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### B.E/B.Tech Electronics and Communication Engineering

S.No	Project Title
<b>Microcontroller Based Projects(8051,PIC16Fxx,Atmel Series)</b>	
1	Intelligent Vehicle
2	Hospital Management
3	Patient Monitoring And Analysis System
4	Micro-controller based Three Wheeled Scooter
5	Aero Modeling and Ground Control simulation
6	Airport Baggage Identifier
7	Alert Mechanism for Blinds
8	Automated Kitchen With Intelligent Appliances
9	Automated Restaurant
10	Biometric Enabled Smart Ration Shops
11	Intelligent Glass House
12	Multi-tier Car Parking Management Systems
13	The Neonatal Intensive Care Unit
14	Operation Theatre Automation and Controller (OTAC)
15	Street Light and Traffic Signal Control using Wireless Technology
16	BABY PRAM
17	Micro-controller based Three Wheeled Scooter
18	Continuous Parameter Monitoring For Gym Users
19	Wheel Chair for Physically Challenged
20	Continuous Ambulatory Peritoneal Dialysis (CAPD)
21	CAN base Automated CAR maneuvering System
<b>Projects on GSM/GPS/RFID/Zigbee</b>	
22	Automated vehicle for physically and visually challenged
23	Community Car Pooling Based on GPS and GSM Technology – an initiative from City Traffic Police
24	A Blind Navigation System using GSM
25	Smart Public Transport Tracking With Route & Timing Suggesting Mechanism
26	Hand Held GPS Co-ordinates Provider
27	GSM Based Home Control Network
28	GSM Based Industrial Disaster Intimation Control System (GIDICS)
29	GSM Based Multi Utility Mass SMS Sender
30	GSM based Sericulture Marketing and Cocoon Selection Mechanism

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31	GSM Controlled Latch and Office Automation
32	GSM based Airport Automation (GAA)
33	RFID Based Toll Gate Automation
34	Metro Rail Tracking and Safety Mechanism
35	RFID Based Office Automation And Attendance Monitoring System With Payroll”
36	Office Automation with Timer, Attendance & Employee Monitoring System
37	Train Collision Preventer /Anti Collision Systems
38	IVRS System For Industrial Control
39	VB based Voice automation using Zigbee.
<b>Projects on Robotics</b>	
40	Automated Book Picking Robot for Libraries
41	Mobile Bomb Disposal Unit
42	Anti-Terrorist Vehicle
43	Data Collector - Unmanned remote surveillance vehicle with Sample Collector
44	Intelligent Spy Robot
45	Light Follower Robot
46	Intelligent Combat Robot
47	Visual Servo Control of a Three Degree of Freedom Robotic Arm System
<b>Embedded IEEE 2013-2014</b>	
48	Accessible Display Design to Control Home Area Networks
49	Remote-Control System of High Efficiency and Intelligent Street Lighting Using a ZigBee Network of Devices and sensors
50	Smart Device for Optimal Use of Stored Renewable Power
51	Sensing Devices and Sensor Signal Processing for Remote Monitoring of Vital Signs in CHF Patients
52	Child Activity Recognition Based on Cooperative Fusion Model of a Triaxial Accelerometer and a Barometric Pressure Sensor
53	An Apparatus in Monitoring the Energy Charging System
54	Automated Control System for Air Pollution Detection in Vehicles
55	Design and Development of Digital PID Controller for DC Motor Drive System Using Embedded Platform for Mobile Robot
56	Design of a WSN Platform for Long-Term Environmental Monitoring for IoT Applications
<b>S.No</b>	<b>Project Title</b>
57	Hardware Demonstration of a Home energy management system for demand response applications
58	Online Monitoring of Geological CO2 Storage And Leakage Based on GPS and GSM
59	Centralized LPG Cylinders Theft Detection System With Security Alerts
60	Management of Mechanical Vibration and Temperature in Small Wind Turbines Using Zigbee Wireless Network
61	Energy Efficient LED Lighting System For Commercial Purpose
62	NFC-Enabled Smartphone Application For Drug Interaction And Drug Allergy Detection
63	Design of a WSN Platform for Long-Term Environmental Monitoring for IoT Applications
64	Environment monitoring and device control using ARM based Embedded Controlled Sensor Network

65	Indoor Localization on Mobile Phone Platforms Using Embedded Inertial Sensors
66	Low Power Wireless Sensor Network for Building Monitoring
67	Management of Mechanical Vibration and Temperature in Small Wind Turbines Using Zigbee Wireless Network
68	Real-time swimmers' feedback based on smart infrared (SSIR) optical wireless sensor
69	Smart Home Energy Management System Including Renewable Energy Based on ZigBee and PLC
70	Wireless Communicatin Monitoring and Security System Embedded Safety Helmet for Real Time Applications.
71	A Reconfigurable Smart Sensor Interface for Industrial WSN in IoT Environment
72	An Integrated System for Regional Environmental Monitoring and Management Based on Internet of Things.
73	WSN-Based Smart Sensors and Actuator for Power Management in Intelligent Buildings.
74	Vehicle Control Using CAN Protocol For implementing the Intelligent Braking System (IBS)
75	A Review On Industrial Automation By Zigbee Based Wireless Remote Controller
76	Online Monitoring of Geological CO2 Storage and Leakage Based on Wireless Sensor Network
77	Child Activity Recognition Based on Cooperative Fusion Model of Triaxial Accelerometer and a Barometric Pressure Sensor
78	Low Power Wirelss Sensor Network for Building Monitoring
79	Health at the home:Remote health monitoring for patients and senior citizens at the home by using centralized web server
80	Transport/Travel Management System: Detection of Aggressive driving of commercial vehicles, along with Fuel theft detection, using centralized web server
81	Intelligent Food Management System: Maintenance of Agro and Non-Agro Foods in Cold Storage/Warehouse
82	Use of Ultrasonic Signal Coding and PIR Sensors to Enhance the Sensing Reliability of an Embedded Surveillance System
	<b>Embedded IEEE 2015 New</b>
83	Hand Gesture Recognition Based Robot Using Accelerometer Sensor
84	A Review on Design of Automated Floor Cleaning System
85	The Elderly Independent Living in Smart Homes: A Characterization of Activities and Sensing Infrastructure Survey to Facilitate Services Development
86	A Zigbee-Based Animal Health Monitoring System
87	WSN AND IOT-BASED SMART HOMES AND THEIR EXTENSION TO SMART BUILDINGS
88	DESIGN & IMPLEMENTATION OF SMART CITY USING CONTROLLED AREA NETWORK PROTOCOL FOR CONTROLLING PURPOSE
89	CONTROLLER AREA NETWORK BASED CRUISE CONTROL IN TRAFFIC SITUATIONS
90	CONTROL AREA NETWORK LIMITATIONS IN ECOCAR
91	DUAL MODE WIRELESS SENSOR NETWORK FOR REAL-TIME CONTACTLESS IN-DOOR HEALTH MONITORING
92	Hardware Demonstration of a Home Energy Management System for Demand Response Appl
93	GREENCHARGE: MANAGING RENEWABLE ENERGY IN SMART BUILDINGS
94	AN ENHANCED CRACK DETECTION SYSTEM FOR RAILWAY TRACK
95	RAILWAY TRACK CRACK DETECTION AUTONOMOUS VEHICLE

96	SEED SOWING USING ROBOTICS TECHNOLOGY
97	AN AUTOMATED SYSTEM FOR ACCIDENT DETECTION
98	An Effective Wireless Solution for Industrial Automation
99	MICROCONTROLLER BASED THREE PHASE FAULT ANALYSIS FOR TEMPORARY AND PERMANENT FAULT
100	A NOVEL RECONFIGURABLE MICROGRID ARCHITECTURE WITH RENEWABLE ENERGY SOURCES AND STORAGE
<b>POWER ELECTRONICS PROJECTS- IEEE 2015-2014 New</b>	
101	A Double Uneven Power Converter Based dc-dc Converter for High-Power DC Grid Systems (IEEE-2015)
102	Automatic Current Sharing of an Input-Parallel Output-Parallel Connected DC–DC with Chain-Connected Rectifiers (2015)
103	Design and Implementation of a Single-Stage Driver for Supplying an LED Street-Lighting Module with Power Factor Corrections (IEEE-2015)
104	A Bridgeless Boost Rectifier for Low-Voltage Energy Harvesting Applications
105	Bridgeless SEPIC Converter With a Ripple-Free Input Current
106	High-Efficiency Digital-Controlled Interleaved Power Converter for High-Power PEM Fuel-Cell Applications
107	Naturally Clamped Zero Current Commutated Soft-switching Current-fed Push-Pull DC/DC Converter:Analysis,Design,and Experimental Results
108	Small-Signal Modeling of Active-Clamped ZVS Current-Fed Full-Bridge Isolated DC/DC Converter and Control System Implementation Using PsoC
109	Current-fed Soft-Switching Push-pull Front-end Converter Based Bidirectional Inverter for Residential Photovoltaic Power
110	A Bidirectional-Switch-Based Wide-Input Reange High-Efficiency Isolated Resonant Converter for Photovoltaic Applications
111	Novel Bidirectional Snubberless Naturally Clamped ZCS Curret-fed Full-bridge Voltage Doubler:Analysis,Design, and Experimental Results
112	Analysis,Design, and Experimental Results of Novel Snubberless Bidirectional Naturally Clamped ZCS/ZVS Current-Fed HalfBridge DC/DC Converter for Fuel Cell Vehicles.
<b>MATLAB IMAGE PROCESSING PROJECTS- IEEE 2015-2014 New</b>	
113	Image Sensor-Based Heart Rate Evaluation From Face Reflectance Using Hilbert–Huang Transform
114	An Efficient MRF Embedded Level Set Method for Image Segmentation
115	Reversible Image Data Hiding with Contrast Enhancement
116	Spectral–Spatial Classification of Hyperspectral Images With a Superpixel-BasedDiscriminative Sparse Model
117	Robust Rooftop Extraction From Visible Band Images Using Higher Order CRF
118	A Multi-Atlas-Based Segmentation Framework for Prostate Brachytherapy
119	Swarm Intelligence for Detecting Interesting Events in Crowded Environments
120	An Innovative Lossless Compression Method for Discrete-Color Images
121	Vector Sparse Representation of Color Image Using Quaternion Matrix Analysis
122	A Visual Model-Based Perceptual Image Hash for Content Authentication

123	Abandoned Object Detection via Temporal Consistency Modeling and Back-Tracing Verification for Visual Surveillance
124	Face Liveness Detection From a Single Image via Diffusion Speed Model
125	Enhancing Color Images of Extremely Low Light Scenes Based on RGB/NIR Images Acquisition With Different Exposure Times
126	Robust Face Recognition for Uncontrolled Pose and Illumination Changes
127	Reversible Watermarking Based on Invariant Image Classification and Dynamic Histogram Shifting
128	Automatic Detection and Reconstruction of Building Radar Footprints From Single VHR SAR Images
129	Human Detection in Images via Piecewise Linear Support Vector Machines
130	Interactive Segmentation for Change Detection in Multispectral Remote- Sensing Images
131	Estimating Information from Image Colors: An Application to Digital Cameras and Natural Scenes
132	Context-Dependent Logo Matching and Recognition
133	Automatic License Plate Recognition (ALPR)
134	Automated Biometric Based Access in Automatic Teller Machine (ATM)
135	Hierarchical Prediction and Context Adaptive Coding for Lossless Color Image Compression
136	Robust Carotid Artery Recognition in Longitudinal B-Mode Ultrasound Images.
137	Color Texture Classification Using Shortest Paths in Graphs
138	Shape Vocabulary: A Robust and Efficient Shape Representation for Shape Matching.
139	Ordinal Feature Selection for Iris and Palmprint Recognition
140	Image Authentication Using Stochastic Diffusion
141	Face Detection and Tracking in Video
142	Automated Biometric Based Access in Automatic Teller Machine (ATM)
143	Tumor-Cut: Segmentation of Brain Tumors on Contrast Enhanced MR Images for Radiosurgery Applications
144	Super-Resolution based Inpainting
<b>IEEE based Project Titles</b>	
145	A New Isolated Bidirectional Buck-Boost PWM Converter 2011
146	Design and Implementation of a Bi-directional Power Converter for Electric Bike with Charging Feature 2011
147	Implementation of Solar Illumination System with Three-Stage Charging and Dimming Control Function
148	Design of intelligent traffic light controller using GSM & Embedded System.
149	Remote airfield lighting system.
150	Microcontroller based neural network controlled low cost autonomous vehicle.
151	Design of intelligent mobile vehicle checking based on ARM7.
152	Industrial automation using ZIGBEE.
153	Implementation of GPS for Location Tracking
154	Design of monitor and control system for supermarket fresh area based on ZIGBEE
155	Wireless Sensor Node to Detect Hazardous Gas Pipeline
156	Design of Vehicle Positioning System Based on ARM
157	Design and Implementation of Pyro-electric Infrared Sensor based Security System
158	Detection of earthquakes and Tsunami through GSM Network Using Accelerometer sensor.
159	Design and Implementation of a Home Embedded Surveillance System with Ultra Low Alert Power
160	The real time temperature measuring system for the jointless train.

161	Design of Land Slid Warning System
162	Home Automation for Mobile Device using Bluetooth Technology
163	Axis stepper motor controller for solar panel with power optimization.
164	Implementation of CAN bus in an autonomous all-terrain vehicles
165	Evidence collection from car black boxes using smart phones.
166	More Efficient Home Energy Management System Based on ZigBee Communication and Infrared Remote Controls
167	Vision-Based Automated Parking System
168	Design of an Intelligent Combat Robot for war field
<b>Diploma in Electronics/Electrical</b>	
169	RFid Based Museum Guide for Tourists
170	RFid Based Highway Toll Tax Collection System
171	RFid based Attendance System
172	RFid based Security System
173	Remote Surveillance Vehicle
174	Master slave communication
175	Greenhouse Robot
176	Industrial Automation Using Cell phone
177	Person counter and Password detector
178	Person counter and Password detector
179	Temperature & Light Monitoring and Controlling
180	Home Security System
181	Monitor and Control of Greenhouse Environment
182	Rolling display using Matrix LEDs
183	Automatic car parking indicator using M0.icrocontroller
184	Automatic Room light Controller with Visitor Counter
185	Level Computing and Storage Device
186	Microcontroller based Data Logger
187	Line follower Robot
189	Six Channel Petrochemical Fire Monitoring & Control Station
190	Gas Turbine Compartment Temperature Controller
	Temperature controller
191	Automatic Railway Gate
192	Heart Rate Monitor
193	Line Follower Robot with Obstacle Detection
194	Data acquisition system using 8051
195	Microcontroller Based Health monitoring system.
196	Time Operated Electrical Appliance Controlling System
197	Temperature & Light Monitoring and Controlling(no synopsis)
198	Radio Frequency Identification System ( RFID )
199	Public Garden Automation
200	Street lights that glow for 1/2km only on detecting vehicle movement

201	Synchronized traffic light signal system (can) to ease traffic congestion in metros	
202	Automatic Dialing to any telephone using I2C protocol on detecting burglary	
203	Automatic irrigation system on sensing soil moisture content	
204	Using TV remote as a cordless mouse for the Computer	
205	Dynamically changing signal light time allotment in street junctions based on traffic density	
206	Auto power supply control from 4 different sources: Solar, Mains, Generator & Inverter to ensure no break power	
207	RFID guided automatic parking permission for vehicles in cellar at commercial complexes	
208	Closed loop feedback operated motor speed control	
209	Line following robotic Vehicle using microcontroller interface	
210	RFID based device control & authentication	
211	Low Cost Zigbee Based Load Controller	
212	RF controlled by hand held unit, laser beam managed bomb-diffusing robot	
213	Automatic Wireless health monitoring system in hospitals for patients	
<b>8051MC PROJECTS</b>		
214	A Zigbee-Based Home Automation System	8051MC,Zigbee communication
215	Automatic Energy Meter Reading	8051MC, RS232, GSM Modem, Energy meter
216	Design of the Smart Home based on embedded system	8051MC, RS232, GSM Modem, IR Sensor
217	Distribution Transformer Monitoring System	8051MC, Temperature sensor, Signal conditioning
218	Intelligent Transportation system	8051MC, RS232, GSM Modem, REID card & Reader
219	Vehicle Registration using Smart Card Identification	8051MC, RS232, GSM Modem, REID card & Reader
220	Mobile Tracking System	8051MC, RS232, GSM Modem, REID card & Reader
221	Embedded Parking System	8051MC, IR Sensor
222	Secluded Data Capturing using GSM	8051MC, RS232, GSM Modem, ADC
223	Service Sector Drive Smartcard System	8051MC, RS232, REID card & reader
224	Intelligent Electronic Voting Machine	8051MC, I2C protocol
225	A Wireless Solution System for Tracking the Stolen Vehicles	8051MC, RS232, GPS,GSM,
225	Solar Position Control and Automatic Power Distribution System	8051MC, ADC, Light sensors, Solar panel
226	Far Flung Information Capturing using PSTN	8051MC, ADC, PSTN
227	Easy SMSing System	8051MC, GSM Modem,
228	Data Transfer Between Two Microcontrollers using IR Communication	8051MC, RS232, IR Transmitter-receiver
229	Fluid Temperature Control using PWM	8051MC, PWM Thermocouple
230	Embedded Vehicle Control through Mobile	8051 Mc, DTMF Receiver, Proximity Sensor
231	Voting through SMS	8051MC, RS232, GSM Modem, I2C
232	Student status acquisition with SMS	8051MC, RS232, GSM Modem, I2C
233	RTC Based Street Light Controller	8051 MC, ADC, LDRS, Solar panel, RTC

234	Interactive Voice Response System for Industrial Automation	8051 MC, DTMF, VB, I2C
235	Biometric enable smart ration shop	8051MC, Biometric sensor, VB, PC
236	Intelligent combat robot	8051MC, GSM Modem, camera, motor
237	Wheel chair for physical challenged	8051MC, GSM Modem, camera, motor
<b>BE/MTech IEEE-2012 PROJECTS</b>		
238	Real Time Bus Monitoring And Passenger Information System	
239	GSM Based Power Meter Reading And Control System	
240	Automatic Bus Recognition Through Mobile	
241	Wireless Patient Monitoring System Using GSM	
242	Building Lighting Automation through the Integration of DALI with Wireless Sensor Networks	
243	A Fair FARE System	
244	An Open Traffic Light Control Model for Reducing Vehicles' CO2 Emissions Based on ETC Vehicles	
245	Image Based Password Authentication For Illiterates With Touchscreen	
246	Automatic Power Grid Controller	
247	Implementation of a Controller Unit for an Intelligent Ventilation System (IVS) for a BTS Room	
248	GSM based e-Notice Board: Wireless Communication	
249	Embedded Web Server for Home Appliances	
250	GSM-Bluetooth based Remote Monitoring and Control System with Automatic Light Controller	
251	Sensor Network Based Oil well Health Monitoring and Intelligent Control	
252	Handheld Measuring Device For Multiple Parameters, In Wood And Ceramic Industries	
253	Implementation Of web Based remote Grid Monitoring	
254	Embedded Ethernet monitor and controlling using web browser	
256	Zero Standby Power Remote Control System using Light Power Transmission Optimizing the Localization of a Wireless Sensor Network in Real Time Based on a Low-Cost Microcontroller	
257	3 G based industrial automation using GSM communication	
258	Analysis, Measurement and Evaluation of Power Line Communication Network Applied for Popular Houses	
259	Energy Consumption data Acquisition and display system development.	
260	Design And Development Of A Low-Cost Microcontroller Based Single Phase Water-Pump Controller	
261	Design of PIC Based Ethernet Interface to Control the Industrial Parameters	
262	A ZigBee-based monitoring and protection system for building electrical safety	
263	Design of intelligent traffic light controller using Embedded System.	
<b>BE BIOMEDICAL Engineering PROJECT LIST</b>		
264	Design of a Wireless Medical Monitoring System.	BIO MEDICAL
265	GPS Based Patient Monitoring Alert	BIO MEDICAL
266	Microcontroller Based Patient Monitoring System	BIO MEDICAL
267	Operation Theatre Automation and Controller (OTAC)	BIO MEDICAL
268	NICU Monitoring With PC	BIO MEDICAL
269	Data Acquisition from body parameters using Zigbee	BIO MEDICAL
270	Health@Home – Remote Monitoring of Vital Signs	BIO MEDICAL
271	Secure Medical Tags For Reducing Medical Errors & Drug Interaction With EHR System	BIO MEDICAL
272	Monitoring Human Joint Movement Using Wearable Computing	BIO MEDICAL

273	Accessible Electronic Interaction for People with Partial Paralysis	BIO MEDICAL
274	Speech Based Control and Alert System for Senior Citizens Using Android Mobile	BIO MEDICAL
275	Wireless Power Transmission For Biomedical Application	BIO MEDICAL
276	Health at the Home: Remote Health Monitoring for Patients and Senior Citizens at the home by using Centralized Web Server	BIO MEDICAL
277	Wireless Power Transmission For Biomedical Application	BIO MEDICAL

### VLSI IEEE 2015 PROJECTS New

278	A fast and accurate network-on-chip timing simulator with a flit propagation model
279	A Methodology for Cognitive NoC Design
280	A packet-switched interconnect for many-core systems with BE and RT service
281	FPGA based design of low power reconfigurable router for Network on Chip (NoC)
282	Reliable router architecture with elastic buffer for NoC architecture
283	Design and analysis of 10 port router for network on chip (NoC)
284	Concentration and Its Impact on Mesh and Torus-Based NoC Performance
285	Effect of core ordering on application mapping onto mesh based network-on-chip design
286	Merged switch allocation and transversal with dual layer adaptive error control for Network-on-Chip switches
287	Argo: A Real-Time Network-on-Chip Architecture With an Efficient GALS Implementation
288	High Speed Modified Booth Encoder Multiplier for Signed and Unsigned Number
289	Design and implementation of 16 × 16 multiplier using Vedic mathematics
290	Low power multiplier architectures using vedic mathematics in 45nm technology for high speed computing
291	Design of area and power aware reduced Complexity Wallace Tree multiplier
299	FPGA implementation of vedic floating point multiplier
300	FPGA based design of low power reconfigurable router for Network on Chip (NoC)
301	VHDL Implementation of Genetic Algorithm for 2-bit Adder
302	Efficient FPGA Implementation of Address Generator for WiMAX Deinterleaver
303	Simulation and Implementation of LDPC Code in FPGA
304	FPGA Implementation of Moving Object Detection in Frames by Using Background Subtraction Algorithm

305	Traffic-aware Design of a High Speed FPGA Network Intrusion Detection System
306	VLSI Implementation of an adaptive edge enhanced image scalar for real-time multimedia applications
307	FPGA Implementation of ANN for Reactive Routing Protocols in MANET
308	Low Power VLSI Implementation of Adaptive Noise Canceller Based on Least Mean Square Algorithm
309	FPGA Architecture for OFDM Software Defined Radio with an optimized Direct Digital Frequency Synthesizer
310	Optimized Implementation of Discrete Wavelet Transform with Area Efficiency
<b>VLSI IEEE 2014-2013 PROJECTS Recent Papers</b>	
311	Design and verification of five port router for network on chip
312	Instruction-based high-efficient synchronization in a many-core Network-on-Chip processor
313	Argo: A Time-Elastic Time-Division-Multiplexed NOC Using Asynchronous Routers Efficient round-robin multicast scheduling for input-queued switches
314	An area- and power-efficient FIFO with error-reduced data compression for image/video processing
315	An Area- and Energy-Efficient FIFO Design Using Error-Reduced Data Compression and Near-Threshold Operation for Image/Video Applications
316	Design and Implementation of an On-Chip Permutation Network for Multiprocessor System-On-Chip.
317	Area and time efficient hardwired pre -shifted bi-rotation CORDIC design
318	Smart Reliable Network-on-Chip
319	A new mode of operation for arbiter PUF to improve uniqueness on FPGA
320	ElastiStore: An elastic buffer architecture for Network-on-Chip routers
321	UnSync: A Soft Error Resilient Redundant Multicore Architecture FPGA based asynchronous pipelined multiplier with intelligent delay controller
322	Design of high speed low power Viterbi decoder for TCM system
323	CORDIC Designs for Fixed Angle of Rotation.
324	MIHST: A Hardware Technique for Embedded Microprocessor Functional On-Line Self-Test
325	Headfirst sliding routing: A time-based routing scheme for bus-NoC hybrid 3-D architecture
326	An Area Effective Parity-Based Fault Detection Technique for FPGAs
327	Vendor agnostic, high performance, double precision Floating Point division for FPGAs
328	Method of modeling analog circuits in verilog for mixed-signal design simulations
<b>IEEE based Project Titles-Electrical Engineering Projects</b>	
329	Digital Fuel Indicator With Petrol Level Detection Using Android Mobile And Automatic Signalling System Using RF TX And RX

330	Wireless Transformer Parameter Measurement And Protection
331	Intelligent Contractor For High Power Motors
332	Demand Side Load Management of Smart Grids Using Intelligent Trading Metering Billing
335	Fault & Overload Detection & Correction IN AC Motor With ON And OFF Control
336	Fault Dedection & Correction IN DC Motor
337	Wireless power theft monitoring system
338	Design and Implementation of a Bi-directional Power Converter for Electric Bike with Charging Feature.
339	Implementation of Solar Illumination System with Three-Stage Charging and Dimming Control Function
340	Industrial Automation Using ZIGBEE
341	Laboratory Automation by Mobile Device using Bluetooth Technology
342	Solar powered house and transmitting the extra power to the government mains
343	Renewable energy - 12V DC Power generation using Back EMF & Solar for LED load
344	Solar powered Irrigation with auto control of pump & SMS alert
345	Automatic stand-by power cutoff outlet for 230V AC operated devices for energy saving
346	Zero Standby Power Remote Control System
347	ARM Based Wireless Meter Reading System with Overload, Power theft Detection and Server Based SMS Alert
348	Coin Based Mobile Charger ,Water Filing And Weight Measurement System
349	Sensor Network Bases Oil Well Health Monitoring And Intelligent Control
350	Remote virtual lab for research & designing industry using wireless technology
351	Android Building Automation for Mobile Device using GSM Technology
352	Building Lighting Automation through the Integration with Wireless Sensor Network
353	Multistage Water Pumping By Connecting Cascade of Low Power Motors Using Solar Power with Automatic Water Level Controller
354	IEEE 802.3U Based I-series Refrigerator
355	Rotating solar system for automobiles with Boost & charge control
356	A Real Time Traffic Light Control Scheme For Reducing Vehicles CO2 Emissions
357	Axis Stepper Motor Control For Solar Panel With Power Optimization
358	Discrete PID Controller For Temperature Compensation
359	Multiple Transformers Oil Temperature Monitoring With Automatic Circuit Breaker Operation
360	Transformer Parameter (Load, Voltage And Oil Level ) Measurement With GSM Alert
361	Energy Conversation System For Smart Homes Based On Cloud Network
362	Application of Intelligent Sun Tracking System With Fuzzy Chip Controller
363	Digital Fuel level Indicator with Vehicle tracking system using GSM and GPS
364	Implementation Of A Remote Data Logging System
365	Intensity of street light automatic controlling
366	Multi-Channel Data Acquisition and Data Logging for Green House Application
367	Performance Analysis of Dual-axis Solar Tracking System
368	Smart Lighting solutions for Smart Cities
369	Solar Maximum Power Point Tracking System And Its Application To Greenhouse
370	Surveillance System with Light Sensor

<b>E&amp;C AND TELECOMMUNICATION/Bio Medical/Electrical and Electronics/Robotics IEEE Projects</b>	
371	Application of Intelligent Sun Tracking System With Fuzzy Chip Controller
372	Automatic anti collision railway system using embedded system technology.
373	Child Activity Recognition Based on Cooperative Fusion Model of Tri-axial Accelerometer and a Barometric Pressure Sensor.
374	Implementation of a Web of Things based Smart Grid To remotely monitor and control Renewable Energy Sources
375	Home automation and security control interface using GSM
376	Industrial automation on android phone by using GSM
377	Microcontroller based Neural network controlled low cost Autonomous vehicle
378	Patient request to nurse using flex sensor
379	Intensity of street light automatic controlling.
380	Digital Fuel level Indicator with Vehicle tracking system using GSM and GPS
381	Eye Blink Sensor for automatic Wheel Chair for paralyzed patients
382	GSM Based Baby Breathing System.
383	GSM based cubicle security system
384	Performance Analysis of Dual-axis Solar Tracking System
385	Real time Tele health monitoring system
386	Smart Lighting solutions for Smart Cities
387	Solar Maximum Power Point Tracking System And Its Application To Greenhouse
388	Solar tracking system using microcontroller
389	Theft intimation of vehicle over SMS to owner who can stop the engine remotely
390	Thermistor Respiratory Monitor
391	Alive Human Being Detector in War Fields, Affected Areas Using RF Camera and PIR (Passive Infrared Sensors) For Rescue Operations with Communication
392	An Adaptable and Extensible Mobile Sensing Framework for Patient Monitoring
393	Android Based Home automation and security control interface using GSM
394	Application of RF ID & Spanning tree algorithm for solving the Vehicle Emission in City on Internet of Things
395	Asset tracking system using GSM & GPS
396	Design and Implementation of Vehicle Tracking System Using GPS/GSM/GPRS Technology and Smart phone Application
397	Pick and place robot using wireless technology for embedded application
398	Real time vehicle tracking system
399	Surveillance System with Light Sensor
400	The design of the scene of the accident alarm system Based on GSM and GPS.
401	Design and Development of a Networked Health Monitoring and Control System
402	Implementation of a remote data logging system
403	A multi-parameter signal monitoring system based on ARM
404	Performance Analysis of Dual-axis Solar Tracking System
405	ARM Hardware Platform for Vehicular Monitoring and Tracking

406	Automated Irrigation System Using a Wireless Sensor Network and GPRS Module
407	IOT Gateway: Bridging Wireless Sensor Networks into Internet of Things
408	Design and Construction of Mini-Robot for Gas LP Detection Using a Mobile Device
409	Design and implementation of Real time Tele Embedded Tele –Health Monitoring system
410	Design of On-line Interactive Data Acquisition and Control System for Embedded Real Time Applications
411	Evidence Collection from Car Black Boxes using Smart phones
412	Intelligent Early-warning System for Landslides Based on the ZigBee Network
413	Participatory Sensing Based Real time Public transport Information Services
414	Design of Rural Intelligent Public Transportation System
415	Visual Odometry and Localization of Moving Objects in Images Acquired by Unmanned Aerial Vehicles.
<b>Raspberry Pi and Linux Based Projects List</b>	
416	Autonomous Navigation Vehicle (Raspberry Pi- Linux)
417	Ethernet Controlled Robot on Linux Raspberry Pi
418	GSM SMS controlled Robot – Raspberry Pi
419	Web server control industrial Equipment Linux Raspberry Pi
420	Web server Controlled Robot on Linux Raspberry Pi
421	Keyboard HID controlled Robot on Linux Raspberry Pi
422	Obstacle avoidance robot on raspberry pi
423	People counting System and Web server monitor system
424	Remote sensors monitor system web server on Linux Raspberry Pi
425	Smart home with vision based surveillance system on Linux
426	Smart Phone Controlled Robot for Video Surveillance Using Wireless Internet & Raspberry Pi Processor
427	Smart phone controlled robot on raspberry pi Linux system
428	Voice controlled industrial equipment on raspberry pi
429	Voice controlled robot using smart phone on raspberry pi
430	Wi-Fi Controlled Robot on Linux Raspberry Pi
<b>Arm Cortex-M4 Technology based Projects</b>	
	Smart Phone 3 - AXIS CONTROLLED ROBOT On ARM Cortex-M4
431	Smart Phone Bluetooth Pick and Drop Robot On ARM Cortex-M4
432	Laptop Bluetooth controlled Pick and Drop Robot On ARM Cortex-M4
4 33	PC Controlled Robot over RF On ARM Cortex-M4
434	Home Automation controlled over Smart Phone
435	Remote environment monitor system and SMS alert On ARM cortex-M4 with GSM Technology
436	Hand Gesture controlled robot for handicap people on ARM cortex-4 technology
437	Autonomous Navigation Robot for rescue On ARM Corext-M4
438	Line Maze Solving Robot on ARM cortex-M4
439	Voice Controlled Robot on ARM Cortex-M4 with Android smart device
440	Voice Controlled smart home on ARM Cortex-M4 with Android smart device
441	Ethernet controlled Pik and place robot on ARM cortex-M4
442	Remote sensor monitor system (internet of things) on ARM Cortex-M4

443	Ethernet controlled remote equipment system (internet of things) on ARM Cortex-M4.
444	Keyboard HID Keys controlled Robot – ARM Cortex-M4
<b>IEEE based Project Titles-Instrumentation Engineering</b>	
445	Novel Design Solutions for Remote Access, Acquire and Control of Laboratory Experiments on DC Machines
446	An Integrated System for Regional Environmental Monitoring and Management Based on Internet of Things
447	Design and Implementation of Client-Server based Remote Motor Control System Industrial Applications
448	A Reconfigurable Smart Sensor Interface for Industrial WSN to IoT Environment
449	Integration of Touch Technology in Restaurants using Android
450	Innovative Graphical Passwords using Sequencing and Shuffling Together
451	Examining market challenges pertaining to cold chain in the frozen food industry in Indian retail sector
452	Robotic automated food service provider is hotel with android based individual menu system
453	Coin Based Universal Mobile Battery Charger, Purified Drinking Water with Emergency Alert System
454	Remote virtual lab for research & development industry using wireless technology
455	Intelligent Food Management System: Maintenance of Agro and Non-Agro Foods in Cold Storage/Warehouse
456	LI-FI Communication
457	Transport/Travel Management System: Detection of Aggressive driving of commercial vehicles, along with Fuel theft detection, using centralized web server

## MATLAB IEEE 2015 PROJECTS

S.NO	MATLAB IEEE 2015 PROJECT TITLES	YEAR
1	Contributions to Automatic Target Recognition Systems for Underwater Mine Classification	IEEE 2015
2	High-Precision, Permanently Stable, Modulated Hopping Discrete Fourier Transform	IEEE 2015
3	A Joint QRS Detection and Data Compression Scheme for Wearable Sensors	IEEE 2015
4	Time–Frequency Joint Sparse Channel Estimation for MIMO-OFDM Systems	IEEE 2015
5	Performance of OFDM Systems With Best-m Feedback, Scheduling, and Delays for Uniformly Correlated Sub channels	IEEE 2015

6	Authenticating Using Secret Key in Digital Video Watermarking Using 3-Level DWT	IEEE 2015
7	Hybrid MIMO-OFDM System with Application to Image Transmission	IEEE 2015
8	Robust and high capacity watermarking for image based on DWT-SVD	IEEE 2015
9	Power Efficient Scattered Pilot Channel Estimation for FBMC/OQAM	IEEE 2015
10	Performance Analysis of Fast Tracking Equalization for SC-FDMA and OFDM systems under multipath fading environment	IEEE 2015
11	On Demand SINR based Scheduling Algorithm (ODSSA) for Mobile Uplink Communication in LTE Networks	IEEE 2015
12	Hybrid Compression of Hyperspectral Images Based on PCA With Pre-Encoding Discriminant Information	IEEE 2015
13	Secure Reversible Image Data Hiding over Encrypted Domain via Key Modulation	IEEE 2015
14	Context-Based Predictor Blending for Lossless Color Image Compression	IEEE 2015
15	Reversible Data Hiding in Encrypted Image with distributed source encoding	IEEE 2015
16	Nighttime Visibility Analysis and Estimation Method in the Presence of Dense Fog	IEEE 2015
17	Using Visual Rhythms for Detecting Video-based Facial Spoof Attacks	IEEE 2015
18	Bayesian Fusion of Multi-Band Images	IEEE 2015
19	Registration of Images With N-Fold Dihedral Blur	IEEE 2015
20	A Novel SURE-Based Criterion for Parametric PSF Estimation	IEEE 2015
21	Histogram-Based Locality-Preserving Contrast Enhancement	IEEE 2015
22	ICI Self-Cancellation with Cosine Windowing in OFDM transmitters Over Fast Time-Varying Channels	IEEE 2015

23	Convergence Constrained Multiuser Transmitter-Receiver Optimization in Single-Carrier FDMA	IEEE 2015
24	Beamforming for Multiuser MIMO-OFDM Interference Channels With Multipath Diversity	IEEE 2015
25	An Efficient MRF Embedded Level Set Method for Image Segmentation	IEEE 2015
26	Robust Clutter Suppression and Moving Target Imaging Approach for Multichannel in Azimuth High-Resolution and Wide-Swath Synthetic Aperture Radar	IEEE 2015
27	Optimizing Template for Lookup-Table Inverse Half toning using Elitist Genetic Algorithm	IEEE 2015
28	An Improved PFA With Aperture Accommodation for Wide field Spotlight SAR Imaging	IEEE 2015
29	A New Framework for SAR Multitemporal Data RGB Representation: Rationale and Products	IEEE 2015
30	Indicator Cokriging-Based Subpixel Mapping Without Prior Spatial Structure Information	IEEE 2015
31	Contributions to Automatic Target Recognition Systems for Underwater Mine Classification	IEEE 2015
32	Features, Color Spaces, and Boosting: New Insights on Semantic Classification of Remote Sensing Images	IEEE 2015
33	Continuous One-Way Detection of Available Bandwidth Changes for Video Streaming Over Best-Effort Networks	IEEE 2015
34	Compressed-Domain Ship Detection on Space borne Optical Image Using Deep Neural Network and Extreme Learning Machine	IEEE 2015
35	An Intelligent Monitoring System for Natural Gas Odorization	IEEE 2015
36	Feature Matching With an Adaptive Optical Sensor in a Ground Target Tracking System	IEEE 2015
37	A Novel Colorless FPLD Packaged With TO-Can for 30-Gbit/s Pre-amplified 64-QAM-OFDM Transmission	IEEE 2015
38	Quantum Spread Spectrum Multiple Access	IEEE 2015
39	New RLL Decoding Algorithm for Multiple Candidates in Visible Light Communication	IEEE 2015

40	Multi-Tap Equalization for Performance Improvement in Optical Fast OFDM Systems	IEEE 2015
41	A Multistage CPE Scheme Based on Crossed Constellation Transformation for M-QA	IEEE 2015
42	Efficient Chromatic Dispersion Precompensation for Coherent Optical OFDM	IEEE 2015
43	Gaussian Conditional Random Fields for Aggregation of Operational Aerosol Retrievals	IEEE 2015
44	Robust Clutter Suppression and Moving Target Imaging Approach for Multichannel in Azimuth High-Resolution and Wide-Swath Synthetic Aperture Radar	IEEE 2015
45	Capabilities of BIOMASS Tomography for Investigating Tropical Forests	IEEE 2015
46	Soil Moisture Estimation Under Tropical Forests Using UHF Radar Polarimetry	IEEE 2015
47	A Novel Range Grating Lobe Suppression Method Based on the Stepped-Frequency SAR Image	IEEE 2015
48	Multi-Task Bayesian Compressive Sensing Exploiting Intra-Task Dependency	IEEE 2015
49	Joint Power Splitting and Antenna Selection in Energy Harvesting Relay Channels	IEEE 2015
50	Compressive Sensing and Reception for MIMO-OFDM Based Cognitive Radio	IEEE 2015
51	Improved Lip Contour Extraction For Visual Speech Recognition	IEEE 2015
52	Recognition of Genuine Smiles	IEEE 2015
53	Spatio-Temporal Flame Modelling and Dynamic Texture Analysis for Automatic Video-Based Fire Detection	IEEE 2015
54	DietCam: Multi-View Food Recognition Using a Multi-Kernel SVM	IEEE 2015
55	Spectrum Allocation in Cognitive Radio Networks using Multi-Objective Differential Evolution Algorithm	IEEE 2015
56	Multiview Alignment Hashing for Efficient Image Search	
57	Learning to Rank Image Tags With Limited Training Examples	

58	Learning Fingerprint Reconstruction: From Minutiae to Image	
59	Detection and Rectification of Distorted Fingerprints	
60	Automatic Face Naming by Learning Discriminative Affinity Matrices From Weakly Labeled Images	
61	Approximation and Compression with Sparse Orthonormal Transforms	
62	Adaptive Regularization With the Structure Tensor	
63	Accurate Vessel Segmentation With Constrained B-Snake	
64	Structured Sparse Priors for Image Classification	
65	Enhancement of Textural Differences Based on Morphological Component Analysis	
66	Learning Compact Feature Descriptor and Adaptive Matching Framework for Face AT&SIP001 - Recognition	
67	Video Deraining and Desnowing Using Temporal Correlation and Low-Rank Matrix Completion	
68	Spectral Laplace-Beltrami Wavelets With Applications in Medical Images	
69	Transfer Learning Improves Supervised Image Segmentation Across Imaging Protocols	
70	Nonparametric Hemodynamic Deconvolution of FMRI Using Homomorphic Filtering	
71	Brain Metastases Detection Methods in Magnetic Resonance Imaging	IEEE 2016
72	Two-Way OFDM-Based Nonlinear Amplify-and-Forward Relay Systems	IEEE 2016

73	Robust Cell Detection of Histopathological Brain Tumor Images Using Sparse Reconstruction and Adaptive Dictionary	IEEE 2016
74	A Novel Approach to Segment Skin Lesions in Dermoscopic Images Based on a Deformable Model	IEEE 2016
75	Lifetime and Energy Hole Evolution Analysis in Data-Gathering Wireless Sensor Networks	IEEE 2016
76	Hybrid Modulation Scheme for a High-Frequency AC-Link Inverter	IEEE 2016
77	A Capacitor Voltage-Balancing Method for Nested Neutral Point Clamped (NNPC) Inverter	IEEE 2016
78	Design and Development of an Efficient Multilevel DC/AC Traction Inverter for Railway	IEEE 2016
79	Modeling and Analysis of Class EF and Class E/F Inverters With Series-Tuned Resonant Networks	IEEE 2016
80	Dynamic Cluster Head Selection Method for Wireless Sensor Network	IEEE 2016
81	Texture Classification Using Dense Micro-Block Difference	IEEE 2016
82	Three-Level PWM Floating H-Bridge Sine wave Power Inverter for High-Voltage and High-Efficiency Applications	IEEE 2016
83	Delay-Dependent Stability Control for Power System With Multiple Time-Delays	IEEE 2016
84	An Efficient SVD-Based Method for Image Denoising	IEEE 2016
85	Unsupervised SAR Image Change Detection Based on SIFT Key points and Region Information	IEEE 2016

86	A Micro-GA Embedded PSO Feature Selection Approach to Intelligent Facial Emotion Recognition	IEEE 2016
87	Unsupervised Deep Learning Applied to Breast Density Segmentation and Mammographic Risk Scoring	IEEE 2016
88	An Empirical Study for PCA- and LDA-Based Feature Reduction for Gas Identification	IEEE 2016
89	Analyzing the Effect of JPEG Compression on Local Variance of Image Intensity	IEEE 2016
90	Amplify-and-Forward Relay Sharing for Both Primary and Cognitive Users	IEEE 2016
91	Design and Implementation of a Novel Multilevel DC–AC Inverter	IEEE 2016
92	High Performance Personalized Heartbeat Classification Model for Long-Term ECG Signal	IEEE 2016
93	Fast Appearance Modeling for Automatic Primary Video Object Segmentation	IEEE 2016
94	On the Permanence of EEG Signals for Biometric Recognition	IEEE 2016
95	A New Cascaded Switched-Capacitor Multilevel Inverter Based on Improved Series–Parallel Conversion With Less Number of Components	IEEE 2016
96	Analysis and Design of Modified Half-Bridge Series-Resonant Inverter With DC-Link Neutral-Point-Clamped Cell	IEEE 2016
97	Spectrum Sensing Performance in Cognitive Radio Networks With Multiple Primary Users	IEEE 2016
98	Reversible Data Hiding in Encrypted Images y Reversible Image Transformation	IEEE 2016
99	Self-Deployment Of Mobile Sensors To Achieve Target Coverage In The Presence Of Obstacles	IEEE 2016

100	Energy-Efficient Infrastructure Sensor Network for Ad Hoc Cognitive Radio Network	IEEE 2016
101	A Novel Zero-Voltage-Switching Push–Pull High-Frequency-Link Single-Phase Inverter	IEEE 2016
102	Combining Generative and Discriminative Representation Learning for Lung CT Analysis with Convolutional Restricted Boltzmann Machines	IEEE 2016
103	A Novel Three-Phase Current Source Rectifier With Delta-Type Input Connection to Reduce the Device Conduction Loss	IEEE 2016
104	Reliability Evaluation of Large Scale Battery Energy Storage Systems	IEEE 2016
105	Economic dispatch of power systems with virtual power plant based interval optimization method	IEEE 2016
106	DBR-MAC: A Depth-Based Routing Aware MAC Protocol for Data Collection in Underwater Acoustic Sensor Networks	IEEE 2016
107	DietCam: Multiview Food Recognition Using a Multikernel SVM	IEEE 2016
108	Unsupervised Deep Feature Extraction for Remote Sensing Image Classification	IEEE 2016
109	Robust Blur Kernel Estimation for License Plate Images From Fast Moving Vehicles	IEEE 2016
110	Lung Pattern Classification for Interstitial Lung Diseases Using a Deep Convolutional Neural Network	IEEE 2016
111	Energy-Efficient Clustering Using Correlation and Random Update Based on Data Change Rate for Wireless Sensor Networks	IEEE 2016
112	On the Energy Efficiency and Effective Throughput Tradeoff of Fading Channels	IEEE 2016
113	Machine Learning Methods for Binary and Multiclass Classification of Melanoma Thickness From Dermoscopic Images	IEEE 2016

114	An Efficient Bayesian PAPR Reduction Method for OFDM-Based Massive MIMO Systems-MATLAB COMMUNICATION	IEEE 2016
115	Domain Specific Learning for Newborn Face Recognition	IEEE 2016
116	Self-Deployment of Randomly Scattered Mobile Sensors to Achieve Barrier Coverage	IEEE 2016
117	Improved Tampering Localization in Digital Image Forensics Based on Maximal Entropy Random Walk	IEEE 2016
118	Improving Saliency Detection Via Multiple Kernel Boosting and Adaptive Fusion	IEEE 2016
119	An equalized global graph model-based approach for multi-camera object tracking	IEEE 2016
120	An Accurate ECG-Based Transportation Safety Drowsiness Detection Scheme	IEEE 2016
121	Development and Comparison of an Improved Incremental Conductance Algorithm for Tracking the MPP of a Solar PV Panel	IEEE 2016
122	Epileptic Seizure Prediction Based on Multivariate Statistical Process Control of Heart	IEEE 2016
123	A Novel Approach for Denoising and Enhancement of Extremely Low-light Video	IEEE 2016
124	Recognizing Common CT Imaging Signs of Lung Diseases Through a New Feature Selection Method Based on Fisher Criterion and Genetic Optimization	IEEE 2016
125	Automatic Change Analysis in Satellite Images Using Binary Descriptors and Lloyd–Max Quantization	IEEE 2016
126	Spatiotemporal Saliency Detection for Video Sequences Based on Random Walk With Restart	IEEE 2016

127	An Optimal-Distance-Based Transmission Strategy for Lifetime Maximization of Wireless Sensor Networks	
128	Influences of Power Electronic Converters on Voltage-Current Behaviors During Faults in DGUs-Part II: Photovoltaic Systems	
129	Successive Interference Mitigation in Multiuser MIMO Interference Channels	
130	Flying-Capacitor Based Hybrid LLC Converters with Input Voltage Auto-Balance Ability for High Voltage Applications	
131	Image Super-Resolution Based on Structure-Modulated Sparse Representation	
132	Dynamic Channel Assignment for Wireless Sensor Networks: A Regret Matching Based Approach	
133	Noninvasive Real-Time Automated Skin Lesion Analysis System for Melanoma Early Detection and Prevention	
134	Acoustic features for the identification of coronary artery disease	
135	Enhancement of Textural Differences Based on Morphological Component Analysis	
136	Cognitive and Energy Harvesting-Based D2D Communication in Cellular Networks: Stochastic Geometry Modeling and Analysis	
137	Hierarchical Graphical Models for Simultaneous Tracking and Recognition in Wide-Area Scenes	
138	Quasi Y-Source Boost DC-DC Converter	
139	Background Subtraction Based on Low-Rank and Structured Sparse Decomposition	

140	Optimal Channel Switching Over Gaussian Channels Under Average Power and Cost Constraints	
141	Word Segmentation Method for Handwritten Documents based on Structured Learning	
142	Mutual dependency of features in multimodal biometric systems	
143	Implementation of Wavelet Based Robust Differential Control for Electric Vehicle Application	
144	Learning Compact Feature Descriptor and Adaptive Matching Framework for Face Recognition	
145	Automatic localization and segmentation of optic disc in fundus image using morphology and level set	
146	Adaptive Image Denoising by Targeted Databases	
147	Sorted Consecutive Local Binary Pattern for Texture Classification	
148	Impacts of Deployment Strategies on Localization Performance in Underwater Acoustic Sensor Networks	
149	A Novel Image Classification Algorithm Using Over complete Wavelet Transforms	
150	Neighborhood Discriminant Hashing for Large-Scale Image Retrieval	
151	Joint Image Registration and Fusion for Panchromatic and Multispectral Images	
152	Ground-Based Cloud Detection Using Automatic Graph Cut	
153	Distributed Compressed Sensing off the Grid	
154	GaN Devices in Resonant LLC Converters: System-level considerations	

155	Multilevel voltage source inverter with optimized usage of bidirectional switches	
156	Topological Modeling and Classification of Mammographic Micro calcification Clusters	
157	A Contrast Adjustment Thresholding Method for Surface Defect Detection Based on Mesoscopy	
158	Particle Swarm Optimization-Based Clustering by Preventing Residual Nodes in Wireless Sensor Networks	
159	Improving Dermoscopy Image Classification Using Color Constancy	