SPIRO

Solutions Pvt. Ltd

- Research & Development Program (RDP)
- Final Year Academic Project (FAP) in Software and Embedded Technologies
- Application Development Program (ADP)

IEEE
PROJECT TITLES GUIDE
2016-2017

Stupros.com
Cultivating Qualities

MATLAB-
DIGITAL IMAGE/SIGNAL PROCESSING

MEDICAL IMAGE PROCESSING

S.NO	PROJECT CODE	TITLE	YEAR
1	ITIMP01	A Discriminatively Trained Fully ConnectedConditional Random Field Model for Blood VesselSegmentation in Fundus Images	2016
2	ITIMP02	Bleeding Frame and Region Detection in the Wireless Capsule Endoscopy Video	2016
3	ITIMP03	Statistical Modeling of Retinal Optical Coherent Tomography	2016
4	ITIMP04	Red Lesion Detection using Dynamic ShapeFeatures for Diabetic Retinopathy Screening	2016
5	ITIMP05	Breast Cancer Detection using PCPCET and ADEWNN: A Geometric Invariant Approach to Medical X-rays Image Sensors	2016
6	ITIMP06	Automatic Lumbar Spondylolisthesis Measurement in CT Images	2016
7	ITIMP07	Brain Tumor Segmentation using Convolutional Neural Networks in MRI Images	2016
8	ITIMP08	A Novel Approach to Segment Skin Lesions inDermoscopic Images Based on aDeformable Model	2016
9	ITIMP09	Optic Disc Localization in Retinal Images based on Cumulative Sum Fields	2016
`10	ITIMP10	Automated vessel segmentation using infinite perimeter active contour model with hybrid region information with application to retinal images	2015
11	ITIMP11	Fast and Adaptive Detection of Pulmonary Nodules in Thoracic CT Images Using a Hierarchical Vector Quantization Scheme	2015
12	ITIMP12	Automatic Classification of Intracardiac Tumor and	2015

		Thrombi in Echocardiography Based on Sparse Representation	
13	ITIMP13	Four-class classification of skin lesions with task decomposition strategy	2015
14	ITIMP14	Adaptive Co-Segmentation Of Pheochromocytomas In CECT Images Using Localized Level Set Models	2015
IMAGE RETRIEVAL			
15	ITIMP15	Multi-label Dictionary Learning for ImageAnnotation	2016
16	ITIMP16	Query-adaptive Small Object Search usingObject Proposals and Shape-aware Descriptors	2016
17	ITIMP17	Sketch-based Image Retrieval by Salient Contour Reinforcement	2016
18	ITIMP18	Clothes Co-Parsing via Joint Image Segmentation and Labeling with Application to Clothing Retrieval	2016
19	ITIMP19	A Novel Active Learning Method in Relevance Feedback for Content-Based Remote Sensing Image Retrieval	2015
NEURAL NETWORKS			
20	ITIMP20	Non-Local Auto-Encoder With CollaborativeStabilization for Image Restoration	2016
21	ITIMP21	Machine learning methods for binary and multiclass classification of melanoma thickness fromdermoscopic images	2016
22	ITIMP22	Locality Sensitive Deep Learning for Detection and Classification of Nuclei in Routine Colon Cancer Histology Images	2016
23	ITIMP23	Compressed-Domain Ship Detection on Space borne Optical Image Using Deep Neural Network and Extreme Learning Machine	2015
IMAGE SEGMENTATION			
24	ITIMP24	Patch-Based Video DenoisingWithOptical Flow Estimation	2016
25	ITIMP25	CASAIR: Content and Shape-Aware ImageRetargeting	2016

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		and Its Applications	
26	ITIMP26	Comprehensive and Practical Vision System for Self-Driving Vehicle Lane-Level Localization	2016
27	ITIMP27	Hierarchical Image Saliency Detectionon Extended CSSD	2016
28	ITIMP28	Robust Blur Kernel Estimation for License PlateImages from Fast Moving Vehicles	2016
29	ITIMP29	Traffic sign detection via graph-based ranking and segmentation algorithms	2015
30	ITIMP30	Segmentation-Based Image Copy-Move Forgery Detection Scheme	2015
31	ITIMP31	Elaboration of Novel Image Processing Algorithm for Arcing Discharges Recognition on HV Polluted Insulator Model	2015
STEGANOGRAPHY			
32	ITIMP32	Lossless Compression of JPEG Coded PhotoCollections	2016
33	ITIMP33	Secure Reversible Image Data Hiding overEncrypted Domain via Key Modulation	2016
34	ITIMP34	An image encryption algorithm based onauto-blocking and ECG signal	2016
35	ITIMP35	Remote Authentication via Biometrics: A Robust Video-Object Steganographic Mechanism Over Wireless Networks	2016
36	ITIMP36	High Capacity Reversible Data Hiding in Encrypted Images by Patch-Level Sparse Representation	2016
BIOMETRICS			
37	ITIMP37	Robust Point Set Matching for Partial FaceRecognition	2016
38	ITIMP38	Fingerprint Liveness Detection From Single ImageUsing Low Level Features and Shape Analysis	2016
39	ITIMP39	Face recognition across non-uniform motion blur, illuminationand pose	2015
AUDIO PROCESSING			
40	ITIMP40	Anti-Spoofing for Text-Independent SpeakerVerification: An Initial Database, Comparisonof Countermeasures, and Human Performance	2016
41	ITIMP41	Logistic Regression-HSMM-based Heart Sound	2016

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		Segmentation	
42	ITIMP42	User-Independent Recognition of Sports Activitiesfrom a Single Wrist-worn Accelerometer:A Template Matching Based Approach	2016
43	ITIMP43	Electrocardiograph compression based on sifting process of empirical mode decomposition	2016
44	ITIMP44	Speech Emotion Recognition UsingFourier Parameters	2015
ARDUINO WITH MATLAB			
45	ITIMP45	Automated Control System for Arduino and Android Based Intelligent Greenhouse	2016
46	ITIMP46	Vision based Bottle classification and Automatic Bottle Filling System	2016
47	ITIMP47	Arduino Based Supervision of Banana RipeningStages	2016
48	ITIMP48	Biometric Access for a Secure Smart Robot	2016
49	ITIMP49	Remote Image Sensing Platform Based on Arduino	2016
50	ITIMP50	Gesture Signals Processing for a Silent Spybot	2016
51	ITIMP51	Controlling Robotic arm through arduino using voice	2016
52	ITIMP52	Intelligent Collision avoidance rover	2016
53	ITIMP53	GUI Controlled BOT using Image Processing	2016
54	ITIMP54	Design of Small Smart Home SystemBased on Arduino	2016
RASPBERRY PI WITH MATLAB			
55	ITIMP55	Smart Drip Irrigation System using Raspberry pi and Arduino	2016
56	ITIMP56	Incorporating Skin Color for Improved FaceDetection and Tracking System	2016
57	ITIMP57	Text-to-Speech Device for Patients with Low Vision	2016
58	ITIMP58	Raspberry Pi Based Laser Spot Detection	2016
59	ITIMP59	Raspberry Pi Image Processing Based Economical AutomatedToll System	2016
60	ITIMP60	Ball Tracking using Raspberry Pi	2016
61	ITIMP61	Real Time Smile Detection using Haar Classifiers on SoC	2016
62	ITIMP62	An Internet of Things Approach for Motion Detection using Raspberry Pi	2016
63	ITIMP63	Real-time Fire Detection for Video Surveillance Applications using a Combination of Expertsbased on	2016

		Color, Shape and Motion	
64	ITIMP64	A Compressive Sensing Approach to DescribeIndoor Scenes for Blind People	2016
65	ITIMP65	Implementation of Line Tracking Algorithm using Raspberry Pi	2016
RASPBERRY PI WITH PYTHON			
66	ITIMP66	An Internet of Things Approach for Motion Detection using Raspberry Pi	2016
67	ITIMP67	Raspberry PI Based Global Industrial Process Monitoring Through Wireless Communication	2016
68	ITIMP68	From RGB led laboratory to servomotor control with websockets and IoT as educational tool	2016
69	ITIMP69	Globally Accessible Machine Automation Using Raspberry Pi	2016
70	ITIMP70	Healthcare based on loT using Raspberry Pi	2016

MATLAB - COMMUNICATION

ORTHOGONAL FREQUENCY-DIVISION MULTIPLEXING(OFDM)

S.NO	PROJECT CODE	PROJECT TITLES	YEAR
1	**ITCM01**	OFDM Signal Processing in Offset-QAM Based Filter Bank Multicarrier Systems	**2016**
2	**ITCM02**	Beamforming OFDM Performance under Joint Phase Noise and I/Q Imbalance	**2016**
3	**ITCM03**	Secure Communication in OFDMA Based Cognitive Radio Networks: An Incentivized Secondary Network Coexistence Approach	**2016**

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4	**ITCM04**	OFDM receiver for fast time-varying channels using block-sparse Bayesian learning	**2016**
5	**ITCM05**	Low-Complexity Modem Design for GFDM	**2016**
7	**ITCM06**	Generalization of orthogonal frequency division multiplexing with index modulation	**2015**
6	**ITCM07**	PAPR analysis of class-iii SLM scheme based on variance Of correlation of alternative OFDM signal sequences	**2015**
8	**ITCM08**	Performance of reconfigurable antennas in a below-decks environment	**2015**

COGNITIVE RADIO NETWORK(CRN)

S.NO	PROJECT CODE	PROJECT TITLES	YEAR
1	**ITCM09**	Outage Performance of Cognitive Relay Networks with Wireless Information and Power Transfer	**2016**
2	**ITCM10**	Dynamic Spectrum Leasing for Bi-DirectionalCommunication: Impact of Selfishness	**2016**
3	**ITCM11**	Sniffer Channel Assignment with ImperfectMonitoring for Cognitive Radio Networks	**2016**
4	**ITCM12**	Low Complexity Energy Detection for SpectrumSensing with Random Arrivals of Primary Users	**2016**
5	**ITCM13**	Improving Physical Layer Security for CRNs Using SINR-Based Cooperative Beamforming	**2016**
6	**ITCM14**	Relay-selection improves the security-reliability trade-off in	**2015**

		cognitive radio systems	
7	**ITCM15**	On signal detection in the presence of weakly correlated noise over fading channels	**2014**

MUTIPLE INPUT MUTIPLE OUTPUT(MIMO)

1	**ITCM16**	Performance Analysis of Dual-Hop MIMO AF Relaying Network with Multiple Interferences	**2016**
2	**ITCM17**	BER Analysis for Spatial Modulation in Multicast MIMO Systems	**2016**
3	**ITCM18**	Performance Evaluation of Best Path Selection in a Multi-Hop Decode-and-Forward Cooperative System	**2016**
3	**ITCM19**	New Results on Transceiver Design for Two-hopAmplify-and-forward MIMO Relay Systems withDirect Link	**2016**
4	**ITCM20**	Energy-Efficient Hybrid Analog and DigitalPrecoding for MmWave MIMO Systems with LargeAntenna Arrays	**2016**
5	**ITCM21**	MIMO-OTH Radar: Signal Model for Arbitrary Placement and Signals With Non-Point Targets	**2015**
6	**ITCM22**	Linear pre coding for MIMO with LDPC coding and reduced complexity	**2015**
7	**ITCM23**	On the Sum-rate the Gaussian MIMO Z channel and the Gaussian MIMO x channel	**2015**

8	ITCM24	Low Cost Pre-Coder Design for MIMOAF Two-Way Relay Channel	2015

WIRELESS OPTICAL COMMUNICATION

S.NO	PROJECT CODE	PROJECT TITLES	YEAR
1	ITCM25	On the Capacity of the Intensity-Modulation Direct-Detection Optical Broadcast Channel	2016
2	ITCM26	Impact of Inter-Relay Cooperation on the Performance of FSO Systems with any Number of Relays	2016
3	ITCM27	Performance of Wireless Optical Communication In *S*-Distributed Turbulence	2016

SATELLITE COMMUNICATION

S.NO	PROJECT CODE	PROJECT TITLES	YEAR
1	ITCM28	Two-Way Satellite Relaying with Estimated Channel Gains	2016
2	ITCM29	A Novel Beamforming and Combining Scheme for Two-Way AF Satellite Systems	2016
3	ITCM30	Channel Estimation and Detection in SatelliteCommunication Systems	2016

VLSI

DFT(DESIGN FOR TESTABILITY)

S.NO	PROJECT CODE	TITLE	YEAR
01	ITVL01	Test Stimulus Compression Based on Broadcast Scan with One Single Input	2016
02	ITVL02	Thermal-Aware Small-Delay Defect Testing in Integrated Circuits for Mitigating Overkill	2016
03	ITVL03	Design for Testability of Sleep Convention Logic	2016
04	ITVL04	Low-Power Programmable PRPG With Test Compression Capabilities	2015

STA(STATIC TIME ANALYSIS)

S.NO	PROJECT CODE	TITLE	YEAR
06	ITVL06	A 1–16-Gb/s All-Digital Clock and Data Recovery With a Wideband, High-Linearity Phase Interpolator	2016
07	ITVL07	Skew Minimization With Low Power for Wide-Voltage-RangeMulti power-Mode Designs	2016

AREA EFFICIENT

S.NO	PROJECT CODE	TITLE	YEAR
08	ITVL08	Polynomial Time Algorithm for Area andPower Efficient Adder Synthesis inHigh-Performance Designs	2016
09	ITVL09	A Fused Floating-Point Four-Term Dot Product Unit	2016
10	ITVL10	Ultralow-Energy Variation-Aware Design:	2016

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		Adder Architecture Study	
11	ITVL11	Hybrid LUT/Multiplexer FPGA Logic Architectures	2016
12	ITVL12	A New Paradigm of Common Subexpression Elimination by Unification of Addition and Subtraction	2016
13	ITVL13	Low-Cost High-Performance VLSI Architecture forMontgomery Modular Multiplication	2016
14	ITVL14	Trade-offs for Threshold Implementations Illustrated on AES	2015
15	ITVL15	Low Power Reconfigurable Double Precision Multiplier for DSP Applications	2015
16	ITVL16	Reverse Converter Design via Parallel-Prefix Adders: Novel Components, Methodology, and Implementations	2015
		LOW POWER	
17	ITVL17	Low-Power Split-Radix FFT Processors Using Radix-2 Butterfly Units	2016
18	ITVL18	Reducing Power, Leakage, and Area of Standard-Cell ASICs Using Threshold Logic Flip-Flops	2016
19	ITVL19	Design-Efficient Approximate Multiplication	2016

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		Circuits Through Partial Product Perforation	
20	ITVL20	A High-Performance FIR Filter Architecture for Fixed and Reconfigurable Applications	2016
21	ITVL21	Design and FPGA Implementation of Reconfigurable Linear-Phase Digital Filter With Wide Cutoff Frequency Range and NarrowTransition Bandwidth	2016
22	ITVL22	Application-Specific Low-Power Multipliers	2016
23	ITVL23	Aging-Aware Reliable Multiplier Design With Adaptive Hold Logic	2015
24	ITVL24	Exact and Approximate Algorithms for the Filter Design Optimization Problem	2015
HIGH SPEED			
25	ITVL25	High-Speed, Low-Power, and Highly Reliable Frequency Multiplier for DLL-BasedClock Generator	2016
26	ITVL26	A Modified Partial ProductGenerator for Redundant BinaryMultipliers	2016
27	ITVL27	High-Speed and Energy-Efficient Carry Skip Adder Operating Under a Wide Range of Supply Voltage Levels	2016
28	ITVL28	A New Fast and Area-Efficient Adder-Based Sign Detectorfor RNS $\{2n - 1, 2n, 2n + 1\}$	2016
29	ITVL29	Efficient Halfband FIR Filter Structures forRF and IF Data Converters	2016

30	ITVL30	FIR Filter Design via Extended Optimal Factoring	2016
31	ITVL31	Variable Latency Speculative Han-Carlson Adder	2015
32	ITVL32	Fault Tolerant Parallel Filters Based on Error Correction Codes	2015
33	ITVL33	$(4 + 2\log n)\Delta G$ Parallel Prefix Modulo-$(2^n -$ 3) Adder via Double Representation of Residues in [0, 2]	2015

QCA TECHNOLOGY

34	ITVL34	USE: A Universal, Scalable, and EfficientClocking Scheme for QCA	2016
35	ITVL35	Design of adder and subtractor circuits inmajority logic-based field-coupled QCAnanocomputing	2016
36	ITVL36	Coplanar Full Adder in Quantum-Dot Cellular Automata via Clock-Zone-Based Crossover	2015
37	ITVL37	Design and simulation of turbo encoder in quantum-dot cellular automata	2015

DA TOOL (TANNER TOOL)

38	ITVL38	Back to the Future: Current-Mode Processorin the Era of Deeply Scaled CMOS	2016
39	ITVL39	Low-Power Variation-Tolerant Nonvolatile Lookup Table Design	2016

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40	ITVL40	Circuit and Architectural Co-Design forReliable Adder Cells With Steep Slope TunnelTransistors for Energy Efficient Computing	2016
41	ITVL41	Designing Tunable Subthreshold Logic Circuits Using Adaptive Feedback Equalization	2016
42	ITVL42	Single-Supply 3T Gain-Cell for Low-Voltage Low Power Applications	2016
43	ITVL43	MOTO-X: A Multiple-Output Transistor-Level Synthesis CAD Tool	2016
44	ITVL44	Energy and Area Efficient Three-Input XOR/XNORs WithSystematic Cell Design Methodology	2016
45	ITVL45	Finite State Machines With Input Multiplexing: A Performance Study	2015
VLSI WITH MATLAB			
46	ITVL46	A Scalable Approximate DCT Architectures for Efficient HEVC Compliant Video Coding	2016
47	ITVL47	LUT Optimization for Distributed Arithmetic-Based Block Least Mean Square Adaptive Filter	2016
48	ITVL48	Multiplierless Unity-Gain SDF FFTs	2016
49	ITVL49	On Efficient Retiming of Fixed-Point Circuits	2016
50	ITVL50	Exploiting Adder Compressors for Power-Efficient	2016

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		2-D Approximate DCT Realization	
51	ITVL51	Input-Based Dynamic Reconfiguration of Approximate Arithmetic Unitsfor Video Encoding	2016
52	ITVL52	Floating-Point Butterfly Architecture Based on Binary Signed-Digit Representation	2016
53	ITVL53	Recursive Integer Cosine Transform for HEVC and Future Video Coding Standards	2016
54	ITVL54	A Generalized Algorithm and Reconfigurable Architecture for Efficient and Scalable Orthogonal Approximation of DCT	2015
55	ITVL55	Design and Analysis of Approximate Compressors for Multiplication	2015

1. RENEWABLE ENERGY

I.SOLAR ENERGY

S.NO	PROJECT CODE	PROJECT TITLES	YEAR
1	ITPW01	Highly efficient asymmetrical pwm full-bridge converter for renewable energy sources	2016

2	ITPW02	A Three Phase Hybrid Cascaded Modular Multilevel Inverter For Renewable Energy Environment	2016
3	ITPW03	Cascaded H Bridge Multilevel PV Topology For Alleviation Of Per Phase Power Imbalances & Reduction of Second Harmonic Voltage Ripple	2016
4	ITPW04	Least Power Tracking Method For Photovoltaic Differential Power Processing System	2016
5	ITPW05	Design And Analysis Of A High Efficiency DC-DC Converter With Soft Switching Capability For Renewable Energy Application Requiring High Voltage Gain	2016
6	ITPW06	A Bi-Directional Three Level LLC Resonant Converter With PWAM Control	2016
7	ITPW07	High-Gain Single-Stage Boosting Inverter For Photovoltaic Applications	2016
8	ITPW08	A Single Phase PV Quasi –Z –Source Inverter With Reduced Capacitance Using Modified Modulation And Double Frequency Ripple Suppression Control	2016

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9	ITPW09	Soft Switching Non Isolated Current Fed Inverter For PV/Fuel Cell Application	2016
10	ITPW10	Front End Isolated Quasi Z Source DC-DC Converter Modules In Series For Photovoltaic High voltage Dc Application	2016
11	ITPW11	A Fast Converging MPPT Technique For Photovoltaic System Under Fast Varying Solar Irradiation And Load Resistance	2015
12	ITPW12	Performance of medium voltage dc bus PV system architecture utilizing high gain DC DC converter	2015
13	ITPW13	Hybrid Transformer Zvs/Zcs Dc Dc Converter With Optimized Magnetics And Improved Power Devices Utilization For Photovoltaic Module Application	2015
		I. WINDENERGY	
14	ITPW14	Control & Operation Of A Dc Grid Based Wind Power Generation System In A Microgrid	2016

15	ITPW15	Sliding Mode Control Of PMSG Wind Turbine Based On Enhanced Exponential Reaching Law	2016
16	ITPW16	A Medium Frequency Transformer Based Wind Energy Conversion System Used For Current Source Converter Based Offshore Wind Farm	2016
17	ITPW17	Doubly Fed Induction Generator For Wind Energy Conversion Systems With Integrated Active Filter Capabilities	2015
II. HYBRID SYSTEMS			
18	ITPW18	A Modified Reference Of An Intermediate Bus Capacitor Voltage Based Second Harmonic Current Reduction Method For A Standalone Photovoltaic Power System	2016
19	ITPW19	Control And Implementation Of Standalone Solar Photovoltaic Hybrid System	2016
20	ITPW20	Grid Connected PV-Wind –Battery Based Multi Input Transformer Coupled Bi Directional DC-DC Converter For Household Application	2016

21	ITPW21	MPPT With Single Dc Dc Converter With Inverter For Grid Connected Hybrid Wind Driven PMSG-PV System	2015
III. ENERGY STORAGE SYSTEM			
22	ITPW22	High Step Up /Step Down Soft Switching Bidirectional DC-DC converter with coupled inductor and voltage matching control for energy storage systems	2016
23	ITPW23	Bidirectional Resonant DC-DC Step-Up Converters For Driving High-Voltage Actuators In Mobile MicroRobots	2016
24	ITPW24	High Efficiency Bi-Directional Converter for Flywheel Energy Storage Application	2016
2.POWER ELECTRONICS			
I. AC TO DC CONVERSIONS			
25	ITPW25	Power Quality Improved Bridgeless Converter Based Computer Power Supply	2016

26	ITPW26	Universal Ac Input High Density Power Adapter Design With A Clamped Series Resonant Converter	2016
27	ITPW27	A Novel Multilevel Multi Output Bidirectional Active Buck PFC Rectifier	2016
28	ITPW28	A Single Stage Single Switch LED Driver Based On The Integrated SEPIC Circuit & CLASS E Converter	2016
29	ITPW29	Interleaved SEPIC Power Factor Pre Regulator Using Coupled Inductors In Discontinuous Conduction Mode With Wide Output Voltage	2016
30	ITPW30	Soft Switching Two Switch Resonant AC-DC Converter With High Power Factor	2016
31	ITPW31	An Integrated High Power Factor Converter With Zvs Transition	2015
32	ITPW32	High Frequency Fed Unity Power Factor Ac-Dc Power Converter With One Switching Per Cycle	2015

II. DC TO AC CONVERSION

33	ITPW33	Efficient Transformerless MOSFET Inverter Grid Tied Photovoltaic System	2016
34	ITPW34	A Novel Zero-Voltage-Switching Push-Pull High-Frequency-Link (PPHFL) Single-Phase Inverter	2016
35	ITPW35	A Zvs Grid Connected Full Bridge Inverter With A Novel ZvsSpwm Scheme	2016
36	ITPW36	Bi Directional Single Power Conversion DC-AC Converter With Non Complementary Active Clamp Circuits	2016
37	ITPW37	Model Predictive Control Applied To An Improved Five Level Bidirectional Converter	2016
38	ITPW38	A Coupled Inductor Based High Boost Inverter With Sub Unity Turns-Ratio Rating	2016
39	ITPW39	A New Common Mode Transformer Less Photovoltaic Inverter	2015
40	ITPW40	An Interleaved High Power Flyback Inverter For Photovoltaic Application	2015

III. MULTILEVEL INVERTER

41	ITPW41	A New Cascaded Switched-Capacitor Multilevel Inverter Based On Improved Series-Parallel Conversion With Less Number Of Components	2016
42	ITPW42	Design And Implementation Of A Novel Multilevel DC-AC Inverter	2016
43	ITPW43	An Enhanced Single Phase Step Up Five Level Inverter	2016
44	ITPW44	A Single Dc Source Cascaded Seven Level Inverter Integrating Switched Capacitor Techniques	2016
45	ITPW45	A Capacitor Voltage Balancing Method For Nested Neutral Point Clamped (NNPC)Inverter	2016
46	ITPW46	Zero Crossing Disturbance Elimination And Spectrum Analysis Of Single Carrier Seven Level SPWM	2015
47	ITPW47	A Single Phase Cascaded Multilevel Inverter Based On A New Basic Unit With Reduced No Of Power Switches	2015
48	ITPW48	Optimum Structure Of Proposed New Cascaded Multilevel Inverter With Reduced No Of Components	2015
IV. DC TO DC CONVERSIONS			
49	ITPW49	A New Transformerless Buck Boost Converter With Positive Output Voltage	2016

50	ITPW50	Z-Source Resonant Converter With Power Factor Correction For Wireless Power Transfer Applications	2016
51	ITPW51	A CLCL Resonant DC/DC Converter for Two-Stage LED Driver System	2016
52	ITPW52	Phase Shift Controlled Isolated Buck Boost Converter With Active Clamped Three Level Rectifier Featuring Soft Switching Within Wide Operation Range	2016
53	ITPW53	Design And Analysis Of A High Efficiency DC-DC Converter With Soft Switching Capability For Renewable Energy Application Requiring High Voltage Gain	2016
54	ITPW54	Isolated Double Step Down Dc Dc Converter With Improved Zvs Range And No Transformer Saturation Problem	2016
55	ITPW55	Inductors A High Gain Input Paralell Output Series Dc Dc Converter With Dual Coupled	2015
56	ITPW56	High Gain Zero Voltage Switching Bidirectional With Reduced Number Of Switches	2015

V. AC TO AC (CYCLOCONVERTER)

57	ITPW57	High Efficiency Single Phase Ac –Ac Converters Without Commutation Problem	2016
58	ITPW58	A Single Stage High Frequency Resonant Ac/Ac Converter	2016
59	ITPW59	A Family Of High Frequency Isolated Single Phase Ac –Ac converter With Safe Commutation Strategy	2016
60	ITPW60	A Dimming Method For Hot Cathode Fluorescent Lamp Using A Resonant Inverter Operating At Fixed Switching Frequency	2015
3.AC & DC DRIVES APPLICATIONS			
61	ITPW61	Speed Sensor Less Induction Machine Control In The Field Weakening Region Using Discrete Speed Adaptive Full Order Observer	2016
62	ITPW62	Sensorless Control For High Speed Brushless Dc Motor Based On Line To Line Back Emf	2016
63	ITPW63	Bldc motor driven solar pv array –fed water pumping system employing zeta converter	2016

64	ITPW64	Single Phase Grid Connected Motor Drive System Dc Link Shunt Compensator &Small Dc Link Capacitor	2016
65	ITPW65	Discontinuous Hybrid –Pwm Based Dc Link Voltage Balancing Algorithm For A 3 Level Neutral Point Clamped (NPC)Traction Inverter Drive	2016
66	ITPW66	A BL-CSC converter-fed BLDC motor drive with power factor correction	2015
67	ITPW67	A Unity Power Factor Bridgeless Isolated CUK Converter-Fed Brushless Dc Motor Drive	2015

4. ELECTRICAL VEHICLE APPLICATION

68	ITPW68	Pulse Width Modulation Based Electromagnetic Interference Mitigation Of Bi Directional Grid Connected For Electrical Vehicles	2016
69	ITPW69	Topology & Control Scheme Of OBC-LDC Integrated Power Unit For Electrical Vehicles	2016

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70	ITPW70	Investigation Of Integrated Charging &Discharging Incorporating Interior Permanent Magnet Machine With Damper Bars For Electrical Vehicles	2016
71	ITPW71	Performance Analysis Of Bidirectional DC-DC Converter For Electrical Vehicles	2015
72	ITPW72	A NonisolatedMultiinputMultioutput Dc-Dc Boost Converter For Electrical Vehicle Application	2015

5.FUZZY LOGIC CONTROL

73	ITPW73	Sensorless Fuzzy-Logic-Based Maximum Power Point Tracking Control For A Small-Scale Wind Power Generation Systems With A SwitchedMode Rectifier	2016
74	ITPW74	Mathematical Modeling And Fuzzy Logic Control Of A Brushless Dc Motor Employed In Automobile And Industrial Application	2016

75	ITPW75	Experimental Evaluation Of A Partially Shaded Photovoltaic System With A Fuzzy Logic-Based Peak Power Tracking Control Strategy	2016

6. MICROGRID APPLICATION

76	ITPW76	Naturally Clamped Snubberless Soft Switching Bidirectional Current Fed Three Phase Push Pull Dc- Dc Converter For Dc Microgrid Application	2016
77	ITPW77	Non Isolated Bidirectional Soft Switching Current Fed LCL Resonant Dc/Dc Converter To Interface Energy Storage In Dc Microgrid	2016
78	ITPW78	A Single Sensor Based MPPT Controller For Wind-Driven Induction Generators Supplying DC Microgrid	2016

1. POWER SYSTEMS

79	ITPS01	Control Of Small Wind Turbine In The High Wind Speed Region	2016
80	ITPS02	A Hybrid STATCOM With Wide Compensation Range And Low Dc Link Voltage	2016
81	ITPS03	An Isolated Three Phase Induction Generator System With Dual Stator Winding Sets Under Unbalanced Load Condition	2016
82	ITPS04	Scaled Current Tracking Control For Doubly Fed Induction Generator To Ride Through Serious Grid Faults	2016
83	ITPS05	Transformer less Single Phase Universal Active Filter With Ups Features And Reduced Number Of Electronics Power Switches	2015
84	ITPS06	Improving Performance Of Cascaded H Bridge Based Interline Dynamic Voltage Restorer	2015
85	ITPS07	A Three-phase Multilevel HybridSwitched-Capacitor PWM PFC Rectifier for HighVoltage Gain Applications	2016
86	ITPS08	An Optimal Method To Design A Trap-CL Filter For A PV Ac Module Based On Flyback Inverter	2016
87	ITPS09	Low Power Energy Conversion With Two Phase Permanent Magnet Machine And Rectifier With Reduced Number Of Controlled Switches	2016
88	ITPS10	Efficient Single Phase Transformerless Inverter Grid Tied PVG System	2016

		With Reactive Power Control	
89	ITPS11	A Matrix Converter Based Bidirectional Contactless Grid Interface	2016
90	ITPS12	A High Step Up Dc Dc Converter Under Alternating Phase Shift Control For Fuel Cell Power System	2015
91	ITPS13	An Integrated Dynamic Voltage Restorer –Ultra capacitor Design For Improving Power Quality Of The Distribution Grid	2015
92	ITPS14	Power balance of cascaded H-bridge multilevel converters for large-scale photovoltaic integration	2015
93	ITPS25	An Improved iUPQC Controller To Provide Additional Grid Voltage Regulation As A STATCOM	2015

NS2(NETWORK SIMULATOR)

WIRED NETWORK

S.NO	PROJECT CODE	PROJECT TITLE	TECHNOLOGY	YEAR
1	ITNWN01	Efficient cache placement strategy in two-tier wireless content delivery network	NS2	2016
2	ITNWN02	Optimal power allocation schemes for the single af relay and jammer wire-tap Channels	NS2	2016

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3	ITNWN03	Hybrid ip/sdn networking: open implementation And experiment management tools	NS2	2016
4	ITNWN04	A multi-channel medium access control protocol For vehicular power line communication systems	NS2	2016
5	ITNWN05	Cocowa: a collaborative contact-based watchdog for detecting selfish nodes	NS2	2015
6	ITNWN06	Service composition in opportunistic networks: a load and mobility aware solution	NS2	2015
7	ITNWN07	Modeling and solving tcp Incast problem in data center Networks	NS2	2015
		MANET		
S.NO	PROJECT CODE	**PROJECT TITLE**	TECHNOLOGY	YEAR
1	ITNMN01	Secret common randomness from routing metadata in ad-hoc networks	NS2	2016

2	ITNMN02	Efficient wireless multimedia multicast in multi-rate multi-channel mesh networks	NS2	2016
3	ITNMN03	A novel approach for efficient usage of intrusion detection system in mobile ad hoc networks	NS2	2016
4	ITNMN04	End-to-end delay modeling in buffer-limited manets: a general theoretical framework	NS2	2016
5	ITNMN05	A secure addressing scheme for Large-scale managed manets	NS2	2015
6	ITNMN06	Mac-layer selfish misbehavior In ieee 802.11 ad hoc networks: detection and defense	NS2	2015

7	ITNMN07	Interference-based topology control algorithm for delayconstrained mobile ad hoc networks	NS2	2015

VANET

S.NO	PROJECT CODE	**PROJECT TITLE**	TECHNOLOGY	YEAR
1	ITNVN01	A stochastic geometry approach to the modeling of dsrc for vehicular safety communication	NS2	2016
2	ITNVN02	Understanding spurious message forwarding in vanet beacon-less dissemination protocols: an analytical approach	NS2	2016
3	ITNVN03	Flow allocation for maximum throughput and bounded delay on multiple disjoint paths for random access wireless multi hop networks	NS2	2016
4	ITNVN04	SCRP: Stable CDS-Based Routing Protocol for Urban Vehicular Ad Hoc Networks	NS2	2016
5	ITNVN05	Reducing interferences in Vanets	NS2	2015
6	ITNVN06	Roff: robust and fast Forwarding in vehicular ad-hoc networks	NS2	2015
7	ITNVN07	Securing warning message Dissemination in Vanets using cooperative Neighbor position verification	NS2	2015

WE CAN ALSO IMPLEMENT YOUR OWN CONCEPT/IDEA

CONGITIVE RADIO

S.NO	PROJECT CODE	PROJECT TITLE	TECHNO LOGY	YEAR
1	ITNCN01	Joint beam forming, power and channel allocation in multi-user and multi-channel underlay misocognitive radio networks	NS2	2016
2	ITNCN02	Energy-efficient and mobile-aided cooperative localization in cognitive radio networks	NS2	2016
3	ITNCN03	Delay-constrained caching in cognitive radio networks	NS2	2016
4	ITNCN04	Mobility prediction based joint stable routing and channel assignment for mobile ad hoc cognitive networks	NS2	2016
5	ITNCN05	Bracer: a distributed broadcast protocol in multi-hop cognitive radio ad hoc networks with collision Avoidance	NS2	2015
6	ITNCN06	Cognitive radio-aware transport protocol for mobile ad hoc networks	NS2	2015
7	ITNCN07	Optimal resource allocation in random access cooperative Cognitive radio networks	NS2	2015

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NETWORK SECURITY

S.NO	PROJECT CODE	**PROJECT TITLE**	TECHNOLOGY	YEAR
1	ITNNS01	Evaluating node reliability in cooperative mimo networks	NS2	2016
2	ITNNS02	On the privacy and performance of mobile anonymous micro blogging	NS2	2016
3	ITNNS03	Mitigating Denial of Service Attacks in OLSR Protocol Using Fictitious Nodes	NS2	2016
4	ITNNS04	Physical layer security in Heterogeneous cellular networks	NS2	2016
5	ITNNS05	Dynamic routing for data integrity and delay differentiated services in wireless sensor networks	NS2	2015
6	ITNNS06	Trust management for Defending on-off attacks	NS2	2015
7	ITNNS07	Privacy-preserving and Truthful detection Of packet dropping attacks in Wireless ad hoc networks	NS2	2015

WE CAN ALSO IMPLEMENT YOUR OWN CONCEPT/IDEA

Education Partners:

Technologies and Domain used:

IEEE 2016, Java, J2ee, Android, Dot net, PHP, Embedded, Vlsi, Matlab, VB, Net working, Data Mining, Image Processing, Cloud Computing, Mobile Computing, Multimedia, Network Security, Soft Engg, Grid Computing, Automation, Robotics, Communication, RF, Zigbee, Blue tooth, GSM/GPS/G-PRS, Power Electronics & Systems, Electrical, DSP, RTOS, Bio metrics, etc.

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- Excellent Placements through our **Spiro HR Management Consultants (SMC) Pvt Ltd.**

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