Proceedings of

3rd National Conference on Image Processing, Computing, Communication, Networking and Data Analytics

Editors

- Andhe Dharani
- Vijayalakshmi M. N
- S. Meenakshi Sundaram
- Manjuprasad B
- Khateeja Ambareen

AIJR Publisher

Series: AIJR Proceedings
More information about this series at -
https://books.aijr.org/index.php/press/catalog/series/proceedings

Andhe Dharani
Vijayalakshmi M. N
S. Meenakshi Sundaram
Manjuprasad B
Khateeja Ambareen
(Editors)

Proceedings of

3rd National Conference on Image Processing, Computing, Communication, Networking and Data Analytics

NCICCNDA 2018 (28th April 2018)

Organized by

Department of Computer Science and Engineering,
GSSS Institute of Engineering and Technology for Women,
Mysore, Karnataka (India)

Published by

AIJR Publisher, 73, Dhaurahra, Balrampur, India 271604

Proceedings of 3rd National Conference on Image Processing, Computing, Communication, Networking and Data Analytics (NCICCNDA 2018) 28th April 2018

Editors

Dr. Andhe Dharani
Professor, Department of MCA
R.V. College of Engineering, Bangalore, Karnataka, India

Dr. Vijayalakshmi M.N
Associate Professor, Department of MCA
R.V. College of Engineering, Bangalore, Karnataka, India

Dr. S. Meenakshi Sundaram
Professor, Department of Computer Science and Engineering
GSSS Institute of Engineering and Technology for Women, Mysuru, Karnataka, India

Manjuprasad B
Assistant Professor, Department of Computer Science and Engineering
GSSS Institute of Engineering and Technology for Women, Mysuru, Karnataka, India

Khateeja Ambareen
Assistant Professor, Department of Computer Science and Engineering
GSSS Institute of Engineering and Technology for Women, Mysuru, Karnataka, India

Conference Organizer

Department of Computer Science and Engineering, GSSS Institute of Engineering and Technology for Women, Mysore, Karnataka (India)

ISBN: 978-81-936820-0-5 (eBook)

Series
AIJR Proceedings
Volume: 1
DOI: 10.21467/proceedings.1
Series Editor
Dr. Adam A. Bahishti

Published
12 June 2018

Imprint
AIJR Books

© 2018 Copyright held by the author(s) of the individual articles. Abstracting is permitted with credit to the source. This is an open access book under Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) license, which permits any non-commercial use, distribution, adaptation, and reproduction in any medium, as long as the original work is properly cited.

Published by

AIJR Publisher, 73, Dhaurahra, Balrampur, India 271604

This Conference Proceeding is dedicated to **Late Prof. Bharadwaj Srikanta Pandit**, *Hon. Founder Secretary, GSSS(R).*

This is a GO- GREEN Initiative taken up by GSSSIETW, Mysuru, for adopting Digital Media for conference publicity, Review Process and Registration Process.

Table of Contents

Preface i

Committees ii

Review Process iv

List of Reviewers v

About the Editors vi

Acknowledgment viii

Ontology Based Text Mining Method Using Cluster Approach 1

Effective Data Access Control in Mobile Cloud Computing Using LDSS CP-ABE 6

Road Safety Surveillance and Intelligent Traffic Management System 15

Power Generation Using LiveCode 19

Remote Tutor – A Novel Interactive Collaborative Teaching Method for E-learning an application of Raspberry Pi 26

Quick Dr: A Smart Mobile Application for Health Care 32

Hand Gesture Recognition Based Social Assistive Robot Controls for Wheelchair Applications 39

Smart Phone Application on MIMO (Organ Donation) 44

Localized Secure Examination Printing Service with Remote Locking 50

Secured Data Sharing and Access Control for Cloud Computing Systems using CP-ABE Algorithm with Verifiable Delegation 57

Dynamic Facet Ordering for Faceted Product Search Engines 62

Blind Hurdle Stick: Android Integrated Voice Based Intimation via GPS with Panic Alert System 69

An Intelligent Intensive Care Unit for Patient Monitoring System 76

Enhanced Performance and Security for Manet's Against Blackhole Attack Blackhole Attacks 80

BLE Beacon Based Museum Knowledge Sharing Platform 94

A Smart Waste Bin for Waste Disposal 99

An Android Application on Wi-Fi Direct 105

GPS Based Toll Collection System 110

Wireless Home Security Surveillance System Using Android Application 115

IOT Based Load Monitoring and Auditing System 123

Compatible and Confidentiality-Preserving Friend Matching in Mobile Cloud 127

Security System for Cloud Based Services 132
CAN Based Vehicle Health Monitoring System 136
Intelligent Parking Based on Geolocation Using IoT 143
Secured Certificate Based Authentication 148
An Android Application for Employee Information Security at Master Control Facility 155
Scalable Approach for Content-Based Image Retrieval in Peer-to-Peer Networks 160
Prediction of Crime Pattern and Suspects Using Datamining Techniques 166
Intelligent Parking System Using IOT 172
TE AROHA 178
Graphical Password with Convex Hull 182
Bank Authentication for Mobile Payment Services 188
Modelling of Moving Object Detection using GCM Alert System 193
A Survey on Collaborative Learning Approach for Speech and Speaker Recognition 199
A Survey on Agricultural Application based on Android 206
Developers Guide for Android Applications 210
Data Migration Techniques in Cloud 215
Implementing of Data Quality in KYC using Cloud Environment 221
Measuring of Data Quality in KYC Using Anomaly Detection Techniques 228
Unmasking Malignant Facebook Applications - A survey 234
A Survey on the Implementation of Reinforcement Learning on Shared Taxi System 241
A Survey on Depiction of Image using Tone and Sketch 253
Internet of Things (IoT): A Revolutionary Approach towards Healthcare Surveillance 257
Big Data Revolution in Health Care Sector 265
Movie Recommendation System using Apache Spark 280
Automated Plant Count Using Unsupervised Classification on UAV Acquired Imagery 287
A Survey on Data Mining Techniques in Image Mining 296
6LoWPAN NETWORK USING CONTIKI OPERATING SYSTEM 300
Secure Cloud Using Cryptography 311
Authorship Detection in Cyber World 318
Design & Implementation of Auto-Stabilizing Bike 325

Android Application for Product Enquiry and Navigation 329
Obstacle Detection System in Dashcams using Convolutional Neural Networks 335
A Survey Paper on Security Challenges in Healthcare Cloud Computing 341
Big Data: Characteristics, Issues and Clustering Techniques 348
A Novel Approach for News Extraction Using Webscraping Technique 359
Game Playing Agent for 2048 using Deep Reinforcement Learning 363
Survey of Estimation of Crop Yield Using Agriculture Data 371
A Multiclass Classification Method Based on Convolutional Neural Network for Leaf Identification 375
Chronic Kidney Disease and Stage Detection Using Machine Learning Classifiers 383
A Survey on Evolution of Mobile Communication from 1G to 7G 391
Pothole Detection System 398
An Android App for IoT Based Remote Health Monitoring System 401
Survey on Online Social Networking Security 407
Security in Cloud Computing Using Blockchain Technology 422
Survey on Two-Factor Authentication with Security in Online Transaction 440
Survey on Parallel Patient Treatment Time Management System 446
Smart e-Commerce Recommendation System Using Data Mining Techniques 458
Gesture based and Voice Enabled Device Switching of Basic Needs for Paralyzed Persons 462
Evidence Aggregation Based Spam Detection in e-Commerce Social Network 467
Paddy Yield Prediction Model Using Data Mining Techniques 474
Conservation of Electricity Using Programmed Smart Street Lights 478
Segmentation and Clustering of Stakeholders using Data Mining Techniques 482
A Navigation Supporting System Using R-Tree 489
A Brief Information of Ethical Hacking 495
Insight into Applications of Deep Learning 504

Preface

We are happy to bring out the proceedings of the 3rd National Conference on Image Processing, Computing, Communication, Networking and Data Analytics (NCICCNDA 2018) held at the GSSS Institute of Engineering and Technology for Women, Mysore, Karnataka (India), on April 28th, 2018. National Conference on Image Processing, Computing, Communication, Networking and Data Analytics aims to provide a platform to researchers, Faculty, Post Graduate Students and participants from Industries to share their expertise and technical knowledge with respect to individual domains.

In 2015, 50 Quality papers were selected for the presentation in NCRACICA-2015, organized in association with CSI Bangalore Chapter. NCICCNDA 2017 held last year in which 57 Quality papers were selected for presentation in the conference organized in association with IEEE Bangalore Section. NCICCNDA has established a tradition of highlighting the important advances in computer science & technology. GSSSIETW, Mysuru has continued this tradition in the 3rd NCICCNDA.

Geetha Shishu Shikshana Sangha® is the outcome of the vision and initiative of Late. Prof. B.S. Pandit who retired as Professor from SJCE, Mysuru. His vision was to provide quality technical education to girls. The institution reflects the ideals of its founder and seeks to achieve excellence as an academic institution and advanced research centre. The vision of the management and commitment provides good governance resulting in progress of the institution.

Five Engineering branches ECE, CSE, ISE, TCE and ITE are accredited for three years by NBA, New Delhi, (Validity: 01-07-2017 to 30-06-2020). The institute offers 6 B. E. Programmes, 2 M. Tech Programmes and MBA all affiliated to VTU Belagavi. The institution has professional forums like IEEE, CSI, IETE and ISOI. The College also offers Ph.D. programmes in E&C, CS&E, E&IE, Mathematics, Chemistry and MBA departments.

We are thankful to all members of the committee for their efforts in putting together an excellent event. We thank the referees for giving their time for reviewing all the abstracts submitted to the conference.

Committees

Chief Patrons:

- Dr. Jagannatha Shenoi M, President, GSSS(R), Mysuru
- Smt. Vanaja B Pandit, Hon. Secretary, GSSS(R), Mysuru

General Chair:

- Sri. Bharath R K, CEO, GSSSIETW, Mysuru
- Smt. Anupama B Pandit, AAO, GSSSIETW, Mysuru
- Dr. Shivakumar M, Principal GSSSIETW, Mysuru

Technically Advisory Committee:

- Dr. G Manimaran, Professor, Computer Engineering Dept. Iowa State University, USA
- Dr. R Venkatesh Babu, Associate Professor, Computational & Data Sciences, IISc, Bengaluru
- Dr. S R Balasundaram, Head, Dept. of Computer Applications NIT Tiruchirappalli
- Dr. Anjaneyulu Pasala, Principal Research Scientist Infosys Labs, Bengaluru
- Dr. R Boopathi Rani, Head, Dept. of ECE, NIT, Puducherry
- Dr. M Girish Chandra, Principal Scientist, TCS Bengaluru
- Dr. S V Mohanasundaram, Design Engineer, C-DAC Bengaluru
- Dr. B Ram Kumar, Principal Engineer Anora Semiconductor Labs Pvt. Ltd., Bengaluru
- Dr R Balasubramaniam, Professor & Head, Dept. of CSE, MS University, Tirunelveli,
- Smt. V Bhuvaneswari Jagan, Deputy Delivery Head L&T Infotech, Bengaluru
- Sri. V Balaji Subramaniam, Group Manager Infosys Ltd. Chennai
- Dr. Suryakanth V. Gangashetty, Associate Professor IIIT Hyderabad
- Dr. Adam Bahishti, Managing Editor, AIJR Publisher, Majmaah University, KSA

Organizing Chair:

- Dr. S Meenakshi Sundaram, Professor and Head Department of CSE, GSSSIETW, Mysuru

Conveners:

- Dr. Nandakumar A N, Professor, Dept. of CSE GSSSIETW, Mysuru
- Sri. Gururaj K S, Associate Professor, Dept. of CSE GSSSIETW, Mysuru

Proceedings Committee:

- Sri. Manjuprasad B, Assistant Professor, Dept. of CSE GSSSIETW, Mysuru
- Smt. Khateeja Ambareen, Assistant Professor, Dept. of CSE GSSSIETW, Mysuru

General Committees

- Dr. Raviraj P, Professor
- Manjunath S, Assistant Professor
- Madhu M Nayak, Assistant Professor
- Rummana Firdaus, Assistant Professor
- Rajashekar M B, Assistant Professor
- Tejaswini R M, Assistant Professor
- Asha Rani M, Assistant Professor
- Usha Rani J, Assistant Professor
- Sowmya M, Assistant Professor
- Rajath A N, Assistant Professor
- Ravi Kumar V G, Assistant Professor
- Shruthi B M, Assistant Professor
- Vishwesh J, Assistant Professor
- Parashiva Murthy B M, Assistant Professor
- Anandhi G, Assistant Professor
- Priyanka K R, Assistant Professor
- Chethan K S, Assistant Professor
- Kavana M D, Assistant Professor
- Shreelakshmi C M, Assistant Professor
- Parvathi S J, Assistant Professor
- Pruthvi P R, Assistant Professor

Website, Banner, Certificate and Brochure Design Committee

- Mahadevappa N, System Analyst
- Satish B N, Programmer
- Usha O, Programmer
- Ravichandran G, Asst. Instructor
- Ravi Kumar S

Review Process

103 papers were presented in the Conference in five session tracks namely Machine learning, Data Analytics and image Processing, Networking and IoT, Android and Smart applications and Mobile Applications and RFID. All these papers were blind reviewed by the various domain experts and plagiarism check for the same papers were done to ensure the originality of the research work carried from the Research Scholars, Faculty members and PG students. Papers are classified and reviewed based on the following areas of interest:

IMAGE PROCESSING

- ♦Content based Image Retrieval
- ♦ Image Compression
- ♦ Multimedia Analysis
- ♦ Medical Image Analysis

COMPUTING

- ♦ Cloud Computing
- ♦ Mobile Computing
- ♦ High Performance Computing
- ♦ Green Computing
- ♦ Mathematical Computing

NETWORKING

- ♦ Internet of Things
- ♦ Wireless Sensor Networks
- ♦ Ad Hoc Networks
- ♦ Network Security
- ♦ Mesh Networks

COMMUNICATION

- ♦ Wireless Communication
- ♦ Optical Communication
- ♦ Visual Light Communication
- ♦ Underwater Communication

DATA ANALYTICS

- ♦ Big Data Analytics
- ♦ Data Analysis and Data Cleansing
- ♦ Data Warehousing Systems
- ♦ Multimedia Information Systems and Search
- ♦ Data Sharing and Dissemination

List of Reviewers

Dr. Andhe Dharnai, Professor, RVCE, Bangalore
Dr. Vijayalakshmi, Associate Professor, RVCE, Bangalore
Dr. S. Meenakshi Sundaram, Professor, GSSSIETW, Mysuru
Dr. Nandakumar AN, Professor, GSSSIETW, Mysuru
Dr. Raviraj P, Professor, GSSSIETW, Mysuru
Sri. Sumit Kushwaha, KNIT, Uttar Pradesh
Dr. Mouneshachari S, Associate Professor, GMIT, Davangere
Sri. Gururaj, Associate Professor, GSSSIETW, Mysuru
Sri. Manjuprasd B, Assistance Professor, GSSSIETW

About the Editors

Dr. Andhe Dharani, currently working as a Professor in the Department of Master of Computer Applications, R.V. College of Engineering, Bengaluru, Karnataka. She has completed her Master of Computer Applications in 2000 and completed M. Phil in 2003. She pursued her doctoral programme from Mother Theresa Women's University, Kodaikanal and obtained her Ph.D. in Jan 2010. She has Undertaken and successfully completed funded research project "Power optimization in Adhoc sensor network" for the Naval Research Board, DRDO, New Delhi, 2011 – 2013, as Principal Investigator. She immersed herself in conducting research in chosen area of specialization, guiding Ph.D. projects and teaching at post graduate level. She has guided more than 100 final year projects and also been involved in research Projects. She has so far published more than 70 papers in national and international journals and also presented papers in Scopus indexed conferences and gained 79 Citations, 05 h-Index and 02 i10 index for these publications. She has attended many international conferences, chaired many technical sessions and has reviewed papers for IEEE and other conferences. She has organized many national and international conferences and workshops. She has honored by Rastriya Sikshana Samithi Trust "Excellence in Education" for Ph.D. completion 2010, presenting publications in International conferences, Syria 2006 and London 2011. received "Young Researcher Award", By Cognizant - R.V. College of Engineering, under ISTE_RVCE chapter.

Dr. Vijayalakshmi M. N, currently working as a Associate Professor, in the Department of Master of Computer Applications, R.V. College of Engineering, Bengaluru, Karnataka. She completed her Master of Computer Applications at Siddaganaga Institute of Technology, Tumakur in 1998 and completed M. Phil from Bharathidasan University in 2007. She pursued her doctoral programme from Mother Theresa Women's University, Kodaikanal and obtained her Ph.D. in Computer Science. She has completed Research Project funded by Computer Society of India. She immersed herself in conducting research in chosen area of specialization, guiding Ph.D. projects and teaching at post graduate level. She has guided more than 100 final year projects and also been involved in consultancy Projects. Dr. Vijayalakshmi has so far published more than 90 papers in national and international journals and also presented papers in Scopus indexed conferences and gained 150+ Citations, 06 h-Index and 05 i10 index for these publications. She has attended many international conferences throughout the world and has chaired many technical sessions. She has organized many national and international conferences and workshops. She has been honoured with 5 different awards for Achieving Excellence in Education.

Dr. S. MeenakshiSundaram is currently working as Professor and Head in the Department of Computer Science and Engineering at GSSS Institute of Engineering and Technology for Women, Mysuru. He obtained his bachelor's Degree in Computer Science & Engineering from Bharathidasan University, Tiruchirappalli in 1989, M. Tech from National Institute of Technology, Tiruchirappalli in 2006 and Ph.D. in Computer Science & Engineering from Anna University Chennai in 2014. He has published 41 papers in refereed International Journals, presented 3 papers in International Conferences and has delivered more than 40 seminars. He is a reviewer of Springer – Soft Computing Journal, International Journal of Ah Hoc Network Systems, Journal of Engineering Science and Technology, Taylor's University, Malaysia and International Journal of Computational Science & Engineering, Inderscience Publishers, UK. He has organized more than 40 seminars / Workshops / FDPs. He has attended more than 45 Workshops / Seminars. His area of interest includes Computer Networks, Wireless Communication, Software Engineering, Optical Networks and Data Mining. He is a Life Member of Indian Society for Technical Education (ISTE) and a member of Computer Society of India (CSI). He has 28 Years of teaching experience and 10 years of research experience. Currently 06 research scholars are pursuing Ph.D. in VTU Belagavi, India under his guidance.

Manjuprasad B, received his B.E degree in Computer Science from Visvesvaraya Technological University; Karnataka and pursuing Ph.D. in Engineering Stream. Currently working as Assistant Professor, Dept. of CSE, GSSSIETW, Mysuru. He has published over 20 articles in various conferences, journals with Google and Scopus Indexing. He has 36 citations for his published papers. His research are includes Wireless Sensor Networks, Machine Learning, Operating System, Storage Area Networks. He has technically involved in various Free and Open Source Software development activities. He is keenly involved in Go Green activities and motivating the same to others by initiating eco-friendly solutions.

Khateeja Ambareen, received M. Tech in Software Engineering and M. Tech Bio Medical Instrumentation from Visvesvaraya Technological University and B.E in Computer Science and Engineering. Currently working as Assistant Professor, Dept of CSE, GSSSIETW, Mysuru. She has published over 10 articles in various conferences and journals. Her area of interest includes Image Processing, Data Analytics and Networking.

Acknowledgment

The Conference team would like to thank Dr. Jagannatha Shenoi M, President, GSSS(R), Mysuru Smt. Vanaja B Pandit, Hon. Secretary, GSSS(R), Mysuru. Chief Guest - Dr. Pradeep Desai, CEO, Thalesat Innovations Private Limited, Bengaluru, Guest of Honor - Sri. Kalose. S. Rama Rao, former Senior Project Manager, L&T Infotech Ltd, Bengaluru. General Chair- Sri. Bharath R K, CEO, GSSSIETW, Mysuru, Smt. Anupama B Pandit, AO, GSSSIETW, Mysuru, Dr. Shivakumar M, Principal GSSSIETW, Mysuru, Review Experts from various Institutes, AIJR Publisher, CSI Mysore and Bangalore Chapters and IEEE Bangalore Section for their continuous support motivation in making this conference a grand success.

AIJR Proceedings Series

NCICCNDA 2018 was organized this year in association with IEEE Bangalore Section, CSI Mysore and Bangalore Chapters and with AIJR Publisher, where the conference proceedings get published after plagiarism check and peer reviews. NCICCNDA 2018 goes with a GO GREEN Concept with e-publicity and no brochures or posters have been printed or circulated to stake holders. 153 research papers that were received have been peer reviewed and 103 papers have been accepted for presentation in NCICCNDA 2018. The papers that meet the requirements of conference proceedings for publication by AIJR has been published in this proceedings after plagiarism check. Hope with the support of all the stake holders' participants enjoyed and benefited in NCICCNDA 2018.

3rd National Conference on Image Processing, Computing, Communication, Networking and Data Analytics

NCICCNDA 2018

ISBN 978-81-936820-0-5

To learn more about
AIJR Publisher
Please visit us at: www.aijr.in