

2020 IEEE 15th International Conference on Industrial and Information Systems (ICIIS 2020)

**Rupnagar, India
26 – 28 November 2020**



**IEEE Catalog Number: CFP2058A-POD
ISBN: 978-1-7281-8525-5**

**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:	CFP2058A-POD
ISBN (Print-On-Demand):	978-1-7281-8525-5
ISBN (Online):	978-1-7281-8524-8
ISSN:	2164-7011

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

15th (IEEE) International Conference on Industrial and Information Systems (ICIIS) 2020
 TABLE OF CONTENTS

Sl. No	Paper ID	Paper Title	Authors	Page(s)
1.	01_ID1570674911	Simulation and Design of Modified SPWM and Single-Phase Five-Level Inverter	<i>Velide Srinath Manmohan Agarwal D.K.Chaturvedi</i>	1 – 6
2.	02_ID1570669706	Semantic Segmentation of Solar PV Panels and Wind Turbines in Satellite Images Using U-Net	<i>Narayana Darapaneni Jagannathan A Vigneshwaran Natarajan Guruprasadh Vadakkupattu Subramanian S Anwesh Reddy Paduri</i>	7 – 12
3.	03_ID1570674574	A Novel Trapezoidal Multi-Coil Antenna for Wireless Charging of Electric Vehicles	<i>Ananth Bharadwaj Vivek Kumar Srivastava Ashwani Sharma C.C. Reddy</i>	13 - 17
4.	04_ID1570675494	Investigation on Transformer Oil Parameters Using Support Vector Machine	<i>Birender Singh A.Harshith Kumar C C Reddy</i>	18-21
5.	05_ID1570674264	Mathematical Modelling and Performance Analysis of Solar Still Coupled with Evacuated Tube Collectors	<i>Namrata Kala Parthsarathi Mulay Twinkle Rane Archana Thosar</i>	22-27
6.	06_ID1570671441	Prediction of Anti-reflection Coating Thickness of a Solar Cell using Artificial Neural Network	<i>Maneesh Kumar Shivhare Apurv Yadav Swaroop Ramaswamy Pillai Vineet Kumar Vashishtha Manish Kumar</i>	28-33
7.	07_ID1570669177	Maximum Power Point Tracking of Photovoltaic Module: An Inertial Delay Control Approach	<i>Vrinda Rupchand Borkar Amruta Deshpande</i>	34-39
8.	08_ID1570668899	Modified Auto Regressive Technique for Univariate Time Series Prediction of Solar Irradiance	<i>Umar Marikkar A. S. Jameel Hassan Mihitha S. Maithripala Roshan I. Parakrama B. Ekanayake Janaka B. Ekanayake</i>	40-45

9.	09_ID1570668632	Fe ₂ O ₃ based Nanocomposites for Enhanced Thermal Energy Storage	<i>Malvika Satish Sharon Santhosh Sujith Kalluri Apurv Yadav Asha Anish Madhavan</i>	46-49
10.	10_ID1570671008	Space optimization for high voltage surge arrester	<i>Grupesh Tapiawala Subhankar Das Satadal Dash Kirushnaraj P Kumar Virvani</i>	50-53
11.	11_ID1570671652	Simulation of water treeing in cable with nanofiller and analysis of EMI in a ruptured cable	<i>Shankar Dayal Mishra Dr. Sunitha K</i>	54-58
12.	12_ID1570669316	An Analytical study on Methods to Detect Degraded Cells in a Multi-Cell Lithium-ion Battery Pack	<i>I.A. Premaratne B.G.L.T. Samaranyake P.J. Binduhewa</i>	59-64
13.	13_ID1570675426	Effect of Source Resistance on the Surface Voltage in an Insulated Overhead Conductor	<i>Ajith John Thomas Enukonda Venkateshwar Reddy C C Reddy</i>	65-68
14	14_ID1570670430	Energy Management System for Neighbourhood EV based Taxi Parking Station	<i>Shankanee Illangarathna Prabath Binduhewa</i>	69-74
15	15_ID1570675279	Estimation of Fault Location Using PPU for Bolted and Non-bolted Faults in a LVDC Microgrid	<i>Geeth Nischal Gottimukkala M V Satya Sai Chandra Sankarsan Mohapatro</i>	75-80
16	16_ID1570675480	Data-driven model of Proton Exchange Membrane Fuel Cell by Support Vector Machine	<i>Prayash Panda Sasmita Behera</i>	81-85

17	17_ID1570677234	Critical Analysis of IS 1255-1983, Reaffirmed 1996 for “Code of Practice for Installation and Maintenance of Power Cables up to and Including 33kV rating”	<i>Ravi kumar Premjeet Nair</i>	86-90
18	18_ID1570668727	Design and Comparative Analysis of Optimized PID Controller Using Neural Network Algorithm	<i>Amrit Kaur Bhullar Ranjit Kaur Swati Sondhi</i>	91-96
19	19_ID1570668841	PI Controller-Based Walking Mechanism of Quadruped Robot on a Side Ramp Path	<i>Rajmeet Singh Tarun Kumar Bera</i>	97-102
20	20_ID1570677279	Reinforcement learning control of servo actuated centrally pivoted ball on a beam	<i>Archana Ganesh Banu Sundareswari M. Monalisa Panda Then Mozhi G Dhanalakshmi K</i>	103-108
21	21_ID1570676105	3D Printed Prosthetic Arm	<i>Akshay Fulzele Harshil Kocho Arnav Jain Dattatray Sawant Amey Raut</i>	109-114
22	22_ID1570668973	HV and MV DC Insulation System: Unexpected Aging Mechanisms and Metrics for Life Prediction	<i>G.C. Montanari R. Ghosh P. Seri</i>	115-120
23	23_ID1570672954	A Comprehensive Survey on Real-Time Voltage Stability Assessment for Power Systems	<i>Gourav Wadhwa Amandeep Kharb Satyam Mishra Mohit Kumar Shreyansh Srivastav</i>	121-126
24	24_ID1570669799	Managing Spinning Reserves for Power System Stability under Increased Renewable Energy Penetration	<i>D.A.H. Chathurika L.Y. Perumpularachchi S.G. Abeyratne R.B. Wijekoon</i>	127-132

25	25_ID1570668970	Measuring PD under Fast Slew Rate, High Voltage and High Frequency Repetitive Voltage Impulses	<i>R. Ghosh P. Seri G.C. Montanari</i>	133-137
26	26_ID1570671623	Analysis of High Frequency High Magnitude Pulse Propagation in Cables Using Finite Element Analysis Software	<i>Soumyadeep Chowdhury Sunitha K</i>	138-143

27	27_ID1570668514	Loss functions for optimizing Kappa as the evaluation measure for classifying diabetic retinopathy and prostate cancer images	<i>Rajendran Nirthika Siyamalan Manivannan Amirthalingam Ramanan</i>	144-149
28	28_ID1570668665	An Ensemble Approach To Emphysema Classification	<i>Chandra Mohan Bhuma</i>	150-155
29	29_ID1570668670	Detecting Masked Faces using Region-based Convolutional Neural Network	<i>Jenil Gathani Krish Shah</i>	156-161
30	30_ID1570668705	Automatic Quality Enhancement of Medical Diagnostic Scans with Deep Neural Image Super-Resolution Models	<i>Karthik K Sowmya Kamath S Surendra U. Kamath</i>	162-167
31	31_ID1570668759	Transfer Learning by Deep Tuning of Pre-trained Networks for Pulmonary Nodule Detection	<i>Dhaarna Sethi Kriti Arora Seba Susan</i>	168-173
32	32_ID1570668820	Convolutional Autoencoder for Blind Hyperspectral Image Unmixing	<i>Yasiru Ranasinghe Sanjaya Herath Kavinga Weerasooriya Mevan Ekanayake Roshan Godaliyadda Parakrama Ekanayake Vijitha Herath</i>	174-179

33	33_ID1570668828	Automatic Threat Detection in Baggage Security Imagery using Deep Learning Models	<i>Aditya Mithal Manit Baser Dhiraj</i>	180-185
34	34_ID1570668931	An Adaptive Multi-level Block-wise Encryption based Reversible Data Hiding Scheme	<i>Ravi Srihitha Yadlapalli Sai Harshini</i>	186-191
35	35_ID1570668940	Vehicle Detection and Localization for Autonomous Traffic Monitoring Systems in Unstructured Crowded Scenes	<i>S.M.K.C.S.B. Egodawela H.M.D.M.B. Herath S.M.A.B. Willamuna M. P. B. Ekanayake G. M. R. I. Godaliyadda J. V. Wijayakulasooriya V.R.Herath I.M.S.Sathyaprasad</i>	192-197
36	36_ID1570669182	Shadow Detection using GAN with Residual CNN Discriminator	<i>Sandeep Yadav Satyajeet Singh Antoreep Jana Seba Susan</i>	198-203
37	37_ID1570669512	Dispersion Entropy for the automated detection of epileptic seizures	<i>Sukriti Monisha Chakraborty Debjani Mitra</i>	204-207
38	38_ID1570669658	Automatic Visual Gun Detection Carried by A Moving Person	<i>Rajib Debnath Mrinal Kanti Bhowmik</i>	208-213
39	39_ID1570669994	Biohashing application using fingerprint cancelable features	<i>Mamatha Ram Radhika K R</i>	214-218
40	40_ID1570670237	Single Image Super-Resolution using Residual Channel Attention Network	<i>Hritam Basak Rohit Kundu1 Anish Agarwal Shreya Giri</i>	219-224
41	41_ID1570670276	Efficient Design Approaches for Sharp PseudoQuadrature Mirror Filter banks using Hybrid Evolutionary Algorithms	<i>Shaeen Kalathil Shabana Urooj Salasiah Hitam</i>	225-230

42	42_ID1570671363	Impact of Population Count on the Presence of Nitrogen Dioxide in United Arab Emirates using Sentinel-5P Satellite Data	<i>Roshan Bhatkar Sarath Raj Nadarajan Assari Jerrin Thadathil Varghese</i>	231-235
43	43_ID1570669713	Automatic Face Detection and Recognition for Attendance Maintenance	<i>Narayana Darapaneni Aruna Kumari Evoori Vijaya Babu Vemuri Thangaselvi Arichandrapandian Karthikeyan G Anwesh Reddy Paduri Dhivakar Babu Jayadev Madhavan</i>	236-241
44	44_ID1570671543	View Invariant Gait Feature Extraction using Temporal Pyramid Pooling with 3D Convolutional Neural Network	<i>Ashish Kumar Anshu Karm Veer Arya Anupam Gupta</i>	242-246
45	45_ID1570672823	Facile Diabetic Retinopathy Detection using MRHE-FEED and Classification using Deep Convolutional Neural Network	<i>Muhammad Zubair</i>	247-252
46	46_ID1570674013	EEG Traced Microstates Detection during Meditation- A State of Consciousness	<i>Laxmi Shaw Aurobinda Routray</i>	253-257
47	47_ID1570674624	Hand Gesture Recognition with Gaussian Scaling and Kirsch Edge Rotation	<i>Satya Narayan S. K. Vipparthi A.P.Mazumdar</i>	258-262
48	48_ID1570674633	Parity Check Based Descriptor for Hand Gesture Detection and Recognition	<i>Satya Narayan S. K. Vipparthi A.P.Mazumdar</i>	263-268
49	49_ID1570675254	Secured Cross Layered Watermark Embedded for Digital Image Authentication Using IWT-SVD	<i>K Jyothsna Devi Priyanka Singh</i>	269-273
50	50_ID1570676198	CrossFeat: Multi-scale Cross Feature Aggregation Network for Hand Gesture Recognition	<i>Gopa Bhaumik Monu Verma Mahesh Chandra Govil Santosh Kumar Vipparthi</i>	274-279

51	51_ID1570677263	Automatic Cloud Detection in Resourcesat LISS-3 Data using Spectral Angle Similarity and Mode Seeking Reference Spectra	<i>Indranil Misra S Manthira Moorthi Debajyoti Dhar</i>	280-284
52	52_ID1570668829	Non Invasive Wearable Device for Fetal Movement Detection	<i>U.H. Delay B.M.T.M. Nawarathne D.W.S.V.B. Dissanayake M.P.B. Ekanayake G.M.R.I. Godaliyadd J.V. Wijayakulasooriya R.M.C.J. Rathnayake</i>	285-290
53	53_ID1570670094	Generating Silver Nanoparticles from Ipomoea aquatica Extract	<i>Joyce Simbajon Hardeep Kumar</i>	291-295
54	54_ID1570670095	Modeling and Analysis of 3D IC Structures for Heat Mitigation by Thermal Through Silicon Vias	<i>Debika Chaudhuri Dalia Nandi (Das) Hafizur Rahaman Tamal Ghosh</i>	296-299
55	55_ID1570674391	A Review on Comprehensive analysis in curbing Diabetes Mellitus with the aid of Nanotools	<i>Niranjan Anirudh Srikanth Reshmi S Nair Kizhakkelan Sudhakaran Siddharth</i>	300-305
a56	56_ID1570677266	The influencing parameters of variable stiffness actuation of shape memory spring for self-sensing	<i>Then Mozhi G. Banu Sundareswari M. Dhanalakshmi Kaliaperumal</i>	306-311
57	57_ID1570668699	Identification of Brand Logos from Video Feed	<i>Pranshu Garg, Anmol Tripathi Ashish Kumar Sahani</i>	312-315
58	58_ID1570668813	Data Extraction From Invoices Using Computer Vision	<i>Mayur Sudhakar Satav Tanmay Varade Dhanashree Kothavale Snehal Thombare Prof.Pranali Lokhande</i>	316-320
59	59_ID1570677294	Multispectral Imaging for Automated Fish Quality Grading	<i>Dhananjaya Jayasundara Lakshitha Ramanayake Neranjan Senarath Sanjaya Herath Roshan Godaliyadda Parakrama Ekanayake Vijitha Herath</i>	321-326

60	60_ID1570669723	Convolution Neural Networks: A Comparative Study for Image Classification	<i>Narayana Darapaneni Krishnamurthy B Anwesh Reddy Paduri</i>	327-332
61	61_ID1570676234	Virtual Character Animation based on Data-driven Motion Capture using Deep Learning Technique	<i>Gopika Rajendran Ojus Thomas Lee</i>	333-338
62	62_ID1570677284	Fake Job Prediction using Sequential Network	<i>Devsmi Ranparia Shaily Kumari Dr Ashish Sahani</i>	339-343
63	63_ID1570670394	The practical approach in Customers segmentation by using the K-Means Algorithm	<i>E.Y.L Nandapala K.P.N Jayasena</i>	344-349
64	64_ID1570673213	Big Data in Precision Medicine and its Legal Implications	<i>Sagee Geetha Sethu Reshmi S Nair Lipsa Sadath</i>	350-356
65	65_ID1570668639	NearBy-Offload: An Android based Application for Computation Offloading	<i>Ashutosh Kumar Ravi Yadav Gaurav Baranwal</i>	357-362
66	66_ID1570670375	TRETA - A Novel Heuristic Based Workflow Scheduling Algorithm in Cloud Environment	<i>K.M.S.U Bandaranayake K.P.N Jayasena B. T. G. S. Kumara</i>	363-368
67	67_ID1570672727	Real-time estimation of COVID-19 cases using machine learning and mathematical models - The case of India	<i>Pratima Kumari Durga Toshniwal</i>	369-374
68	68_ID1570670381	A Machine Learning Approach to Predicting Covid19 Cases Amongst Suspected Cases and Their Category of Admission	<i>Narayana Darapaneni Amanpreet Singh Anwesh Paduri Aparna Ranjith Abhay Kumar Divya Dixit Suparna Khan</i>	375-380
69	69_ID1570669908	COVID 19 Severity of Pneumonia Analysis Using Chest X Rays	<i>Narayana Darapaneni Shweta Ranjane Uday Shankar Pallavajula Satya</i>	381-386

			<i>D.Krishna prashanth M Harichandan Reddy Anwesh Reddy Paduri Aravind Kumar Adhi Vachaspathi Madabhushanam</i>	
70	70_ID1570669898	COVID-19 Infection Dynamics for IndiaForecasting the Disease using SIR models	<i>Narayana Darapaneni Arjun Panwar Anwesh Reddy Paduri Ankit Patel Chaitanya Shah Jigar Gada Milind Majrekar</i>	387-392
71	71_ID1570669742	Inception C-Net(IC-Net): Altered Inception Module for Detection of Covid-19 and Pneumonia using Chest X-rays	<i>Narayana Darapaneni Tushar Gupta Anwesh Reddy Paduri Arpit Banerji Sanjay Sharma Dishant Sharma Nitin Gupta</i>	393-398
72	72_ID1570675492	An Adaptive System of Yogic Gesture Recognition for Human Computer Interaction	<i>Priyanka Choudhary Satya Narayan Tazi</i>	399-402
73	73_ID1570670450	Fire Emergency Detection from Twitter Using Supervised Principal Component Analysis	<i>Mohammed Ahsan Raza Noori Ritika Mehra</i>	403-408
74	74_ID1570675473	Aspect Based Sentiment Oriented Hotel Recommendation Model Exploiting User Preference Learning	<i>Mahirangi Godakandage Prof. Samantha Thelijagoda</i>	409-414
75	75_ID1570668839	Comparison of Neural Networks for Foreign Exchange Rate Prediction	<i>Pooja Aggarwal Ashish Kumar Sahani</i>	415-419
76	76_ID1570669606	Handwritten Form Recognition Using Artificial Neural Network	<i>Narayana Darapaneni Malarvizhi Subramaniyan Aafia Mariam Sai Venkateshwaran Nandini Ravi Anwesh Reddy Paduri Sumathi Gunasekaran Asha</i>	420-424

77	112_ID1570677336	e-Agriculture: Irrigation System based on Weather Forecasting	<i>Koppala Guravaiah S Srinivasulu Raju</i>	425-430
78	78_ID1570669879	Universal Text Scanner Solution	<i>Narayana Darapaneni Arjun Makar Sumathi Gunasekaran Trapti Kalra Bhanu Jain Anwesh Reddy Paduri Divakar Joshi Manu Jain</i>	431-436
79	79_ID1570670220	Facial Expression Classification Using Convolutional Neural Networking and Its Applications	<i>Ruhi Jaiswal</i>	437-442
80	80_ID1570671546	Aircraft Engine Reliability Analysis using Machine Learning Algorithms	<i>Deepankar Singh Mithilesh Kumar K.V. Arya Sunil Kumar</i>	443-448
81	81_ID1570677410	A Survey: Strategies for detection of Autism Syndrome Disorder	<i>Pratik Soygaonkar Balaji Patil</i>	449-454
82	82_ID1570669777	Rice Plant Leaf Disease Detection and Severity Estimation	<i>Radhika Wadhawan Mayyank Garg Dr Ashish Kumar Sahani</i>	455-459
83	83_ID1570670350	Empirical Study on Multi Convolutional Layer-based Convolutional Neural Network Classifier for Plant Leaf Disease Detection	<i>Sunil C K Jaidhar C D Nagamma Patil</i>	460-465
84	84_ID1570674974	Handling of Class Imbalance for Plant Disease Classification with Variants of GANs	<i>Barshneya Talukdar</i>	466-471
85	85_ID1570675911	Coupled Bi-Orientation Octet Pattern for Medical Image Retrieval	<i>Yoggya Mehrotra Shekhar Yadav</i>	472-477

86	86_ID1570666670	Word embedding-based Part of Speech tagging in Tamil texts	<i>Sajeetha Thavareesan Sinnathamby Mahesan</i>	478-482
87	87_ID1570668752	Sarcasm Detection in Newspaper Headlines	<i>Parnavi Shrikhande Vikram Setty Dr. Ashish Sahani</i>	483-487
88	88_ID1570668980	SigmaLaw-ABSA: Dataset for Aspect-Based Sentiment Analysis in Legal Opinion Texts	<i>Chanika Ruchini Mudalige Dilini Karunarathna Isanka Rajapaksha Nisansa de Silva Gathika Ratnayaka Amal Shehan Perera Ramesh Pathirana†</i>	488-493
89	89_ID1570668986	Party Identification of Legal Documents using Co-reference Resolution and Named Entity Recognition	<i>Chamodi Samarawickrama Melonie de Almeida Nisansa de Silva Gathika Ratnayaka Amal Shehan Perera</i>	494-499
90	90_ID1570669364	Exploring interdisciplinary nature of postgraduate research in the field of Computing using Text mining: a case study	<i>Manoj Lall</i>	500-505
91	91_ID1570669704	Detecting Crimes Related Twitter Posts using SVM based Two Stages Filtering	<i>S.P.C.W Sandagiri B.T.G.S Kumara Banujan Kuhaneswaran</i>	506-510
92	92_ID1570675928	On the Impact of Partial Sums on Interconnect Bandwidth and Memory Accesses in a DNN Accelerator	<i>Mahesh Chandra</i>	511-515
93	93_ID1570675267	Fuzzy Controller for Traffic Management in 5G Networks	<i>Jayalakshmi G. Naragund Vijayalakshmi M Suvarna G. Kanakaraddi</i>	516-521
94	94_ID1570668502	A Novel RE Teams Selection Process For User-Centric Requirements Elicitation Frameworks Based On Big-Five Personality Assessment Model	<i>M. Aqeel Iqbal Asadullah Shah</i>	522-527

95	95_ID1570668541	Process Hierarchy for GSD Based User-Centric Requirements Elicitation Frameworks	<i>M. Aqeel Iqbal Asadullah Shah</i>	528-533
96	96_ID1570668627	Machine learning-based Acoustic Repellent System for Protecting Crops against Wild Animal Attacks	<i>Devsmi Ranparia Gunjeet Singh Anmol Rattan Dr Harpreet Singh Dr Nitin Auluck</i>	534-539
97	97_ID1570669039	Challenges and Implications of Technological Transitions: The Case of Online Examinations in India	<i>Malini Mittal Bishnoi Swathi Suraj</i>	540-545
98	98_ID1570669605	Unsupervised Feature Learning for Whatsapp network Data packets using Autoencoder	<i>Ramraj S Dr Usha G</i>	546-549
99	99_ID1570670089	Li-Fi: Illuminating the Future of Internet	<i>Jasmine Mannil Abraham Hardeep Kumar Dr. G. Josemin Bala</i>	550-554
100	100_ID1570670449	Expectation-Based Multi-Attribute Multi-Hop Routing (EM2R) in Underwater Acoustic Sensor Networks	<i>B. R. Chandavarkar Akhilraj V. Gadagkar</i>	555-560
101	101_ID1570671920	Significance of Controller in Software Defined Networks	<i>Deepjyot Kaur Ryaat Manmohan Sharma</i>	561-566
102	102_ID1570672768	Debunking the Fabricated Myths Around 5G	<i>Muhammad Usman Hadi Mareya Khurshid Ali</i>	567-570
103	103_ID1570677269	A Compact Ultra-Wideband Antenna with Truncated Ground for 5G Applications	<i>Prachi Vishal Gupta</i>	571-574
104	104_ID1570677238	DAFNA: Decentralized Auction based Fog Node Allocation in 5G Era	<i>Gaurav Baranwal Dinesh Kumar</i>	575-580

105	105_ID1570677250	Identification of Malicious Code Variants using Spp-Net Model and Color Images	<i>Anita Brigit Mathew Sony Kurian</i>	581-585
106	106_ID1570677292	An Approach to Reduce Uncertainty Problem in Network Intrusion Detection Systems	<i>Gargi Kadam Sahil Parekh Priyanka Agnihotri Dayanand Ambawade Prasenjit Bhavathankar</i>	586-590
107	107_ID1570677331	Identification and Mitigation Tool for Sql Injection Attacks (SQLIA)	<i>W. H. Rankothge Mohan Randeniya Viraj Samaranayaka</i>	591-595
108	108_ID1570672779	Sigma Delta Radio Frequency Transport System for 5G Sub-6 GHz Fronthauls	<i>Muhammad Usman Hadi</i>	596-600
109	109_ID1570675018	A Magnetic Resonance Coupling Based Touchless Pad for Human-Computer Interfacing	<i>Vivek Kumar Srivastava Ashwani Sharma Ananth Bharadwaj</i>	601-605
110	110_ID1570675287	A Data Mining and Ontology-Based Approach for Predicting the Research Ideas in the Wildlife Sector of Sri Lanka	<i>Premisha Premananthan Kumara BTGS Enoka P Kudavidanage Banujan Kuhaneswaran</i>	606-610
111	111_ID1570675802	Smart Irrigation Based on Crops using IoT	<i>Shyam Peraka Reddy Sudheer Bandi Narasimha Rao Allu Ravi Teja Esai Naveen Kumar</i>	611-616