

# **27th Annual Conference of the International Association for Management of Technology (IAMOT 2018)**

Towards Sustainable Technologies  
and Innovation

Birmingham, United Kingdom  
22 – 26 April 2018

Volume 1 of 3

## **Editors:**

**Breno Nunes**  
**Ali Emrouznejad**

**David Bennett**  
**Leon Pretorius**

ISBN: 978-1-7138-0603-5

**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© (2018) by International Association for Management of Technology (IAMOT)  
All rights reserved.

Printed with permission by Curran Associates, Inc. (2020)

For permission requests, please International Association for Management of Technology (IAMOT)  
at the address below.

International Association for Management of Technology (IAMOT)  
c/o University of Miami  
College of Engineering  
248294 Coral Gables  
Florida 33124-0623  
USA

Phone: (305) 284-2344

Fax: (305) 284-4040

iamot@miami.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: 845-758-2633  
Email: curran@proceedings.com  
Web: www.proceedings.com

# TABLE OF CONTENTS

## VOLUME 1

<b>FUZZY QUALITY FUNCTION DEPLOYMENT (FUZZY-QFD) APPLIED TO NEW DEFENSE PRODUCT DEVELOPMENT</b> .....	1
<i>Maria Fatima Almeida, Carlos Eduardo Luz, Guilherme Martins</i>	
<b>MODELLING THE IMPACT OF ENTREPRENEURSHIP IN URBAN EMPLOYMENT GROWTH OF MINING TOWNS IN A DEVELOPING COUNTRY – A SYSTEM DYNAMICS APPROACH</b> .....	21
<i>George Maluleke, Leon Pretorius</i>	
<b>ELEMENTS OF A SYSTEM DYNAMICS SIMULATION MODEL FOR REQUIREMENTS ELICITATION</b> .....	40
<i>Naude Scribante, Leon Pretorius, Siebert Benade</i>	
<b>POTENTIAL ADVANTAGES AND DRAWBACKS TO ELECTRONIC MEDICINE MANAGEMENT SYSTEMS FOR UK LONG-TERM CARE FACILITIES: A LITERATURE REVIEW</b> .....	57
<i>Medha Kothari, Ian Maidment, Prasanta Dey</i>	
<b>THE JOURNEY TO EGYPT’S DIGITAL TRANSFORMATION</b> .....	74
<i>Mohamed Azzam, Tarek Khalil, Nezar Sami</i>	
<b>MARKET DISSIMILARITY, TECHNOLOGY COMPLEMENTARITY AND COLLABORATIVE INNOVATION PERFORMANCE: THE MODERATING EFFECTS OF IT ADOPTION</b> .....	98
<i>Jianghua Zhou, Jizhen Li, Zixu Liu, Hao Jiao</i>	
<b>FOREIGN EQUITY, EXPORTING AND FIRM INNOVATION</b> .....	123
<i>Zixu Liu, Jianghua Zhou, Jizhen Li, Gupeng Zhang</i>	
<b>THE USE OF TECHNOLOGY DEVELOPMENT ENVELOPE AND TECHNOLOGY ROADMAPPING PRINCIPLES FOR DEVELOPING COUNTRIES AS A BASIS FOR LONG-TERM TECHNOLOGY PLANNING IN SOUTH AFRICA</b> .....	147
<i>Petrus Letaba, Tinus Pretorius, Leon Pretorius</i>	
<b>THE EFFECT OF THE EXECUTIVE SPONSOR ON THE SUCCESS OF A MEGAPROJECT - AN EXPLORATORY CASE STUDY</b> .....	161
<i>Willem Louw, Herman Steyn, Wim Gevers, Jan Wium</i>	
<b>WHAT IS THE POTENTIAL OF ADDITIVE MANUFACTURING IN SUPPLY CHAINS? A NARRATIVE LITERATURE REVIEW APPROACH</b> .....	186
<i>Sara Tilabi, Petri Helo, Josu Takala</i>	
<b>STRATEGY TO THE EFFECTIVENESS OF UNIVERSITY-INDUSTRY COLLABORATION FOR TECHNOLOGY TRANSFER</b> .....	N/A
<i>Chia-Chi Sun</i>	
<b>SUSTAINABLE CONSUMPTION AS A CONSTRAINT TO SUSTAINABLE PRODUCTION</b> .....	208
<i>Michel Leseure</i>	
<b>TECHNOLOGY MANAGEMENT INITIATIVES IN AGRO-BASED INDUSTRIES OF COLOMBIA AND BRAZIL: THE ROLE OF GOVERNMENT, NATIONAL AND REGIONAL AGENCIES</b> .....	228
<i>Deycy Janeth Sanchez Preciado, Breno Nunes, David Bennett</i>	
<b>REVERSE LOGISTICS PROCESSES AND TEXTILE WASTE: STUDY IN A CLOTHING CLUSTER</b> .....	230
<i>Eliane Pinheiro, Antonio Carlos De Francisco</i>	
<b>EMPIRICAL RESEARCH ON GREEN INNOVATION ABILITY EVALUATION OF CHINA’S MANUFACTURING ENTERPRISES BASED ON PRINCIPAL COMPONENT ANALYSIS</b> .....	239
<i>Xu Jianzhong, Wang Manman</i>	
<b>STUDY ON THE INNOVATION ECOSYSTEM OF ENERGY SAVING AND ENVIRONMENTAL PROTECTION INDUSTRY IN CHINA</b> .....	N/A
<i>Xia Cao, Xiao Han</i>	
<b>EMPIRICAL RESEARCH ON COOPERATIVE INNOVATION ABILITY OF EQUIPMENT MANUFACTURING ENTERPRISES BASED ON FACTOR ANALYSIS</b> .....	241
<i>Jian Zhong Xu, Ya-Nan Zhao</i>	
<b>IMPROVING KNOWLEDGE CAPITALIZATION IN PRODUCT FORMULATION: A COSMETIC INDUSTRY STUDY CASE</b> .....	243
<i>Juliana Serna, Vincent Boly, Paulo Cesar Narváez Rincón, Veronique Falk</i>	

<b>THE INTERACTION MECHANISM BETWEEN CORPORATE SOCIAL RESPONSIBILITY AND ENTERPRISE COMPETITIVENESS FROM THE PERSPECTIVE OF LOCALIZATION</b> .....	N/A
<i>Yuqi Sun, Xia Cao</i>	
<b>RESEARCH ON THE APPLICATION OF PROJECT MANAGEMENT MATURITY MODEL IN CHINA</b> .....	N/A
<i>Xia Cao, Xin Xu</i>	
<b>THE IMPACT OF PROCESS CONDITION MONITORING ON CRITICAL EQUIPMENT IN THE PROCESS INDUSTRY</b> .....	250
<i>Krige Visser, Kreesen Govender</i>	
<b>MODEL BASED SYSTEMS ENGINEERING (MBSE) IN DEVELOPMENT PROJECTS: A FRAMEWORK FOR DEPLOYMENT</b> .....	267
<i>Philip Steyn, Leon Pretorius</i>	
<b>REDEFINING THE ROLE OF SMES IN VALUE CREATING ECOSYSTEMS: EVIDENCE FROM CASE STUDIES</b> .....	279
<i>Caro Els, Sara Grobbelaar, Denzil Kennon</i>	
<b>A TRANSFORMATION IN GLOBAL BUSINESS AND ENGINEERING: THE RENAISSANCE OF MULTI-POLARITY IN INNOVATION</b> .....	305
<i>Jurgen Poesche, Ilkka Kauranen</i>	
<b>INDUSTRY TRANSFORMATION FROM CHEMICAL PULPING TO BIOREFINING</b> .....	317
<i>Jurgen Poesche, Fabio De Oliveira Paula, Maria Lima-Toivanen, Kari Lilja</i>	
<b>VERIFYING CONCEPTS FOR COMPLEX PRODUCT-SERVICE SYSTEM (PSS) DESIGN</b> .....	334
<i>Torsten Dehn, Daniel Chicksand, Louise Knight</i>	
<b>DIFFUSION OF MOBILE COMMUNICATIONS TECHNOLOGIES: A CASE STUDY OF LESOTHO</b> .....	354
<i>Joe Amadi-Echendu, Ntsane Mole</i>	
<b>CRITICAL SUCCESS FACTORS FOR SIX SIGMA DESIGN AND DEPLOYMENT TO COMPLIMENT LEAN OPERATIONAL STRATEGY TOWARDS CAPABILITY MATURITY</b> .....	361
<i>Andre Vemeulen, Jan-Harm Pretorius, Albert Viljoen</i>	
<b>DEVELOPMENT OF ROAD QUALITY ASSURANCE MEASUREMENT TOOL IN CONSTRUCTION PROJECTS</b> .....	377
<i>Andre Vemeulen, Jan-Harm Pretorius, Kgashane Stephen Nyakala</i>	
<b>AN EXPLORATION OF NECESSARY CONDITIONS FOR STANDARD SUCCESS FOR COMPLEX SYSTEMS</b> .....	391
<i>Geerten Van De Kaa</i>	
<b>A DESCRIPTIVE LITERATURE REVIEW OF IT GOVERNANCE</b> .....	400
<i>Marcelo Okano, Marcelo Fernandes, Eliane Simoes</i>	
<b>REPRESENTATIONS OF GENEALOGIES IN THE THEORY OF GRAPHS: K-GRAPHS</b> .....	417
<i>Marcelo Okano, Victor Alexandre Ploeger Mansueli</i>	
<b>INNOVATION IN SERVICES: THE PATH OF INNOVATION IN THE LABORATORY OF CLINICAL ANALYSIS SABIN</b> .....	427
<i>Sonia Botelho Borges, Luciene Braz Ferreira, Erika Lisboa</i>	
<b>RESEARCH ON THE RELATIONSHIP BETWEEN VENTURE CAPITALISTS' TRUST IN ENTREPRENEURS AND THEIR INVESTMENT BEHAVIOURS</b> .....	450
<i>Hongtao Yang, Sulei Li</i>	
<b>IMPACTS OF DIGITAL ECOSYSTEMS ON SUPPLY CHAIN MANAGEMENT</b> .....	473
<i>Luca Urciuoli</i>	
<b>SMART INNOVATION: A CONSOLIDATED FRAMEWORK FOR INNOVATION</b> .....	487
<i>John Liu, Mei Ho</i>	
<b>SUPPORTING THE PLANNING PHASE OF SME-TAILORED TECHNOLOGY TRANSFER PROJECTS</b> .....	504
<i>Christian Fechtelpeter, Arno Kuehn, Roman Dumitrescu</i>	
<b>THE CRITERIA FOR IMPLEMENTING THE LEARNING CURVE THEORY ON CONSTRUCTION PROJECTS</b> .....	529
<i>Erns Hattingh, Corro Van Waveren, Kai-Ying Chan</i>	
<b>FACTORS INFLUENCING THE ACCEPTANCE OF DIGITAL BANKING: AN EMPIRICAL STUDY IN SOUTH AFRICA BASED ON THE ENHANCED TECHNOLOGY ACCEPTANCE MODEL</b> .....	550
<i>Jacques Hough, Kai-Ying Chan</i>	
<b>ADDRESSING SUSTAINABILITY THROUGH RENEWABLE ENERGY ECOSYSTEMS IN INDIA</b> .....	571
<i>Gita Surie</i>	

<b>DOES AN INDEPENDENT ORGANIZATIONAL INNOVATION FUNCTION PREDICT NPD PERFORMANCE? – UNCOVERING THE CAUSAL CHAIN.....</b>	591
<i>Wiesenfeldt Philipp, Fabian Reck</i>	
<b>THE STUDY OF THE COMMUNICATION EFFECT ON EMOTIONAL DESIGN IN VIRTUAL REALITY TECHNOLOGY .....</b>	611
<i>Shoz-Zhi Wu, Wei-Hsin Hsiang</i>	
<b>THE INTERMEDIATE ROLE OF RESOURCE REALLOCATION .....</b>	636
<i>Fang Wang, Xiaoyong Dai</i>	
<b>THE IMPACT OF MOBILE SERVICE INNOVATIONS ON PERCEPTION OF RETAIL DESTINATION ATTRACTIVENESS .....</b>	659
<i>Amela Dizdarevic, Heiner Evanschitzky, Christof Backhaus</i>	
<b>STRATEGY IMPLEMENTATION IN A SOUTHERN AFRICAN MINING COMPANY .....</b>	660
<i>Ngenohasho Mutilitha, Herman Steyn</i>	
<b>PATTERN BASED DIGITIZATION OF PRODUCT PORTFOLIOS .....</b>	680
<i>Julian Echterfeld, Juergen Gausemeier</i>	
<b>HOW TO IMPLEMENT INDUSTRY 4.0? AN EMPIRICAL ANALYSIS OF LESSONS LEARNED FROM BEST PRACTICES.....</b>	700
<i>Johannes W. Veile, Daniel Kiel, Julian M. Müller, Kai-Ingo Voigt</i>	
<b>VALUE STREAM MAPPING AT A SOUTH AFRICAN BUTTERFLY VALVE MAKING COMPANY .....</b>	724
<i>Forbes Chiromo, Naume Mmakadi Mahlo</i>	

## VOLUME 2

<b>WHAT DRIVES INDUSTRY 4.0 ADOPTION? AN EXAMINATION OF TECHNOLOGICAL, ORGANIZATIONAL, AND ENVIRONMENTAL DETERMINANTS.....</b>	737
<i>Christian Arnold, Johannes Veile, Kai-Ingo Voigt</i>	
<b>CONCEPTUAL FRAMEWORK TO MANAGE COMPLEXITY WHEN INTRODUCING TECHNOLOGICAL CHANGE TO AUTOMOTIVE PRODUCTION LINES .....</b>	756
<i>Willem Liebrecht Otto, Gert Adriaan Oosthuizen</i>	
<b>FAIL NO MORE IN INDUSTRIAL AUTOMATION INVESTMENT! A NOVEL TECHNOLOGY SUCCESS INDICATOR MODEL .....</b>	770
<i>Janne Leinonen, Jürgen Poesche, Ilkka Kauranen</i>	
<b>ROADMAPPING ACROSS BUSINESS SEGMENTS – IMPLEMENTATION OF ROADMAPPING AT GRUNDFOS TO SUPPORT TECHNOLOGY PLANNING .....</b>	783
<i>Clare Farrukh, Michele Routley, Robert Phaal, Christian Rasmussen</i>	
<b>THE ROLE OF INTERMEDIARIES IN DEVELOPING THE TECHNOLOGICAL COOPERATION BETWEEN SMALL KNOWLEDGE-BASED COMPANIES AND INDUSTRIAL AND ECONOMIC FIRMS BASED ON GUARANTEED-BUYS METHOD .....</b>	803
<i>Reza Naghizadeh</i>	
<b>MAPPING SUSTAINABLE VALUE FOR NEW TECHNOLOGY – DEVELOPING A CONFIGURABLE APPROACH FOR EXPLORING POTENTIAL EXPLOITATION OPPORTUNITIES .....</b>	810
<i>Clare Farrukh, Maria Holgado</i>	
<b>THE CHALLENGES IN THE APPLICATION AND PROCESSING OF SANDSTONE: A CASE OF QWAQWA, FREE STATE, SOUTHERN AFRICA .....</b>	833
<i>John Francis Agwa-Ejon, Anup Pradhan</i>	
<b>A LITERATURE REVIEW ON BUILDING ASSETS OF VALUE: WHAT ARE THE INDICATORS OF BUSINESS SUCCESS? .....</b>	840
<i>Palesa Ramashala, Tinus Pretorius, Herman Steyn</i>	
<b>THE CASE OF BVSA: STUDY OF THE USE OF DIGITAL BUSINESS PLATFORMS TO OFFER SOCIAL SERVICES AND SUSTAINABILITY .....</b>	853
<i>Marcelo Okano, Marcelo Eloy Fernandes, Edgar Souza, Eliane Simões</i>	
<b>PROFILE OF ENERGY GENERATION USING PIEZOELECTRIC MATERIAL IN THE PERIOD 2010-2017.....</b>	869
<i>Yesid De Jesus Montoya-Contreras, Gerardo Angulo-Cuentas, Alfaima Solano-Blanco, José Miguel Ramírez-Vergara, Libardo Escobar-Toledo</i>	
<b>‘SMART CITY’ MODEL FOR DESCENTRALIZATION OF PERUVIAN SUSTAINABLE DEVELOPMENT: CASE STUDY OF HUÁNUCO CITY .....</b>	889
<i>Marta Tostes, Gumercindo Bartra, Nérida Pastranaand Alberto Cajavilca</i>	
<b>R&amp;D SUSTAINABILITY OF BIOTECH START-UPS IN FINANCIAL RISK.....</b>	910
<i>Takao Fujiwara</i>	

<b>TOWARDS A CONCEPTUAL FRAMEWORK FOR THE DESIGN, DEVELOPMENT AND IMPLEMENTATION OF TECHNOLOGY PLATFORMS FROM A PLATFORM OWNER'S PERSPECTIVE</b> .....	912
<i>Hilde Herman, Saartjie Grobbelaar, Calie Pistorius</i>	
<b>INNOVATION MANAGEMENT PRINCIPLES FROM ISO 50500 SERIES</b> .....	960
<i>Alice De Casanove, Laure Morel</i>	
<b>PRODUCT CHARACTERISTICS IN THE CLOTHING AND TEXTILE COMPANIES IN GAUTENG, SOUTH AFRICA</b> .....	975
<i>Forbes Chiromo, Andre Nel</i>	
<b>CRITICAL SUCCESS FACTORS FOR INFORMATION TECHNOLOGY (IT) PROJECTS IN SOUTH AFRICA</b> .....	992
<i>Kwete Mwana Nyandongo</i>	
<b>ASSESSING INNOVATION CAPABILITIES OF WINE INDUSTRY SMES IN THE REGION OF SAN JUAN-ARGENTINA</b> .....	1013
<i>Mauricio Camargo, Daniel Galvez, Lucia Desgens, Sandra Oviedo</i>	
<b>ASSESSING THE PERFORMANCE OF AGILE METHODOLOGY: A CUSTOMER PERSPECTIVE</b> .....	1022
<i>Kwete Mwana Nyandongo, Lucas Khoza</i>	
<b>A CONCEPTUAL FRAMEWORK FOR THE ENHANCEMENT OF TRUST IN SOUTH AFRICA'S FRESH PRODUCE MARKETS THROUGH THE USE OF SELF-SERVICE TECHNOLOGIES</b> .....	1041
<i>Justy Range, Awie Leonard</i>	
<b>TRANSITIONING THE KNOWLEDGE ERA – PREPARING FOR NEW FUTURES</b> .....	1062
<i>Anthon Botha</i>	
<b>A LITERATURE REVIEW OF THE USE OF PROJECT PORTFOLIOS IN EFFECTIVE STRATEGY EXECUTION: A PROPOSED APPROACH TO IMPROVE BUSINESS SUCCESS</b> .....	1083
<i>Palesa Ramashala, Tinus Pretorius, Herman Steyn</i>	
<b>A SYSTEMS ENGINEERING APPROACH TO BUSINESS SUSTAINABILITY</b> .....	1104
<i>Megan Rautenbach, Imke De Kock, Louzanne Bam, Alan Brent</i>	
<b>FINTECHS IN BRAZIL: OPPORTUNITIES OR THREATS?</b> .....	1127
<i>Erika Lisboa, Raphaela Soares Godinho, Lucas Leão Da Silva</i>	
<b>CLASSIFYING RESEARCH FIELDS RELATED TO ARTIFICIAL INTELLIGENCE</b> .....	1144
<i>Tatsuya Kuroda, Shino Iwami, Ichiro Sakata</i>	
<b>THE SOCIO-ECONOMIC POTENTIAL OF BIOETHANOL FUEL PRODUCED FROM SUGAR PROCESSING PLANTS IN SOUTHERN AFRICA: A CASE OF MALAWI</b> .....	1162
<i>John Francis Agwa-Ejon, Anup Pradhan</i>	
<b>THE IMPACT OF ECONOMIC FACTORS ON THE SUSTAINABILITY OF EHEALTH IMPLEMENTATIONS IN DEVELOPING COUNTRY: A SYSTEMATIC REVIEW</b> .....	N/A
<i>Getnet Bogale Fanta, Leon Pretorius, Louwrence Erasmus</i>	
<b>THE IDENTIFICATION AND PRIORITIZATION OF THE TECHNOLOGICAL COLLABORATION CHALLENGES AMONG SMALL KNOWLEDGE-BASED FIRMS AND LARGE COMPANIES; CASE STUDY OF INNOVATION SYSTEM IN IRAN</b> .....	1176
<i>Reza Naghizadeh</i>	
<b>THE EFFECTIVENESS OF INFORMATION TECHNOLOGY (IT) GOVERNANCE FRAMEWORK WHEN ADOPTING CLOUD COMPUTING</b> .....	1184
<i>Kwete Mwana Nyandongo, Nosizwe Mxobo</i>	
<b>SMART MANUFACTURING: THE MANUFACTURING STRATEGY AND AFFORDANCES PERCEPTION INFLUENCY</b> .....	1207
<i>Ricardo Vieira, Adriana Melo</i>	
<b>VENTURE CLIENT: ANALYSIS OF THE MINING LAB PROGRAM</b> .....	1209
<i>Vinicius Roman, Gilvan Silva, Marcus Vieira, Rogério Faria, Rodrigo Gomes</i>	
<b>AN EXPLORATORY STUDY REGARDING OPEN DATA IN SOME DEVELOPING COUNTRIES</b> .....	1223
<i>Claudia Jimenez, Ivonne Rodriguez, Maria Burke</i>	
<b>TECHNOLOGY MANAGEMENT EDUCATION: A GLOBAL PRESPECTIVE</b> .....	1237
<i>Pamela Becker, Dorothy McAllen</i>	
<b>THE PATTERNS OF COMPANY: FIRM AND ORGANIZATION</b> .....	1242
<i>Nathália Pufal, Paulo Zawislak</i>	
<b>EFFECTS OF COMPETITORS' STATE ON MERGERS AND ACQUISITIONS IN JAPAN</b> .....	1262
<i>Hiroko Yamano, Ichiro Sakata, Masanao Ochi</i>	
<b>A CASE STUDY OF SCIENCE, TECHNOLOGY AND INNOVATION NETWORKS: THE TRIPLE HELIX AT PONTIFICIA UNIVERSIDAD CATOLICA DEL PERU</b> .....	1274
<i>Francisco Cuellar, Domingo Gonzalez</i>	

<b>MODELLING THE DYNAMICS OF RENEWABLE ENERGY TECHNOLOGIES: A REVIEW OF PAST EXPERIENCE AND FUTURE OPPORTUNITIES</b> .....	1294
<i>Sara Grobbelaar, Mauricio Uriona</i>	
<b>RESEARCH PERFORMANCE OF THE LIFE SCIENCES PROGRAMS FUNDED BY MINISTRY OF SCIENCE AND TECHNOLOGY IN TAIWAN- A BIBLIOMETRIC STUDY</b> .....	1321
<i>Kai-Lin Chi, Ming-Kwen Tsai</i>	
<b>MANAGEMENT PRACTICES EXECUTED IN SCIENCE AND TECHNOLOGY PARKS (STPS)</b> .....	1330
<i>Gerardo Angulo-Cuentas, Maryuris Charris-Poloand Jaime Alberto Camacho-Pico</i>	
<b>ACTORS, TRENDS IN KNOWLEDGE PRODUCTION AND INNOVATION IN INDIAN RENEWABLE ENERGY SECTOR: A CASE OF SOLAR AND WIND TECHNOLOGIES</b> .....	1373
<i>Amitkumar Singh Akoijam</i>	
<b>PROJECT MANAGEMENT IN THE PUBLIC SECTOR: LESSONS FROM THE LITERATURE</b> .....	1394
<i>Diego Clemente, Jeniffer De Nadae, Graziela Galvão, Marly De Carvalho</i>	
<b>DEVELOPING SCALES FOR MEASURING KNOWLEDGE ACCEPTANCE AND USE IN PROJECTS</b> .....	N/A
<i>Corro Van Waveren, Leon Oerlemans, Tinus Pretorius</i>	
<b>VEHICLE ROUTING OPTIMIZATION INSIGHTS: INNOVATION, IMPLEMENTATION AND RESEARCH COLLABORATION OPPORTUNITIES</b> .....	1416
<i>Alfaima Solano-Blanco, Gerardo Angulo-Cuentas, José Miguel Ramírez Vergara, Jairo Barrios Vásquez</i>	

### VOLUME 3

<b>PROFILING OF THE INVENTIVE ACTIVITY IN THE PROCESSING AND TREATMENT OF WASTE VEGETABLE OIL</b> .....	1439
<i>Gerardo Angulo-Cuentas, Maryuris Charris-Polo, Luz Cadena, Elvis Nuñez</i>	
<b>ELECTRICITY: ANALYSIS OF WORLD INVENTIVE ACTIVITY, TRENDS AND OPPORTUNITIES OF INNOVATION</b> .....	1456
<i>Gerardo Angulo-Cuentas, Ray Jesus Fandiño Garcia, Rafael Jacquín</i>	
<b>GLOBAL PERSPECTIVE ON ENVIRONMENTAL SCIENCE: AN ASSESSMENT OF THE SCIENTIFIC PRODUCTION</b> .....	1481
<i>Gerardo Angulo-Cuentas, Claudia Vanessa Fuentes Cuadrado, Freddy Orozco Salas, Eduardo Polo Brito</i>	
<b>DETECTING POTENTIAL COMPOSITE MATERIALS USING LITERATURE-BASED DISCOVERY OF ACADEMIC PAPERS: MESO-LEVEL ANALYSIS</b> .....	1504
<i>Chika Fujisue, Hajime Sasaki, Hiroko Yamano, Ichiro Sakata</i>	
<b>SMART SPECIALISATION IN FINNISH REGIONS: HOW TO FACILITATE CONTINUOUS ENTREPRENEURIAL DISCOVERY PROCESS?</b> .....	1514
<i>Mona Roman, Timo Nyberg, Katharina Fellnhöfer</i>	
<b>REVIEWING TECHNOLOGY MANAGEMENT PROJECTS USING BIMODAL DEVELOPMENT AND "JUST DO IT" APPROACHES</b> .....	1530
<i>Torben Tambo, Nikolaj Dybdal Clausen</i>	
<b>PLM OR ERP, THE CHICKEN OR THE EGG: TOWARDS AN ENTERPRISE LEVEL MASTER DATA MANAGEMENT APPROACH FOR IMPROVING INNOVATION AND SUPPLY CHAIN COLLABORATION</b> .....	1532
<i>Torben Tambo</i>	
<b>COMPANY INNOVATION SYSTEM: A CONCEPTUALIZATION</b> .....	1550
<i>Erik Den Hartigh</i>	
<b>SCIENTIFIC CURRENT IN THE ENERGY FIELD 2014-2017</b> .....	1569
<i>Jairo Barrios Vásquez, Gerardo Angulo-Cuentasand Silvia Valenzuela Mongua</i>	
<b>ITERATIVE CO-CREATION IN HEALTHCARE MOBILE APP DEVELOPMENT</b> .....	1592
<i>Nicholas Dacre, Ahmad Beltagui, Fiona Maciver, Jamie Prangnell</i>	
<b>SUPPORT OF PROCESS IMPROVEMENT ACTIVITIES TO PRODUCTS AND PROCESSES INNOVATION: CASES IN INNOVATIVE COMPANIES</b> .....	1615
<i>Fabiane Letícia Lizarelli, José Carlos Toledo, Artur Yuiti Ishizaka, Dário Henrique Alliprandini</i>	
<b>INNOVATING CREATIVITY IN DIGITAL PROJECT MANAGEMENT</b> .....	1639
<i>Nicholas Dacre, Leonard Raphael, Gary Bell, David Pontin</i>	
<b>DETERMINING THE STRONGLY AND WEAKLY MOST CONGESTED FIRMS IN DATA ENVELOPMENT ANALYSIS</b> .....	1654
<i>Mohammad Khoveyni, Robabeh Eslami</i>	
<b>CATEGORIZING DECISION MAKING UNITS BASED ON MULTI-LEVEL FRONTIERS IN DATA ENVELOPMENT ANALYSIS</b> .....	1662
<i>Robabeh Eslami, Mohammad Khoveyni</i>	

<b>TECHNOLOGY FORESIGHT AT A UNIVERSITY RESEARCH CENTER IN MEXICO: DESIGN AND FIRST RESULTS.....</b>	1668
<i>Nadia Castillo-Camarena, Eugenio Lopez-Ortegaand Eric Garcia-Cano</i>	
<b>THE FIT BETWEEN MODULARIZATION STRATEGY AND PLATFORM LEADERSHIP.....</b>	1683
<i>Chia-Liang Hung, Jerome Chih-Lung Chou, Hong-Wei Lin</i>	
<b>INNOVATION AND INTELLECTUAL PROPERTY MANAGEMENT - INTEGRATIVE APPROACH FOR COMPETITIVENESS.....</b>	1692
<i>Gouri Gargate</i>	
<b>A NEW RISK MANAGEMENT FRAMEWORK FOR COLLABORATIVE INNOVATION PROJECTS BASED ON NETWORK DYNAMIC ANALYSIS.....</b>	1713
<i>Ronggui Ding, Lei Wang, Shaochong Gao, Tao Sun</i>	
<b>GREEN INFORMATION SYSTEMS ADOPTION: A REFLECTION ABOUT META-THEORETICAL ASSUMPTIONS TOWARDS A RESEARCH AGENDA.....</b>	1721
<i>Petruska De Araujo Machado, Anatalia Saraiva Martins Ramos, Breno Nunes</i>	
<b>THE ROLE OF GENDER IN THE ICT AND BUSINESS PERFORMANCE RELATIONSHIP: A META-ANALYSIS.....</b>	1744
<i>Sharmin Nahar, Abhijit Sengupta, Mohammed Shamsul Karim</i>	
<b>ENTERPRISE KNOWLEDGE HETEROGENEITY AND INNOVATION DIFFUSION: MULTIPLE MEDIATING EFFECTS OF KNOWLEDGE SHARING.....</b>	1785
<i>Bing Sun, Wanqin Yu</i>	
<b>THE ROLE OF SOCIAL MEDIA IN PROMOTING RESILIENCE IN POST-DISASTER RECOVERY CONTEXT: THE SYRIAN CRISIS.....</b>	1801
<i>Asma Jdaitawi, Victoria Uren, Oscar Rodriguez-Espindola</i>	
<b>THE BRAZILIAN ENERGY SYSTEMS AND SMART GRIDS – AN ANALYSIS USING THE TECHNOLOGICAL INNOVATION SYSTEMS APPROACH.....</b>	1817
<i>Alessandro Da Silva Longa, Carlos Augusto Caldas Moraes</i>	
<b>TECHNOLOGY ADOPTION: FACTORS INFLUENCING THE ADOPTION DECISION OF THE INTERNET OF THINGS IN A BUSINESS ENVIRONMENT.....</b>	1836
<i>Flavio Lobo, Eduardo Vasconcellos, Liliana Vasconcellos Guedes</i>	
<b>COLLABORATION PATTERNS IN SCIENCE BETWEEN IRAN AND AUSTRIA.....</b>	N/A
<i>Marianne Hörlesberger</i>	
<b>KNOWLEDGE NETWORK: DIAGNOSIS OF RESEARCHING NETWORKS IN PERU FOR THE GENERATION OF INNOVATION ON DERIVATIVE OF ORIGINAL PRODUCTS, 2017.....</b>	1856
<i>Maricela Castillo, Marta Lucia Tostes Vieira</i>	
<b>TO B OR NOT TO B: IS THE B MOVEMENT REALLY CHANGING THE MEANING OF BUSINESS SUCCESS IN BRAZILIAN COMPANIES?.....</b>	1877
<i>Luciano Munck, Maria Fernanda Tomiotto, Aline M. Santana, Monica Borges, Bradley A. Corbett:</i>	
<b>INTERNET BANKING VS BLOCKCHAIN: WHAT TECHNOLOGY ADHERES BETTER TO ASPECTS RELATED TO INFORMATION SECURITY? A BRAZILIAN CASE STUDY.....</b>	1900
<i>Juliani Morais, Rita De Cássia Monteiro, Diego Monteiro</i>	
<b>TECHNOLOGICAL ROUTES AND INNOVATIONS TO GREEN VEHICLE PROPULSION SYSTEMS.....</b>	N/A
<i>Alex Fabianne De Paulo, Breno Nunes, Geciane Silveira Porto</i>	
<b>RISE AND DECLINE OF THE SHIPBUILDING INDUSTRY IN BRAZIL.....</b>	1914
<i>James Weiss</i>	
<b>UNIVERSITY – INDUSTRY COOPERATION: A RESEARCH PROFILING.....</b>	1934
<i>Gerardo Angulo-Cuentas, Maryuris Charris-Poloand Claudia Marcela Garcia-Pertuz</i>	
<b>MATCHING TECHNOLOGICAL BID IN SMART CITIES INITIATIVES: A CASE STUDY OF INNOVATION FAIRS AT RESEARCH INSTITUTE IN BRAZIL.....</b>	1950
<i>Aline A. Perini, Guilherme F. Shiraishi, Anderson Z. Freitas</i>	
<b>OFFSET AGREEMENTS IN AEROSPACE.....</b>	1961
<i>Anna Company Rosello, Harm-Jan Steenhuis</i>	
<b>DETERMINING AN APPROPRIATE ELECTRICITY SUPPLY MIX FOR LOCAL GOVERNMENTS: A SYSTEM DYNAMICS APPROACH TO A SOUTH AFRICAN CASE STUDY.....</b>	1981
<i>Johannes Gerhard Janse Van Rensburg, Alan C. Brent, Josephine Musango, Imke De Kock</i>	
<b>GLOBAL RISKS, BIOTECHNOLOGY, AND THE FUTURE OF BIOSECURITY.....</b>	2002
<i>Sung-Goo Han</i>	
<b>TRANSLATING THE PHARMACOVIGILANCE CHALLENGE LANDSCAPE TO A LOWER LEVEL OF ABSTRACTION: THE IMPLEMENTATION OF A VALUE CHAIN ANALYSIS, THE 5WHY METHOD, AND FISHBONE DIAGRAMS.....</b>	2017
<i>Izak Lamprecht, Louzanne Bam, Imke De Kock</i>	



<b>THE INSTITUTIONAL DILEMMA OF THE OWNERSHIP OF SERVICE SCIENCE AND TECHNOLOGY ACHIEVEMENT AND ITS SOLUTION .....</b>	<b>2036</b>
<i>Zhihong Deng</i>	
<b>OPTIMIZED CROSSOVER GENETIC ALGORITHM FOR TSP BASED ON PATH REPRESENTATION .....</b>	<b>2050</b>
<i>Fu Yan, Jianzhong Xu, Fengshu Li</i>	
<b>THE REMUNERATION OF EMPLOYEES' INVENTIONS INSTITUTE OF CHINA.....</b>	<b>2058</b>
<i>Huilei Ge</i>	
<b>ORGANIZATIONAL PRESSURES BEHIND SUSTAINABILITY PERFORMANCE IN BANGLADESHI READYMADE GARMENTS INDUSTRY: THE EFFECTS OF SUSTAINABILITY MANAGEMENT SYSTEM, ORGANIZATIONAL DYNAMIC CAPABILITIES AND RESOURCE COMMITMENT .....</b>	<b>2067</b>
<i>Ismat Rahman, Prasanta Kumar Dey</i>	
<b>ADOPTION OF AGRICULTURE MOBILE VALUE ADDED SERVICE IN RURAL INDIA .....</b>	<b>N/A</b>
<i>Ruchita Gupta, Karuna Jain, Durgesh Kumar Jaiswal</i>	
<b>A CONCEPTUAL FRAMEWORK FOR MANAGING HEALTHCARE INNOVATION PLATFORMS: A VALUE CHAIN PERSPECTIVE .....</b>	<b>2085</b>
<i>Annica Marais, Sara Grobbelaar, Denzil Kennon</i>	
<b>IMPROVEMENT OF PROCESS MACHINERY AVAILABILITY AND RELIABILITY: A CASE STUDY OF THE PRODUCTION LINE IN A SUGAR PROCESSING PLANT .....</b>	<b>2112</b>
<i>Moses Kasirye</i>	
<b>THE ROLE OF POLICY ANALYSIS TO SUPPORT DATA VISIBILITY ACROSS PUBLIC PHARMACEUTICAL DELIVERY SYSTEMS: THE CASE OF VAN.....</b>	<b>N/A</b>
<i>Emma Kleynhans, Louzanne Bam, Imke De Kock</i>	
<b>SOCIOTECHNICAL CONSIDERATIONS FOR HEALTH INFORMATION TECHNOLOGY DESIGN AND IMPLEMENTATION IN COMPLEX AND ADAPTIVE HEALTH SYSTEMS .....</b>	<b>2139</b>
<i>Maximillian Schurer, Louzanne Bam, Imke De Kock</i>	
<b>THE ROLE OF INTELLECTUAL CAPITAL IN THE INTRAPRENEURSHIP PROCESS.....</b>	<b>2155</b>
<i>Jose Carlos Curiel Franco, Miriam Delgado Verde</i>	
<b>A CONCEPTUAL DEMAND DRIVEN HEALTHCARE SUPPLY CHAIN MANAGEMENT MATURITY MODEL FOR THE PUBLIC HEALTHCARE SUPPLY CHAIN IN SOUTH AFRICA .....</b>	<b>N/A</b>
<i>Munyaradzi Bvuchete, Sara S Grobbelaar, Joubert Van Eeden</i>	
<b>MANAGEMENT OF SEVERE INFLUENCES AFFECTING PRODUCT DEVELOPMENT PROJECTS: UNDERSTANDING THE BEHAVIOUR OF DISRUPTING EVENTS THROUGH EXISTING CASES.....</b>	<b>2178</b>
<i>Fausto Guaragni, Roland Ortt, Kristin Paetzold:</i>	
<b>Author Index</b>	