

Advances in Intelligent Systems and Computing

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Series editor

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Editors

Information Systems Design and Intelligent Applications

Proceedings of Fifth International
Conference INDIA 2018 Volume 1

 Springer

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Preface

The Fifth International Conference on Information System Design and Intelligent Applications (INDIA 2018) was successfully hosted by the Université des Mascareignes (UDM) from 19th July 2018 to 20th July 2018 at the InterContinental Resort Balaclava in Mauritius.

The Université des Mascareignes has strategically partnered with Université de Limoges, France, to offer a double degree with a strong emphasis on industrial placement, design its curriculum, introduce industry-based electives and facilitate students' internship at the industry for skill development. It has established a Centre of Excellence in collaboration with industry for various research and training purposes. The value addition training and career augmentation services prepare the students to meet expectations of industry demands.

Research focuses of the faculty of information and communication technology include algorithms and theory of computation, artificial intelligence, bioinformatics, cloud computing, database and data mining, data analytics, human-computer interaction, information and network security, Internet technology, image processing, mobile computing, pattern recognition, program analysis and testing, parallel and distributed computing, real-time systems, service-oriented architecture, soft computing, software engineering and wireless sensor networks.

The objective of this conference was to provide opportunities for the researchers, academicians and industry persons to interact and exchange the ideas, experience and gain expertise in the cutting-edge technologies pertaining to soft computing and signal processing. Research papers in the above-mentioned technology areas were received and subjected to a rigorous peer-reviewed process with the help of programme committee members and external reviewers. The INDIA 2018 conference received research articles in various domains, and after the rigorous review, only quality articles were accepted for publication in Springer AISC series. The hosting of the conference and full sponsorship approved by the director were the key factors in generating quality papers from UDM staff.

Special thanks to keynote speakers Mr. Aninda Bose, Senior Editor, Hard Sciences Publishing, Springer Nature; Dr B. Annappa, Professor, Department of Computer Science and Engineering, National Institute of Technology Karnataka,

Surathkal, Mangalore, India; and Dr. Jagdish Chand Bansal, Professor, South Asian University, New Delhi, and Visiting Research Fellow, Maths and Computer Science, Liverpool Hope University, UK.

We would like to express our gratitude to all session chairs and reviewers for extending their support and cooperation.

We would like to express our special gratitude to Organizing Committee Co-chair, Prof. Binod Kumar Pattanayak, Siksha ‘O’ Anushandhan University, Bhubaneswar, Odisha, and Publication Chair, Dr. Suresh Chandra Satapathy, KIIT, Bhubaneswar, for initiating this conference and for their valuable support and encouragement till the successful conclusion of the conference.

We are indebted to all the committee members for organizing the conference, namely Mohammad Reza Hosenkhan, Organizing Committee Chair, Founding Dean Faculty of Information and Communication Technology; Mrs Nundini Akaloo, Programme Committee Chair, Founding Dean Faculty of Business Management; Mrs Rubina Fareed and Dr. Swaleha Peeroo, Lecturers from the Faculty of Business Management; Mr Seeven Amic, Programme Committee Co-chair; and Mr Sanjeev Cowlessur, Mrs Shameera Lotun, Mrs Mahejabeen Peermamode and Mrs Dosheela Ramlawat, Lecturers from the Department of Software Engineering.

Special thanks to administrative staff, namely Mrs Farzana Antoaroo, Mr Ravi Langur, Mr Deojeet Nohur, Mrs Vimi Lockmun-Bissessur and Mrs Yasoda Benoit.

We express our heartfelt thanks to our Chief Patron, the Hon. (Mrs) Leela Devi Dookhun-Luchoomun, Minister of Education and Human Resources, Tertiary Education and Scientific Research, who supported and inaugurated the conference.

We are first and foremost indebted to the General Chair Dr. Radhakrishna Somanah, Outstanding Scientist, Director General of UDM, Commander of the Star and Key of the Indian Ocean (CSK)—one of the highest national awards received on the Republic Day of Mauritius on 12 March 2011, Chevalier dans l’Ordre des Palmes Academiques—Award by the Republic of France on 4 September 2009, Award by International Astronomical Union (IAU): minor planet Somanah 19318 in our solar system named after his name “Somanah” in 2007 for his contribution to research in astronomy award by NASA to my research group in June 2004 for excellence in Education and Discovery. We express our deep gratitude to Dr. R. Somanah for having believed in the importance and value of the conference and for having found solutions to many challenges and obstacles in Mauritius at the initial stage (and even after) to ensure that the conference materializes and becomes reality and has finally been a success.

Last, but certainly not least, our special thanks to all the authors without whom the conference would not have taken place. Their technical contributions have made our proceedings rich and praiseworthy.

Bhubaneswar, India
Lucknow, India
Beau Bassin-Rose Hill, Mauritius
London, UK
Zlín, Czech Republic

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Contents

New Strategy for Mobile Robot Navigation Using Fuzzy Logic	1
B. B. V. L. Deepak and D. R. Parhi	
EEG Monitoring: Performance Comparison of Compressive Sensing Reconstruction Algorithms	9
Meenu Rani, S. B. Dhok and R. B. Deshmukh	
Text Detection Through Hidden Markov Random Field and EM-Algorithm	19
H. T. Basavaraju, V. N. Manjunath Aradhya and D. S. Guru	
Classification and Comparative Analysis of Control and Migraine Subjects Using EEG Signals	31
Abhishek Uday Patil, Amitabh Dube, Rajesh Kumar Jain, Ghanshyam Dass Jindal and Deepa Madathil	
An Empirical Analysis of Big Scholarly Data to Find the Increase in Citations	41
J. P. Nivash and L. D. Dhinesh Babu	
Iterative Sharpening of Digital Images	53
B. Sravankumar, Chunduru Anilkumar, Sathishkumar Easwaramoorthy, Somula Ramasubbareddy and K. Govinda	
An Effective Rumor Control Approach for Online Social Networks	63
S. Santhoshkumar and L. D. Dhinesh Babu	
A Novel Approach for Data Security in Cloud Environment Using Image Segmentation and Image Steganography	75
R. Kiran Kumar and D. Suneetha	

Suppression of Artifacts for Mobile ICG Using Nonlinear Adaptive Algorithms	83
Madhavi Mallam, A. GuruvaReddy, B. JanakiRamaiah, B. Ramesh Reddy and M. K. Lingamurthy	
Review on Big Data and Its Impact on Business Intelligence	93
C. S. Pavan Kumar and L. D. Dhinesh Babu	
Big Data Analysis for Anomaly Detection in Telecommunication Using Clustering Techniques	111
C. Gunavathi, R. M. Swarna Priya and S. L. Aarthy	
Accurate Facial Ethnicity Classification Using Artificial Neural Networks Trained with Galactic Swarm Optimization Algorithm	123
Chhandak Bagchi, D. Geraldine Bessie Amali and M. Dinakaran	
Machine Learning on Medical Dataset	133
M. P. Gopinath, S. L. Aarthy, Aditya Manchanda and Rishadh	
Analysis of Diverse Open Source Digital Tools and Learning Management System Users in Academics	145
J. Karthikeyan, W. Christopher Rajasekaran and Panadda Unyapho	
Secured Key Management with Trusted Certificate Revocation in MANET	159
Manikandan Narayanan, Anusha Kannan, Senthilkumaran Ulaganathan and Monesh Reddiar	
A New Technique for Accurate Segmentation, and Detection of Outfit Using Convolution Neural Networks	169
Priyal Jain, Abhishek Kankani and D. Geraldine Bessie Amali	
An Investigation on Educational Data Mining to Analyze and Predict the Student's Academic Performance Using Visualization	179
J. Dheeraj Kumar, K. R. Shankar and R. A. K. Saravanaguru	
Real-Time Hierarchical Sensitivity Measure-Based Access Restriction for Efficient Data Retrieval in Cloud	189
A. Antonidoss	
Provision of Efficient Sentiment Analysis for Unstructured Data	199
C. Priya, K. Santhi and P. M. Durairaj Vincent	
Automated Shopping Experience Using Real-Time IoT	209
A. Krishnamoorthy, V. Vijayarajan and R. Sapthagiri	

A Comparative Survey on Three-Dimensional Reconstruction of Medical Modalities Based on Various Approaches 223
 Sushitha Susan Joseph and D. Aju

Estimating the Distance of a Human from an Object Using 3D Image Reconstruction 235
 R. M. Swarna Priya, C. Gunavathi and S. L. Aarthu

Adaptive Routing Mechanism in SDN to Limit Congestion 245
 Anusha Kannan, Sumathi Vijayan, Manikandan Narayanan and Monesh Reddiar

Optimization and Decision-Making in Relation to Rainfall for Crop Management Techniques 255
 K. Lavanya, Anand Vardhan Jain and Harsh Vardhan Jain

Evaluation of Features to Identify a Phishing Website Using Data Analysis Techniques 267
 Amalanathan Geetha Mary

Prediction of Heart Disease Using Long Short-Term Memory Based Network 277
 K. S. Umadevi

Oceanographic Mapping and Analysis 285
 Tejas Mohlah and Thirugnanam Tamizharasi

Study of Symmetric-Key Cryptosystems and Implementing a Secure Cryptosystem with DES 299
 H. Santhi, P. Gayathri, Sanskar Katiyar, G. Gopichand and Sagarika Shreevastava

Big Data Analysis on Effective Communication Skills and Personal Grooming—A Key to Managers and Supervisors in Business Enterprises and Retail Outlets in Vellore and Katpadi 315
 S. Horizan Prasanna Kumar and J. Karthikeyan

Technology-Enabled Digital Language Learning Using a Flipped Innovation Model 325
 I. S. John Vijayakumar and J. Karthikeyan

Factors Affecting the Adoption of Cloud Computing Among SMEs in Mauritius 333
 V. Domun and H. Bheemul

An Investigation of the TCP Meltdown Problem and Proposing Raptor Codes as a Novel to Decrease TCP Retransmissions in VPN Systems 337
 Irfaan Coonjah, Pierre Clarel Catherine and K. M. S. Soyjaudah

Big Data Hadoop MapReduce Job Scheduling: A Short Survey	349
N. Deshai, B. V. D. S. Sekhar, S. Venkataramana, K. Srinivas and G. P. S. Varma	
A Study on IOT Tools, Protocols, Applications, Opportunities and Challenges	367
N. Deshai, S. Venkataramana, B. V. D. S. Sekhar, K. Srinivas and G. P. S. Varma	
Land Use Land Cover Classification Using a Novel Decision Tree Algorithm and Satellite Data Sets	381
K. V. Ramana Rao and P. Rajesh Kumar	
Image Denoising Using Wavelet Transform Based Flower Pollination Algorithm	391
B. V. D. S. Sekhar, S. Venkataramana, V. V. S. S. S. Chakravarthy, P. S. R. Chowdary and G. P. S. Varma	
Comparative Analysis of PSO-SGO Algorithms for Localization in Wireless Sensor Networks	401
Vyshnavi Nagireddy, Pritee Parwekar and Tusar Kanti Mishra	
Inclusive Use of Digital Marketing in Tourism Industry	411
Gunjan Gupta	
Design of Differential Amplifier Using Current Mirror Load in 90 nm CMOS Technology	421
Payali Das, Suraj Kumar Saw and Preetisudha Meher	
A Survey on On-Chip ESD Protection in CMOS Technology	431
Lukram Dhanachandra Singh and Preetisudha Meher	
Efficient VLSI Implementation of CORDIC-Based Multiplier Architecture	441
Rashmita Baruah, Preetisudha Meher and Ashwini Kumar Pradhan	
Study of Electrical and Magnetic Properties of Multiferroic Composite $(\text{BiFeO}_3)_x(\text{Ba}_5\text{RTi}_3\text{V}_7\text{O}_{30})_{1-x}$	451
Hage Doley, Anuradha Panigrahi and Pinaki Chakraborty	
Low-Power Process-Insensitive Operational Amplifier Design	461
D. Anitha, K. Manjunatha Chari and P. Satish Kumar	
Static Task Scheduling Heuristic Approach in Cloud Computing Environment	473
Biswajit Nayak, Sanjay Kumar Padhi and Prasant Kumar Pattnaik	
Impact of Outlier Detection on Neural Networks Based Property Value Prediction	481
Sayali Sandbhor and N. B. Chaphalkar	

ADAS^{DL}—Innovative Approach for ADAS Application Using Deep Learning 497
 Ramachandra Guda, V. Mohanraj, J. V. Kameshwar Rao and N. A. Chandan kumar

Vowel Onset Point Detection in Hindi Language Using Long Short-Term Memory 505
 Arpan Jain, Amandeep Singh and Anupam Shukla

An Assessment of Interaction Protocols for Multi-agent Systems 517
 Dimple Juneja, Jasmine, Shefali, Pratibha Kumari and Anjali Arya

An Analytical Approach for Asthma Attack Prevention 527
 Aakash Gupta

Unusual Crowd Event Detection: An Approach Using Probabilistic Neural Network 533
 B. H. Lohithashva, V. N. Manjunath Aradhya, H. T. Basavaraju and B. S. Harish

Variance-Based Feature Selection for Enhanced Classification Performance 543
 D. Lakshmi Padmaja and B. Vishnuvardhan

Attribute Reduction for Defect Prediction Using Random Subset Feature Selection Method 551
 G. N. V. Ramana Rao, V. V. S. S. S. Balaram and B. Vishnuvardhan

Author Index 559

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Radhakrishna Somanah is Director of Universite des Mascareignes. He is one of the three pioneers of professional astronomy in Mauritius (together with Dr Nalini Issur and Dr Kumar Golap who is now working for the VLA, NRAO). He is fully involved with the design, construction and research at the Mauritius Radio Telescope (MRT) project since 1989. MRT is one of the biggest scientific research projects at the University of Mauritius. The main aim of the project was to produce a map of the southern sky at 151.5 MHz (unique in the world), perform astrophysical interpretation of the map, develop new algorithms and software etc. He has been involved with the supervision of the civil, mechanical, electrical and electronics work. Because of its immensity, it took nearly 5 years (1989–1993) to build. He was also part of the team which developed the software to convert the raw data into deconvolved radio images, and astrophysical interpretation of the latter. He has many publications in reputed journals.

Xin-She Yang obtained his DPhil in Applied Mathematics from the University of Oxford. He then worked at Cambridge University and National Physical Laboratory (UK) as a Senior Research Scientist. Now he is Reader in Modelling and Optimization at Middlesex University, an elected Bye-Fellow at Cambridge University and Adjunct Professor at Reykjavik University (Iceland). He is the chair of the IEEE CIS Task Force on Business Intelligence and Knowledge Management. He is on the list of both 2016 and 2017 Clarivate Analytics/Thomson Reuters Highly Cited Researchers.

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