

2020 International Conference on Decision Aid Sciences and Application (DASA 2020)

**Sakheer, Bahrain
8 – 9 November 2020**

Pages 1-635



**IEEE Catalog Number: CFP20Y89-POD
ISBN: 978-1-7281-9678-7**

**Copyright © 2020 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP20Y89-POD
ISBN (Print-On-Demand):	978-1-7281-9678-7
ISBN (Online):	978-1-7281-9677-0

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) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

TOWARDS AN INTELLIGENT DECISION MAKING OF TI-BASED POWDERS SELECTION FOR MEDICAL MANUFACTURING	1
<i>Ivan Izonin, Tetiana Tepla, Dmytro Danylyuk, Roman Tkachenko, Zoia Duriagina, Ihor Lemishka</i>	
ASSESSING THE COVID-19 PERFORMANCE INDICATORS USED IN THE PORTUGUESE DAILY SITUATION REPORT	6
<i>Sérgio Sousa, Rute Teixeira, Eusébio Nunes</i>	
A NONINVASIVE APPROACH USING MULTI-TIER DEEP LEARNING CLASSIFIER FOR THE DETECTION AND CLASSIFICATION OF BREAST NEOPLASM BASED ON THE STAGING OF TUMOR GROWTH.....	12
<i>V S. Renjith, P Subha Hency Jose</i>	
PREDICTION AND CLASSIFICATION OF RHEUMATOID ARTHRITIS USING ENSEMBLE MACHINE LEARNING APPROACHES	17
<i>Shanmugam Sundaramurthy, Saravanabhavan C, Pravin Kshirsagar</i>	
EMPIRICAL METHOD OF EVALUATING THE NUMERICAL VALUES OF METRICS IN THE PROCESS OF MEDICAL SOFTWARE QUALITY DETERMINATION.....	22
<i>V. Sheketa, V. Zorin, S. Chupakhina, N. Kyrsta, M. Pasyeka, N. Pasieka</i>	
DEEP CONVOLUTIONAL NEURAL NETWORK BASED FEATURE EXTRACTION WITH OPTIMIZED MACHINE LEARNING CLASSIFIER IN INFANT CRY CLASSIFICATION	27
<i>K Ashwini, P M Durai Raj Vincent, Kathiravan Srinivasan, Chuan-Yu Chang</i>	
COMPUTERIZED DECISION AID APPLIED TO MESHLESS METHOD FOR THE USE CASE: WAVE-STRUCTURE INTERACTIONS	33
<i>Mohamed Loukili, Kamila Kotrasova, Mustapha Mouhid</i>	
BOARD OF DIRECTORS AND INTELLECTUAL CAPITAL DISCLOSURE: EVIDENCE FROM GCC COUNTRIES	37
<i>Leena F. Abdulkarim, Omar I. Juhmani</i>	
SENTIMENT ANALYSIS OF BANKS' ANNUAL REPORTS AND BANK FEATURES: LASSO APPROACH.....	42
<i>Elsayed A. H. Elamir, Gehan A. Mousa</i>	
CORPORATE GOVERNANCE MECHANISMS AND FIRMS' DIVIDEND PAYOUT POLICIES: EVIDENCE FROM BAHRAIN	49
<i>Mohamed Almulla, Omar I. Juhmani</i>	
ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) DISCLOSURE AND FIRM PERFORMANCE: EVIDENCE FROM GCC BANKING SECTOR.....	54
<i>Abdulla Al-Jalahma, Hessa Al-Fadhel, Mesfer Al-Muhanadi, Najeeba Al-Zaimoor</i>	
APPLICATION OF FUZZY TOPSIS ALGORITHM FOR SELECTING BEST FAMILY CAR.....	59
<i>Anirban Sarkar, Arijit Ghosh, Badal Karmakar, Azharuddin Shaikh, Sankar Prasad Mondal</i>	
A DISCRETE ANALOGUE OF THE HALF-LOGISTIC DISTRIBUTION.....	64
<i>Alessandro Barbiero, Asmerilda Hitaj</i>	

THE APPLICATION OF TOPSIS IN THE SELECTION OF STATISTICAL PREDICTION MODEL: A FORENSIC INK ANALYSIS CASE STUDY.....	68
<i>Loong Chuen Lee, Abdul Aziz Jemain</i>	
SOLVING STOCHASTIC LINEAR QUADRATIC GAMES IN DISCRETE TIME WITH TWO PLAYERS USING EXACT LINE-DOUBLE NEWTON METHOD	73
<i>A. Rafsanjani Zani, Sugiyarto Surono</i>	
MICROMANAGEMENT'S IMPACT ON BANKS' PERFORMANCE	77
<i>Issa Khoury, Antoine Tannous</i>	
PROPOSED METAMODELS TRANSFORMATION FROM PREDICTIVE METHODOLOGIES TO AGILE METHODOLOGIES.....	85
<i>Ibrahim Hamzane, Allae Erraissi, Banane Mouad, Abdessamad Belangour</i>	
GUIDELINES OF INFLUENCER INTELLIGENCE: POSITIVE & NEGATIVE IMPACT OF INFLUENCER TO COMMUNITY	90
<i>Indra Gamayanto, Farrikh Alzami, Sendi Novianto</i>	
OPTIMAL ENGINE TECHNOLOGY MIX IN A LOW CARBON ECONOMY	95
<i>Florian Kellner, Bernhard Lienland, Sebastian Utz</i>	
TOWARDS REAL-TIME HOMOGENEITY AND HETEROGENEITY IN STUDENT'S BELIEFS	99
<i>Chaman Verma, Zoltán Illés, Veronika Stoffová</i>	
DEVELOPMENT OF A VOICE CHATBOT FOR PAYMENT USING AMAZON LEX SERVICE WITH EYOWO AS THE PAYMENT PLATFORM	104
<i>Isaac Samuel, Fiyinfoba A. Ogunkeye, Ayobami Olajube, Ayokunle Awelewa</i>	
DATA ANALYTICAL FRAMEWORK FOR INTERNET OF THINGS.....	109
<i>Tausifa Jan Saleem, Syed Rameem Zahra, Mohammad Ahsan Chishti</i>	
TIME SERIES FORECASTING OF HOURLY WATER CONSUMPTION WITH COMBINATIONS OF DETERMINISTIC AND LEARNING MODELS IN THE CONTEXT OF A TERTIARY BUILDING	116
<i>Anissa Ticherahine, Aida Boudhaouia, Patrice Wira, Abdenacer Makhoul</i>	
RESPONSIBILITY SOCIAL MONITORING AS THE SUSTAINABLE DEVELOPMENT BASIS.....	122
<i>Iryna Moiseienko, Ivanna Dronyuk, Igor Moyseyenko</i>	
QUANTIFICATION OF SOCIAL IMPACTS ON WORKERS TO AID DECISION-MAKING IN MICRO AND SMALL ENTERPRISES	127
<i>Diego Alexis Ramos Huarachi, Fabio Neves Puglieri, Julio Abraham Ramos Quispe, Antonio Carlos De Francisco</i>	
MODELING EVAPOTRANSPIRATION USING ENCODER-DECODER MODEL.....	132
<i>Khadijeh Alibabaei, Pedro D. Gaspar, Tânia M. Lima</i>	
A NON-ISOLATED DC-DC BOOST CONVERTER WITH HIGH GAIN ABILITY FOR RENEWABLE ENERGY SOURCES APPLICATIONS	137
<i>Nazia Rahman, Umme Aiman, Md Shahbaz Alam, Mohd Rizwan Khalid, Adil Sarwar, M. S. Jamil Asghar</i>	

ATTRACTING GEN Z TO SMALL AND MEDIUM ENTERPRISES (SMES): A VIEW THROUGH THE JOB CHARACTERISTIC MODEL.....	142
<i>Theresa C. F. Ho, Ling Suan Choo, Poh-Chuin Teo, Narentheren Kaliappen</i>	
INVESTIGATING THE LINKAGE BETWEEN QUALITY OF WORK LIFE AND BURNOUT IN INDIAN IT INDUSTRY.....	146
<i>Shivani Agarwal, Vijender Kumar Solanki</i>	
DESIGNING THE CONCEPT OF LEADERSHIPS INTELLIGENCE (CI2.1) VERSION 2.0 INSIDE SOCIAL MEDIA USING KEN WATANABE PROBLEM SOLVING 101 METHODS	151
<i>Farrikh Alzami, Sendi Novianto, Indra Gamayanto</i>	
METHODOLOGY OF HUMAN FACTOR INFLUENCE ON COMPLEX SAFETY OF ENTERPRISES	157
<i>Gvozdev Evgeny Vladimirovich</i>	
A MEMETIC METAHEURISTICS SEARCH ALGORITHM FOR LOAD FREQUENCY REGULATION IN MULTI AREA POWER SYSTEM	163
<i>Ardhala Bala Krishna, Sobhit Saxena, Vikram Kumar Kamboj, Chaman Verma</i>	
FLEET MANAGEMENT OPTIMIZATION IN CAR RENTAL INDUSTRY: DECISION AID MODELS FOR LOGISTICS IMPROVEMENT	168
<i>Carlos M. Fernandez, António A. Freitas, António N. Morais, Tânia M. Lima, Pedro D. Gaspar</i>	
LOGISTICS STRATEGY (FIFO, FEFO OR LIFO) DECISION SUPPORT SYSTEM FOR PERISHABLE FOOD PRODUCTS	173
<i>Adriana Mendes, João Cruz, Tiago Saraiva, Tânia M. Lima, Pedro D. Gaspar</i>	
MULTI-CRITERIA DECISION MAKING METHODS AND PROJECT DELIVERY APPROACHES	179
<i>Hasan Mahmoud, Malick Ndiaye, Salwa Beheiry, Hana Adada</i>	
DESIGN AND ANALYSIS OF A CLOSED-LOOP TEMPERATURE ENGINEERING CONTROL SYSTEM USING MIKROC AND PROTEUS	184
<i>Aaron Don M. Africa, Darlene Alyssa P. Abaluna, Ara Jyllian Abello, Joaquin Miguel B. Lalusin</i>	
A LOW COST AUGMENTED REALITY SYSTEM FOR WIDE AREA INDOOR NAVIGATION.....	190
<i>Vivek Dosaya, Shashwat Varshney, Vijaya Kumar Parameshwarappa, Akshay Beniwal, Shraddha Tak</i>	
IIOT BENEFITS AND CHALLENGES WITH BLOCKCHAIN	196
<i>Amit Chaurasia</i>	
DEVELOPMENT OF MICROSTRIP PATCH ANTENNA INTEGRATED ON SOLAR CELL BASED ARTIFICIAL MAGNETIC CONDUCTOR SURFACE FOR GREEN WIRELESS APPLICATIONS.....	204
<i>Suresh Babu Thandullu Naganathan, Sivakumar Dhandapani</i>	
A COMPARATIVE STUDY OF DIFFERENT FEATURE EXTRACTION TECHNIQUES FOR IDENTIFYING COVID-19 PATIENTS USING CHEST X-RAYS IMAGES	209
<i>Shrasti Vyas, Ayan Seal</i>	

A MULTI-CRITERIA SCHEME TO BUILD MODEL ENSEMBLE FOR DENGUE INFECTION CASE ESTIMATION	214
<i>Nittaya Kerdprasop, Kittisak Kerdorasop, Paradee Chuaybamroong</i>	
A REVIEW ON DIAGNOSIS AND TREATMENT METHODS FOR CORONAVIRUS DISEASE WITH SENSORS.....	219
<i>Ivan Miguel Pires</i>	
IMPROVING EFFICIENCY OF SELF-CARE CLASSIFICATION USING PCA AND DECISION TREE ALGORITHM.....	224
<i>Muhammad Syafrudin, Ganjar Alfian, Norma Latif Fitriyani, Abdul Hafidh Sidiq, Tjahjanto Tjahjanto, Jongtae Rhee</i>	
ATTENDANCE MANAGEMENT SYSTEM USING FACIAL RECOGNITION	228
<i>Ankush Kumar, Manish Sharma, Saurabh Pratap Gautam, Ranjeet Kumar, Sandeep Raj</i>	
PREDICTION OF SUCCESS IN CROWDFUNDING PLATFORMS.....	233
<i>Partha Mukherjee, Youakim Badr, Srushti N. Karvekar</i>	
BUILDING A NEW BLUEPRINT FOR OPERATING WORKFLOW EFFICIENTLY	238
<i>Adel Almalki, Irfan Mohiuddin, Ahmad S. Almogren, Ahmed Ghoneim</i>	
SOCIAL INTERACTIONS ISSUES IN GROUP DECISION-MAKING.....	245
<i>Ayeley Tchangani</i>	
DECISION AID IN BUDGETING SYSTEMS FOR SMALL & MEDIUM ENTERPRISES.....	253
<i>Mahani Hamdan, Chin Kang Chen, Muhammad Anshari</i>	
CAN RELATED PARTY TRANSACTIONS BE A MATTER FOR FIRM VALUE? EVIDENCE FROM EMERGING MARKETS.....	258
<i>Talat Iqbal Tariq, Gehan A. Mousa</i>	
A GCC EVIDENCE ON THE EFFECT OF BOARD AND AUDIT COMMITTEE FEATURES ON CSR: THE CASE OF EMPLOYEE AND PRODUCT INFORMATION.....	264
<i>Abdelmohsen M. Desoky, Elsayed A. H. Elamir, Gehan A. Mousa</i>	
CORPORATE GOVERNANCE, OWNERSHIP STRUCTURE AND INVESTMENT STRUCTURE: EVIDENCE FROM GCC COUNTRIES	270
<i>Zahra Husain, Omar I. Juhmani</i>	
A FUZZY MULTICRITERIA APPROACH FOR PHOSPHOGYPSUM WASTE VALORIZATION	274
<i>Nada Ghiloufi, Ines Kanoun, Ahmed Frikha</i>	
FUZZY DECISION SUPPORT SYSTEM FOR RISK ANALYSIS IN URBAN REQUALIFICATION PROJECT	279
<i>José Leão, Marcele Elisa Fontana</i>	
ON SOLVING THE ON-DEMAND GROCERY DELIVERY PROBLEM.....	284
<i>Nour El Houda Hammami, Safa Bhar Layeb, Amel Jaoua</i>	
LOGISTIC AND BLOCKCHAIN: A STRONG PARTNERSHIP.....	288
<i>Alia Al Sadawi, Ghassan Abu-Lebdeh, Malick Ndiaye</i>	
DATA ANALYTICS OF STRATEGIC AGILITY AND COMPETITIVENESS IN OPERATION PERFORMANCE: A CASE OF BANKING SECTOR IN SAUDI ARABIA	293
<i>Basheer A. Al-Nattar, Abdulsattar Alazzawi</i>	

COMPREHENSIVE FORECASTING OF INTERCONNECTED SOCIO- ECONOMIC INDICATORS AS A METHODOLOGICAL BASIS FOR ADOPTING OPTIMAL MANAGEMENT	299
<i>Oleksandr Yankovyi, Oleksii Hutsaliuk, Viktoriia Tomareva-Patlahova, Nataliia Shmatko, Olena Kabanova, Yuliia Rud</i>	
OPTIMIZATION MODEL FOR PRODUCTION SYSTEMS OF IRRIGATION IMPROVEMENT PROJECTS USING NONLINEAR PROGRAMMING AND GENETIC ALGORITHMS.....	305
<i>Robert Antonio Romero-Flores</i>	
SUPPORTING TOOLS FOR TRANSITION TOWARDS INDUSTRY 4.0: A PRESSURIZED CYLINDER MANUFACTURING CASE STUDY.....	310
<i>Md Mashum Billal, Miguel Baritto, S. M. Muntasir Nasim, Rumana Afroz Sultana, Mohammad Arani, Ahmed Jawad Qureshi</i>	
MICROSOFT AZURE IOT-BASED EDGE COMPUTING FOR SMART HOMES.....	315
<i>Amjad Hameed Shehab, Sufyan T. Faraj Al-Janabi</i>	
INTEROEVERY: MICROSERVICE BASED INTEROPERABLE SYSTEM.....	320
<i>Badr El Khalyly, Mouad Banane, Allae Erraissi, Abdessamad Belangour</i>	
STACKING-BASED GRNN-SGTM ENSEMBLE MODEL FOR PREDICTION TASKS.....	326
<i>Ivan Izonin, Roman Tkachenko, Pavlo Vitynskyi, Khrystyna Zub, Pavlo Tkachenko, Ivanna Dronyuk</i>	
TRAFFIC-LIGHTS-BASED GUIDANCE SYSTEM IN LEBANON USING NETWORK OPTIMIZATION	331
<i>Elie Khoderchah, Ibrahim Jazzar, Samer El-Zahab, Nabil Semaan, Abobaker Al-Sakkaf</i>	
A STATE-OF-THE-ART REVIEW ON XEVS AND CHARGING INFRASTRUCTURE.....	335
<i>Mohd Rizwan Khalid, Mohammad Saad Alam, M. S. Jamil Asghar</i>	
DECISION MAKING TO CALCULATE ECONOMIC SUSTAINABILITY INDEX: A CASE STUDY.....	343
<i>Shahd Yasser, Nour Sameh, Sally Kassem, Youssef Emad, Omar Tariq, Irene Fahim</i>	
AIR QUALITY MONITORING THROUGH LORA TECHNOLOGIES: A LITERATURE REVIEW	350
<i>Gonçalo Vicente, Gonçalo Marques</i>	
SIMULATION STUDY OF A SOLAR GLIDER DESIGN.....	355
<i>Salman Shahid Pervaiz, Abdulqader Abdullah, Sharul Sham Bin Dol</i>	
A STUDY ON MACHINE LEARNING CLASSIFIER MODELS IN ANALYZING DISCIPLINE OF INDIVIDUALS BASED ON VARIOUS REASONS ABSENTEEISM FROM WORK.....	360
<i>Mayakkannan Raman, Narentheren Kaliappen, Choo Ling Suan</i>	
TALENT OPTIMIZATION IN FACULTY RECRUITMENT IN THE POST-COVID-19 ERA.....	365
<i>Sumaya Al-Abbasi, Hatem Masri</i>	
EMPLOYEES WITH STIGMATIZED IDENTITY SUFFER MORE! HOW MUCH PSYCHOPATH AND UNCIVIL LEADERS CONTRIBUTE?	369
<i>Sobia Bano, Muhammad Ali Asadullah, Natasha Zafar</i>	
UNDERSTANDING THE KEY FACTORS THAT INFLUENCE EMPLOYEE LOYALTY IN PUBLIC ORGANIZATIONS	376
<i>Ramy A. Rahimi</i>	

SIMULATION AND ANALYTIC HIERARCHY PROCESS TO IMPLEMENT OUTPATIENT APPOINTMENT SYSTEM AT HABIB BOURGUIBA HOSPITAL SFAX TUNISIA.....	382
<i>Ahmed Missaoui, Younes Boujelben</i>	
INFLATION RATE AND CONSTRUCTION MATERIALS PRICES: RELATIONSHIP INVESTIGATION.....	387
<i>Muhammad Ali Musarat, Wesam Salah Alaloul, Abdul Hannan Qureshi, Muhammad Altaf</i>	
COMPUTATIONAL MODELLING AND ANALYSIS OF FULLERENE BASED POLYMER SOLAR CELL.....	391
<i>Waqas Farooq, Muhammad Ali Musarat, Wesam Salah Alaloul</i>	
IMPROVEMENT OF GRAPHICAL MODEL OF RAILWAY STATIONS FUNCTIONING.....	395
<i>Dmytro Kozachenko, Anatoliy Verlan, Ruslana Korobyova</i>	
PREDICTION MODEL FOR TYPE 2 DIABETES USING STACKED ENSEMBLE CLASSIFIERS	399
<i>Norma Latif Fitriyani, Muhammad Syafrudin, Ganjar Alfian, Agung Fatwanto, Syifa Latif Qolbiyani, Jongtae Rhee</i>	
EXPLORING THE ROLE OF MEDICAL DECISION MAKING IN BIOTECHNOLOGY FIELD THROUGH SCIENCE MAPPING.....	403
<i>A. Castorena-Robles, N. K. Gamboa-Rosales, A. Faz-Mendoza, M. A. Casas-Valadez, C. E. Medina-Rodríguez, J. R. López-Robles</i>	
IMED: UBIQUITOUS HEALTHCARE PLATFORM FOR CHRONIC PATIENTS	408
<i>Mohammed Anis Oukebdane, Abd Ellah Taib, Samir Ghouali, Mohammed Seghir Guellil, Walid Cherifi, Amina Elbatoul Dinar</i>	
EFFICIENCY ANALYSIS TO EVALUATE A BREAST CANCER SCREENING CAMPAIGN: A CASE STUDY FROM TUNISIA	412
<i>Safa Bhar Layeb, Najla Omrane Aissaoui, Nouha Ben Fatma, Mohamed Frikha, Zied Jemai, Nadra Bohli, Chokri Hamouda</i>	
ASYMMETRIC PRODUCTION METRIC FOR CALCULATING THE SIMILARITY OF OBJECTS.....	415
<i>Alexandr Sorokin</i>	
FORECAST OF THE NUMBER OF NEW PATIENTS AND THOSE WHO DIED FROM COVID-19 IN BAHRAIN.....	422
<i>Anastasiia-Olha Strontsitska, Olena Pavliuk, Ruslan Dunaev, Roman Derkachuk</i>	
APPLICATION OF MOBILE COMPUTER DIGITAL DEVISE FOR CURRENT MEDICAL AND BIOLOGICAL CONTROL IN FUTSAL.....	427
<i>Taras Panchuk, Illya Chaikovsky, Myroslav Panchuk</i>	
GENDER PREDICTION FOR INSTAGRAM USER PROFILING USING DEEP LEARNING.....	432
<i>Adri Priadana, Muhammad Rifqi Maarif, Muhammad Habibi</i>	
DETERMINING OWNERSHIP STRUCTURE THRESHOLD AS A BASIS FOR FINANCIAL DECISION MAKING: A PANEL QUADRATIC REGRESSION MODEL	437
<i>Faisal, M. Shabri Abd. Majid, A. Sakir</i>	
GRAPHICAL DISCLOSURE PRACTICES IN GCC COUNTRIES: A DESCRIPTIVE APPROACH.....	442
<i>Mooza Ebrahim Alhadi, Gehan A. Mousa</i>	

STOCK PRICE PREDICTION USING CNN AND LSTM-BASED DEEP LEARNING MODELS.....	447
<i>Sidra Mehtab, Jaydip Sen</i>	
CORPORATE GOVERNANCE AND THE INSOLVENCY RISK: EVIDENCE FROM BAHRAIN.....	454
<i>Ola Al Haddad, Omar I. Juhmani</i>	
STABILITY INSPECTION OF ISOLATED HYDRO POWER PLANT WITH CUTTLEFISH ALGORITHM.....	459
<i>Megha Khatri, Atul Kumar</i>	
TOWARDS THE ASSESSMENT OF THE EFFICIENCY AND SUSTAINABILITY OF ENERGY-BASED INVESTMENT PROJECTS	464
<i>Joaquín Alencastre Cordi, Daniel Alejandro Rossit, Miguel Ajís, Laura Biondo</i>	
AN EFFECTIVE SOLUTION TO UNIT COMMITMENT PROBLEM IN PRESENCE OF SUSTAINABLE ENERGY USING HYBRID HARRIS HAWK'S OPTIMIZER	469
<i>Dinesh Dhawale, Vikram Kumar Kamboj</i>	
STATE OF THE ART: LASER SURFACE TEXTURING FOR BIOMEDICAL APPLICATIONS.....	473
<i>I. Shivakoti, D. Pandey, G. Kibria, A. Sharma, B. B. Pradhan</i>	
INTELLIGENT PROCESSES IN THE CONTEXT OF MINING 4.0: TRENDS, RESEARCH CHALLENGES AND OPPORTUNITIES.....	480
<i>A. Faz-Mendoza, N. K. Gamboa-Rosales, C. E. Medina-Rodríguez, M. A. Casas-Valadez, A. Castorena-Robles, J. R. López-Robles</i>	
PERFORMANCE EVALUATION OF PULP AND PAPER MILLS: BOOTSTRAP DATA ENVELOPMENT ANALYSIS APPROACH.....	485
<i>Shashi K. Shahi, Mohamed Dia</i>	
A MULTI-CRITERION DECISION ANALYSIS BASED ON PCA FOR ANALYZING THE DIGITAL TECHNOLOGY SKILLS IN THE EFFECTIVENESS OF GOVERNMENT SERVICES	490
<i>Prabhat Mittal</i>	
APPLICATION OF FINTECH, MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE IN PROGRAMMED DECISION MAKING AND THE PERCEIVED BENEFITS.....	495
<i>Mohammad Selim</i>	
VALUE-BASED ADOPTION MODEL ON E-WALLET IN MALAYSIA: A CONCEPTUAL PAPER	501
<i>Chen Hooi Ling, Poh-Chuin Teo, Theresa C. F. Ho, Ling Suan Choo</i>	
INDOOR AIR QUALITY MONITORING WITH IOT: PREDICTING PM10 FOR ENHANCED DECISION SUPPORT.....	504
<i>Jagriti Saini, Maitreyee Dutta, Gonçalo Marques</i>	
COGNITIVE COMPUTING IN SOFTWARE EVALUATION	509
<i>Harshitha M Nayak, E Naresh, Sahana P Shankar, J Ananda Babu</i>	
DATA AUGMENTATION TO IMPROVE THE PERFORMANCE OF A CONVOLUTIONAL NEURAL NETWORK ON IMAGE CLASSIFICATION.....	515
<i>Deshan Fonseka, Christos Chrysoulas</i>	

HOUSING INFRASTRUCTURE RESILIENCE FRAMEWORK DEVELOPMENT FOR SUSTAINABLE FUTURE	519
<i>Mrinal Kanti Sen, Subhrajit Dutta, Golam Kabir</i>	
ENSEMBLE LEARNING ALGORITHM-BASED ARTIFICIAL NEURAL NETWORK FOR PREDICTING SOLAR RADIATION DATA	526
<i>Mohammed Ali Jallal, Abdessalam El Yassini, Samira Chabaa, Abdelouhab Zeroual, Saida Ibnyaich</i>	
PROMOTING GREEN BEHAVIOR IN LABORATORIES: A CONCEPTUAL PAPER.....	532
<i>Yossra Fareed El-Tony, Ling Suan Choo</i>	
STRATEGIC INTELLIGENCE AND KNOWLEDGE MANAGEMENT AS DRIVERS OF DECISION-MAKING IN MINING INDUSTRY: AN ANALYSIS OF THE LITERATURE.....	536
<i>A. Faz-Mendoza, N. K. Gamboa-Rosales, A. Castorena-Robles, M. J. Cobo, R. Castañeda-Miranda, J. R. López-Robles</i>	
CORPORATE UNIVERSITY: THE VITAL HUMAN RESOURCE AND MARKETING DECISION-MAKING MODEL IN KNOWLEDGE-ECONOMY TODAY'S COMPETITIVENESS.....	541
<i>Waleed A. Aziz, Shaju George</i>	
INTELLIGENT COMPUTATION TO BUILD A NOVEL RECOMMENDER OF PRODUCTS THROUGH (PAGERANK-CLUSTERING AND DGSPAN- FBR).....	547
<i>Samaher Al-Janabi, K. Noor</i>	
THE AREAS AND REQUIREMENTS OF COMPETITIVENESS ADVANTAGE IN JORDANIAN UNIVERSITIES	555
<i>Antoine Tannous, Abdallah Al Harahsheh</i>	
DECISION MODELS IN MARKETING: THE ROLE OF SENTIMENT ANALYSIS FROM BIBLIOMETRIC ANALYSIS	561
<i>M. A. Casas-Valadez, A. Faz-Mendoza, C. E. Medina-Rodríguez, A. Castorena-Robles, N. K. Gamboa-Rosales, J. R. López-Robles</i>	
STATISTICAL AND PROBABILISTIC-BASED DECISION AIDS FOR OFFSHORE WIND TURBINE RELIABILITY	566
<i>Nathan R Dappa, Srinivas Sriramula</i>	
STOCHASTIC-BASED DETERIORATION MODELING OF ELEVATORS IN HEALTHCARE FACILITIES.....	572
<i>Reem Ahmed, Ahmed Assad, Eslam Mohammed Abdelkader, Tarek Zayed, Fuzhan Nasiri</i>	
NEUTROSOPHIC-AHP-BASED GA MODEL FOR RENEWALS PLANNING OF HOSPITAL BUILDING ASSETS	577
<i>Reem Ahmed, Fuzhan Nasiri, Tarek Zayed</i>	
REALIZATION OF LOW SCATTERING FOR A HIGH-GAIN PLANAR ANTENNA USING AN ARTIFICIAL DUAL-LAYER METASURFACE	582
<i>Abdessalam El Yassini, Mohammed Ali Jallal, Saida Ibnyaich, Abdelouhab Zeroual, Samira Chabaa</i>	
OPTIMAL SELECTION OF PYRAMID POOLING COMPONENTS FOR CONVOLUTIONAL NEURAL NETWORK CLASSIFIER.....	586
<i>Siti Raihanah Abdani, Mohd Asyraf Zulkifley</i>	

AN INTEGRATED WEIGHTING-BASED MODIFIED WASPAS METHODOLOGY FOR ASSESSING PATIENT SATISFACTION.....	592
<i>Satender Pal Singh, Tithishri Kundu, Arnab Adhikari, Sumanta Basu</i>	
DEVELOPMENT OF A COLLABORATIVE DECISION-MAKING FRAMEWORK TO IMPROVE THE PATIENTS' SERVICE QUALITY IN THE INTENSIVE CARE UNIT.....	597
<i>Gowthaman Sivakumar, Eman Almehdawe, Golam Kabir</i>	
WEB PREDICTOR COVIDZ: DEEP LEARNING FOR COVID-19 DISEASE DETECTION FROM CHEST X-RAYS	601
<i>Mohammed Seghir Guellil, Samir Ghouali, Emad Kamil Hussein, Mohammed Anis Oukebdane, Amina Elbatoul Dinar, Walid Cherifi, Abd Ellah Taib, Boualem Merabet</i>	
A BENDERS DECOMPOSITION APPROACH FOR LOW RANK CONCAVE MINIMIZATION PROBLEMS.....	607
<i>Ahmed Saif, Samir Elhedhli</i>	
ONTOLOGY-BASED APPROACH TO DETERMINE THE COVERAGE OF EXAMINATION PAPERS	613
<i>Yasindu T. Premathilaka, Kuhaneswaran Banujan, Banage T. G. S Kumara</i>	
COMPARISON BETWEEN SUPPORT VECTOR MACHINE AND RANDOM FOREST FOR HEPATOCELLULAR CARCINOMA (HCC) CLASSIFICATION	618
<i>Velery Virginia Putri Wibowo, Zuherman Rustam, Sri Hartini, Qisthina Syifa Setiawan, Jane Eva Aurelia</i>	
COMPARING DECISION TREE AND LOGISTIC REGRESSION FOR PANCREATIC CANCER CLASSIFICATION.....	623
<i>Qisthina Syifa Setiawan, Zuherman Rustam, Sri Hartini, Velery Virginia Putri Wibowo, Jane Eva Aurelia</i>	
MULTI-AREA DYNAMIC DISPATCH MATHEMATICAL FORMULATION INCORPORATING PEVS/BEVS AND RENEWABLE ENERGY SOURCES	628
<i>Ch. Leela Kumari, Vikram Kumar Kamboj, S. K. Bath</i>	
CUCKOO SEARCH OPTIMIZATION BASED MPPT FOR INTEGRATED DFIG-WIND ENERGY SYSTEM.....	636
<i>B. Srikanth Goud, P. Srinivasa Varma, B. Loveswara Rao, M. Sai Krishna Reddy, A. Pandian, Ch. Rami Reddy</i>	
MODELLING FOR OPTIMAL LOAD DISPATCH OF INTEGRATED RENEWABLE ENERGY SOURCE/BESS/ELECTRIC VEHICLE CHARGING STATION.....	640
<i>Shivani Sehgal, Aman Ganesh, Vikram Kumar Kamboj</i>	
ENHANCING OF THE OPERATIONAL DECISIONS IN ELECTRIC POWER SYSTEMS UNDER BLACKOUTS	646
<i>Gonzalo Alvarez, María Julia Blas</i>	
DECISION-MAKING SUPPORT SYSTEM FOR FRUIT DISEASES CLASSIFICATION USING DEEP LEARNING.....	652
<i>Eduardo Assunção, Catarina Diniz, Pedro Dinis Gaspar, Hugo Proença</i>	
PROMOTING PATIENT SAFETY THROUGH MACHINE LEARNING.....	657
<i>Ragheb H. Al Nammari</i>	

MACHINE LEARNING FOR STRATEGIC DECISION MAKING DURING COVID-19 AT HIGHER EDUCATION INSTITUTES	663
<i>Amjed Sid Ahmed Mohamed Sid Ahmed, Mazhar Hussain Malik</i>	
COMBINED MULTI-LAYERED BIG DATA AND RESPONSIBLE AI TECHNIQUES FOR ENHANCED DECISION SUPPORT IN SHIPPING	669
<i>Spandonidis C. Christos, Theodoropoulos Panagiotis, Giordamlis Christos</i>	
TRANSFORMING BUSINESS DECISION MAKING WITH INTERNET OF THINGS (IOT) AND MACHINE LEARNING (ML).....	674
<i>Mahmood Asad Moh'D Ali, Abu Basahr, Mustafa Raza Rabbani, Yomna Abdulla</i>	
ADOPTION OF E-BUSINESS: A SYSTEMATIC LITERATURE REVIEW	680
<i>Melinska Ayu Febrianti, Gisy Amanda Yudhistira, Qurtubi, Elisa Kusrini</i>	
ESCALATION COMMITMENT IN DECISION MAKING AND ITS POSSIBLE EFFECTS IN THE LONG RUN.....	686
<i>Mohammad Selim</i>	
CONSUMER VEHICLE PURCHASE DECISION-MAKING DURING COVID-19.....	692
<i>Sarah Raza, Meryem Masmoudi</i>	
SMART AGENT EDGE MICROSERVICES DEPLOYMENT APPROACH	697
<i>Badr El Khalyly, Mouad Banane, Allae Erraissi, Abdessamad Belangour</i>	
AN OVERVIEW OF INTRUSION DETECTION BASED ON DEEP LEARNING TECHNIQUES	702
<i>Fadheela Hussain, Mustafa Hammad</i>	
IOT BASED SMART DIGITAL ELECTRIC METER FOR HOME APPLIANCES.....	708
<i>Ayodeji Olalekan Salau, Lekhika Chettri, Tshering Kiden Bhutia, Mayalmit Lepcha</i>	
IMPROVING THE PERFORMANCE OF MULTINOMIAL LOGISTIC REGRESSION IN VOWEL RECOGNITION BY DETERMINING BEST REGRESSION COEFFICIENTS.....	714
<i>Shahrul Azmi Mohd Yusof, Abdulwahab F. Atanda, Husniza Husni</i>	
THE INTUITIONISTIC FUZZY SET FLOWSORT METHODOLOGY FOR GREEN SUPPLIER EVALUATION	719
<i>Fedia Daami Remadi, Hela Moalla Frikha</i>	
LAND SURFACE TEMPERATURE MODELLING OVER GEOCLIMATIC REGIONS OF NIGERIA USING SOFT-COMPUTING INTELLIGENCE TECHNIQUES	726
<i>Olusola Samuel Ojo, Babatunde Adeyemi</i>	
INNOVATIVE TECHNOLOGIES FOR THE CREATION OF A NEW SUSTAINABLE, ENVIRONMENTALLY NEUTRAL ENERGY PRODUCTION IN UKRAINE	732
<i>Myroslav Panchuk, Sviatoslav Kryshchtopa, Andrii Panchuk</i>	
DESIGN KEY PERFORMANCE INDICATOR FOR DISTRIBUTION SUSTAINABLE SUPPLY CHAIN MANAGEMENT.....	738
<i>Elisa Kusrini, Khoerun Nisa Safitri, Asrul Fole</i>	
ANALYSING THE EFFECT OF ELECTRONIC SERVICE QUALITY AND SATISFACTION ON APPAREL PURCHASE PROPINQUITY DECISION.....	745
<i>Nishant Kumar, Divya Mohan, Neha Sharma</i>	

ADOPTION OF FINTECH AND FUTURE PERSPECTIVE: AN EMPIRICAL EVIDENCE FROM BAHRAIN ON DIGITAL WALLETS	751
<i>Ali Saeed Ahmed, Mukesh Kumar, Mahmood Asad Moh'D Ali</i>	
AGILITY DECISION-MAKING MODEL IN DIGITAL ENTERPRISE MARKETS DRIVEN BY TURBULENCE OF CULTURAL COGNITION AND TECHNOLOGICAL INNOVATION	756
<i>Issam Kouatli, Raed Elkhailil, Khalid Karam</i>	
BUSINESS ANALYTICS OF E-COMMERCE POLICY AND PRACTICE: AN ETHICAL PERSPECTIVE	761
<i>Rania Aburaya</i>	
INFLUENCE OF EXTERNAL WORKFORCE DIVERSITY FACTORS ON LABOR PRODUCTIVITY IN CONSTRUCTION PROJECTS: EMPIRICAL EVIDENCE FROM PAKISTAN	768
<i>Ahsen Maqsoom, Khawar Khan, Muhammad Ali Musarat, Hasnain Mubasit, Iram Shaheen</i>	
ARTIFICIAL INTELLIGENCE AS DECISION AID IN HUMANITARIAN RESPONSE	773
<i>Anusorn Swasdee, Muhammad Anshari, Mahani Hamdan</i>	
A BRANCH-AND-BOUND ALGORITHM FOR THE PROBLEM OF SCHEDULING WITH A CONFLICT GRAPH	778
<i>Amin Mallek, Mourad Boudhar</i>	
ATTITUDE REGULATION OF SPACECRAFT USING LARGE ANGLE EIGEN-AXIS ROTATIONS	783
<i>Syed Muhammad Amrr, M. Nabi</i>	
TECHNOLOGY APPLICATIONS FOR HEALTH SAFETY DECISION MAKING UNDER COVID-19 PANDEMIC MANAGEMENT	788
<i>Rajan Gupta, Saibal Kumar Pal, Aayush Khattar, King Baliyan</i>	
NEW COMBINING RULES FOR SPATIAL CLUSTERING METHODS USING SIGMA-COUNT FOR SPATIAL EPIDEMIOLOGY	794
<i>Laisa Ribeiro De Sá, Liliane Dos Santos Machado, Jordana De Almeida Nogueira, Ronei Marcos De Moraes</i>	
CANCER LITERATURE CLASSIFICATION METHODS PERFORMANCE.....	801
<i>Cheng-Yuan Ho, Mariana Syamsudin, Yueh-Chun Shen</i>	
INCORPORATING THE DECISION MAKER'S PREFERENCES IN DIETARY MENU PLANNING PROBLEM.....	806
<i>J. Ichraf, S. Soulef, K. Hichem</i>	
COMPARISON BETWEEN CONVOLUTIONAL NEURAL NETWORK AND CONVOLUTIONAL NEURAL NETWORK-SUPPORT VECTOR MACHINES AS THE CLASSIFIER FOR COLON CANCER	812
<i>Jane Eva Aurelia, Zuherman Rustam, Velery Virginia Putri Wibowo, Qisthina Syifa Setiawan</i>	
HYPERPARAMETER OPTIMIZATION ON SUPPORT VECTOR MACHINE USING GRID SEARCH FOR CLASSIFYING THALASSEMIA DATA.....	817
<i>Afifah Rofi Laeli, Zuherman Rustam, Sri Hartini, Faisa Maulidina, Jane Eva Aurelia</i>	
TEXTMAGE: THE AUTOMATED BANGLA CAPTION GENERATOR BASED ON DEEP LEARNING.....	822
<i>Abrar Hasin Kamal, Md. Asifuzzaman Jishan, Nafees Mansoor</i>	

LINEAR SUPPORT VECTOR MACHINE AND LOGISTIC REGRESSION FOR CEREBRAL INFARCTION CLASSIFICATION.....	827
<i>Alva Andhika Sa'Id, Zuherman Rustam, Velery Virgina Putri Wibowo, Qisthina Syifa Setiawan, Afifah Rofi Laeli</i>	
ELECTRICITY POWER DEMAND COMPARATIVE ANALYSIS OF DISTRICT COOLING AND CONVENTIONAL COOLING SYSTEMS - CASE STUDY IN DIYAR AL MUHARRAQ (DAM) DEVELOPMENT PROJECT).....	832
<i>A. Ashoor Helal, A. Y. Abdalla</i>	
A PROPOSED LEAN DISTRIBUTION SYSTEM FOR SOLAR POWER PLANTS USING MATHEMATICAL MODELING AND SIMULATION TECHNIQUE.....	839
<i>Mohsen Momenitabar, Zhila Dehdari Ebrahimi, Seyed Hassan Hosseini, Mohammad Arani</i>	
EFFECTS OF CHEVRONS ON THE ACOUSTIC NOISE AND VELOCITY PATTERNS OF AIRCRAFT NOZZLES.....	845
<i>Mohammad Osama Khan, Mohammad Anas Khan, Sharul Sham Dol</i>	
A FUZZY GOAL PROGRAMMING MODEL FOR SELECTING THE BEST SUSTAINABLE RENEWABLE ENERGY SOURCE IN ALGERIA	850
<i>Mohammed Seghir Guellil, Samir Ghouali, Mostefa Belmokaddem, Samir Bettahar, Fayçal Mokhtari</i>	
AUTOMATED HOME-BASED PHYSIOTHERAPY	854
<i>Singarao Karthik, Sandeep Kumar, Kantipudi Mvv Prasad, Kuchuru Mysurareddy, C John Moses, B Dillep Seshu</i>	
PANDEMIC STABILIZER USING SMARTWATCH	860
<i>Ritu Dhull, Dheeraj Chava, Deepala Vineeth Kumar, Kantipudi Mvv Prasad, Gaurav Samudrala, M Vijay Bhargav</i>	
MACHINE LEARNING FOR MALWARE DETECTION ON BALANCED AND IMBALANCED DATASETS	867
<i>Manish Goyal, Raman Kumar</i>	
REAL-TIME CONTACT TRACING DURING A PANDEMIC USING MULTI-CAMERA VIDEO OBJECT TRACKING	872
<i>Maha Yaghi, Tasnim Basmaji, Reem Salim, Jawad Yousaf, Huma Zia, Mohammed Ghazal</i>	
MUNICIPAL INFRASTRUCTURE PRIORITIZATION BASED ON CONSEQUENCE-BASED DECISION-MAKING FRAMEWORK.....	877
<i>Golam Kabir, Abdullah Alzahrany</i>	
INNOVATION IN AN EMERGING MARKET: A BIBLIOMETRIC AND LATENT DIRICHLET ALLOCATION BASED TOPIC MODELING STUDY	882
<i>Mohd Faiz Hilmi, Yanti Mustapha, Mohammad Tasyriq Che Omar</i>	
PERFORMANCE MODELING OF SAWMILLS USING ARTIFICIAL INTELLIGENCE.....	887
<i>Shashi K. Shahi, Mohamed Dia, Salimur Choudhury</i>	
FACTORS INFLUENCING ETHICAL DECISION MAKING: A VIEW THROUGH ENGINEERING CONSULTANCY FIRM IN MALAYSIA.....	893
<i>Lee Wei Leong, Theresa C. F. Ho, Poh-Chuin Teo, Ling Suan Choo</i>	
SIMILARITY FEATURES FOR THE EVALUATION OF OBFUSCATION EFFECTIVENESS	898
<i>Yury Kosolapov, Petr Borisov</i>	

TRACEABILITY SYSTEM USING IOT AND FORECASTING MODEL FOR FOOD SUPPLY CHAIN	903
<i>Ganjar Alfian, Muhammad Syafrudin, Norma Latif Fitriyani, Jongtae Rhee, Muhammad Rifqi Ma'Arif, Imam Riadi</i>	
A PROCESSING DELAY TOLERANT WORKFLOW MANAGEMENT IN CLOUD-FOG COMPUTING ENVIRONMENT (DTWM_CFS).....	908
<i>K Jairam Naik</i>	
DECISION MAKING BASED ON MACHINE LEARNING ALGORITHM FOR IDENTIFYING FAILURE RATES IN THE OIL TRANSPORTATION PIPELINE	914
<i>E. B. Priyanka, S. Thangavel</i>	
MACHINE LEARNING TECHNIQUES FOR DETERMINING STUDENTS' ACADEMIC PERFORMANCE: A SUSTAINABLE DEVELOPMENT CASE FOR ENGINEERING EDUCATION.....	920
<i>Sujan Poudyal, Morteza Nagahi, Mohammad Nagahisarchoghaei, Ghodsieh Ghanbari</i>	
EFFECT OF INDIVIDUAL DIFFERENCES IN PREDICTING ENGINEERING STUDENTS' PERFORMANCE: A CASE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT	925
<i>Morteza Nagahi, Raed Jaradat, Mohammad Nagahisarchoghaei, Ghodsieh Ghanbari, Sujan Poudyal, Simon Goerger</i>	
COMPARATIVE ANALYSIS ON CARBON FOOTPRINT OF HYDROGEN FUEL CELL AND BATTERY ELECTRIC VEHICLES BASED ON THE GREET MODEL	932
<i>Eugene Yin Cheung Wong, Danny Chi Kuen Ho, Stuart So, Chi-Wing Tsang, Eve Man Hin Chan</i>	
EXPERIMENTAL CHARACTERIZATION OF DYNAMIC BEHAVIOR OF LAB SCALE VIBRATING SIEVE USING IDENTIFIED MODELS	938
<i>Mateus Sousa Freitas, Anderson Lima De Menezes, Vinicius Pimenta Barbosa, Estevão Dos Santos Gedraite, Carlos Henrique Ataíde, Rubens Gedraite</i>	
A PRACTICAL SCHEDULING OPTIMIZER FOR PLASTIC INJECTION MOLDING FACILITIES.....	943
<i>George Ayad, Irene S. Fahim</i>	
A FRAMEWORK FOR RISK MANAGEMENT OF LARGE-SCALE ORGANISATION SUPPLY CHAINS	948
<i>Tingyi Hong, Athanasios Kolios</i>	
BACKWATER CALCULATION DUE TO ARC BRIDGES WITH SKEWED CROSSING	954
<i>Kimia Haji Amou Assar, Serter Atabay, Abdullah Gokhan Yilmaz</i>	
PERFORMANCE EVALUATION OF AN ENSEMBLE METHOD FOR DIAGNOSIS OF CHRONIC KIDNEY DISEASE WITH FEATURE SELECTION TECHNIQUE.....	959
<i>Olayinka Ayodele Jongbo, Toluwase Ayobami Olowookere, Adebayo Olusola Adetunmbi</i>	
DATA IMPUTATION-BASED LEARNING MODELS FOR PREDICTION OF DIABETES.....	966
<i>Dilip Singh Sisodia, Reenu Agrawal</i>	
ANALYSIS OF DENGUE FEVER TRANSMISSION DYNAMICS WITH MULTIPLE CONTROLS: A MATHEMATICAL APPROACH.....	971
<i>Afeez Abidemi, Hamed Olawale Fatoyinbo, Joshua Kiddy K. Asamoah</i>	
A REAL-TIME APPLICATION TO DETECT HUMAN VOICE DISORDERS	979
<i>M. G. Manisha Milani, Murugaiya Ramashini, Murugiah Krishani</i>	

A SOFTWARE PACKAGE FOR ANALYZING AND EVALUATING CHILDREN WITH AUTISM SPECTRUM DISORDER (ASD) IN SRI LANKA	985
<i>Nuska Nazardeen, Lmesha Yapa, Mohamed Imthath, Suneth Pathirana, Poornnima Jayathunga</i>	
COMBINING CONVOLUTIONAL NEURAL NETWORK AND LONG SHORT-TERM MEMORY TO CLASSIFY SINUSITIS	991
<i>Ilsya Wirasati, Zuherman Rustam, Velery Virginia Putri Wibowo</i>	
MACHINE INTELLIGENCE VS. HUMAN INTELLIGENCE IN GEOLOGICAL INTERPRETATION OF SEISMIC DATA	996
<i>Mohammed Farfour, Mostefa Mesbah</i>	
DEEP NEURAL NETWORK-BASED APPROACH TO IDENTIFY THE CRIME RELATED TWITTER POSTS	1000
<i>S. P. C. W Sandagiri, B. T. G. S Kumara, Banujan Kuhaneswaran</i>	
PROMOTING THE BENEFITS OF ESCO PROJECTS AT UNIVERSITY OF BAHRAIN.....	1005
<i>Fatema Mohamed Janahi, Mohamed Bin Shams</i>	
NATURAL GAS PIPELINE FAILURE RISK PREDICTION AND RELATION ANALYSIS BY COMBINING ROUGH-AHP AND ROUGH DEMATEL METHOD	1010
<i>Sk Kafi Ahmed, Golam Kabir</i>	
DAILY FORECASTING OF PHOTOVOLTAIC POWER USING NON-LINEAR AUTO- REGRESSIVE EXOGENOUS METHOD.....	1016
<i>Mohamed Louzazni, Heba Mosalam</i>	
STATISTICAL FITTING OF WIND SPEED DATA FOR DETERMINATION OF WIND POWER POTENTIALS IN SAUDI ARABIA	1021
<i>Mohammed Abdullah Al-Shehri, Youguang Guo, Gang Lei</i>	
INTERNET OF THINGS: A REVIEW OF ARCHITECTURE AND PROTOCOLS	1027
<i>Navdeep Lata, Raman Kumar</i>	
RESEARCH PAPER CLASSIFICATION BASED ON WORD2VEC AND COMMUNITY DISCOVERY	1032
<i>Esra Gündogan, Mehmet Kaya</i>	
AUTOMATIC TERM EXTRACTION ON TURKISH SCIENTIFIC TEXTS	1037
<i>Irfan Aygün, Mehmet Kaya</i>	
A SENTIMENT ANALYSIS STUDY ON RECOGNITION OF FACIAL EXPRESSIONS: GAUSS AND CANNY METHODS	1041
<i>Aynur Sevinç, Buket Kaya, Ayten Geçmez</i>	
MULTICRITERIA ASSESSMENT OF THE CREATIVE-INNOVATIVE POTENTIAL OF BRAZILIAN CITIES	1047
<i>Victor Diogho Heuer De Carvalho, Jaime Vinicius Araújo Cirilo, Felipe Rocha P. Menezes De Barros, Thyago Celso Cavalcante Nepomuceno</i>	
WHICH WILL SERVE BETTER AS A HEDGE OR DIVERSIFIER GOLD OR BITCOIN?	1052
<i>Md. Jamal Hossain, Mohd Tahir Ismail, Sadia Akter, Mohammad Raquibul Hossain</i>	
THE IMPACT OF TRADE AND FINANCIAL OPENNESS ON BANKS FINANCIAL DEVELOPMENT IN GCC COUNTRIES	1056
<i>Mohamed Sayed Abou Elseoud, Ahmed Rashed Alkawari</i>	

FISCAL AND MONETARY POLICY, TRADE OPENNESS, AND ITS IMPACT ON INDONESIAN EXCHANGE RATE	1064
<i>Chenny Seftarita, Ferayanti, Fitriyani, Asri Diana</i>	
A PERFORMANCE ANALYSIS OF DEEP CONVOLUTIONAL NEURAL NETWORKS USING KUZUSHIJI CHARACTER RECOGNITION	1068
<i>Harshil Shah, V. Manjula</i>	
OPTIMIZING AMBULANCE PATHS: CASE STUDY OF RED CROSS TRIPOLI BRANCH	1072
<i>Elissa Rafka, Nadia Baroudi, Samer El-Zahab, Nabil Semaan, Abobakr Al-Sakkaf</i>	
HANDLING UNKNOWN WORDS IN NEURAL MACHINE TRANSLATION SYSTEM	1077
<i>Kamal Deep Garg, Jatin Gupta, Vandana Saini</i>	
MINIMUM-COST FLIGHT PACKAGE DEVELOPMENT USING DIJKSTRA'S SHORTEST PATH	1082
<i>Ibrahim Jazzar, Samer El-Zahab, Eslam Mohammed Abdelkader, Abobakr Al-Sakkaf</i>	
COMPARATIVE PERFORMANCE OF ISLAMIC MARKET INDEX BASED ON OPTIMIZED RENKO METHOD	1086
<i>Mohammad Omar Farooq</i>	
APPLICATION OF GA FEATURE SELECTION ON NAIVE BAYES, RANDOM FOREST AND SVM FOR CREDIT CARD FRAUD DETECTION	1091
<i>Yakub K. Saheed, Moshood A. Hambali, Micheal O. Arowolo, Yinusa A. Olasupo</i>	
STOCK PRICE FORECAST WITH DEEP LEARNING	1098
<i>Firuz Kamalov, Linda Smail, Ikhlaas Gurrib</i>	
HOW TO CHOOSE AN ONLINE FINANCIAL PRODUCT	1103
<i>Yeyu Wang, Lanting Chen, Wenjing Yang, Shengxin Zhu</i>	
PREFERENCE DISAGGREGATION IN ARAS-H METHOD FOR ROAD SAFETY PROBLEM IN TUNISIA	1110
<i>Maroua Ghram, Hela Moalla Frikha</i>	
EVALUATING ENVIRONMENTAL QUALITY IN TUNISIA USING FUZZY CODAS SORT METHOD	1115
<i>Abir Ouhibi, Hela Moalla Frikha</i>	
DECISION SUPPORT USING SIMULATION TO IMPROVE PRODUCTIVITY: A CASE STUDY	1120
<i>Nour Abdulatif, Shahd Yasser, Irene Fahim, Youssef Emad, Abdelrahman Saleh, Sally Kassem</i>	
OPTIMISTIC DISCLOSURE TONE IN CORPORATE ANNUAL REPORTING AND FINANCIAL PERFORMANCE	1128
<i>Zainab Alalwani, Gehan A. Mousa</i>	
A TWO STAGE APPROACH FOR OFF-PRICE RETAILERS SELECTION	1134
<i>Mechmech Rihab, Harbi Slim, B. Hadj-Alouane Atidel, Sboui Sami</i>	
AN INVESTIGATION INTO CONTRIBUTING FACTORS OF EXCESS INVENTORY WITHIN THE COSMETIC INDUSTRY IN THE UAE: AN AHP ANALYSIS	1139
<i>Vian Ahmed, Sara Saboor, Heba Khlaif, Ahmed Al Suwaidi, Dana Yazbak, Ameera Khan</i>	

A PATH PLANNING OPTIMIZATION ALGORITHM BASED ON PARTICLE SWARM OPTIMIZATION FOR UAVS FOR BIRD MONITORING AND REPELLING – SIMULATION RESULTS.....	1144
<i>Ricardo Mesquita, Pedro D. Gaspar</i>	
GROUP DECISION MODEL FOR LOGISTIC PERFORMANCE ANALYSIS: A PARALLEL BETWEEN CONTRACTING AND OUTSOURCED COMPANIES	1149
<i>Tarsila Rani Soares De Vasconcelos, Marcele Elisa Fontana, José Leão</i>	
AUTOMATICALLY NAVIGATING PROTEIN INTERACTION NETWORKS WITH A SOFTWARE PRODUCT LINE APPROACH.....	1155
<i>Daniel-Jesus Munoz, Dina Medina-Vera</i>	
LSTM BASED APPROACH FOR CLASSIFYING TWITTER POSTS FOR MOVIE SUCCESS PREDICTION	1160
<i>W. M. D. R. Ruwantha, B. T. G. S. Kumara</i>	
SOFT SENSOR FOR ONLINE PREDICTION OF CEMENT FINENESS IN BALL MILL.....	1166
<i>Karina Andreatta, Filipe Apóstolo, Reginaldo Nunes</i>	
AN APPROACH TO AUTOMATICALLY MEASURE AND VISUALIZE CLASS COHESION IN OBJECT-ORIENTED SYSTEMS	1174
<i>Afrah Yusuf, Mustafa Hammad</i>	
FRIEND RECOMMENDATION DECISION SYSTEMS VIA MULTIPLE SOCIAL NETWORK ALIGNMENT	1180
<i>Ahmet Anil Müngen, Betül Bulut, Mehmet Kaya</i>	
NEURAL NETWORK-SUPPORT VECTOR MACHINE FOR SINUSITIS CLASSIFICATION	1185
<i>Jane Eva Aurelia, Zuherman Rustam, Afifah Rofi Laeli, Faisa Maulidina</i>	
MEASURING THE ACCURACY OF SVM WITH VARYING KERNEL FUNCTION FOR CLASSIFICATION OF INDONESIAN WAYANG ON IMAGES	1190
<i>Muhathir, Al-Khowarizmi</i>	
RANDOM NET IMPLEMENTATION OF MLP AND LSTMS USING AVERAGING ENSEMBLES OF DEEP LEARNING MODELS	1197
<i>Vinayak Ashok Bharadi</i>	
IOT DRIVEN RESILIENCY WITH ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND ANALYTICS FOR DIGITAL TRANSFORMATION	1205
<i>Sumera Ahmed, Suraya Miskon</i>	
HYBRID ENCRYPTION PROTOCOL FOR RFID DATA SECURITY	1209
<i>H. P. T. M. Jayawardana, R. L. Dangalla</i>	
YOLO V4 BASED HUMAN DETECTION SYSTEM USING AERIAL THERMAL IMAGING FOR UAV BASED SURVEILLANCE APPLICATIONS	1213
<i>Prashanth Kannadaguli</i>	
PREDICTION OF REAL ESTATE LAND PRICES IN THE KINGDOM OF BAHRAIN	1220
<i>Mahmood Husain Abdulaziz, Ahmed M. Zeki</i>	
WHAT MOTIVATES SHARIAH COMPLIANT COMPANIES IN APPLYING ACCOUNTING CONSERVATISM?	1224
<i>Zata Hulwani Zuhri, Ratna Mulyany</i>	

EMBRACING OF FINTECH IN ISLAMIC FINANCE IN THE POST COVID ERA	1230
<i>Mustafa Raza Rabbani, Yomna Abdulla, Abu Basahr, Shahnawaz Khan, Mahmood Asad Moh'D Ali</i>	
MANAGING BIG DATA USING MODEL DRIVEN ENGINEERING: FROM BIG DATA META-MODEL TO CLOUDERA PSM META-MODEL.....	1235
<i>Allae Erraissi, Mouad Banane</i>	
CLASSIFICATION OF BINARY CLASS HIV/AIDS TEST RESULTS USING ENSEMBLE LEARNING MODELS	1240
<i>Daniel Mesafint Belete, D H Manjaiah</i>	
A TWO TIER ITERATIVE ENSEMBLE METHOD TO TACKLE IMBALANCE IN MULTICLASS CLASSIFICATION.....	1248
<i>S. Sridhar, A. Kalaivani</i>	
IOT BASED REMOTE PATIENT MONITORING SYSTEM	1255
<i>Sidra Maqbool, Muhammad Waseem Iqbal, Muhammad Raza Naqvi, Khawaja Sarmad Arif, Muhammad Ahmed, Muhammad Arif</i>	
PAYOUT DECISION PRE- AND DURING COVID-19: EVIDENCE FROM BAHRAIN.....	1261
<i>Abdulrahman Husain, Yomna Abdulla</i>	
MACROECONOMIC DETERMINANTS OF NONPERFORMING LOANS: AN EMPIRICAL EVIDENCE FROM GCC COUNTRIES	1265
<i>Muna Ahmad Al-Romaihi, Mukesh Kumar, Sumathi Kumaraswamy</i>	
THE ASYMMETRIC ASSOCIATION AMONG THE CONSUMPTION OF GASOLINE, FINANCIAL ADVANCEMENT, AND ECONOMIC FREEDOM IN SINGAPORE.....	1269
<i>Ala Fathi Assi, Aliya Isiksal, Turgut Tursoy</i>	
LEVELS OF FINANCIAL INCLUSION IN THE WAEMU COUNTRIES: A CASE STUDY USING DEA.....	1274
<i>Pawoumodom M. Takouda, Mohamed Dia, Alassane Ouattara</i>	

Author Index