



SPIRO
SOLUTIONS PVT LTD

**POWER
ELECTRONICS
PROJECT TITLE
2015 - 2016**

TECHNOLOGY : MATLAB
DOMAIN : POWER ELECTRONICS

S.NO	CODE	TITLES	APPLICATION	YEAR
AC TO DC CONVERTERS (RECTIFIERS)				
1.	ITPW01	An integrated high-power-factor converter with ZVS transition	DC motors, HVDC transmission	2015
2.	ITPW02	High-frequency-fed unity power-factor AC–DC power converter with one switching per cycle	SMPS, Solar plant	2015
3.	ITPW03	High-power-factor rectifier using the modified sepic converter operating in discontinuous conduction mode	Drives application, HVDC transmission	2015
4.	ITPW04	Improved-power-quality bridgeless-converter-based multiple-output SMPS	switch mode power supply, DC motors	2015
5.	ITPW05	Power factor corrected zeta converter based improved power quality switched mode power supply	Switch mode power supply, HVDC transmission	2015
6.	ITPW06	Single-inductor dual-output buck–boost power factor correction converter	DC motors, HVDC transmission	2015
7.	ITPW07	A novel three-phase buck–boost AC–DC converter	Drives application	2014
DC TO DC CONVERTERS (CHOPPERS)				

8.	ITPW08	A fast-converging MPPT technique for photovoltaic system under fast-varying solar irradiation and load resistance	Traction application, DC motors, Solar plant	2015
9.	ITPW09	A high gain input-parallel output-series DC/DC converter with dual coupled inductors	Switch mode power supply, Solar plant	2015
10.	ITPW10	High gain zero voltage switching bidirectional converter with reduced number of switches	Traction application, SMPS	2015
11.	ITPW11	Hybrid transformer ZVS/ZCS DC-DC converter with optimized magnetic and improved power devices utilization for photovoltaic module applications	DC motors, Drives application	2015
12.	ITPW12	Isolated AC/DC offline high power factor single-switch led drivers without electrolytic capacitors	LED, industrial application	2015
13.	ITPW13	Non-isolated high step-up DC-DC converters adopting switched-capacitor cell	solar plant, DC motors	2015
14.	ITPW14	Performance of medium-voltage dc-bus pv system architecture utilizing high-gain DC-DC converter	Solar plant, DC drives application	2015
15.	ITPW15	Soft switching DC-DC converter for distributed energy sources with high step up voltage capability	Traction application, SMPS	2015

16.	ITPW16	A high voltage gain dc–dc converter integrating coupled-inductor and diode–capacitor techniques	HVDC application, industrial application	2014
17.	ITPW17	Soft-switching current-fed push–pull converter for 250-w ac module applications	SMPS, DC motors	2014
DC TO AC CONVERTERS (INVERTERS)				
18.	ITPW18	A new common-mode transformer less photovoltaic inverter	AC grid applications, AC motors	2015
19.	ITPW19	A quasi-unipolar SPWM full-bridge transformer less pv grid-connected inverter with constant common-mode voltage	TRACTION application, ac grid application	2015
20.	ITPW20	A single-phase cascaded multilevel inverter based on a new basic unit with reduced number of power switches	Medical application, sensitive applications	2015
21.	ITPW21	An interleaved high-power flyback inverter for photovoltaic applications	AC motor application ,ac grid application	2015
22.	ITPW22	Hybrid multicarrier modulation to reduce leakage current in a transformer less cascaded multilevel inverter for photovoltaic systems	Medical application, sensitive application	2015
23.	ITPW23	Hybrid switched-inductor converters for high step-up conversion	AC motor application , AC grid application	2015
24.	ITPW24	Optimum structures of proposed new cascaded multilevel inverter with reduced number of components	Medical and sensitive application	2015

25.	ITPW25	Zero-crossing disturbance elimination and spectrum analysis of single-carrier seven-level SPWM	Ac motor application , grid application	2015
26	ITPW26	A step-up switched-capacitor multilevel inverter with self voltage balancing	Renewable energy system, hybrid electric vehicles	2014
AC TO AC (CYCLOCONVERTER)				
27.	ITPW27	A bridgeless BHB ZVS-PWM AC-AC converter for high-frequency induction heating applications	Heating application ,high power ac drives	2015
28.	ITPW28	A dimming method for hot cathode fluorescent lamp using a resonant inverter operating at fixed switching frequency	Arc furnace, drying process	2015
MOTOR APPLICATIONS				
29.	ITPW29	PFC CUK converter-fed BLDC motor drive	Variable speed applications	2015
30.	ITPW30	A BL-CSC converter-fed BLDC motor drive with power factor correction	Low maintenance applications	2015
31.	ITPW31	Power factor correction in bridgeless-LUO converter-fed BLDC motor drive	Low maintenance applications	2015
32.	ITPW32	Deployment of an adaptable sensorless commutation technique on BLDC motor drives exploiting zero sequence voltage	Drives applications	2015
33.	ITPW33	A unity power factor bridgeless isolated CUK converter-fed brushless dc motor drive	low maintenance applications	2015
ELECTRICAL VEHICLE APPLICATIONS				

34.	ITPW34	Performance analysis of bi-directional DC-DC converters for electric vehicles	hybrid vehicles ,drives applications	2015
35.	ITPW35	A non isolated multiinput multioutput DC-DC boost converter for electric vehicle applications	Hybrid applications	2015

Education Partners:



Technologies and Domain used:

IEEE 2014, 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/GPRS, Power Electronics & Systems, Electrical, DSP, RTOS, Bio metrics, etc.

Features

- Latest 2014 IEEE, Science Direct, ACM based project concept and solutions.
- State of the art infrastructure, Innovative Project training methods.
- All our efforts are focused on students to meet industry requirements.
- Our environment is encapsulated with doctorates, professionals and other experts.
- Excellent Placements through our **Spiro HR Management Consultants (SMC) Pvt Ltd.**

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