

# **1st International Conference on Machine Learning and Data Engineering (iCMLDE2017)**

Sydney, Australia  
20-22 November 2017

ISBN: 978-1-7138-0850-3

**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© (2017) by iCMLDE 2017  
All rights reserved.

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

For permission requests, please contact iCMLDE 2017  
at the address below.

ICMLDE 2017

Phone: 61 431 070 618  
Email: [secretary@icmlde.net.au](mailto:secretary@icmlde.net.au)

[icmlde.net.au](http://icmlde.net.au)

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

<b>CLUSTERING ON MANIFOLDS</b> .....	1
<i>Junbin Gao</i>	
<b>A CUMULATIVE TIMELINE FEATURE SELECTION APPROACH FOR DATA CLASSIFICATION</b> .....	2
<i>Rafiqul Islam</i>	
<b>SIMPLIFIED SWARM OPTIMIZATION FOR FEASIBILITY-BASED RULES ON CONSTRAINED ENGINEERING DESIGN OPTIMIZATION</b> .....	7
<i>Wei-Chang Yeh, Chia-Ling Huang</i>	
<b>REAL-TIME AGE AND GENDER ESTIMATION FROM FACE IMAGES</b> .....	15
<i>Jang-Hee Yoo, So-Hee Park, Yongjin Lee</i>	
<b>TIME SERIES ANOMALY DETECTION IN ONLINE SOCIAL NETWORK: CHALLENGES &amp; SOLUTIONS</b> .....	21
<i>Md Rafiqul islam, Rafiqul Islam, Abu Raihan M Kamal</i>	
<b>FACIAL EXPRESSION CLASSIFICATION BASED ON SHAPE FEATURE OF EMOTICONS</b> .....	29
<i>Akira Fujisawa, Kazuyuki Matsumoto, Minoru Yoshida, Kenji Kita</i>	
<b>REAL-TIME IRIS CENTER DETECTION AND TRACKING FROM VIDEO IMAGES</b> .....	35
<i>Dipankar Das, Md. Golam Rashed, Md. Rezaul Bashar, Yoshinori Kuno</i>	
<b>DEVELOPMENT OF GAS ACCIDENT PREDICTION TECHNIQUE IN THE AREA OF DENSE ENERGY CONSUMPTION BY CFD SIMULATION</b> .....	42
<i>Jung-Hoon Kim, Young-Gu Kim, Young-Do Jo</i>	
<b>SPOKEN TERM DETECTION METHOD USING SUFFIX ARRAY AND BIT-SEQUENCE REPRESENTATION</b> .....	49
<i>Satoru Tsuge, Kenji Kita</i>	
<b>REAL-TIME PANORAMA IMAGE STITCHING BASED ON MULTI-THREADED SYSTEM</b> .....	55
<i>Ahyun Lee, Insung Jang</i>	
<b>TELEOPERATED ROBOT CONTROLLING INTERFACE: AN INTERNET OF THINGS BASED APPROACH</b> .....	62
<i>Mohammad Sanaullah Chowdhury, Md. Sharfuddin Parvez</i>	
<b>WAVELET BASED NONLINEAR AUTOREGRESSIVE NEURAL NETWORK TO PREDICT DAILY RESERVOIR INFLOW</b> .....	69
<i>W.M.N. Dilini Basnayake, Dilhari Attygalle, Liwan Liyanage-Hansen, K.D.W. Nandalal</i>	
<b>DYNAMIC SHORT TERM LOAD FORECASTING USING FUNCTIONAL PRINCIPAL COMPONENT REGRESSION</b> .....	76
<i>K.A.D. Deshani, Dilhari Attygalle, Liwan Liyanage-Hansen, G.P. Lakraj</i>	
<b>DOMAIN KNOWLEDGE DRIVEN APPROACH IN DATA ANALYTICS</b> .....	83
<i>Koh May Fern, Chew Yew Choong, Seck Thiam Ho</i>	
<b>QUERY OPTIMIZATION IN SEARCH ENGINES</b> .....	89
<i>Baisakhi Chakraborty, Nirjhar Datta Chaudhuri, Dambar Chetri, Akshay Naik</i>	
<b>3D BUILDING RECONSTRUCTION BASED ON LINE DETECTION ALGORITHM</b> .....	96
<i>Yongzhe Xu, Minhaz Uddin Ahmed</i>	
<b>A SURVEY ON CLOUD, FOG COMPUTING AND INTERNET OF THINGS: AN ARCHITECTURAL VIEWPOINT</b> .....	102
<i>Mohammad Sanaullah Chowdhury, Ata Ullah</i>	
<b>AUTOMATIC EAR DETECTION USING DEEP LEARNING</b> .....	108
<i>MD Moniruzzaman, Syed Mohammed Shamsul</i>	
<b>AUTOMATIC DAMAGE DETECTION OF CONTAINERS BASED ON HIERARCHICAL IMAGE ANALYSIS</b> .....	115
<i>Youngjae Lim, Jang-Hee Yoo, Kiyoun Moon</i>	
<b>HIGH EFFICIENCY FACIAL EXPRESSION RECOGNITION BASED ACTIVE SEMI-SUPERVISED LEARNING</b> .....	121
<i>Kim Jin Woo, Minhaz Uddin Ahmed, Md Rezaul Bashar, Phill Kyu Rhee</i>	
<b>THE OPTIMIZATION OF DISTRIBUTED COMPUTED SVM BY KNN</b> .....	130
<i>Lizelong, Yangcheng</i>	
<b>A DEEP LEARNING BASED APPROACH FOR HUMAN ACTION RECOGNITION</b> .....	137
<i>Minhaz Uddin Ahmed, Kim Jin Woo, Miyoung Nam, Md Rezaul Bashar, Phill Kyu Rhee</i>	

<b>ANDROID BASED VEHICLE TRACKING SYSTEM USING GPS SENSOR .....</b>	<b>146</b>
<i>Mohammad Sanaullah Chowdhury, Nusrat Zahan, Israt Binteh Habib, Shamima Akter</i>	
<b>BIOMETRICS AND DATA SECURITY: AN INVESTIGATION ON BIOMETRIC TEMPLATES IN COMPUTING ENVIRONMENT.....</b>	<b>153</b>
<i>Roshan Dhakal, Rafiqul Islam, Champake Mendis</i>	
<b>INFORMATION SECURITY TRAINING AND AWARENESS PROGRAM: AN INVESTIGATION .....</b>	<b>165</b>
<i>Roshan Dhakal, Rafiqul Islam, Champake Mendis</i>	
<b>AGRICULTURAL ENVIRONMENT MONITORING USING INTERNET OF THINGS AND WIRELESS SENSOR NETWORKS .....</b>	<b>179</b>
<i>Mohammad Sanaullah Chowdhury, Shreya Khisa, Sourav Kumar Das</i>	
<b>DSTUS: A DEEP LEARNING APPROACH FOR SMART TRAFFIC UPDATING SYSTEM IN GIS .....</b>	<b>186</b>
<i>Abolghasem Sadeghi-Niaraki, Md. Rezaul Bashar, Soo-Mi Choi</i>	
<b>USING GENETIC ALGORITHM WITH TRIPLE CROSSOVER TO SOLVE TRAVELLING SALESMAN PROBLEM .....</b>	<b>195</b>
<i>Shamima Akter, Mohammad Sanaullah Chowdhury, Subrina Akter, Lutfun Nahar, Md. Wahid Murad</i>	
<b>MPU BASED 6050 FOR 7BOT ROBOT ARM CONTROL POSE ALGORITHM .....</b>	<b>201</b>
<i>Liuqiang Qian, Zhengwei Zhu, Cheng Liu</i>	
<b>IDENTIFICATION OF SUSCEPTIBLE WEBSITES FROM CODE INJECTION ATTACH.....</b>	<b>206</b>
<i>Hussein Alnabulsi, Rafiqul Islam</i>	
<b>VISUAL ATTENTION DETECTION: WHAT IS THE TARGET PERSON LOOKING AT? .....</b>	<b>215</b>
<i>Partha Pratim Debnath, Md. Golam Rashed, Dipankar Das</i>	
<b>Author Index</b>	