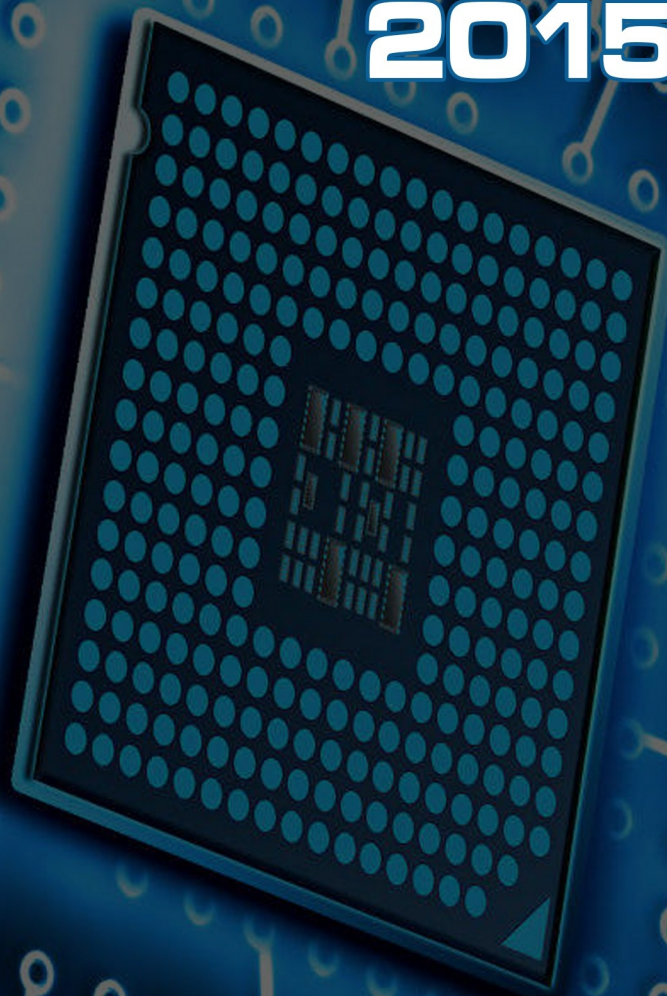




**SPIRO**  
SOLUTIONS PVT LTD

**FPGA BASED  
PROJECT TITLE  
2015 - 2016**



# FPGA

**TECHNOLOGY: VLSI**

**HARDWARE: FPGA**

**DOMAIN: ROBOTICS**

| S.NO | PROJECT CODE | PROJECT TITLE                                                                                       | APPLICATION        |
|------|--------------|-----------------------------------------------------------------------------------------------------|--------------------|
| 1    | ITVL41       | FPGA BASED TOWARDS A NEW MODALITY-INDEPENDENT INTERFACE FOR A ROBOTIC WHEEL CHAIR                   | VIRTUAL DYNAMICS   |
| 2    | ITVL42       | FPGA BASED HUMAN-LIKE MOTION GENERATION AND CONTROL FOR HUMANOID'S DUAL ARM OBJECT MANIPULATION     | HUMANOID ROBOT     |
| 3    | ITVL43       | FPGA BASED A ROBUST REAL-TIME VISION SYSTEM FOR AUTONOMOUS CARGO TRANSFER BY AN UNMANNED HELICOPTER | AUTOMATED CONTROL  |
| 4    | ITVL44       | FPGA BASED AN ULTRASONIC AND VISION-BASED RELATIVE POSITIONING SENSOR FOR MULTI ROBOT LOCALIZATION  | ROBOT LOCALIZATION |
| 5    | ITVL45       | FPGA BASED EFFECTS OF VIBROTACTILE FEEDBACK ON HUMAN LEARNING OF ARM                                | MOTION BASED ROBOT |

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|                                                                                          |        |                                                                                                           |                      |
|------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------|----------------------|
|                                                                                          |        | MOTIONS                                                                                                   |                      |
| 6                                                                                        | ITVL46 | FPGA BASED AUTOMATIC LIGHTING SYSTEM<br>USING MULTIPLE ROBOTIC LAMPS                                      | AUTOMATION<br>ROBOTS |
| <b>TECHNOLOGY: VLSI</b><br><br><b>HARDWARE: FPGA</b><br><br><b>DOMAIN: ANDROID</b>       |        |                                                                                                           |                      |
| 7                                                                                        | ITVL47 | FPGA BASED SMART DIARY: A SMARTPHONE-BASED FRAMEWORK FOR SENSING, INFERRING AND LOGGING USER'S DAILY LIFE | ROBO STORAGE         |
| <b>TECHNOLOGY: VLSI</b><br><br><b>HARDWARE: FPGA</b><br><br><b>DOMAIN: AUTOMATION</b>    |        |                                                                                                           |                      |
| 8                                                                                        | ITVL48 | FPGA BASED AUTOMATION DETECTION OF SQUATS IN RAILWAY INFRASTRUCTURE                                       | VISION<br>DETECTION  |
| 9                                                                                        | ITVL49 | FPGA BASED HAND-MOTION CRANE CONTROL USING RADIO FREQUENCY REAL-TIME LOCATION SYSYTEM                     | MECHATRONICS         |
| <b>TECHNOLOGY: VLSI</b><br><br><b>HARDWARE: FPGA</b><br><br><b>DOMAIN: GSM &amp; GPS</b> |        |                                                                                                           |                      |
| 10                                                                                       | ITVL50 | FPGA BASED REAL-TIME GPS PRECISE POINT                                                                    |                      |



|                                                                                         |        |                                                                                                  |                       |
|-----------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------|-----------------------|
|                                                                                         |        | POSITIONING-BASED PERCEPTIBLE WATER VSPOR ESTIMATION FOR RAINFALL MONITORING AND FORECASTING     | SENSOR NETWORK        |
| 11                                                                                      | ITVL51 | FPGA BASED A METHODOLOGY FOR DENOISING AND GENERATING BUS INFRASTRUCTURE DATA                    | LOCATION POSITIONING  |
| 12                                                                                      | ITVL52 | FPGA BASED AUTOMATION DETECTION AND NOTIFICATION OF POTHOLES AND HUMPS ON ROADS TO AIDS DRIVERS  | AUTOMATED ELECTRONICS |
| 13                                                                                      | ITVL53 | FPGA BASED AUTOMATIC AMBULANCE RESCUE SYSYTEM                                                    | EMERGENCY RESCUE      |
| <b>TECHNOLOGY: VLSI</b><br><b>HARDWARE: FPGA</b><br><b>DOMAIN: CONSUMER ELECTRONICS</b> |        |                                                                                                  |                       |
| 14                                                                                      | ITVL54 | FPGA BASED INTEGRATION OF MEMS INERTIAL AND PRESSURE SENSOR FOR VERTIAL TRAJECTORY DETERMINATION | PRESSURE HANDLER      |
| 15                                                                                      | ITVL55 | FPGA BASED STEPPER MOTOR CONTROL                                                                 | AUTOMATION            |
| 16                                                                                      | ITVL56 | FPGA BASED MULTIPLE AXIS MOTION CONTROL CHIP                                                     | ROBO MECHANISM        |

**TECHNOLOGY: VLSI**

**HARDWARE: FPGA**

**DOMAIN: LI-FI**

|    |        |                                                                              |                         |
|----|--------|------------------------------------------------------------------------------|-------------------------|
| 17 | ITVL57 | FPGA BASED ECOFRIENDLY DATA<br>TRANSMISSIONIN VISIBLE LIGHT<br>COMMUNICATION | TRASMISSION<br>FIDELITY |
|----|--------|------------------------------------------------------------------------------|-------------------------|

## 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.

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