

Md Wahidul Hoque, Deputy Director, Security, Chittagong Port Authority, Bangladesh
Mostafa Arif-ur Rahman, Director, Chittagong Port Authority, Bangladesh

4:00 pm – 6:00 pm, December 28 (Thursday)**Room 1****Optimization**

Session Chair: Khondoker Safin Kaosar Saad, Department of Industrial and Production Engineering, Military Institute of Science and Technology (MIST), Dhaka-1216, Bangladesh

ID 28 Lean Six-Sigma (LSS) workforce readiness identifiers

Ziaul Huq, University of Nebraska at Omaha, USA United States

ID 38 Fair Assignment of Matchdays in Turkish Super League under a Rest Mismatch Minimization Objective

Yasin Göçgün, Department of Industrial Engineering, School of Engineering and Natural Sciences, İstanbul Medipol University, Beykoz, İstanbul, Türkiye
Niyazi O Bakır, Department of Mechanical & Industrial Engineering, College of Engineering, Sultan Qaboos University, Al-Khoudh, Sultanate of Oman

ID 102 Optimization at King Abdullah Port

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

ID 123 Smart Charging Infrastructure Optimization for Electric Vehicles Using Data Science and Predictive Analytics

Toukir Ahamed, Department of Industrial and Production Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Dr. Ferdous Sarwar, Professor and Head of the Department, Industrial and Production Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

ID 128 Optimization of Wire EDM Process Parameters in the Fabrication of Spur Gear Using Taguchi Technique

Khondoker Safin Kaosar Saad, Md Omar Al Javed, Zayed Ur Rahman, Tasfia Saba and Adib Bin Rashid, Department of Industrial and Production Engineering, Military Institute of Science and Technology (MIST), Dhaka-1216, Bangladesh

ID 49 Optimized Drone Navigation: Integrating Neural Networks with Ant Colony Optimization for Precise and Fuel-Efficient Delivery Routes

Arnob Paul and Rafat Ferdaush, Dept. of Electrical and Electronic Engineering, Shahjalal University of Science and Technology, Sylhet, Bangladesh

ID 154 Optimized Drone Navigation: Integrating Neural Networks with Ant Colony Optimization for Precise and Fuel-Efficient Delivery Routes

Arnob Paul and Rafat Ferdaush, Dept. of Electrical and Electronic Engineering, Shahjalal University of Science and Technology, Sylhet, Bangladesh

4:00 pm – 6:00 pm, December 28 (Thursday)

Room 2

Human Factors and Safety

Session Chair: Syam Babu Bokka, Department of Mechanical Engineering, National Institute of Technology Manipur, Imphal, India

ID 33 Development of Musculoskeletal Disease Risk Factor Assessment (MDRFA) Model for the Factory Workers in Bangladesh
Fardeen Islam, Mohammad Abu Shahriar Hossain and Kazi Humayra Shams, Department of Industrial Engineering and Management, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh

ID 55 Rapid Upper Limb Assessment (RULA) Technique for Posture Correction in Worker Reducing Musculoskeletal Disorders and Enhancing Work Efficiency

Syam Babu Bokka, Department of Mechanical Engineering, National Institute of Technology Manipur, Imphal, India

Anil Kumar Birru, Department of Mechanical Engineering, National Institute of Technology Manipur, Imphal, India

Netai Chandra Dey, Department of mining engineering, IEST Shibpur, Kolkata, India

Amandeep Kaur, Department of Conservative Dentistry and Endodontics, Oral Health Sciences Centre, PGIMER, Sangrur, Punjab, India

ID 78 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

ID 18 Potential and Challenges of Bangladesh Shipbuilding in Contest of Global

Commodore Khandakar Akhter Hossain, (E), NUP, ndc, psc, PhD, BN, Commodore Superintendent Dockyard and Chairman, BN Dockyard Technical Institute, Chattogram, Bangladesh

ID 19 Evaluation of Prospects and Challenges of Local Ship Recycling Industry in Contest of Global

Commodore Khandakar Akhter Hossain, (E), NUP, ndc, psc, PhD, BN, Commodore Superintendent Dockyard and Chairman, BN Dockyard Technical Institute, Chattogram, Bangladesh

ID 29 Total Productive Maintenance: Enhancing Overall Equipment Efficiency in Steel industry of Bangladesh

Joyanta Das, Department of Industrial and Production Engineering, Khulna University of Engineering & Technology, Khulna, Bangladesh

Prasis Saha, Department of Electrical and Electronics Engineering, Dhaka, Bangladesh

Sanatan Sushil, Department of Industrial and Production Engineering, Shahjalal University of Science & Technology, Sylhet, Bangladesh

4:00 pm – 6:00 pm, December 28 (Thursday)

Room 3

Sustainability and Quality

Session Chair: Mohammad Abdul Baset, DUET, Bangladesh

ID 165 Community Service: Assistance of Water Hyacinth Craftsmen to Design Ergonomic Chairs, Bantul, Yogyakarta

Lina Gozali, Ronaldo Setiawan and Mario Ajipangestu dan Frans Jusuf Daywin, Industrial Engineering Department, Universitas Tarumanagara Indonesia

ID 25 Real-time Battery Swapping Station Recommendation using Ensemble Clustering

Donghwan Shin and Taesu Cheong, School of Industrial and Management Engineering, Korea University, Seoul, South Korea

ID 147 Prioritizing sustainable indicators for Mineral industry of Pakistan

Saleem Raza Chalgri, Department of Mining Engineering, Mehran University of Engineering and Technology Jamshoro

Muhammad Saad Memon and Shakeel Ahmed Shaikh, Department of Industrial Engineering and Management, Mehran University of Engineering and Technology Jamshoro

Fahad Irfan Siddiqui, Department of Mining Engineering, Mehran University of Engineering and Technology Jamshoro

ID 94 Selection of Hospital Support Ships Using the Analytical Hierarchy Process Method in the Indonesian Marine Police in the Main Duty and Function of Security Maintenance

Panji Pratama Hendra Surya, Industrial Engineering Department, Faculty of Engineering, University of Indonesia, Depok, Indonesia

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

ID 1 A Paper Review on Lean Manufacturing and Six Sigma

Mohammad Khalid Bin Syeed, Department of Mechanical and Production Engineering, Islamic University of Technology, Gazipur, Bangladesh

ID 110 Development of an Implementation Framework for a Quality Management System at Manufacture of SMEs to Improve Efficiency of existing processes

Ahmed Mehrem and Piyush Goel, Institute of Transport Systems and Logistics, Factory of Engineering, University of Duisburg-Essen, Forsthausweg 2, 47057 Duisburg, Germany

ID 168 Transforming Waste Polyester Threads into Fuel and Gas: A Sustainable Solution for Resource Recovery

4:00 pm – 6:00 pm, December 28 (Thursday)

Room 4

Global Supply Chain and Logistics

Session Chair: Prof. Md. Mamun Habib, Ph.D.

Speaker I

Prof. Md. Mamun Habib, Ph.D.
Professor, SBE, Independent University, Bangladesh
Visiting Scientist, University of Texas - Arlington, USA
Adjunct Professor, UNIRAZAK, Malaysia
Visiting Professor, Beijing Wuzi University, China
Visiting Professor, UCSI, Malaysia; PUP, Philippines

Talk Title: The Latest Trends of Supply Chain Management in the Post-Pandemic Era

Speaker II

Abdullah Ali Safe Khan CSCM™
Supply Chain Lead
Rancon Trucks and Buses Ltd
Rancon Agro limited (Rancon Auto Division II)
Dhaka, Bangladesh

Speaker III

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

Speaker IV

ID 199 Aggregate Planning, MPS, And MRP of a Textile Production

Abdullah Al Rahi
University of Windsor
Research and Graduate Teaching Assistant,
401 Sunset Avenue Windsor, Ontario, Canada

Musabbir Hasan Sumon
University of Windsor,
401 Sunset Avenue Windsor, Ontario, Canada

Ebrahim Pichka
University of Windsor
Research and Graduate Teaching Assistant
401 Sunset Avenue Windsor, Ontario, Canada

Qausar Rhaman
Business Data Analyst, Carhartt WIP.
Uttara, Dhaka-1230. Bangladesh

4:00 pm – 6:00 pm, December 28 (Thursday)

Room 5

Diversity and Inclusion Panel Sponsored by Ford Motor Company Women in Industry and Academia (WIIA)

Panel Chair

Annesha Ahmed, PMP
Director, Strategy and Business Development
Diesel Power Services Limited
Dhaka, Bangladesh

Panel Co-Chair

Kazi Nusrat Islam
Lecturer in Mathematics
Basic Science Department
Primeasia University
Banani, Dhaka-1213, Bangladesh
Assistant Editor of IEOM Society International

Panel Speaker I

Panel Speaker II

Panel Speaker III

Panel Speaker IV

4:00 pm – 6:00 pm, December 28 (Thursday)

Room 6

Technical Presentations

Session Chair: Md. Sifat Ibna Islam

ID 246 Enable to Transfer Bulk Power from Long Distance Without Any Modification of Existing Over Head Transmission Line and Only Replacing the Conductor

Md. Rokibul Alam
Senior General Manager (Engineering)
BRB Cable Industries Limited
BSCIC Industrial Estate
Kushtia-7000, Bangladesh

ID 75 Revolutionizing Urban Life: Smart Mobility and Smart Cities in Bangladesh

Quazi Monjur E-Elahi, Syeda Umme Habiba and Md Sufi Ahmed Talukder, Department of Mechanical and Production Engineering, Ahsanullah University of Science and Technology (AUST), Dhaka, Bangladesh

ID 193 A Combined Approach to Safety and Security of IoT by applying FTA and AT with Minimal Cut sets

Mohammad Rezaul Karim, University of Bradford, UK

ID 227 Modification of Symbiotic Organisms Search Algorithm for Blood Distribution Problems in Pekanbaru City Blood Bank Unit

Muhammad Isnaini Hadiyul Umam, Fitra Lestari, Muhammad Rizki, and Nazaruddin, Industrial Engineering Department, Faculty of Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia
Muhammad Luthfi Hamzah, Information System Department, Faculty of Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia
Hartono, Mathematical Education Department, Faculty of Tarbiyah and Education, Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia
Budi Azwar, Islamic Economics Department, Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia
Salmaini Yeli, Faculty of Ushuluddin
Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia

ID 229 Modeling FDM Gear Printing: An Experimental Design-Based Mathematical Approach

Abderrahim OUDRA, Hamza ISKSIQUI, Latifa EZZINE and Haj EL MOUSSAMI
Engineering of complex systems and structures (ECSS), ENSAM, Moulay Ismail University, Meknes, Morocco

ID 230 IoT Integrated Fire Prevention and Alert Systems for Garments Industries in Bangladesh

Mohammad Rezaul Karim, Sohag Kabir, Ci Lei, and Raluca Lefticaru, School of Computer Science, Artificial Intelligence and Electronics, Faculty of Engineering and Digital Technologies, University of Bradford, Bradford, United Kingdom
Mohammad Abdul Baset, Department of Textile Engineering, Dhaka University of Engineering and Technology (DUET), Gazipur, Bangladesh

ID 237 Mapping Blood Center Locations in Rajshahi By AHP and TOPSIS

Md. Sifat Ibna Islam and Tomal Sarkar, Department of Industrial & Production Engineering, Faculty of Mechanical Engineering, Rajshahi University of Engineering and Technology (RUET), Rajshahi-6204, Bangladesh
Md. Sazol Ahmmmed, Doctorate of Philosophy (PhD) Mechanical Engineering, Missouri University of Science and Technology, Rolla, Missouri, USA

7:00 – 9:00 pm, December 28, Conference Awards Ceremony

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Bangladesh University of Engineering and Technology (BUET)
Dhaka, Bangladesh

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Military Institute of Science & Technology (MIST)
Dhaka, Bangladesh

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Associate Professor & Head, Department of Industrial and Production Engineering
Bangladesh Army University of Science and Technology (BAUST)
Saidpur Cantonment, Nilphamari, Bangladesh

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Khulna University of Engineering & Technology (KUET)
Khulna -9203, Bangladesh

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European University of Bangladesh, Dhaka, Bangladesh

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Visiting Scientist, University of Texas – Arlington, USA
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Visiting Professor, Beijing Wuzi University, China
Visiting Professor, UCSI, Malaysia; PUP, Philippines

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Director, Strategy and Business Development
Diesel Power Services Limited
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 <p style="font-size: small; margin: 5px 0;">HONOURABLE GUEST</p> <p style="font-weight: bold; margin: 5px 0;">ENGR. MOHAMMAD FARHAN FERDOUS</p> <p style="font-size: x-small; margin: 5px 0;">FOUNDER & CHAIRMAN Japan-Bangladesh Robotics and Advanced Technology Research Center (JBRATRC), Japan</p>	 <p style="font-size: small; margin: 5px 0;">HONOURABLE GUEST</p> <p style="font-weight: bold; margin: 5px 0;">PROF. DR. MD. MIZANUR RAHMAN</p> <p style="font-size: x-small; margin: 5px 0;">HEAD OF DEPARTMENT Department of Mechatronics Engineering World University of Bangladesh</p>	 <p style="font-size: small; margin: 5px 0;">HONOURABLE GUEST</p> <p style="font-weight: bold; margin: 5px 0;">DR. MD. RIYAD TANSHEN</p> <p style="font-size: x-small; margin: 5px 0;">HEAD OF DEPARTMENT Department of Electrical & Electronics Engineering World University of Bangladesh</p>	 <p style="font-size: small; margin: 5px 0;">HOST</p> <p style="font-weight: bold; margin: 5px 0;">RUMANA TASNIM</p> <p style="font-size: x-small; margin: 5px 0;">FACULTY ADVISOR IEOM Society WUB Chapter World University of Bangladesh</p>
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	149. Papua New Guinea University of Technology	225. Arongghata, Khulna, Bangladesh
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Nov. 14-16, 2023, Melbourne
Venue: Batman's Hill Hotel on Collins



14th International Conference on
**Industrial Engineering and
Operations Management**
February 12-14, 2024, Dubai, UAE
Venue: Hyatt Regency Dubai, Host: Khalifa University



5th African International Conference on
**Industrial Engineering &
Operations Management**
Johannesburg/Pretoria, South Africa
April 23-25, 2024, Venue: CSIR ICC



5th South American Conference on
**Industrial Engineering &
Operations Management**
Bogota, Colombia, May 7-9 2024
Host: Fundación Universitaria UNIR Colombia



9th North American Conference on
**Industrial Engineering and
Operations Management**
Washington, DC, USA, June 4-6, 2024
Host: University of the District of Columbia (UDC)
Venue: UDC Campus, 4200 Connecticut Ave NW



7th European Conference on
**Industrial Engineering &
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Augsburg / Munich, Germany
July 16-18, 2024
Host: Augsburg Technical University



5th Asia Pacific Conference on
**Industrial Engineering and
Operations Management**
Sept. 10-12, 2024, Tokyo, Japan
Host: Hosei University, Venue: Yokohama



4th Indian International Conference on
**Industrial Engineering and
Operations Management**
November 5-7, 2024, Hyderabad
Host and Venue: JNTU, Hyderabad



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