

Embedded Systems Projects

I. EMBEDDED based HANDHELD MOBILE COMPUTERS

1. Heart Rate Tracking using Wrist-Type Photoplethysmographic (PPG) Signals during Physical Exercise with Simultaneous Accelerometry. **(IEEE 2016)**
2. Wearable Noncontact Armband for Mobile ECG Monitoring System. **(IEEE 2016)**
3. AutoDietary: A Wearable Acoustic Sensor System for Food Intake Recognition in Daily Life. **(IEEE 2016)**
4. An RFID based Smartphone Proximity Absence Alert System. **(IEEE 2016)**
5. Smart phone-based peak expiratory flow meter. **(IEEE 2016)**
6. Market Basket Analysis using Association Rule Learning (Snap & Shop). **(IEEE 2016)**
7. Infant Security Systems for Hospitals Using IBEACON. **(IEEE 2016)**
8. UR-SolarCap: An Open Source Intelligent Auto-Wakeup Solar Energy Harvesting System for Supercapacitor-Based Energy Buffering. **(IEEE 2016)**

II. EMBEDDED based BIO-MEDICAL APPLICATIONS

1. Non-invasive measurement of stress levels in knee implants using a magnetic-based detection method. **(IEEE 2016)**
2. Telemonitoring System for Patients with Chronic Kidney Disease Undergoing Peritoneal Dialysis (Portable Kidney Machines). **(IEEE 2016)**
3. Benefits of using a voice and EMG-driven actuated glove to support occupational therapy for stroke survivors. **(IEEE 2016)**
4. An NFC-Enabled CMOS IC for a Wireless Fully Implantable Glucose Sensor. **(IEEE 2016)**



IEEE 2016

5. Temporal Pattern Recognition in Gait Activities Recorded with a Footprint Imaging Sensor System. **(IEEE 2016)**
6. Analysis of Oscillatory Neural Activity in Series Network Models of Parkinson's Disease During Deep Brain Stimulation. **(IEEE 2016)**
7. Model for Personalization of mHealth Systems for Monitoring Patients with Chronic Diseases. **(IEEE 2016)**
8. OB CITY–Definition of a Family-Based Intervention for Childhood Obesity Supported by Information and Communication Technologies. **(IEEE 2016)**
9. A Self-Calibrating Radar Sensor System for Measuring Vital Signs. **(IEEE 2016)**

III. EMBEDDED based CYBER-PHYSICAL SYSTEM

1. Wearable Heart Rate Sensor Systems for Wireless Canine Health Monitoring. **(IEEE 2016)**
2. Analysis and Control of Multi-Phase Inductively Coupled Resonant Converter for Wireless Electric Vehicle Charger Applications. **(IEEE 2016)**
3. A Dual-Channel, Interference-free, Bacteria-Based Biosensor for Highly-Sensitive Water Quality Monitoring. **(IEEE 2016)**
4. Modeling Mobile Ticket Dispenser System with Impatient Clerk. **(IEEE 2016)**
5. Transport models and intelligent transportation system to support urban evacuation planning process (School Children Transportation safety). **(IEEE 2016)**
6. Maintenance Scheduling of Volt-VAR Control Assets in Smart Distribution Networks Using Advanced Metering Infrastructure. **(IEEE 2016)**
7. An Adaptive Impedance Matching System for Vehicular Power Line Communication. **(IEEE 2016)**
8. Soft Actuation: Smart Home and Office with Human-in-the-Loop. **(IEEE 2016)**

EMBEDDED SYSTEMS Projects

IEEE 2016



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IEEE 2016

IV. EMBEDDED based ROBOTIC VEHICLE

1. Head Movement Controlled Wheel Chair Using MEMS Sensors. **(IEEE 2016)**
2. Autonomous Data Collection with Limited Time for Underwater Vehicles. **(IEEE 2016)**
3. Control of a Wheelchair in an Indoor Environment Based on a Brain-Computer Interface and Automated Navigation. **(IEEE 2016)**
4. Design and development of a climbing robot for several applications. **(IEEE 2016)**
5. Visual Servoing of Quadrotors for Perching by Hanging from Cylindrical Objects. **(IEEE 2016)**
6. Robust Trajectory Tracking Error-Based Model Predictive Control for Unmanned Ground Vehicles. **(IEEE 2016)**
7. Learning Physical Collaborative Robot Behaviors from Human Demonstrations. **(IEEE 2016)**

V. EMBEDDED based UBIQUITOUS COMPUTING

1. Modeling Healthcare Quality via Compact Representations of Electronic Health Records. **(IEEE 2016)**
2. Microwave Sensing of Quality Attributes of Agricultural and Food Products. **(IEEE 2016)**
3. Electrical Impedance Sensor for Real-Time Detection of Bovine Milk Adulteration **(IEEE 2016)**
4. Active RFID and ESP8266 based Child Monitoring System. **(IEEE 2016)**
5. Using Distributed Wearable Sensors to Measure and Evaluate Human Lower Limb Motions. **(IEEE 2016)**
6. Analysis and Modeling of Selected Energy Consumption Factors for Embedded ECG Devices (Fault detector unit). **(IEEE 2016)**

IEEE 2016

7. Railway Track Circuit Fault Diagnosis Using Recurrent Neural Networks (condition monitoring for railway industry). **(IEEE 2016)**
8. Energy Optimization Study of Rural Deep Well Two-Stage Water Supply Pumping Station (Sewage Treatment). **(IEEE 2016)**
9. A Blind-Zone Detection Method Using a Rear-Mounted Fisheye Camera with Combination of Vehicle Detection Methods. **(IEEE 2016)**

VI. *EMBEDDED based ENERGY-SENSITIVE PRODUCTION CONTROL*

1. MAS-Based Energy Management Strategies for a Hybrid Energy Generation System. **(IEEE 2016)**
2. Wind turbine condition monitoring and fault diagnosis in China. **(IEEE 2016)**
3. Challenges and Perspectives in Tandem Thermoelectric–Photovoltaic Solar Energy Conversion. **(IEEE 2016)**
4. Power comparison of MPPT techniques for solar system. **(IEEE 2016)**
5. A Flexible Piezoelectric-Pyroelectric Hybrid Nanogenerator Based on P(VDF-TrFE) Nanowire Array. **(IEEE 2016)**

VII. *EMBEDDED based SECURITY AND ACCESS CONTROL*

1. Software-Defined Industrial Internet of Things in the Context of Industry 4.0. **(IEEE 2016)**
2. An Active Safety System for Low-Speed Bus Braking Assistance. **(IEEE 2016)**
3. A Multisensor Technique for Gesture Recognition Through Intelligent Skeletal Pose Analysis. **(IEEE 2016)**



IEEE 2016

VIII. EMBEDDED based BANKING

1. Effects of Automated Teller Machine on the Performance of Nigerian Banks. **(IEEE 2016)**
2. AADHAR based Electronic Voting Machine using Arduino (Automatic Voting Machine). **(IEEE 2016)**
3. Comparative Study and Simulation of Digital Forensic Tools. **(IEEE 2016)**

IX. EMBEDDED based E-COM

1. BSN-Care: A Secure IoT-based Modern Healthcare System Using Body Sensor Network. **(IEEE 2016)**
2. Smart Pollution Monitoring for Instituting Aware Traveling. **(IEEE 2016)**
3. 3. Low Power Wearable Systems for Continuous Monitoring of Environment and Health for Chronic Respiratory Disease. **(IEEE 2016)**
4. Autonomous Channel Switching: Towards Efficient Spectrum Sharing for Industrial Wireless Sensor Networks. **(IEEE 2016)**
5. An Optimal and Learning-Based Demand response and Home Energy Management System. **(IEEE 2016)**
6. Design of Automated Irrigation System based on Field sensing and forecasting. **(IEEE 2016)**
7. A Tri-Beam Dog-Bone Resonant Sensor with High-Q in Liquid for Disposable Test-Strip Detection of Analyze Droplet (Saline droplet measurement system). **(IEEE 2016)**

IEEE 2016

X. EMBEDDED based WIFI & LIGHT FIDELITY

1. Optimized LEDs Foot printing for Indoor Visible Light Communication Networks **(IEEE 2016)**
2. VANET based Real-Time Intelligent Transportation System (VLC based VANET). **(IEEE 2016)**
3. A Surveillance Robot For Real Time Monitoring and Capturing Controlled Using Android Mobile (spy robot based WI-FI). **(IEEE 2016)**

XI. EMBEDDED based TRANSPORTATION SYSTEM

1. Access Control Application using Android Smartphone, Arduino and Bluetooth (remote controlled vehicle based on Intel Galileo Platform). **(IEEE 2016)**
2. Three stage Toll Gate Alarming Mechanism on Road Highways. **(IEEE 2016)**
3. A Survey of Vision-Based Traffic Monitoring of Road Intersections (Travolution). **(IEEE 2016)**
4. Connected Vehicles for Intelligent Transportation Systems. **(IEEE 2016)**
5. Distratto: Impaired Driving Detection Using Textile Sensors. **(IEEE 2016)**
6. Solving the Dynamic Vehicle Routing Problem under Traffic Congestion (congestion control, ambulance clearance, and stolen vehicle detection). **(IEEE 2016)**

XII. EMBEDDED based INTERNET OF THINGS (IOT)

1. Geo-spatial Location Spoofing Detection for Internet of Things. **(IEEE 2016)**
2. DB-based Repository Design for IoT generated RFID/Sensor Big Data- Supply Chain Management. **(IEEE 2016)**

IEEE 2016

3. Using Smart Edge IoT Devices for Safer, Rapid Response with Industry IoT Control Operations- Manufacturing. **(IEEE 2016)**
4. Black Box Anomaly Detection in Multi-Cloud Environment. **(IEEE 2016)**
5. Front-End Intelligence for Large-Scale Application-Oriented Internet-of-Things. **(IEEE 2016)**
6. Enabling Synergy in IoT: Platform to Service and Beyond- Heterogeneous Company Infrastructure. **(IEEE 2016)**
7. Internet of Things and Big Data Analytics for Smart and Connected Communities . **(IEEE 2016)**
8. E-Waste Management: Save Earth. **(IEEE 2016)**

XIII. EMBEDDED based VIRTUAL REALITY

1. Cognitive Load Measurement in a Virtual Reality-based Driving System for Autism Intervention. **(IEEE 2016)**
2. Air-touch User Interface with High Touch Accuracy on Flat-concave dual-mirror projector. **(IEEE 2016)**
3. Cyberphysical System with Virtual Reality for Intelligent Motion Recognition and Training. **(IEEE 2016)**

XIV. EMBEDDED based COMPUTER VISION AND IMAGE PROCESSING

1. Diabetic foot ulcer assessment through the aid of smart phone. **(IEEE 2016)**
2. Robust Cell Detection of Histopathological Brain Tumor Images Using Sparse Reconstruction and Adaptive Dictionary Selection. **(IEEE 2016)**
3. Fusion of quantitative image and genomic biomarkers to improve prognosis assessment of early stage lung cancer patients **(IEEE 2016)**

IEEE 2016

4. MIGS-GPU: Microarray Image Gridding and Segmentation on the GPU. **(IEEE 2016)**
5. Automatic Constraint Detection for Layout Regularization. **(IEEE 2016)**
6. Catalogue of Hybrid Video Watermarking Techniques. **(IEEE 2016)**
7. Daytime Preceding Vehicle Brake Light Detection Using Monocular Vision. **(IEEE 2016)**
8. Onboard fuzzy logic approach to active fire detection in Brazilian amazon forest. **(IEEE 2016)**

XV. *EMBEDDED based HUMAN-MACHINE INTERFACE*

1. Visual-Attention Based background modeling for Detecting Infrequently Moving Objects. **(IEEE 2016)**
2. A High-Efficiency and High-Speed Gain Intervention Refinement Filter for Haze Removal. **(IEEE 2016)**
3. Statistical Hypothesis Detector for Abnormal Event Detection in Crowded Scenes. **(IEEE 2016)**
4. Automatic Ear Landmark Localization, Segmentation & Pose Classification in Range Images. **(IEEE 2016)**
5. Bayesian Blind Identification of Nonlinear Distortion with Memory for Audio Applications (Medico Stick). **(IEEE 2016)**
6. Adherent Raindrop Modeling, Detection and Removal. **(IEEE 2016)**

XVI. *EMBEDDED based ARCHITECTING AND CONSTRUCTION*

1. Sensing and Decision-Making in Cyber-Physical Systems: The Case of Structural Event Monitoring. **(IEEE 2016)**

IEEE 2016

2. Automated Crack Detection on Concrete Bridges. **(IEEE 2016)**
3. Detection of Inner Corrosion of Steel Construction Using Magnetic Resistance Sensor and Magnetic Spectroscopy Analysis. **(IEEE 2016)**
4. A Survey on Rapidly Deployable Solutions for Post-Disaster Networks. **(IEEE 2016)**
5. Smart City Wireless Connectivity Considerations and Cost Analysis: Lessons Learnt From Smart Water Case Studies. **(IEEE 2016)**
6. Soil Structure Interaction of Tall Buildings .**(IEEE 2016)**
7. Automatic Crack Detection and Measurement Based on Image Analysis. **(IEEE 2016)**

XVII. EMBEDDED based LAB-VIEW

1. Teaching Introductory Robotics Programming: Learning to Program with National Instruments' LabVIEW. **(IEEE 2016)**
2. EEG Acquisition and Processing for Cognitive Brain Mapping During Chess Problem Solving. **(IEEE 2016)**
3. The puzzle of police body cams. **(IEEE 2016)**

XVIII. EMBEDDED based RASPBERRY PI

1. Smart Home Automation: A Literature Review. **(IEEE 2016)**
2. Smart Precision based Agriculture using Sensors. **(IEEE 2016)**
3. The tactile internet: vision, recent progress, and open challenges. **(IEEE 2016)**
4. Multi-Directional Multi-Level Dual-Cross Patterns for Robust Face Recognition. **(IEEE 2016)**
5. Early Scavenger Dimensioning in Wireless Industrial Monitoring Applications. **(IEEE 2016)**