

41st International Conference on Computers & Industrial Engineering 2011

**Los Angeles, California, USA
23-25 October 2011**

ISBN: 978-1-62748-683-5

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2011) by Computers & Industrial Engineering
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact Computers & Industrial Engineering
at the address below.

Computers & Industrial Engineering
c/o Mohamed Dessouky
3715 McClintock Avenue, GER 240
Los Angeles CA 90089-0193

Phone: (949) 425-1686
Fax: (949) 425-1696

dessouky@usc.edu

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

A DYNAMIC PROGRAMMING APPROACH FOR MINIMIZING THE NUMBER OF DRAWING STAGES AND HEAT TREATMENTS IN CYLINDRICAL SHELL MULTI-STAGE DEEP DRAWING	1
<i>Tamer F. Abdelmaguid, Ragab K. Abdel-Magied, Mostafa Shazly, Abdalla S. Wifi</i>	
A MULTI-STAKEHOLDER INDUSTRIAL PROJECTS SELECTION: AN ANALYTIC HIERARCHY PROCESS AND ZERO-ONE-GOAL PROGRAMMING APPROACH	7
<i>Salah R. Agha</i>	
A NEW FRAMEWORK TO INCORPORATE COMPETITIVE CONSIDERATIONS INTO SUPPLY CHAIN NETWORK DESIGN	13
<i>S. Alavi, M. Pazoki, K. Fahimi</i>	
CONTAINER TERMINAL BERTH ALLOCATION AND QUAY CRANE ASSIGNMENT USING IP AND SIMULATED ANNEALING	19
<i>Islam Ali, Yasmine Abouelseoud, Mohammad Hamdy Elwany</i>	
A CLUSTERING APPROACH FOR CHANGE POINT ESTIMATION IN MULTIVARIATE NORMAL PROCESSES	26
<i>Saeed Allahyari, Amirhossein Amiri</i>	
A BI-OBJECTIVE FACILITY LOCATION PROBLEM IN THE PRESENCE OF A PROBABILISTIC LINE BARRIER	32
<i>Mehdi Amiri-Aref, Armand Baboli, Nikbakhsh Javadian, Reza Tavakkoli-Moghaddam</i>	
A BENDERS DECOMPOSITION APPROACH FOR REDESIGNING A WAREHOUSE NETWORK PROBLEM	38
<i>Amir Hossein Zahedi Anaraki, Jafar Razmi, Mohammad Jeihoonian</i>	
A HYBRID MODEL OF DATA MINING AND MCDM METHODS FOR ESTIMATING CUSTOMER LIFETIME VALUE	44
<i>Amir Hossein Azadnia, Pezhman Ghadimi, Mohammad Molani-Aghdam</i>	
ANALYSIS OF PARTICIPANT BEHAVIOUR IN A TWITTER BASED CROWDSOURCING PROJECT	50
<i>Basar Oztaysi</i>	
A FRAMEWORK FOR SUSTAINABLE PERFORMANCE ASSESSMENT OF SUPPLY CHAIN MANAGEMENT PRACTICES	56
<i>Emilie Chardine-Baumann, Valerie Botta-Genoulaz</i>	
A DYNAMIC MODEL FOR THE DESIGN OF GREEN LOGISTIC NETWORKS	62
<i>M. Bennekrouf, W. Mtalaa, F. Boudhar, Z. Sari</i>	
A NEW APPROACH FOR SOLVING HYBRID FLOWSHOP SCHEDULING PROBLEMS THROUGH EVOLUTIONARY ALGORITHMS	68
<i>Fulvio Antonio Cappadonna, Giovanni Celano, Antonio Costa, Sergio Fichera</i>	
A SIMULATION STUDY OF LOGISTICS AND MANUFACTURING ACTIVITIES IN AN AUTOMOBILE SUPPLY CHAIN	74
<i>Mazjar Gholamian Moghadam, Behrooz Karimi, Mohamad Darayi</i>	
A CAPACITATED MULTI-ECHELON JOINT LOCATION-INVENTORY MODEL FOR SUPPLY CHAIN MANAGEMENT	80
<i>Rany Metry Deskoones, Ali Diabat</i>	
EVALUATING THE DESIGN OF THE CURRENT SAUDI ARABIAN LICENSE PLATE	86
<i>Ahmed M. El-Sherbeeny, Hesham M. Al Sohibani, Ahmed S. Al Suhaibani, Amjad A. Al Suhaibani</i>	
PLAT – PRODUCTION LINES ANALYSIS TOOL	92
<i>P. Fernandes, M.E.J. O’Kelly, C.T. Papadopoulos, A. Sales</i>	
SIX SIGMA AT A CROSSROADS	98
<i>T.N. Goh</i>	
CROP PLANNING AND WATER MANAGEMENT: A SURVEY	104
<i>Walid Goma, Nermine Harraz, Amr ElTawil</i>	
OPTIMISATION OF OUTSOURCING ACTIVITY UNDER A WIN-WIN SINGLE OUTSOURCER – SINGLE SUBCONTRACTOR RELATIONSHIP	110
<i>Mohammed Haoues, Mohammed Dahane, Nadia Kinza Mouss, Nidhal Rezg</i>	
SUPPLIER SELECTION AND ORDER ALLOCATION IN SUPPLY CHAIN MANAGEMENT	116
<i>Hadi N. Fors, Nermine A. Harrazb, Mohamed G. Abouali</i>	
FRONTIER-BASED PERFORMANCE ANALYSIS MODELS FOR SUPPLY CHAIN MANAGEMENT: STATE OF THE ART AND RESEARCH DIRECTIONS	122
<i>Per J. Agrell, Adel Hatami-Marbini</i>	

A LOCATION-INVENTORY-ROUTING-PROBLEM WITH PERISHABLE PRODUCTS	130
<i>AbdelHalim Hiassat, Ali Diabat</i>	
A DYNAMIC PROGRAMMING APPROACH TO RETIREMENT AND REPLACEMENT PLANNING OF COMBAT AIRCRAFT	136
<i>Jinju Kim, Changmuk Kang, Yoo S. Hong</i>	
MULTISTAGE RESOURCE ALLOCATION PROBLEM BY MULTIPLE-CHOICE CONSTRAINTS WITH HYBRID GENETIC ALGORITHM.....	142
<i>Kenichi Ida, Chi-Ming Lin, Mitsuo Gen, Jung B. Jo</i>	
THE ROLE OF CHANGE MANAGEMENT IN A MANUFACTURING EXECUTION SYSTEM	148
<i>Johannes Cottyn, Hendrik Van Landeghem, Kurt Stockman, Stijn Derammelaere</i>	
A HYBRID GENETIC ALGORITHM FOR INTEGRATED DYNAMIC CELL FORMATION WITH PRODUCTION PLANNING BASED ON WORKLOAD BALANCING	154
<i>Atefeh Kahfi , Farnaz Barzinpour</i>	
TABU SEARCH FOR DISASSEMBLY LINE BALANCING WITH MULTIPLE OBJECTIVES.....	160
<i>Can B. Kalayci, Surendra M. Gupta</i>	
USING COMBINATION OF REVERSE ENGINEERING AND VALUE ENGINEERING FOR IMPROVEMENT IN DESIGNS, CONSTRUCTION PROJECTS AND MANUFACTURING INDUSTRIES.....	166
<i>Hossein Amoozad Khalili, Anahita Maleki, Shabnam Ayatollahi</i>	
OPTIMAL DESIGN OF ON-LINE ELECTRIC VEHICLE.....	172
<i>Young Dae Ko, Young Jae Jang</i>	
A HYBRID APPROACH TO INTEGRATE CUSTOMER EXPERIENCE MANAGEMENT (CEM) & CUSTOMER RELATIONSHIP MANAGEMENT (CRM).....	178
<i>John W. K. Leung, Kenneth K. Kwong, Brian Lai</i>	
VARIATION IN PROCESSING TIME IN ONE-OF-A-KIND PRODUCTION: CASE STUDIES USING THE STATE SPACE HEURISTIC	184
<i>Wei Li, Barrie R. Nault</i>	
DEVELOPING AN INTEGRATED SYSTEM FOR CAD AND INSPECTION PLANNING	190
<i>Emad Abouel Nasr, Abdulrahman Al-Ahmari, Ali Kamrani, Osama Abdulhameed</i>	
ORDER-DRIVEN COMPONENT AND PRODUCT RECOVERY FOR SENSOR-EMBEDDED PRODUCTS (SEPS) USING LINEAR PHYSICAL PROGRAMMING.....	196
<i>Onder Ondemir, Surendra M. Gupta</i>	
A NEW HYBRID HEURISTIC APPROACH FOR SOLVING GREEN TRAVELING SALESMAN PROBLEM.....	202
<i>Eren Ozceylan, Mustafa Servet Kiran, Yakup Atasagun</i>	
A COMPARATIVE STUDY ON A SELECTION OF SEARCH DESIGN ALGORITHMS FOR SOLVING THE BUFFER ALLOCATION PROBLEM IN SERIAL PRODUCTION LINES.....	208
<i>C.T. Papadopoulos, M.E.J. O'Kelly, M.I. Vidalis, C. Petridis, N. Pistofigdis, M. Nikita</i>	
SPARE PARTS INVENTORY SYSTEMS UNDER AN INCREASING FAILURE RATE DEMAND INTERVAL DISTRIBUTION.....	214
<i>Safa Saidane, M. Zied Babai, M. Salah Aguir, Ouajdi Korbaa</i>	
A REVIEW OF SUPPLY CHAIN COMPLEXITY DRIVERS.....	220
<i>Seyda Serdar-Asan</i>	
PHASE II MONITORING OF MA (1) LINEAR PROFILES.....	226
<i>P. Soleimani, R. Noorossana, A. Narvand</i>	
A MULTI-OBJECTIVE EVOLUTIONARY ALGORITHM FOR INTELLIGENT PATROLLING	232
<i>Oswaldo Aguirre, Rafael Llausas, Crystal Lucero, Heidi Taboada, Jose Espiritu, Christopher Kiekintveld</i>	
A SOLUTION METHOD FOR NONLINEAR INTEGER PROGRAMMING PROBLEM WITH INTERVAL COEFFICIENTS USING HYBRID GA/SA ALGORITHMS	238
<i>Takeaki Taguchi, Takao Yokota</i>	
INTEGRATED DECISION MAKING AND OPTIMIZATION MODEL FOR ROBOT TECHNOLOGY FROM PLANNING TO IMPLEMENTATION.....	244
<i>Farzad Tahriri, Siti Zawiah Binti Md Dawal</i>	
A MULTI-CRITERIA DECISION MODEL FOR URBAN MASS TRANSIT SYSTEMS	250
<i>Y. Ilker Topcu, Sezi Cevik Onar</i>	
SCHEDULING IN SERVICE SYSTEMS: AN APPLICATION IN THE EVENT-TOURISM INDUSTRY	256
<i>Norbert Trautmann, Gianluca Brandinu</i>	
MATHEMATICAL PROGRAMMING APPROACH TO COURSE-TEACHING ASSISTANT ASSIGNMENT PROBLEM	262
<i>Fadime Uney-Yuksektepe, Ilayda Karabulut</i>	

A HYBRID EVOLUTIONARY ALGORITHM FOR MEAN-ABSOLUTE DEVIATION PORTFOLIO OPTIMIZATION PROBLEM.....	268
<i>Xu Wang, Qi Chen, Mitsuo Gen, Lin Lin</i>	
SOCIAL NETWORKS, THE BANKING SUPPLY CHAIN AND FINANCIAL INCLUSION IN SOUTH AFRICA: A FRAMEWORK.....	274
<i>Nichola J. Dewar, Diatha K. Sundar, V.S. Sarma Yadavalli</i>	
SURVEYING ENTERPRISE RESOURCE PLANNING (ERP) SUCCESS FACTORS IN GOVERNMENTAL ORGANIZATIONS IN MIDDLE EAST.....	280
<i>Seyed Mohamad Mahdi Kazemi, Seyed Hossien Iranmanesh, Seyed Mohamad Kazemi</i>	
OPTIMAL DESIGN OF A MULTITIER REWARD SCHEME.....	285
<i>Amir Gandomi, Saeed Zolfaghari</i>	
INTEGRATED PROCESS PLANNING AND SCHEDULING WITH SETUP TIME CONSIDERATION BY ANT COLONY OPTIMIZATION.....	291
<i>S.Y. Wan, T.N. Wong, Sicheng Zhang, Luping Zhang</i>	
ANALYZING THE EFFECTS OF SCRAP, REWORK, RANDOM MACHINE BREAKDOWNS AND PARTIAL BACKORDERING ON THE ECONOMIC PRODUCTION QUANTITY MODEL USING TAGUCHI METHOD.....	297
<i>Kemal Subulan, Kemal Subulan, A. Serdar Tasan</i>	
A HYBRID GENETIC ALGORITHM APPROACH FOR OPTIMIZING DYNAMIC MULTI- COMMODITY SUPPLY CHAINS.....	303
<i>H. Abbas, M. Hussein, M. Etman</i>	
MODELING AND ANALYZING OF A CONSTRUCTION PROJECT CONSIDERING RESOURCE ALLOCATION THROUGH A HYBRID METHODOLOGY: PETRI NETS AND FUZZY RULE BASED SYSTEMS.....	317
<i>Kemal Subulan, Alper Saltabas, A.serdar Tasan, Sadik Can Girgin</i>	
COORDINATION BY CONTRACT FOR CAPACITY AND PRICE DECISIONS CONSIDERING STOCHASTIC AND PRICE-DEPENDENT DEMAND SETTINGS.....	323
<i>Yahya Pezeshki, Armand Baboli, Mohammad R. Akbari Jokar</i>	
GRADIENTMETHODS FOR BINARY INTEGER PROGRAMMING.....	330
<i>Chien-Yuan Huang, Ta-Chung Wang</i>	
SERVICE MODELING FOR SERVICE TESTING LABORATORY.....	337
<i>Jin Sung Lee, Hyunjin Kim, Sang-Kuk Kim, Bohyun Kim, Jae-Yoon Jung</i>	
A PRODUCTION PLANNING AND SCHEDULING MODEL FOR SEMICONDUCTOR WAFER MANUFACTURING PLANTS.....	343
<i>K. Rezaei, H. Eivazy, A. Rezaeadeh, S. Nazari-Shirkouhi</i>	
SOLVING A ROUTING PROBLEM OF GOODS DELEVRING: A CASE STUDY.....	349
<i>Yagouni Mohammed, Igoulalene Idris, Haddadou Mehdi-Sofiane</i>	
DESIGN OF RECONFIGURABLE MANUFACTURING SYSTEMS: OPTIMAL MACHINES SELECTION USING NON DOMINATED SORTING GENETIC ALGORITHM (NSGA-II).....	355
<i>Abderrahmane Bensmaine, Mohammed Dahane, Lyes Benyoucef</i>	
CRITICAL LINKS FOR DRT FEEDER TRANSIT SEVICES.....	361
<i>Shailesh Chandra, Luca Quadrifoglio</i>	
Author Index	