



Pretoria, South Africa

October 30 – November 1, 2018

Undergraduate Student Paper Competition Awards Sponsored by SIEMENS

1st Place

ID 209 Time-Dependent Traffic Route Selection for Unsignalized Junctions in Tandem Queueing network
Anand Jaiswal, Chirag Chandan Mishra and Cherian Samuel, Dept. of Mechanical Engineering, Indian Institute of Technology (BHU), Varanasi, India

2nd Place

ID 088 Gas Chromatography Calibration Curve for Siloxanes Analysis
Justin K. Mbwebwe, Douw G. Faurie and Molelekoa J. Mosesane, Department of Chemical, Metallurgical and Material Engineering, Tshwane University of Technology, Pretoria, Republic of South Africa

3rd Place

ID 465 Integrated Energy Conversion (IEC) System for Fitness Centres
Emanuel Zeferino and Boitumelo Ramatsetse, Tshwane University of Technology, South Africa

Graduate Student Paper Competition Awards sponsored by EATON Corporation

1st Place

ID 086 The Study of the Sewerage Disinfection Properties of Moringa Oleifera Leaf Powder
Douw G. Faurie, Sthen-Karl Boussougou and Molelekoa J. Mosesane, Department of Chemical, Metallurgical and Material Engineering, Tshwane University of Technology, Pretoria, Republic of South Africa

2nd Place

ID 095 Evaluation of Chemical Oxygen Demand (COD) Reduction in Distillery Wastewater Treatment Using the Photocatalysis
Daphney Hlotse, Thabo Brooms, Molelekoa Mosesane, Department of Chemical, Metallurgical and Materials Engineering, Tshwane University of Technology, Pretoria, South Africa

3rd Place

ID 134 Application of Auxiliary Equipment in Productivity Improvement
Ngaka Mosia, Mechanical and Industrial Engineering, University of South Africa (Unisa), Florida, Science Campus, Gauteng, South Africa
Jan Harm Christiaan Pretorius, University of Johannesburg, South Africa

LEAN SIX SIGMA COMPETITION

ID 204 Implementation of 5S in a Mechanical Workshop at University of Johannesburg: A Case Study
Valentine Khumalo, Kapil Gupta and Zanele Mpanza, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, RSA

Master Thesis Competition Awards

1st Place

ID 253 Characterization of an Auger-Type Pyrolysis Reactor using Induction Heating as an Energy Source
Daniel Erich Botha, Pyro Carbon Energy (Pty) Ltd, Gaborone, Botswana
Mmoloki Makoba, Department of Chemical, Materials and Metallurgical Engineering, Faculty of Engineering and Technology, Botswana International University of Science and Technology, Palapye, Botswana
László-Zsolt Szabó, Dept. of Chemical Engineering, Faculty of Chemistry and Chemical Engineering, University of Babeş-Bolyai, Cluj-Napoca, Romania

Competitions Winners and Best Track Papers – 2018 IEOM Pretoria Conference

Thapelo Shomana, Baboloki Thatayaone Chiwara, Şerban Paul Agachi and Edison Muzenda Department of Chemical, Materials and Metallurgical Engineering, Faculty of Engineering and Technology, Botswana International University of Science and Technology, Palapye, Botswana

2nd Place

ID 128 Application of Auxiliary Equipment in Productivity Improvement

Ngaka Mosia, Unisa, South Africa

Jan Harm Christiaan Pretorius, University of Johannesburg, South Africa

Best Poster Awards

1st Place

ID 191 A Capacitated Clustering Heuristic for Large Datasets

Jacoba H. Bührmann and Ian Campbell, School of Mechanical, Industrial and Aeronautical Engineering, University of the Witwatersrand, Johannesburg, RSA

M. Montaz Ali, School of Computational and Applied Mathematics (CAM), University of the Witwatersrand, Johannesburg, RSA

2nd Place

ID 470 Performance Assessment of a Reconfigurable Vibrating Screen Using Finite Element Analysis and Experimental Approach

Boitumelo Ramatsetse and Khumbulani Mpofu, Department of Industrial Engineering, Tshwane University of Technology, Pretoria, South Africa

3rd Place

ID 155 A Review on Novel Techniques for Iron Recovery from Chalcopyrite (CuFeS₂)

N. Poloko and G. Dahna Department of Chemicals, Materials & Metallurgical Engineering, Botswana International University of Science and Technology, Private Bag 16, Palapye, Botswana

ID 474 Technological Tools and Application Platform for Successful Development of Reconfigurable Machine Tools

V. Sibanda, Khumbulani i Mpofu and J. Trimble, Department of Industrial Engineering, Tshwane University of Technology, Pretoria, South Africa

Best Track Papers Awards

Automation and Agility 136

What has Industry 4.0 got to do with us? A review of the Literature

Dennit Quewan Adams

Department of Industrial Engineering

Masters student at Tshwane University of Technology, Pretoria, South Africa

Prof. Khumbulani M. Mpofu

Department of Industrial Engineering

Tshwane University of Technology, Pretoria, South Africa

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Adjudging the Efficacy of Total Productive Maintenance: Case Study

Ignatio Madanhire, Kumbi Mugwindiri and Stephen Ndlovu

University of Zimbabwe, Department of Mechanical Engineering,

P.O Box MP167, Mt Pleasant, Harare, Zimbabwe

Charles Mbohwa

University of Johannesburg, Department of Quality Management and Operations Management,

P. O. Box 524, Auckland Park 2006, South Africa.

Data Analytics and Big Data 54

Time Series forecast of Sea Surface Temperature for Hokkaido fishery ports along coastal line of Japan Sea

Chim Chwee WONG

LKC Faculty of Engineering and Science, Universiti Tunku Abdul Rahman, Kuala Lumpur, Malaysia

Junichi KISHIGAMI

Competitions Winners and Best Track Papers – 2018 IEOM Pretoria Conference

Department of Information and Electronic Engineering, Muroran Institute of Technology, Hokkaido, Japan

Decision Sciences 79

A predictive approach for effective management and planning within the energy sector of South Africa

L.K. Tartibu

Department of Mechanical and Industrial Engineering Technology
University of Johannesburg, Doornfontein Campus, Johannesburg 2028, South Africa

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Adenuga Olukorede Tijani, Mpfu Khumbulani and Gabisile Buyiswa Gamede

Department of Industrial Engineering, Tshwane University of Technology, Pretoria, South Africa

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Long-term electricity demand forecasting using a generalised additive mixed quantile averaging (GAMMQV) model

Paul Mokilane and Pravesh Debba

Council for Scientific and Industrial Research, Pretoria, South Africa.
and School of Statistics and Actuarial Science, University of the Witwatersrand, South Africa

V.S.S. Yadavalli

Department of Industrial and Systems Engineering, School of Engineering, University of Pretoria, South Africa

Caston Sigauke

University of Venda, University Road, Thohoyandou, Limpopo Department of Statistics Limpopo, South Africa

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Nexus between Human Capital Development and Economic Growth in Nigeria

¹Jesusetemi Oluwafemi, ²E.T. Akinlabi and ³Pule Kholopane

^{1,3}Department of Quality and Operations Management, University of Johannesburg, RSA

²Dept. of Mechanical Engg. Science, Faculty of Engineering & the Built Environment, University of Johannesburg, APK, RSA

Afolabi Babatunde

⁴Economics Department, College of Social and Management Science,
Afe Babalola University, Ado Ekiti, Nigeria

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Yolisa Andi Motsepe, Bheki Makhanya and Prof. J.H.C Pretorius

Post-Graduate School of Engineering Management, Faculty of Engineering and the Built Environment, University of Johannesburg, Auckland Park, South Africa

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Ratshiedana P.E, Nwobodo-Anyadiiegwu Nkeiruka Eveth, and Kidogo Ibrahimu

Department of Quality and Operations Management
University of Johannesburg, Johannesburg, South Africa

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Frederick Robert Peter Edlmann

Department of Industrial Engineering, University of Stellenbosch, South Africa

Sara S. Grobbelaar

Department of Industrial Engineering AND DST-NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy (SciSTIP), University of Stellenbosch, South Africa

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Islam Hamdi El-Ghonaimy, and Urban Consultant

Department of Architecture and Interior Design
College of Engineering - University of Bahrain, Isa Town, Bahrain

Needa Javed

Research assistant Department of Architecture and Interior Design
College of Engineering - University of Bahrain

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Violet Jacobs and Lungile Nyanga

Department of Industrial and Systems Engineering
Cape Peninsula University of Technology, Bellville, Cape Town, 7530, South Africa

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Anand Jaiswal

Department of Mechanical Engineering, Indian Institute of Technology (BHU), Varanasi, India

Chirag Chandan Mishra

Department of Mechanical Engineering, National Institute of Technology, Warangal, Warangal, Telangana, India

Cherian Samuel

Department of Mechanical Engineering, Indian Institute of Technology (BHU), Varanasi, India

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Operational Improvement Outcomes through Voluntary Compliance in Road Transport Operations

Abdool Kamdar, Frank Kienhöfer, and Bruno Emwanu

University of the Witwatersrand, Private Bag 3, Wits, 2050

Gert Heyns

University of Johannesburg, PO Box 524, Auckland Park, 2006

Paul Nordengen

CSIR Built Environment, PO Box 395, Pretoria, 0001

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Stephen Katlego Letlhake, Goodwell Muyengwa and Yvonie N. Mawane

Department of Mechanical Engineering and Industrial Engineering Technology
University of Johannesburg, Johannesburg, South Africa

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Anastasia Papadouris and George Alex Thopil

Department of Engineering and Technology Management
Graduate School of Technology Management, University of Pretoria, Hatfield, South Africa

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Prof Islam El-Ghonaimy

Urban Designer and Landscape Architect Consultant
Department of Architecture, College of Fine Arts, Alexandria University, Egypt.
Affiliated with Department of Architecture and Interior, College of Engineering,
University of Bahrain, Bahrain

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Optimization-based Scheduling of Ingula Pumped Storage Plant under Demand Uncertainty

Zakaria Yahia

Department of Quality and Operations Management
University of Johannesburg, Johannesburg, South Africa
(on leave from Department of Mechanical Engineering, Fayoum University, Fayoum, Egypt)

Pule Kholopane

Department of Quality and Operations Management
University of Johannesburg, Johannesburg, South Africa

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Gbeminiyi John Oyewole

Department of Industrial and Systems Engineering,
University of Pretoria, Pretoria 0002, South Africa

Olufemi Adetunji

Department of Industrial and Systems Engineering,
University of Pretoria, Pretoria 0002, South Africa

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Amevi Acakpovi

Electrical and Electronic Engineering Department
Accra Technical University, Accra, Ghana

Abena M. Adutwum

Open University of Malaysia/ Accra Institute of Technology (AIT),
Accra-North Accra, P.O.Box: AN19782, Accra, Ghana

Mathias Bennet Michael

Electrical and Electronic Engineering Department
Accra Technical University, Accra, Ghana

Samuel Blay Amo

Electrical and Electronic Engineering Department
Accra Technical University, Accra, Ghana

Anthony Deku

Mechanical Engineering Department, Accra Technical University, Accra, Ghana

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Jolanda Becker and Wynand van Dyk

Industrial Engineering Department, University of Stellenbosch, Stellenbosch, 7599, South Africa

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Yvonie N. Mawane and Goodwell Muyengwa

Department of Mechanical and Industrial Engineering Technology
University of Johannesburg, Johannesburg, South Africa

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Sekhwela Moses Mokgala

School of Mechanical, Industrial and Aeronautical Engineering
University of the Witwatersrand, Johannesburg, South Africa

Bruno Emwanu

School of Mechanical, Industrial and Aeronautical Engineering
University of the Witwatersrand, Johannesburg, South Africa

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Gratitude Charis, Gwiranai Danha and Edison Muzenda

¹Department of Chemical, Materials and Metallurgical Engineering, College of Engineering and Technology, Botswana International University of Science and Technology, Boseja Ward, Private Bag 16 Palapye, Botswana.

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Philisa Mangakane, John Trimble and Mukondeleli Grace Kanakana-Katumba

Department of Industrial Engineering
Tshwane University of Technology, South Africa, Pretoria

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Guilherme Luz Tortorella, Eduardo Ferreira da Silva and Danieli Braun Vargas

Department of Production and Systems Engineering
Federal University of Santa Catarina, Caixa Postal 476, 88040-900, Florianopolis, SC, Brazil