



IEOM Society

"Achieving and Sustaining Operational Excellence"

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2023 IEOM Zambia Awards

4th African International Conference on Industrial Engineering and Operations
Management, Hilton Garden Inn Hotel, Lusaka, Zambia

Distinguished Academic Leadership Award

Prof. Anne Lungowe Sikwibele
Acting Vice Chancellor
University of Zambia
Lusaka, Zambia

Distinguished Industry Leadership Award

Douglas Mboweni, Ph.D.
Group Chief Executive Officer
Econet Wireless Zimbabwe Limited
Harare, Zimbabwe

James A. Tompkins, Ph.D.
Chairman and Founder, Tompkins Ventures
Chairman and Co-Founder, Tompkins Leadership

Distinguished Industry Achievement Award

Dan Cockerell
26-Year Disney Veteran – Former Vice President of Magic Kingdom
Leadership Coaching Disney Keynote Speaker
Cockerell Consulting Group
Orlando, Florida, United States

Dr. Mncono-Liwani Buyiswa
Corporate Services & Traction Motors Operation Executive
Gibela Rail Transport Consortium
Johannesburg, Gauteng, South Africa

Dr. Charles Mungule
Director
Citizen Economic Empowerment Commission
Lusaka, Zambia

Distinguished Professor Award

Dr. Grace Mukondeleli Kanakana-Katumba
Executive Dean, Faculty of Engineering and the Built environment
Tshwane University of Technology
Montana, Pretoria, South Africa

Dr. Lubinda Haabazoka
Director
Graduate School of Business

University of Zambia
Lusaka, Zambia

Dr. Michael N. Mulenga, PhD, MSc, BEng, MASCE, FEIZ, REng
Dean, School of Engineering
University of Zambia
Lusaka, Zambia

Outstanding Professor Award

Vassilis C. Gerogiannis, Ph.D.
Professor and Head
Department of Digital Systems
University of Thessaly
Larissa, Greece

James J. Cochran, Ph.D.
Associate Dean for Research, Professor of Statistics, and Rogers-Spivey Fellow
University of Alabama
Tuscaloosa, AL, USA

Dr. Margaret L. Brandeau
Coleman F. Fung Professor of Engineering
Professor of Health Policy (by Courtesy)
Stanford University
Stanford, California 94305, USA

Global Engineering Education Award

Dr. Suraj Kumar Mukti
Associate Professor
Department of Mechanical Engineering
National Institute of Technology Raipur
Raipur, India

Dr. Amr Eltawil
Dean of the School of Innovative Design Engineering
Professor of Industrial Engineering
Egypt-Japan University of Science and Technology (E-JUST)
New Borg El Arab, Egypt

Dr. Erastus Mwanaumo
Senior Lecturer
University of Zambia (UNZA)
Lusaka, Zambia

Global Supply Chain and Logistics Award

Professor David Poee
Full Professor, Department of Business Management
Heads the Masters & Doctoral portfolio in the department
University of Johannesburg
South Africa

Prof. Zoubida Chorfi
Equipe de recherche AMIPS
Ecole Mohammadia d'Ingénieurs
Mohammed V University
Rabat, Morocco

Dr. Matthew Quayson
Lecturer, Department of Logistics and Supply Chain Management
Ho Technical University
Ho, Ghana

Dr. Nita Sukdeo
Associate Professor
Department of Quality and Operations Management
University of Johannesburg
Gauteng, South Africa

Global Business Management Award

Samwell Irungu
Managing Director
Pathcare Kenya Limited
Nairobi, Kenya

Industry Solutions Award

Mr. Steven Dihwa
Coordination Centre Executive Director
Southern African Power Pool (SAPP)
Harare, Zimbabwe

Donald Kuk
President & CTO
Enterprise Transformation Excellence
New York, United States

Prof Jackson Phiri
Senior Lecturer
Department of Computer Science
School of Natural Sciences
University of Zambia
Lusaka, Zambia

Industry 4.0 Award

Lerato Nyama
Quality Management & Internal Governance Director
Siemens Digital Industries
Johannesburg, Gauteng, South Africa

Dr. Norman Gwangwava
Senior Lecturer, Concurrent Engineering, Manufacturing Engineering Design, Manufacturing Information and Database Systems
Botswana International University of Science and Technology (BIUST)
Palapye, Botswana

Ts. Dr. Mehran Doulat, Ph.D.
Adjunct Professor & Associate Researcher
Best Practice Improvement Resource (BPIR.com)
The Centre for Organizational Excellence Research (COER)
Massey University, New Zealand

Lean Six Sigma Award

Prenisha Govender
Process Engineer – Toyota Boshoku South Africa
BTECH: Industrial Engineering (Cum Laude & Deans Merit 2020)
Masters student: Durban University of technology
Durban, South Africa

Innovation Award

Dr. Christopher E. Borroni-Bird
Founder of Afreecar LLC
Former Vice President, Strategic Development of Qualcomm
Detroit, Michigan, USA

Mr. Lukonga Lindunda
Co-Founder/Executive Director
Bonghive Group
Lusaka, Zambia

Data Analytics Award

Dr. Oludolapo Akanni Olanrewaju
Department of Industrial Engineering
Durban University of Technology
Durban, South Africa

Dr. Elif Kongar
Professor, Economics & Business Analytics Department
University of New Haven
West Haven, Connecticut, USA

Sustainability Award

Dr. Noha Mostafa
Associate Professor of Industrial Engineering and Management
Mechanical Engineering Department, The British University in Egypt
Cairo, Egypt

Dr. Nick Tucker
Associate Professor
School of Engineering
University of Lincoln
Lincoln, UK

Dr. Khulood A. Rambo, PhD, PMP
Global Ambassadors of Sustainability
Program Manager
Jeddah, Saudi Arabia

Women in Industry and Academia Award

Dr. Natalie Skeepers
Global Safety Resources Consultant & Executive Director
Global Safety Resources c
Johannesburg, Gauteng, South Africa

Dr. Eng. Loice K Gudukeya
Senior Lecturer
Mechanical Engineering Department
University of Zimbabwe
Harare, Zimbabwe

Ms. Sebonkile Thaba
Lecturer in Transport and Supply Chain Management
University of Johannesburg
Johannesburg, Gauteng, South Africa

IEOM Distinguished Service and Leadership Award

Dr. Bupe Getrude Mwanza
Associate Director and Senior Lecturer
Graduate School of Business
University of Zambia
Lusaka, Zambia

IEOM Society Conference Service Award

Dr. Austin Mwange
Dr. Norman Kachamba
Mr. Gelvazio Sakala

Dr. Marthias Silwamba
Ms. Jessie Nkhowani
Mr. Gelvazio Sakala
Dr. Moagabo Ragoasha
Dr. Marthias Silwamba
Mr. Wiza Ngambi
Dr. Nita Sudeko
Dr. Natalie Skeepers
Dr. Paul Amaechi Ozor
Dr. Loice K Gudukeya
Ms. Sebonkile Thaba
Dr. Christine Lesa
Dr. Tawanda Mushiri
Mr. Lawrence Seseni

Competition Winners

UNDERGRADUATE PAPER COMPETITION

First Place

ID 4 Perceived Employee Engagement, Collaborative Capability, and Service Tenure as Correlates of Employee Performance: A Multivariate Analysis

America, Girlie; De Palma, Mary Leinel; Demalata, Fiona Mae; Denila, Robert Ryan; Inocencio, Bheatrixe and Oblino, Sharmae Jayne, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines – Quezon City, Cubao, Quezon City, Philippines

UNDERGRADUATE RESEARCH COMPETITION

First Place

ID 179 Determining Factors influencing Disaster Consciousness in the Philippines: A Multiple Regression Approach

Bianca Danielle C. Bornilla, Ranice Ysabelle B. Ang, John Karol F. Angeles, Justine Lian P. Fabia, and Yoshiki B. Kurata, Department of Industrial Engineering, University of Santo Tomas, España Blvd., 1015, Manila, Philippines

Second Place

ID 74 Validation of Neurcom Machine through Dominant Leg Balance Testing

Drew Topoly, Sean Coleman, Kit Allman, Dr. Denise Bauer and Dr. Girish Upreti, Department of Engineering, Industrial Engineering, Director of Engineering and Assistant Professor of Engineering, Methodist University, Fayetteville, North Carolina 28311, USA

Dr. Matthew Foreman and Dr. John Fox, Department of Occupational Therapy, Assistant Professor of Occupational Therapy and Associate Professor of Physical Therapy, Methodist University, Fayetteville, North Carolina 28311, USA

GRADUATE STUDENT PAPER COMPETITION

First Place

ID 86 Analysis of Connection Fee Subsidies on Rural Electrification Projects in Zambia-Case of Chibombo District
Florence Kambikambi, Postgraduate Student, School of Postgraduate Studies, University of Lusaka, Lusaka, Zambia
Michael Kalumbu Nsefu, School of Postgraduate Studies, University of Lusaka, Plot No. 37413, Off Alick Nkata Road, Mass Media, Lusaka, Zambia

Second Place

ID 62 Suitability of Osara River Sand Deposits for Moulding Operation

A. Ayuba, Nigerian Army University Biu, Nigeria

T. Ause, O. Aponbiede and M. U Suleiman, Department of Metallurgical and Materials Engineering, Ahmadu Bello, University, Zaria. Kaduna State, Nigeria

A. Adebisi, Air Force Institute of Technology, Kaduna, Nigeria

Third Place

ID 71 Effects of Workforce Diversity on Employee Performance in the Textile Industry

Gouri Priya Jyothi L, Student (II MBA), Operations and Business Analytics, Amrita School of Business, Amrita Vishwa Vidyapeetham, Coimbatore, Tamil Nadu, India

Dr. T. Sakthi Nagaraj, Asst Professor, Operations, Amrita School of Business, Amrita Vishwa Vidyapeetham, Coimbatore, Tamil Nadu, India

MASTERS THESIS COMPETITION

First Place

ID 160 Factors influencing successful risk management for financial planners

Heloise Strauss, School of Business Leadership, University of South Africa

Sugandren Naidoo, Department of Operations Management, College of Economic and Management Sciences, University of South Africa

Second Place

ID 193 Relationship between Procurement Management and Project Performance of Public Infrastructure Projects at the Ministry of Infrastructure Housing and Urban Development in Zambia (MIHUD)

Mark Zulu, Postgraduate School, University of Lusaka, Lusaka, Zambia

Funmilayo Caroline Jayeola, Department of Civil and Environmental Engineering, University of Zambia, Lusaka, Zambia

Ayodeji Emmanuel Oke, Department of Quantity Surveying, Federal University of Technology, Akure, Nigeria

Erastus Misheng'u Mwanauo, Department of Civil and Environmental Engineering, University of Zambia and University of South Africa (UNISA), Lusaka, Zambia and Pretoria, South Africa

Third Place

ID 108 The Effect of Reverse Logistics Practices on Economic Performance: A Case Study of Simba Breweries

Alex Lumba, Postgraduate Student, Graduate School of Business, University of Zambia, Lusaka, Zambia

Bupe Getrude Mwanza, Associate Director and Senior Lecturer, Graduate School of Business, University of Zambia, Lusaka, Zambia

ID 190 Assessment of the Effect of the National Health Insurance Scheme Universal Health Coverage on Service Quality in Health Facilities in Lusaka

Elizabeth Mofya, Manager- Health Insurance, ZSIC LIFE, Zambia

DOCTORAL DISSERTATION COMPETITION

First Place

ID 107 A SWOT Analysis of Smart Cities Frameworks

Portia Mupfumira, Namibia University of Science and Technology, Windhoek, Namibia

Professor Michael Mutingi, Ph.D., Namibia University of Science and Technology, Windhoek, Namibia

Second Place

ID 73 Can Social Media Marketing Adoption Lead to Relative Competitiveness and Improved Sales Performance? A Study of SME Suppliers in The Zambian Mining Sector

Beenzu Siachinji, PhD student, Graduate School of Business, The Copperbelt University, Kitwe, Zambia

Dr Stella Zulu-Chisanga, Senior Lecturer, The Copperbelt University, School of Business, Kitwe, Zambia

Dr Bruce Mwiya, Senior Lecturer, The Copperbelt University, School of Business, Kitwe, Zambia

Dr Yvonne Kabeya Saini, Senior Lecturer, Witwatersrand University, Business School, Johannesburg, South Africa

SENIOR DESIGN PROJECT COMPETITION

First Place

ID 72 Evaluating the Student and Faculty MyMU Portal Interface at Methodist University

Sarah Davis, Kalkidan Gebrehiwot, Dr. Denise H. Bauer and Dr. Girish Upreti, Department of Engineering, Industrial and Systems Engineering, Methodist University, Fayetteville, North Carolina 28311, United States

Second Place

ID 105 Hybridization of a Floating Solar PV with Hydro Power Generation for Water Conservation

Michael Sakala, Energy Lead, WWF Zambia Country Office, Plot 4978, Los Angeles Boulevard, P.O. Box 50551 RW, Long acres, Lusaka Zambia

Uli Goltenbott, Ph.D., Chief Technology Officer, Shizen Energy Ltd, 1-1-6 Arato, Chuo Ward, Fukuoka City, Fukuoka Ohori Bldg. 3F/6F, 810-0062, Japan

Christopher Chisense, Director, Zambezi River Authority Head Office Lusaka P.O. Box 30233, Lusaka Zambia,

HIGH SCHOOL STEM COMPETITION

First Place

ID 78 Vehicle Driver Interaction using EMG Signal Analysis

Lee Ji Yun and Shin Dong Ho, Student and Professor, MY PAUL SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea

Jeongwon Kim, Student, Department of Economics, College of Economics, Nihon University, 3-2 Kanda-Misakicho, 1-chome, Chiyoda-ku, Tokyo, Japan

Second Place

ID 77 A Study on EMG Signal Classification for Improving Control Methods for Electric Prosthetic Hands

Benny Choi and Shin Dong Ho, Student and Professor, MY PAUL SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea
Jeongwon Kim, Student, Department of Economics, College of Economics, Nihon University, 3-2 Kanda-Misakicho, Chiyoda-ku, Tokyo, Japan

Third

ID 76 Improving Knowledge Distillation Using Data Augmentation

Jun Seung Woo and Shin Dong Ho, Student and Professor, MY PAUL SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea

ID 7 The Spy Machine

Joey Qiao, A.Y. Jackson Secondary School, Ontario, Canada

LEAN SIX SIGMA COMPETITION

First Place

ID 131 Challenges to Implementing Lean Construction in Nigerian Construction Industry

Victoria Akinola, Lecturer I, Department of Building, School of Environmental Technology, Federal University of Technology, Akure, Nigeria

Joseph Akinola, Associate Professor, Head of Department and Associate Professor, Dept. of Quantity Surveying, School of Environmental Technology, Federal University of Technology Akure. Nigeria

Second Place

ID 70 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

SUPPLY CHAIN AND LOGISTICS COMPETITION

First Place

ID 151 Assessing the Last Mile delivery logistics of the Zambia Medicines and Medical Supplies Agency

Ethel Tembo Mwanaumo, Graduate School of Business, University of Zambia, Great East Road, Lusaka, Zambia

Dryton Kabwe, Post Graduate School, University of Lusaka, Zambia

Bupe Getrude Mutono Mwanza, Graduate School of Business, University of Zambia, Great East Road, Lusaka, Zambia

Erastus Misheng'u Mwanaumo, Department of Civil and Environmental Engineering, School of Engineering, University of Zambia, Great East Road, Lusaka, Zambia

Second Place

ID 75 A Review of Supply Chain Opportunities and Challenges Experienced in the African Street Food Industry

Daniel Lagamang, Tatenda Talent Chingono and Charles Mbohwa, Department of Quality and Operations Management, University of Johannesburg, RSA, South Africa

Best Track Papers

Transportation and Traffic

ID 56 Evaluating the Current Policies of Transit System-Based Transportation Development in Jakarta: A Systemic Framework

Siti Alfiyah and Dendi P Ishak, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Depok, Jawa Barat, Indonesia

Lean, Quality and Six Sigma

ID 11 An Assessment of The Use of Quality 4.0 Trends in Higher Education Institutions in South Africa

Eric Mikobi Bakama, Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa

Nita Inderlal Sukdeo, Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa

Kemlall Ramsaroop Ramdass, Operations Management, University of South Africa, Johannesburg, South Africa

Genevieve Bakam Fotso, Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa

Robotics and Industry 4.0

ID 13 Industry 4.0 Implementation Challenges in an Unfacilitated Environment: A Case of Manufacturing Industries in Zambia

Tola Toyin Afolabi and Levy Siaminwe, Department of Mechanical Engineering, School of Engineering, University of Zambia, Lusaka, Zambia

Operations Excellence

ID 178 An Assessment of the Effect of Corporate Social Responsibility on the Competitiveness of SMEs in the Retail Sector in Ndola District

Christine Nankamba Lesa Shikaputo, Head of Department – Department of Operations and Supply Chain Management, School of Business, Copperbelt University, Kitwe, Zambia

Grant Sikazwe, MBA Student, School of Graduate Studies, Copperbelt University, Kitwe, Zambia

Progress Choongo, Senior Lecturer, School of Business, Copperbelt University, Kitwe, Zambia

Business management

ID 18 “The Impact of Digital Divide on Integration of Organizational Discourse with Digital Media During Covid-19 Pandemic: A Review of Seventh-Day Adventist Church in Zambia.”

Dexter Adamson Njuka, Institute of Distance Education, University of Zambia, Lusaka, Zambia

Jackson Phiri, School of Natural Sciences, Department of Computer Sciences, University of Zambia, Lusaka, Zambia

ID 89 The Effect of Sustainable Human Resources Practices on Employee Retention, Engagement, and Royalty in the Banking Sector in Zambia

Progress Choongo, Ph.D., Senior Lecturer, School of Business, Copperbelt University, Kitwe, Zambia

Ms. Emeldah Mulenga, Human Resources Manager, Road Development Agency, Lusaka, Zambia

Chanda Shikaputo, Ph.D., Dean - School of Business, Copperbelt University, Kitwe, Zambia

Sustainability

ID 156 Decentralized and Distributed Power Generation for Sustainable Energy

Moses Jeremiah Barasa Kabeyi, Industrial Engineering Department, Durban University of Technology, Durban South Africa

Oludolapo Akanni. Olanrewaju, Industrial Engineering Department, Durban University of Technology, Durban South Africa

Case study

ID 64 The Implementation of Theory of Constraints (TOC) in a South African Mining Environment: A Case Study of a Continuously-run Concentrator Plant

Hilda Kundai Chikwanda, Ph.D., Associate Professor, Department of Engineering and Technology Management, University of Pretoria, Pretoria, South Africa

Sifiso Innocent Mntambo, Instrumentation Engineer (Process Plant), Royal Bafokeng Platinum, South Africa

Design

ID 67 A Systemic Framework Analysis for Designing Financial Model in Replace Water Meter Analog to Smart Meter

Lina Triastuti and Armand Omar Moeis, Industrial Engineering Department, University of Indonesia, Depok, Indonesia