Faculty of Engineering, Built Environment and Information Technology

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

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Department of Industrial and Systems Engineering

Aula Theatre

Projects Evening

2 November 2017

18:30
Welcome
Prof Johan Joubert

18:40
Introduction of students
Mrs Wilna Bean

18:45
Improving changeover time through simulation modelling at MONN (Pty) Ltd
Marcus Nouwens

19:00
Resource scheduling algorithm for maintenance planning
Kirsten Young

19:15
The strategic improvement of a warehouse at Wispeco Aluminium (Pty) Ltd
Khairoonisa Hoorzook

19:30
Interval

19:40
Optimising spatial predictions for rhino presence
Maryn van der Laarse

19:55
Moving forward
Jana Taute

20:10
A system dynamics model of the forward and reverse supply chain of returnable containers to South African Breweries
Maryke Nel

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

Ammon SC Sebastian How intermediate facilities affect waste collection operations

Banks RJ Reece Reducing waste as a result of downtime in a carbonated beverage manufacturing facility

Becker M Maryke A facility location model for an FMCG company

Behr CM Carina Production scheduling at Wispeco Aluminium anodising plant

Berry A Anè Feasibility study for building an inland distribution centre for SPAR South Africa

Bhika EH Ebrahim A facility plan for a relocating manufacturing plant

Blaettler L Liezahn Stock rotation optimisation for Pico-Gro CC

Boshoff EI Estella Locating facilities strategically: A case study using Solidarity Trade Union

Bothma SL Someri Plant fleet scheduling improvement and production optimisation at a manganese plant

Brittz AJ André Simulation model template and manual for Rotek Industries

Burutu KN Keziah Inventory management for Kloostersaal cafeteria

Buys E Elzette University of Pretoria driven to control: An introduction to fleet management

Buys S Stephanie Analysis and optimisation of logistics in the supply chain network

Carstens W Winand Opencast mining: Blasting data analysis and process optimisation

Chinyamakobvu DK Duduzile Facility layout plan for a second Sandton Gautrain station for the Gautrain Management Agency

Cilliers E Elizna Efficient facilities layout of a bank branch

Collinet H Henry Using statistical process control to monitor web services

Corcoran SA Samantha Process monitoring and improvement of a supply chain

Darwish SD Salam Enhancing the Modularise model for the upliftment of bottom of the pyramid economies

De Beer D Darren Food security in South Africa: Improving the availability, affordability, and quality of fresh produce in informal communities

De Villiers B Bernard Production line expansion at Milkor (Pty) Ltd

De Wet CG Zinanteaux Warehouse operations analysis through the use of process flow diagrams and value stream mapping

Dube K Koketso Optimisation of a chassis receiving, storing and sequencing process

Du Plooy PC Phillip Application of machine learning techniques in facility energy management

Ehlers D Divan Material management and logistics optimisation: The optimisation of ASSMANG Black Rock Logistics

Engelbrecht E Ezanne Identifying and analysing value-adding, essential non-value-adding and non-value-adding activities of a vehicle using GPS traces

Erasmus JH Jan Harm Facility planning: A community health centre

Esterhuyse ML Madeleen Facility layout improvements and truck scheduling at Wispeco Aluminium (Pty) Ltd

Geldenhuys C Cilliers Lean panelling process flow analysis and innovation improvement implementation

Greyling MT Megan Improvement of the inventory management process in an automotive OEM company's supply chain

Griessel R Renate Reducing carbon footprint: Developing a lifecycle design decision support tool

Hamersma KA Kris Improving probabilistic record linkage with a single-layer neural network

Hattingh D Danielle Packhouse and storeroom flow and optimisation

Hoorzook KH Khairoonisa The strategic improvement of a warehouse at Wispeco Aluminium (Pty) Ltd

Ingham MJ Michael Investigating production volumes and sales of metals using a Bayesian change point detection approach

Keeve AFS Anna Facility planning: Case study at Enterprise Foods (Pty) Ltd a division of Tiger Brands

Keuler RE Riana Effective planning and control of the development of a wind turbine facility using the systems approach

Khweyane EM Elinah Optimising the use of a business process management tool at triVector

Kruger L Lindelie Information system design for a real estate company

Krüger K Karien Single machine scheduling for powder coating aluminium profiles at Wispeco Aluminium (Pty) Ltd

Le Roux H Hesti A facility solution required to incorporate cold sterilisation in the supply chain of citrus exported to Europe

Ledwaba MM Mashadi Application of quality function deployment within an educational institute

Lombard C Charnelle Improvement of a business system for Ukwazi Engineering (Pty) Ltd

Longland CJC Christoff Development of a simulation model for asset management in the mining industry

Mabasa MF Mbhoni Development of a work study teaching mechanism for SMMEs

Mahlangu DC David Using the SCOR model to evaluate a vehicle distribution network

Manaka ME Matome A review of internal warehouse operations

Maree E Elani Development of a performance improvement model for HR personnel assessments: A case of the Sasol Mining industry

Maree H Herman Production system flow process monitoring and diagnosis

Masenya MA Mmanotshe Lonmin Plc: Determination of workforce requirement and scheduling

Matanda BK Benjamin Local body material flow at Ford Motor Company of Southern Africa

Matthew L Lauren Optimising water management at a coal mine (Sasol)

Mauer C Claudine Information system design for an SMME incubation program at Vukani-Ubuntu's enterprise and supplier development centre

Maumela V Vhuhwavho Information system design: A cosmetology concept at Princess Hair Salon

Mbiza MW Mafemane Mogalakwene water balance

McGladdery D Duncan Greedy algorithm and model for analysis of a bus fleet's operations

Mills JB Jesse The design, planning and implementation of Kanban systems at Benteler Automotive

Moeketsi TC Tshepang Investigating the feasibility of integrating an automated guided vehicle system into body shop logistics processes

Mokgoro P Palesa Returns management of dairy products at a retailer

Mokgotho MT Matlaleng Optimising a file system and storage library to conform to ISO 9001:2015

Monageng KJ Keabetswe Facilities planning of a fatigue test laboratory

Moosa A Ameera Part location assignment in Ford Motor Company's part warehouse

Mtsheku TJ Thenjiwe Operations management approach for waste reduction and sales improvements: The case of ABC bakery depot

Müller GS Gustav ISO ERP software development

Mulumba K Kaja Simulation of a Longwall mining method for Sasol Mining

Mupezeni V Verdad Optimising the flow behaviour of make-to-assembly parts in a production environment

Nel B Bianca Analysis of processes and service delivery at the University of Pretoria bindery for the development of an improvement plan aiming towards increased productivity, cost efficiency and profitability

Nel M Maryke A system dynamics model of the forward and reverse supply chain of returnable containers to South African Breweries

Nouwens MS Marcus Improving changeover time through simulation modelling at MONN (Pty) Ltd

Ntuli NN Nomahlubi Fine order process improvement at a distribution centre

Oosthuizen GC Gerhard An investigation, analysis and redesign of a production line

Patel Y Yash Alleviation of a bottleneck at a Distribution Centre, using simulation modelling

Potgieter M Marika Investigation into the feasibility of self-service options for the Malawi Traffic Information System

Pouwels R Robert Increase throughput at Airconduct CC

Pretorius FC Frederik Warehouse inventory management of slow-moving stock at the Midrand warehouse of Vector Logistics

Prinsloo R Riandré Developing an industry solution to service bottom-end markets in South Africa

Raath VF Vivienne Changing the sales model of a cricket equipment and apparel company

Rabambi M Mulalo Flashing process optimisation at Clotan Steel (Pty) Ltd

Ramagoma MP Mutshutshudzi Reducing lock-up parts losses at Ford Motor Company of Southern Africa

Robertson KM Kyle Airport route development decision support tool for Cape Town Air Access

Sadiki NL Ngweta The design of an automated tooling control and management system

Saji A Agnes Improving inventory management for an automotive company

Sankar S Shiven Optimising the turnaround time of coal testing for an industrial application

Schmid CA Claudia Facility redesign of a storage unit to minimise "store age" inefficiency

Schreuder GAJ Gert Controlling quality of aluminium alloy composition at Wispeco (Pty) Ltd

Schutte H Heinu Matching supply and demand of an airline's onboard catering supplies

Silinda GZ Gift Stock optimisation model in a medical practitioner environment

Sithole ZJ Zweli Using the Zachman framework to align strategic business processes with the existing project methodology of AfriGIS

Sivhidzho M Mulweli Process improvement and line balancing of a chassis-zero assembly line

Suliman A Aarifah Improving the efficiency of a traditional family business through information system and facility design

Swanepoel JL Déwyk Water truck routing in an open pit mine

Taute J Jana Moving forward

Thomas A Alexander Ordering system improvement and product tracking at Pico-Gro CC

Thomson KE Kelsey Improving truck turnaround times and space utilisation in a beer warehouse using simulation

Van Aarde M Margo Forecasting transportation service demand for fleet optimisation: The case of a third-party logistics provider

Van den Berg EG Emile An operations research approach to work scheduling aimed at identifying and assigning the minimum staffing quantities to meet client satisfaction requirement at Sugo Bryanpark (Pty) Ltd under uncertain dynamic demand

Van der Laarse M Maryn Optimising spatial predictions for rhino presence

Van der Walt JL Juan Solar power system performance and optimal behaviour investigation for clients with multiple sites: A systems dynamic approach

Van der Westhuizen R Rene The systematic improvement of product packing accuracy as a means of increasing customer satisfaction and business profitability

Van Dyk PL Paul Analysis and proposed solution for deviations between promised delivery dates and actual dates for Sinvac Piping (Pty) Ltd orders

Van Kraayenburg S Shani A study of best practice software applications in the secondary distribution execution process

Van Loggerenberg N Nichole Reducing the amount of defects on printed circuit board assemblies at Parsec (Ansys Limited) by using Statistical Process Control

Van Niekerk WW Werner The development of a decision support model for the picking, staging, combining and loading activities in the grocery distribution warehouse of a large fast moving retailer

Van Zyl RI Ruan Establishing an effective and seamless high technology supply chain for a medical device in South Africa: Can a supply chain communication system be successfully incorporated?

Venier MJA Maurizio Static vs. Dynamic Routing within a third-party logistics environment

Venter A Anthea Reengineering of employee recruitment and onboarding processes: The case of a global drilling solutions company

Venter FMF Francois Using a discrete-event simulation model to identify bottlenecks and determine the efficiency in a maintenance workshop

Vorster E Eben Improving a large retail distribution center for centralised distribution and improved productivity

Wagener R Raymond The optimisation of electricity consumption at Woodlam (Pty) Ltd - Interzign

Wertheim Aymes JPC Julian An inventory layout plan for Bosun Brick (Pty) Ltd products produced in three different factories and stored in three independent warehouses, at the same facility

Wiesner BO Brandon Designing an ISO-Integrated Management System software package

Wilson H Henri Inventory management techniques analysed for an improvement in the cash flow of a distribution warehouse

Young KC Kirsten Resource scheduling algorithm for maintenance planning

Zevenbergen LC Leoné Optimisation of material handling and manufacturing logistics at Rotapak Paper (Pty) Ltd