



Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en
Inligtingtegnologie / Lefapha la Boetšenere,
Tikologo ya Kago le Theknolotši ya Tshedimošo

Department of Industrial and Systems Engineering

Aula Theatre

Projects Evening

1 November 2018

18:30

Welcome
Prof Johan Joubert

18:40

Introduction of students
Mrs Wilna Bean

18:45

Automated investment assessment:
An investment decision-making model for the ordinary person
Melissa van Niekerk

19:00

Stock optimisation for an online company
offering niche products
Palesa Maringa

19:15

Identifying markets for customised bicycles using
data and business analytics
Christelle Els

19:30

Interval

19:40

Designing robust future distribution networks
Carike Karsten

19:55

Improving the waste supply chain at the Ford Motor
Company of Southern Africa (Pty) Ltd
Tanya Venter

20:10

Learning back at the ranch: Applying statistical learning to
feedlot operations at Manjoh Ranch (Pty) Ltd
Damien de Gouveia

20:25

Awards ceremony
Prof Sarma Yadavalli

20:35

Guests move to Rautenbach Hall where refreshments
are served and posters displayed

Comprehensive list of projects

Ahmed MZ Mohammad Optimisation of a passenger terminal at an airport

Aphane L Lerato The analysis and improvement of a production facility layout at EATRITE

Ashoori N Nika Warehouse facility plan for ICM INDUSTRIES

Atkinson RC Robert Process flow improvement of a mattress manufacturing facility

Barendrecht MJ Marnes Quality assurance and cost evaluation of an electronic detonator soldering process at DETNET SOUTH AFRICA (Pty) Ltd

Berman-Levy E Erin Inventory optimisation at CHEF WORKS Inc

Bester K Katherine Design and development of a specialised information system for ASTRA Operations

Bipath S Shivaash Streamlining the goods receiving process for a major South African retailer

Bruwer I Ingrid The development of a decision support model for the ordering of a perishable product

Bucher B Kevin Warehouse process improvement utilising information system technology and inventory management principles at ANDRU MINING (Pty) Ltd

Burger PAD Paul Resource planning by optimising the machine acquisition schedule for PROJECT AEROSWIFT

Campbell SR Sebastian Process improvement of an e-commerce small medium enterprise through process improvement

Coetsee NA Niel The implementation of Bayesian network models for the use of fault reduction at the BMW GROUP Plant in Rosslyn

Coetzee B Berna Layout design and optimisation of a new proposed advanced manufacturing centre at the COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (CSIR)

Conrads AM Andreas Exploring the effects of variance in payload and operator skill levels on open pit mining operations using discrete event simulation modelling

Keziah K Crosson The location, selection and design of a medical device and equipment warehousing facility

De Clercq U Ughard Warehouse optimisation using a multi-level storage allocation algorithm at SPRINGBOK SUPERSPAR

De Gouveia DS Damien Learning back at the ranch: Applying statistical learning to feedlot operations at MANJOH RANCH (Pty) Ltd

De Wet SJ Sunja Creating a growth strategy and optimisation plan in order to move from start-up to company in the VoIP industry

Deena P Praneil Call centre optimisation model

Des Fontaine RA Rulé Moving SANTAM INSURANCE towards Industry 4.0 through dynamic simulation resource scheduling

Dippenaar A Amey Water resilience in the WESTERN CAPE GOVERNMENT: HEALTH

Du Toit C Charné System dynamic modelling of a continuous flow grain dryer for AFGRI

Els C Christelle Identifying markets for customised bicycles using data and business analytics

Fechter PE Petroné Proposals to improve product quality at JURGENS Ci

Ferreira D Danielle Workflow improvement and standardisation of pre-planting activities at PICO GRO CC

Ferreira SPB Schalk A warehouse layout design for IMPAQ EDUCATION

Fok M Michael Resource allocation for a freight forwarding company

Freire MM Matthew Truck telemetry: Matching gamified movement to real drive cycles

Gray TJ Thomas Product strategy development at BARKTREE (Pty) Ltd

Groenewald M Marné Knowledge the competitive advantage - design and development of a waste monitoring dashboard

Gumbo AK Anthony Inventory management system for an online store with multi perishable items

Hoogenhout C Chané Optimisation of resource scheduling at SPRINGBOK SUPERSPAR

Hoque A Annono Increasing the throughput and decreasing overtime expense at a G4S CASH SOLUTIONS branch using six sigma principles

Hugo J Jeanne-Marie Batch sizing and scheduling on a volatile production line through the usage of linear optimisation at MECALC (Pty) Ltd

Janse van Rensburg CJ Christian Optimising the warehouse operations of a pharmaceutical wholesaler

Jansen van Rensburg PS Petrus Constructing synthetic freight vehicle activity chains using a next place prediction algorithm

Joubert JJ Jacobus A study of proposed improvements for inflow logistics

Kakuyu BT Bradley Development and management of information systems using enterprise architecture and lean six sigma

Kamoto T Raynold Improving business processes at LAST MILE TECHNOLOGIES (Pty) Ltd through the design of an inventory theft control system and vehicle routing & scheduling algorithm

Karsten C Carike Designing robust future distribution networks

Kubheka NN Nqobile Optimisation of the polyvinyl chloride sorting process at a material recovery facility using lean six sigma techniques

Labuschagne M Marthie Feasibility study and strategic location modelling of a centralised distribution centre for CONWAYS ALUMINIUM PROFILE STOCKISTS

Lamprecht CJ Cornelis Optimisation of an inventory system

Le Riche N Nicole Optimising the allocation of fleets across business units for VECTOR LOGISTICS

Liebenberg N Nelda Optimisation algorithm to determine the installation aeration schedule of 500 silo tubes

Maharajh A Akshay Using statistical factor analysis to ensure effective decision making at an Airport

Maree JJ Joseph Reducing giveaways at a dried food manufacturing plant

Maree SR Simoné Rescuing the rescue centre

Maringa PJ Palesa Stock optimisation for an online company offering niche products

Maritz AI Alicia Developing a lean manufacture practice within the maintenance storage warehouse of RUSSELLSTONE PROTEIN

McDougall D Donwin Modelling the equipment requirements for the foundation laying phase for the construction of a processing plant

Möller Z Zané Redesign the ordering system of fresh produce at ZZFRESH

Monama BJ Bridgitte Optimising revenue for a business networking platform

Moolman T Tanisha Factory productivity under investigation

Moopanar D Davishkar Optimisation and productivity enhancement of a multi-echelon warehouse management process

Mphaga IK Isaac Improving customer satisfaction in retail stores

Mtolo ZH Zime A revised business process model to improve the service level offering of a courier logistical business unit

MRI RH Reinhard Requirements management for agile software supply chain

Murengami RM Malvern Inventory management at STARBUCKS MENLYN MAINE

Naidoo S Stephanie Facility planning and lean techniques applied at THE BICYCLE SHED (Pty) Ltd

Ngango DS Dennis Aligning the organisation with market strategy at MYSLEEP (Pty) Ltd

Ngubeni MM Makaziwe Automation and optimisation of the value chain using RFID technology

Nkabinde ZN Zamaswazi Design and development of an ERP framework for an organic farm at WENSLEYDALE FARMS CC

Nolte M Marco Dynamic Capacity planning at GLOBEFLIGHT WORLDWIDE EXPRESS (SA) Pty Ltd

Osler JM Jessica-Ellen Improving the efficiency of flow and capacity of a warehouse facility at MONTEAGLE LOGISTICS

Padiachy TT Thiagan Process improvement and cycle time reduction of the e-coat rework process at BMW SOUTH AFRICA (Pty) Ltd

Pearce JA Jeanette Improving resource utilisation at the BEARINGS 2000 Warehouse

Perry BS Bradley Improving the effectiveness of the underground mining process by developing an OEE measurement

Roberts KO Kyle Optimal sizing of solar energy systems at SOLARAFRICA ENERGY (Pty) Ltd

Rogers TG Trevor Design, development and application of IoT for smart integration and connectedness of systems: A case of bicycle monitoring and tracking on the HATFIELD UNIVERSITY campus

Sebastiao GA Genevieve Increasing the capacity of a fresh produce processing plant

Seboka KJ Katlego Model enhancement and automation of the HSIM prioritisation scheme for adaptation to a complex environment

Smith C Carissa Balancing efficiency and effectiveness of production scheduling

Smith MJ Murray The development of a tool to automate the programming of classes for BALLISTIX CROSSFIT SOMERSET WEST

Snyman C Chanté Determining the optimal waste diversion method with feasibility studies

Stanz DN Danien Optimisation of assessor routes for KING PRICE INSURANCE

Swanepoel A Anieke Elevation-based fuel consumption predictions using a gamification model: The South African truck simulator

Swart G Gareth Relocation feasibility study and communication improvement of microgreen production at PICO GRO CC

Twala T Thuto Resource capacity planning for the training department of an EXXARO mine

Vally MA Mohammed How much will they buy?

Van der Walt L Lismari Improving the standard delivery agreement for deliveries made from the PICK N PAY (Pty) Ltd Longmeadow distribution centre

Van der Westhuizen MJ Marc Improving internal supply chain at FORD MOTOR COMPANY OF SOUTHERN AFRICA (Pty) Ltd

Van Heerden Z Zander Recovery rate optimisation at a mining concentrator at LONMIN Plc

Van Jaarsveld A Adèle The analysis and modelling of AURECON RSA's offshoring admin and technical quality process for process improvement

Van Niekerk M Melissa Automated investment assessment: An investment decision-making model for the ordinary person

Van Renssen KM Maryke Selection of an applicable cherry picker in SASOL SYNFUELS, Secunda Operations

Van Staden MJ Marnus Developing a probabilistic model to determine the feasibility of machinery acquisitions

Van Wyk SW Schalk Study of visual factory and 5S techniques at the UNIVERSITY OF PRETORIA Bindery

Van Zyl AT Aidan Optimisation algorithm for the re-engineering of the aftermarket service delivery department at TOYOTA FORKLIFT SOUTH AFRICA

Van Zyl R Robyn Inventory cost down and marketing revenue up

Venter JJ Jeanne Process optimisation and inventory management at TRUEWOOD FURNITURE

Venter T Tanya Improving the waste supply chain at the FORD MOTOR COMPANY OF SOUTHERN AFRICA (Pty) Ltd

Viviers HJ Juan Scheduling unrelated parallel moulding machines with multi objective models

Vosloo JS Jessica The development of a decision support model for the flexible job shop-scheduling problem in a multi-product assembly environment

Wannenburg SY Stefanie The development of a discrete event based simulation model to improve the construction process of a large diameter steel water pipeline

West JB Jacobus Optimisation of lead-time at an assembly facility

Wolff JJ Joshua Total systems management for productivity enhancement a case of WOLFF LOGISTICS (Pty) Ltd