**MTech Projects**

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| **2016 -** April | | | | |
| Sl.No. | Pr.No. | Title | Student Name | Guide |
| 1 | TPR/1 | Video Frame development Realization using FBGA | Ajhad M | Jegajith P T |
| 2 | TPR/2 | SmartFusion Soc based Data Compression and Recording System for Environmental Stress Monitoring | Anakha U S | Dr. Sethunadh R  & Maria George |
| 3 | TPR/3 | Design Optimization of Broadband Radar Absorbers using Artificially Engineered Materials | Anusha Eldho | Dr. Balamati Choudhury |
| 4 | TPR/4 | Automotive Diagnostics over IP based on AUTOSAR | Balendu S Kumar | Soniya J |
| 5 | TPR/5 | Interleaving Of Multiple Compressed Video Stream & Intelligence On Optimised Bandwidth | Eaka Valsan | Rajkumar M |
| 6 | TPR/6 | Detection and Delineation of P & T Waves in Electrocardiogram | Jeeshma Ganardhanan | Mr. Vineeth Sinha |
| 7 | TPR/7 | Radar Cross Section of Coated Conducting Structures | Manmohan C T | Dr. Hema Singh |
| 8 | TPR/8 | High Accuracy People Ditection Algorithm | Nishitha A | Rajkumar M |
| 9 | TPR/9 | Dielectric Characterization of Emulsions | Prakash P V | Dr. Vikram Melapudi |
| 10 | TPR/10 | Optical tomography for non – intrusive measurements | Reshmi Lal K | S Rajapandian |
| 11 | TPR/11 | Firmware Development of G-Code Interpreter with PID Motion Control | Reshmy R Nair | Jegajith P T |
| 12 | TPR/12 | Optimized AUTOSAR Based Dual Core Operating System For Automobiles | Rosna Vareed V T | Ms. Sreeja K S |
| 13 | TPR/13 | Reconfigurable Multiband Patch Antenna | Santhosh B S | Prof. (Dr.) C K Aanandan |
| 14 | TPR/14 | Methodology for consistent timing and smart debug for high speed FPGA video design | Shibin K S | Nighil E |
| 15 | TPR/15 | Adaptive Digital Beam Forming Techniques for Active Phased Array Radar | Sibilkumar T B | Prof. (Dr.) C K Aanandan |
| 16 | TPR/16 | Enhancement of bandwidth of RMSA Using U-slot techniques | Sreelatha K K | Prof. (Dr.) C K Ananthan |
| 17 | TPR/17 | Design and Analysis of Low Observable Antenna by FSS Technology | Sruthi T V | Prof. (Dr.) C K Aanandan &  Dr. Shiv Narayan |
| 18 | TPR/18 | Radar Cross Section of Dielectric Structures | Subhalakshmy A.B | Dr.Hema Singh & Dr.C K Aanandan |
| 19 | TPR/19 | Audio Steganography in Android with Data Compression and Asymmetric Cryptography | Swathy K C | Prof.(Dr.) Supriya M.H. |
| 20 | TPR/20 | Acoustic Synthesis of Underwater Noise for Target Modeling | Unnimaya N | Prof.(Dr.) Supriya M.H. |
| 21 | TPR/21 | Design and Characterization of Higher Order Sigma Delta ADC | Vani R | Dr.Sreelal S |
| 22 | TPR/22 | Electromagnetic Design and Performance Analysis of Streamlined Airborne Radomes based on Novel Wall Configurations | Mahima P | Dr.Raveendranath U.Nair & Dr.C K Aanandan |
| **2016 -** November | | | | |
| 1 | TPR/1 | Stepper motor based graphics plotter with GUI | Akhil P | Dr. Bijoy A Jose |
| 2 | TPR/2 | Design and Development of Metasurface for Electromagnetic Applications | Akshaya V.V | Dr. Balamati Choudhury, Mr.Selva Kumar N & Dr. C K Aanandan |
| 3 | TPR/3 | Framework for Digital video Stabilisation & Object Tracking | A K Shijesh | Prof.(Dr.) Supriya M.H. |
| 4 | TPR/4 | Corporate Ridesharing | Alan Tom Jose | Mr.Jackson Chackungal & Dr. Bijoy A Jose |
| 5 | TPR/5 | FORMAL METHOD BASED TECHNIQUE TO DERIVE THE REQUIREMENTS FROM EMBEDDED SYSTEM MODELS | Athira V V | Dr. Manju Nanda |
| 6 | TPR/6 | Design and Analysis of Planar Radomes for Phased Array Antennas | Athulya N | Dr.C K Aanandan & Ms. Vineetha Joy |
| 7 | TPR/7 | Accelerated Numerical Based Techniques for Radar Cross Section Analysis | Deepa K Sasidharan | Dr.Hema Singh & Ms. Vineetha Joy |
| 8 | TPR/8 | Smart Automobile Surveillance System | Diji K V | Dr. Bijoy A Jose & Mr. Naveen Mullakara Vasudevan |
| 9 | TPR/9 | IoT enabled Flight Kiosk | Dipumon Haridas | Dr. Bijoy A Jose & Roshan Joseph |
| 10 | TPR/10 | FDTD BASED MODELING FOR RCS ESTIMATION OF AEROSPACE STRUCTURES | Ganeshnath R | Dr. ShivNarayan &  Dr.C K Aanandan |
| 11 | TPR/11 | Enhancing Antenna Boresight Gain Using a Miniaturised Metasurface Lens | Irshad Ali TK | Dr. C K Aanandan |
| 12 | TPR/12 | Home Interaction System | Jithin T sudhakar | Dr. Bijoy A Jose & Mr. Naveen Mullakara Vasudevan |
| 13 | TPR/13 | Design and Development of Conformal Frequency Selective Surfaces for Aerospace Applications | Limna T J | Dr. ShivNarayan &  Dr.C K Aanandan |
| 14 | TPR/14 | Investigations on the use of Metasurfaces for Bandwidth Enhancement of Circularly Polarized Microstrip Antenna | Mukundakumar M | Dr.C K Aanandan |
| 15 | TPR/15 | EM Analysis of Plasma-Based Radar Absorbing Structures | Nijila K S | Dr.C K Aanandan , Dr.Hema Singh & Mrs. Vineetha Joy |
| 16 | TPR/16 | Design and Development of Compact H Plane SIW Horn Antenna | Nisamol T A | Dr.C K Aanandan |
| 17 | TPR/17 | Study of Wi-Fi and Captive Portal Implementation | Nived V | Sharath K S |
| 18 | TPR/18 | Development and patch array antenna with reduced Radar Cross Section | Priyanka R Ravi | Dr.C K Aanandan |
| 19 | TPR/19 | Develop a diagnosis-prognosis approach critical embedded systems | Sandeep Krishnan P | Jayanthi J |
| 20 | TPR/20 | Integration of UML with UPPAL for Safety Critical Design, Analysis & verification | Shakira Thankayathil | Dr. Manju Nanda |

**2017 -** November

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| --- | --- | --- | --- | --- |
| 1 | TPR/1 | Enhanced Aerial Surveillance Using Artificial Intelligence | Anjali P P | Mr. Naveen Mullakara Vasudevan |
| 2 | TPR/2 | Extendable Compact Planar UWB MIMO Antenna Array | Aparna C | Dr.C K Aanandan |
| 3 | TPR/3 | Planogram Compliance Checking System | Elizabeth George E | Mr. Naveen Mullakara Vasudevan |
| 4 | TPR/4 | Design and Development of Conformal Antenna for Aerospace Applications | Laya Varghese | Dr. Balamati Choudhury &  Dr.C K Aanandan |
| 5 | TPR/5 | ECG Simulation | Little Treesa & Misha Mary Mathews | Prof.(Dr.) Supriya M.H. |
| 6 | TPR/6 | Simulation of Hydrophone Array Configuration for Wideband Beamforming - Spatial Filtering | Rajeswarimol T | Mr.Arun A.Balakrishnan |
| 7 | TPR/7 | AR and IoT based Monitoring and Assistance System for Hotels | Rohit V Vasanth | Prof.(Dr.) Supriya M.H. |
| 8 | TPR/8 | Implementation of chatterbot and integration in messaging platforms | Salmanul Faris K | Roshan Joseph |
| 9 | TPR/9 | Gain Improvement of Lower UWB Monopole Antenna using FSS Layer | Sanalakshmi Sajeevan | Dr.C K Aanandan |
| 10 | TPR/10 | Design and fabrication of matching circuit for hydrophone array and fabrication of hydrophone array | Shabin P | Mr.Arun A.Balakrishnan |
| 11 | TPR/11 | Bandwidth Reconfigurable Planar Antenna for WLAN/WiMax Applications | Surya V V | Dr.C K Aanandan |
| **2017 -** April | | | | |
| 1 | TPR/1 | Stepper Motor Based Graphics Plotter with GUI | Akhil P | Dr. Bijoy A Jose |
| 2 | TPR/2 | Design and Development of Metasurfaces for Electromagnetic Applications | Akshaya V V | Dr. Balamati Choudhury |
| 3 | TPR/3 | Corporate Ridesharing | Alan Tom Jose | Mr. Jackson Chackungal |
| 4 | TPR/4 | Formal Method based technique to derive the requirements from Embedded system models | Athira V V | Dr. Manju Nanda |
| 5 | TPR/5 | Design and Analysis of Planar Radomes for Phased Array Antennas | Athulya N | Mrs. Vineetha Joy |
| 6 | TPR/6 | Accelerated Numerical Based Techniques for Radar Cross Section Analysis | Deepa K Sasidharan | Dr.Hema Singh & Mrs. Vineetha Joy |
| 7 | TPR/7 | Smart Automobile Surveillance System | Diji K V | Mr. Naveen M Vasudevan |
| 8 | TPR/8 | IoT enabled Flight Kiosk | Dipumon Haridas K | Roshan joseph |
| 9 | TPR/9 | FDTD based Modeling for RCS Estimation of Aerospace-like Structures | Ganeshnath R | Dr. Shiv Narayan |
| 10 | TPR/10 | Enhancing Antenna Boresight Gain Using a Miniaturised Metasurface Lens | Irshad Ali T K | Dr.C K Aanandan |
| 11 | TPR/11 | Home Interaction System | Jithin T Sudhakar | Mr. Naveen M Vasudevan |
| 12 | TPR/12 | Design and Development of Conformal Frequency Selective Surfaces for Aerospace Applications | Limna T J | Dr. ShivNarayan |
| 13 | TPR/13 | Modelling and Analysis of UAV Autopilot | Nidha Mol O A | Mrs. Jayanthi J |
| 14 | TPR/14 | EM Analysis of Plasma-Based Radar Absorbing Structures | Nijila K S | Dr.Hema Singh & Mrs. Vineetha Joy |
| 15 | TPR/15 | Captive Portal Implementation and Location Based Attendance System | Nived V | Sharath K S |
| 16 | TPR/16 | Development of Patch Array Antenna with Reduced Radar Cross Section | Priyanka R Ravi | Dr.C K Aanandan |
| 17 | TPR/17 | Implementation of AES Encryption and Decrypton With High Secured Low Power Multiplexer-LUT Based S-Box | Ratheesh T | Mr.Mithun Haridas T.P. |
| 18 | TPR/18 | Develop a Diagnosis-Prognosis Approach for Safety Critical Embedded Systems | Sandeep Krishnan P | Mrs. Jayanthi J |
| 19 | TPR/19 | Integration of UML with UPPAAL for Safety Critical System Design, Analysis & verification | Shakira Thankayathil | Dr. Manju Nanda |

**2018**

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| --- | --- | --- | --- | --- |
| 1 | TPR/1 | Substrate Integrated Waveguide (SIW) Antennas At X-Band | Abhida KA | Dr.C K Aanandan |
| 2 | TPR/2 | Emotion Recognition & Analysis | Ajai John Chemmanam | Roshan Joseph |
| 3 | TPR/3 | Development of VR Interface on FPGA | Amina K | Prof.(Dr.) Supriya M.H. |
| 4 | TPR/4 | AI based Enhanced Aerial Surveillance Using Drone | Anjali P P | Mr. Naveen M Vasudevan |
| 5 | TPR/5 | Compact Planar UWB MIMO Antenna Array | Aparna C | Dr.C K Aanandan |
| 6 | TPR/6 | Underwater Image Enhancement using CLAHE, USM | Bindu Ravi T V | Arun A Balakrishnan |
| 7 | TPR/7 | Real-Time Electric Vehicle Scheduling & Allocation for Smart Energy Vehicles | Chicku Salim | Ajith Kumar P N |
| 8 | TPR/8 | Design and Development of Metamaterial Inspired Conformal Radar Absorbers | Delme Winson | Dr. Balamati Choudhury |
| 9 | TPR/9 | Artificial Intelligence based Planogram Compliance Checking System | Elizabeth George E | Mr. Naveen M Vasudevan |
| 10 | TPR/10 | IOT Based Real-Time Indoor Positioning System | Elsa Mary Cyriac | Alan Raj Abraham |
| 11 | TPR/11 | Machine Learning Based Real Time Face Recognition | Joe N George | Rajkumar M |
| 12 | TPR/12 | Design and Development of Conformal Antenna for Aerospace Applications | Laya Varghese | Dr. Balamati Choudhury |
| 13 | TPR/13 | Simulation of Hydrophone Array Configuration for Wideband Beamforming: Target localisation and Tracking | Manasa P M | Prof.(Dr.) Supriya M.H. |
| 14 | TPR/14 | Neural Network Based People Detection and Tracking for Queue time Estimation | Oshin Maria George | Syed Khan |
| 15 | TPR/15 | Simulation of Hydrophone Array Configuration for Wideband Beamforming – Spatial Filtering | Rajeswarimol T | Mr. Arun A Balakrishnan |
| 16 | TPR/16 | Gain Improvement of Lower UWB Monopole Antenna using FSS Layer | Sanalakshmi Sajeevan | Dr.C K Aanandan |
| 17 | TPR/17 | Data Acquisition and Processing in Imaging Sonars | Sreedevi K | Vijay Gopal G |
| 18 | TPR/18 | WEBRTC Audio-Video Conferencing System | Sreelekshmi S | Babukannan Balakrishnan |
| 19 | TPR/19 | Bandwidth Reconfigurable Planar Antenna for WLAN/WiMAX | Surya V V | Dr.C K Aanandan |
| 20 | TPR/20 | Underwater Object Detection using OpenCV Python and Matlab | Vidya Ramachandran | Mr. Arun A Balakrishnan |
| 21 | TPR/21 | Empirical analysis using tensorflow on high performance computer | Vishnupriya A B | Dr. Bijoy A Jose |

**2019**

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| --- | --- | --- | --- | --- |
| 1 | TPR/1 | Application of Physically Unclonable Function in Hardware Security | Ajish Zacharias | Dr. Bijoy Antony Jose |
| 2 | TPR/2 | IoT Based Self-Healing Mesh Network | Anisha anil | Mr. Tinto Thomas |
| 3 | TPR/3 | Implementation of Chatbot Using Microsoft Bot Framework | Aparna mohan | Roshan Joseph |
| 4 | TPR/4 | Automation Development And Execution of diagnostic Testing for Power Train controls of Electrification (Hybrid) Vehicles | Athira A S | Veera reddy |
| 5 | TPR/5 | Dead Reckoning and 6LoWPAN Integretion or Healthcare Applications | Athulya Rose Augustine | Vishal Roy |
| 6 | TPR/6 | Design and Development of Dynamic EW Threat Simulator | Baiju E | B N Lokesha |
| 7 | TPR/7 | Lighting Control System Using Multi-Protocols | Beneeta Christy J | Mr. Tinto Thomas |
| 8 | TPR/8 | FPGA Implementation of 64 Point Fft | Chithra P C | Dr. Nalesh S |
| 9 | TPR/9 | Hybrid Route Recommender System for Smarter Logistics | Grieshma Unnikrishnan | Dr. Bijoy Antony Jose |
| 10 | TPR/10 | Design of Koch Fractal Antenna for RFID Tag Application | Hanan Muzafar | Dr. C K Aanandan |
| 11 | TPR/11 | Design and Development of Autonomous Underwater vehicle for Imaging | Jagadees P M | Rajesh M |
| 12 | TPR/12 | Design and Simulation of A 205MHz Radio Frequency Power Amplifier | Jasil T K | Prof. Dr. P Mohanan |
| 13 | TPR/13 | Design of Fully Integrated S-Band Power Amplifier | Keerthy Muraleedharan | Mr. Vineesh Mohan |
| 14 | TPR/14 | Automated Validation of Instrument Panel Cluster Using Image Processing Algorithms | Little Treesa | Gracen P George |
| 15 | TPR/15 | AI Based Smart Retail Shop | Misha Mary Mathews | Naveen Mullakara vasudevan |
| 16 | TPR/16 | Development of IoT Nodes Using 6LoWPAN | Muhammed Safvan P | Mr. Ajay M P |
| 17 | TPR/17 | Localization and Tracking Using Beamforming Techniques | Rashida K | Prof. (Dr.) Supriya M H |
| 18 | TPR/18 | Deep Learning Based Road Safety Solution | Razan K Abdulla | Mr. Renjith Viswanath |
| 19 | TPR/19 | Firmware Design for Synchronized Data Acquisition and Telemetry for Distributed Sensors | Resmi M G | Mr. Nirmal Mohan Sc ‘E’ |
| 20 | TPR/20 | Speech Recognition: a Comparison Between Microsoft Cognitive Services & Neural Networks | Revathi S | Roshan Joseph |
| 21 | TPR/21 | Construction Safety Surveillance Using Machine Learning | Ruksin Kamal | Dr. Bijoy Antony Jose |
| 22 | TPR/22 | Underwater Image Enhancement | Sanila K H | Prof. (Dr.) Supriya M H |
| 23 | TPR/23 | CNN-LSTM Based Human Action Recognition Using Deep-Learning | Snobin Antony | Mr. Mithun Haridas T P |
| 24 | TPR/24 | Comparitive Study of Underwater Object Detection Using Conventional Machine Learning Methods and Transfer Learning Techniques | Sravya N | Mr. Arun A Balakrishnan |
| 25 | TPR/25 | Deep Learning Based Car Damage Accessment for Automation in Insurance Clames | S L Sreejith | Karthikeyan S |
| 26 | TPR/26 | CAN Based Reconfigurable Bulding Automation System | Sreelakshmy M A | Prof. (Dr.) C K Aanandan |
| 27 | TPR/27 | Optimum Wideband Beamforming Techniques for Sensor Arrays in Frequency Domain | Thulasi Devi P G | Mr. Arun A Balakrishnan |
| 28 | TPR/28 | SuperDirective Antennas | Varada P | Dr. Deepti Das Krishna |

**2020**

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| --- | --- | --- | --- | --- |
| 1 | TPR/1 | Application of Physically Unclonable Function in hardware Security | Ajish Zacharias | Dr. Bijoy Antony Jose |
| 2 | TPR/2 | Temperature Modelling of Exhaust System Components in IC Engines | Anju Deleep | Mr. Manoj Kumar C |
| 3 | TPR/3 | Implementation of NIST Test Suite on FPGA | Ankita | Dr. Rajith Subhra Chakraborty |
| 4 | TPR/4 | RF Signal Strength Mapping | Anoop Raj | Kumary V Y Vidhu |
| 5 | TPR/5 | Multiplierless Sinc Filter with Improved magnitude Characteristics and Implementation in FPGA | Athulya M Nair | Shaji V P |
| 6 | TPR/6 | Optimization of RISC-V Code Size | P S Babu | Dr. Thripti S Warrier |
| 7 | TPR/7 | Near Field Analyzer in EMC Application | Bineesha P | Mr. Akhil V Paul |
| 8 | TPR/8 | Design and Implementation of Software Model for Remote Smart Parking Assistance in Automatic Transmission Cars | Fathima K A | Sushama Gupta |
| 9 | TPR/9 | Direction Finding System Using Time Modulated Array | Jaisy M A | Dr. Deepti Das Krishna |
| 10 | TPR/10 | Frequency Agile Electrically Small Antennas | Jinesh K P | Kumary V Y Vidhu |
| 11 | TPR/11 | Design and Experimental Characterization of Panels Covered with uniform and Engineered Metalized Paint for the Isolation of Buildings Areas from UHF RFID Communications | Jithin M S | Dr. Deepti Das Krishna |
| 12 | TPR/12 | Design of a 2-4 GHz Wideband Antenna for the Detection of Cosmological Recombination Spectral lines | Kavitha K | Dr. A Reghunathan |
| 13 | TPR/13 | FPGA Implementation of NO∆ Compression technique Used in NoC Based Multi-Core SoCs | Keerthana Gopi | Dr. Thripti S Warrier |
| 14 | TPR/14 | Sensor data Acquisition System | Krishnapriya T S | Dr. Suresh G & Mr. Arun A Balakrishnan |
| 15 | TPR/15 | Development of Firmware for FPGA Based Edge Sensor Controller | Lekshmi S Raj | Dr. Padmakar Singh Parihar |
| 16 | TPR/16 | Multiple Access Underwater Acoustic Channel Simulator | Mumthas A J | Sijomon P J |
| 17 | TPR/17 | HMI Generation for Safety Critical Embedded System | Nayana K | Dr. Manju Nanda |
| 18 | TPR/18 | Design and Analysis of Structurally Integrated Antenna for Aerospace Application | Nikhila T | Dr. Balamati Choudhury |
| 19 | TPR/19 | Design of Mobile Remote for Autonomous Navigation | Nirmal K A | Abel Varghese David |
| 20 | TPR/20 | Polyphace Filter Bank Channelizer Implementation on FPGA | Rabina Jose | Mr. Sameer Babu T P & Dr. Nalesh S |
| 21 | TPR/21 | Embedded Acoustic Modem | Remya Mary Thomas | Sameer Babu T P |
| 22 | TPR/22 | Machine Learning Based Image Quality Accessment | Shahanaz N | Dr. Bijoy Antony Jose |
| 23 | TPR/23 | Underwater Video Segmentation and Classification Using Learning Models | Shamsudheen | Mr. Mithun Haridas T P |
| 24 | TPR/24 | Sound Velocity Recorder | Sheetal P M | Sijomon P J |
| 25 | TPR/25 | Periodic Configuration (EBG/Metamaterial) for EM Applications | Sreelal R K | Dr. P H Rao |
| 26 | TPR/26 | Document Processing with Deep Learning | Swati | Naveen Mullakara Vasudevan |
| 27 | TPR/27 | Evolutionary Algoritm Based Optimization and EM Performance Analysis of Planar Graded Radomes for Phased Array Antennas | Teena A J | Mrs. Vineetha Joy & Dr. Hema Singh |
| 28 | TPR/28 | Wideband Conformal Antennas for Vehicle Mounted Jammer | Vishnu Prasad U | Dr. P H Rao |

**2022**

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| --- | --- | --- | --- | --- |
| 1 | TPR/1 | Development of L2 Tunnel to maintain access during data centre migration | Abu Jose George | Prof. (Dr.) Supriya M H |
| 2 | TPR/2 | Electronic power steering embedded software development | Adharsh R | Mr.S.Paramasivan |
| 3 | TPR/3 | Sea-Thru: Method for reconstruction of colours in underwater images | Adithya Babu | Mr. Arun A Balakrishnan |
| 4 | TPR/4 | Underwater image color restoration using Haze–Lines | Akhila Ashokan | Mr. Arun A Balakrishnan |
| 5 | TPR/5 | Reconstruction of underwater images using se-thru algorithm | Anagha Viswanath | Mr. Arun A Balakrishnan |
| 6 | TPR/6 | Verification of BIT manipulation ISA implemented in RISC-V | Anjana Mohandas | Dr. Tripti S Warrier |
| 7 | TPR/7 | FPGA based focused time domain beam forming for underwater acoustic imaging applications | Aparna A | Prof. (Dr.) Supriya M H |
| 8 | TPR/8 | Dielectric measurements of material | Athira K S | Dr. Deepti Das Krishna |
| 9 | TPR/9 | Design of a CMOS-memristive mixed-signal neuromorphic processor | Athira V | Dr.Nalesh S |
| 10 | TPR/10 | Negative group delay circuits | Athullia Emmanuel | Dr. Deepti Das Krishna & Mrs.Kumary V Y Vidhu |
| 11 | TPR/11 | Microwaves for non destructive testing | Breana Paul A | Dr. Deepti Das Krishna |
| 12 | TPR/12 | Trajectory estimation and tracking of fish species from underwater video | Faiza M Sidhique | Mr. Mithun Haridas T P |
| 13 | TPR/13 | Building a brain tumor detection application | Juhaina Parvin O K | Mr. Mithun Haridas T P & Alan Jose |
| 14 | TPR/14 | Design of P-SIMD instructions for RISC-V | Lakshmi M Kaimal | Dr. Tripti S Warrier |
| 15 | TPR/15 | Design of microwave diplexer | Madhuri Madhu | Mrs.Kumary V Y Vidhu |
| 16 | TPR/16 | Development of a machine learning based passive acoustic monitoring system for marine habitats using Spresense | Mathew Benny | Prof. (Dr.) Supriya M H |
| 17 | TPR/17 | ADAS ECU: Software development and verification | Mohamed Nihal Edakarakath | Mr.Pradeep P Nair |
| 18 | TPR/18 | Analysis of segmentation architectures on underwater images | Nazrin P B | Mr. Mithun Haridas T P |
| 19 | TPR/19 | Monaural separation of underwater acoustic sorces using successive down sampling and resampling of multi-resolution features network | Rolands Jose | Prof. (Dr.) Supriya M H |
| 20 | TPR/20 | Image processing on FPGA | Sona T S | Dr. Tripti S Warrier |
| 21 | TPR/21 | Implementation of adder and multiplier based on posit arithmetic | Sreelakshmi Pavithran | Dr.Nalesh S |
| 22 | TPR/22 | Embedded monocular depth estimation for obstacle detection and avoidance | Sruthy K S | Dr.Nalesh S |
| 23 | TPR/23 | VRain tumor detection and classification using deep neural networks | Vipina T V | Mr. Arun A Balakrishnan |
| 24 | TPR/24 | Design of reverberation chamber and its properties | Vismaya Vijayan | Dr. Deepti Das Krishna |

**2023**

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| --- | --- | --- | --- | --- |
| 1 | TPR 2023/1 | Radiative wireless power transfer. | Hrijith K. | Mrs. Kumary V Y Vidhu |
| 2 | TPR 2023/2 | Metasurface application for 5G Communication. | Nandana V | Mrs. Kumary V Y Vidhu |
| 3 | TPR 2023/3 | Silicon based light sensor. | Sandra EK | Dr. Tripti S Warrier |
| 4 | TPR 2023/4 | 3D DRAM Cache organizations. | Gokul K G | Dr. Tripti S Warrier |
| 5 | TPR 2023/5 | Real time epilepsy detection through wearable device using RISC-V CNN Coprocessor | Ranjan Kumar | Dr. Tripti S Warrier |
| 6 | TPR 2023/6 | Context encoder transfer- learning approaches for eye fundus analysis. | Sudhina D | Mr. Arun A Balakrishnan |
| 7 | TPR 2023/7 | Complementary FET (CFET) standard cell design for low parasitics | Divya Elizabeth Mathew | Mr. Arun A Balakrishnan |
| 8 | TPR 2023/8 | TS-SRAM Based L1 Caches with PVT autotracking. | Albin Joy | Mr. Arun A Balakrishnan |
| 9 | TPR 2023/9 | Soil moisture monitoring through UAS- Assisted internet of things LoRaWAN wireless underground sensors. | Anusree C | Dr. Nalesh S |
| 10 | TPR 2023/10 | Real-time semantic SLAM using short term dense concatenate network. | Joel Raju | Dr. Nalesh S |
| 11 | TPR 2023/11 | High linearity sinusoidal current generator using shifting current mirror architecture. | Akshaya Jayan | Dr. Nalesh S |
| 12 | TPR 2023/12 | IMCA: an efficient In-memory convolution accelerator. | Ajsar Maraickar KJ | Mrs. Tessy Ninan |
| 13 | TPR 2023/13 | Map making in social indoor environment through robot navigation using active SLAM | Aleena Ajith | Mrs. Tessy Ninan |
| 14 | TPR 2023/14 | Physical attack protection techniques for IC chip level hardware security | Jintamol Kochumon | Mrs. Tessy Ninan |
| 15 | TPR 2023/15 | Low-SAR MIMO Antenna array design for 5G mobile phones. | Nasla M. | Dr. Deepti Das Krishna |
| 16 | TPR 2023/16 | Protection of modular data centres from cyber attack via electromagnetic emanations. | K Athul Prem | Dr. Deepti Das Krishna |
| 17 | TPR 2023/17 | Miniaturized broadband dual-polarized dipole antenna based on multiple resonances and its array for base-station applications. | Dilsha T.A. | Dr. Deepti Das Krishna |
| 18 | TPR 2023/18 | Pedestrian detection with unsupervised multi-stage feature learning. | Rehana Puliyakkuth | Mr. Mithun Haridas T.P. |
| 19 | TPR 2023/19 | Incremental deep learning for object detection | Seetha P.S. | Mr. Mithun Haridas T.P. |

**MSc Projects**

**2016**

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| **Sl No** | **Pr.No** | **Title** | **Student Name** | **Guide** |
| 1 | MPR/1 | Using Advanced Formal Techniques for Model –Based Embedded Engineering | Abhilash Chandran | Dr. Manju Nanda & Mr. Arun A Balakrishnan |
| 2 | MPR/2 | RF Based Biosensors | Anakha Balakrishnan | Dr. P Mohanan |
| 3 | MPR/3 | Intelligent Alert System to Provide Medical Assistance for Accident Victims | Arun George | Mithun Haridas T P |
| 4 | MPR/4 | Impedance and Radiation Characteristics of Microstrip Antennas with Defected Ground Plane | Arya C | Dr. C K Aanandan |
| 5 | MPR/5 | EM Design and Performance Analysis of Radar Absorbing Structures (RAS) | Bijo John | Dr. Hema Singh & Mr. Midhun Haridas |
| 6 | MPR/6 | Impedance and Radiation Characteristics of Microstripe Antennas with Defected Ground Plane | Fathima Beegam S | Dr. C K Aanandan |
| 7 | MPR/7 | RF Based Biosensors | Irshad C F | Dr. P Mohanan |
| 8 | MPR/8 | Compact Meander Line Antenna | Manila M | Dr. P Mohanan |
| 9 | MPR/9 | Hardware – Software Co – Simulation of AES Algorithm | Keerthana M | Dr.Bijoy A Jose |
| 10 | MPR/10 | Intelligent Secondary Controller for SMPS | Manu James | Dr.Bijoy A Jose |
| 11 | MPR/11 | Intelligent Alert System to Provide Medical Assistance for Accident Victims | Nicky Kattukaran | Mithun Haridas T P |
| 12 | MPR/12 | Study and Design of Multiband Microstrip Patch Antennas | Nithin Mohan K P | Prof. C K Aanandan |
| 13 | MPR/13 | Hardware – Software Co – Simulation of AES Algorithm | Panchangam Sai Manjunath | Dr.Bijoy A Jose |
| 14 | MPR/14 | Structurally Integrated Antennas for Aerospace Applications | Rahul A R | Dr. Balamati Choudhury |
| 15 | MPR/15 | Study of Conformal FSS for Aerospace Applications | Reshms P Mohandas | Dr. Shiv Narayanan & Dr. Mithun Haridas T P |
| 16 | MPR/16 | Compact Meander Line Antenna | Rindhu P M | Dr. P Mohanan |
| 17 | MPR/17 | Wireless Sensor Network for Temperature Monitoring | Sreelakshmi M S | Dr.Bijoy A Jose |
| 18 | MPR/18 | Design and Simulation of Digital Input Board for Reactor Applications | Varsha A | Mithun Haridas T P & R P Behera |
| 19 | MPR/19 | Radar Cross Section Estimation Using High Frequency Asymptotic Techniques | Visalakshy T C | Dr. Hema singh & Mr. Mithun Haridas T P |

**2017**

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| --- | --- | --- | --- | --- |
| 1 | MPR/1 | Automated Cavity Perturdation Technique for Measuring Dielectric Parameters Using Network Analyser | Amal Shisivaji | Retd. Prof. Dr. Mathew K T |
| 2 | MPR/2 | Security Enhanced Audio Steganography Using DSSS Method | Anjana Krishnan A | Dr. Supriya M H |
| 3 | MPR/3 | Object detection Using Neural Network | Athira K S & Kishore S R | Mr. Mithun Haridas T P |
| 4 | MPR/4 | Modelling of Validation algorithm Using NI LabVIEW | Chinjitha S | Dr. Manju Nanda |
| 5 | MPR/5 | RF Based Glucose Monitoring Using Serpentine Antenna | Drisya A T & Nivya S | Prof. (Dr.) P Mohanan |
| 6 | MPR/6 | Effect of Mutual Coupling on the Phases of Yagi- Antenna Arrays | Geethu A G & Nandana V | Prof. Dr. P Mohanan |
| 7 | MPR/7 | Analysis and Design of an Antenna for Wireless Monitoring Applications | Indu V Nair & Fathimath Safvana K V | Prof. Dr. C K Aanandan |
| 8 | MPR/8 | IR Remote for Smart Home Solutions | Manuel Joseph & Sidhik A R | Dr. Bijoy A Jose & Abhijith C R |
| 9 | MPR/9 | Analysis and Re- Synthesis of Sound Spectrograph | Muhammad Safvan P & Razan K Abulla | Mr. Arun A Balakrishnan |
| 10 | MPR/10 | RF Based Glucose Monitoring Using Serpentine Antenna | Drisya A T & Nivya S | Prof. (Dr.) P Mohanan |
| 11 | MPR/11 | Character Recognition using Rural Network | Pragalf T Jose | Mr. Arun A Balakrishnan |

**2018**

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| --- | --- | --- | --- | --- |
| 1 | MPR/1 | Intruder Detection for Video Surveillance Using machine Learning | Amritha S & Arya Ramesan | Mr. Mithun Haridas T P |
| 2 | MPR/2 | Microstrip Patch Antenna that Aims at UWB Applications | Ashana A & Snesha Sukumaran | Prof. Dr. C K Aanandan |
| 3 | MPR/3 | Density Based Traffic Control System Using Image Processing | Athira Thankappan, Uthara E Prakash & Vishnupriya K V | Mr. Arun A Balakrishnan |
| 4 | MPR/4 | Internet of Things Based Patient Monitoring System | Ebison T Joseph & Irshad K | Dr. Bijoy A Jose |
| 5 | MPR/5 | Predictive Maintenance of Electerical Motors | Nandu R & Krishna A U | Mr. Arun A Balakrishnan & Abhijith C R |
| 6 | MPR/6 | Dual Band Omnidirectional Antenna for IEEE 802.11AX APs | Rahul U | Dr. Deepu V Nair |
| 7 | MPR/7 | Intelligent Voice Assistant for Door | Keerthana Gopi & Sabna A | Dr. Bijoy A Jose |
| 8 | MPR/8 | Study of Load Differentiation by Harmonics using Embedded Systems | Saaisanthosh R | Dr. Bijoy A Jose |

**2019**

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| --- | --- | --- | --- | --- |
| 1 | MPR/1 | Feasibility Study for RF Energy Harvesting | Abhilash P V | Dr. Deepti Das Krishna |
| 2 | MPR/2 | Swarm Robotics Algorithms | Arun K Soman & Abhiram P S | Dr. Tripti S Warrier |
| 3 | MPR/3 | Hand gesture Recognition for Human – Robot Interaction | Albert Francis | Dr. Bijoy Antony Jose |
| 4 | MPR/4 | Acoustics Source Localization Using Machine Learning Algorithms | Alwin Ghosh & Justin Joy | Prof. Dr. Supriya M H |
| 5 | MPR/5 | Harmonic Suppressed Stepped Impedance Dipole Antenna | Amala Thomas & Preena K | Prof. Dr. P Mohanan |
| 6 | MPR/6 | Object Classification Using Deep Learning Architecture on Resource Constrained Embedded System | Annamol Benny & Athul M S | Asst. Prof. (Mr.) Mithun Haridas T P |
| 7 | MPR/7 | SCRA/XR – 4 Emulation / Monitoring Interface for Robocon Controller | Aswin S Kanattu & Hari Unnikrishnan | Prof. Dr. C K Aanandan |
| 8 | MPR/8 | Emotion Recognition Using Machine Learning Technique | Busthan P | Dr. Bijoy A Jose |
| 9 | MPR/9 | Studies on Mobile Radiation hazards and Mitigation Techniques | Chinju C | Dr. Balamati Choudhury |
| 10 | MPR/10 | Harmonic Suppressed Tapered SI Antenna | Ehijas K V & Vismaya Vijayan | Prof. Dr. P Mohanan |
| 11 | MPR/11 | OFDM Implementation Using GNU Radio and USRP | Kavya K & Sudhin M P | Asst. Prof. (Mr.) Arun A Balakrishnan |
| 12 | MPR/12 | Millimeter Wave Antennas for Automotive Applications | Khurshida K V | Dr. Raveendranath U Nair & Dr. Hema Singh |
| 13 | MPR/13 | Design and Optimization of frequency Selective Surface Structures for Radome Applications | Libin S | Dr. Shiv Narayan |
| 14 | MPR/14 | Object Detection Using SVM and HOG Feature Descriptor | Sajithra S & Sreelakshmi S | Mithun Haridas T P |
| 15 | MPR/15 | Face Tracking Robot Testbed for Performance Assessment of Machine Learning Techniques | Nithin P B | Dr. Bijoy Antony Jose |

**2022**

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| 1 | MPR/1 | Portable Device for Health Monitoring | Abhijith Anil & Sruthi K S | Dr. Tripti S Warrier |
| 2 | MPR/2 | Real- Time Health Monitoring System | Akhil V B | Mr. Arun A Balakrishnan |
| 3 | MPR/3 | Design and Assembly of an Antenna Demonstration System | Akshaya P V & Hrijith K | Dr. Deepti Das Krishna |
| 4 | MPR/4 | Measurement of Dielectric Material Properties | Anagha K M | Dr. Deepti Das Krishna |
| 5 | MPR/5 | Design and Fabrication INSET Feed Microstrip Patch Antenna | Aneesha Shaji & Seetha P S | Ms. Kumary V Y Vidhu |
| 6 | MPR/6 | Smart Robot Assistant for Visually Impaired Person | Aravind S Nath & Nikita Reji | Dr. Nalesh S |
| 7 | MPR/7 | Crop Disease Detection Using CNN | Anusree C | Dr. Tripti S Warrier |
| 8 | MPR/8 | Underwater Fish Species Classification Using Convolution Neural Network | Devika Thambi | Mr. Arun A Balakrishnan |
| 9 | MPR/9 | Deep Image Formation Model for Underwater Image Enhancement | Femilda Philiph | Prof. Dr. Supriya M H |
| 10 | MPR/10 | AI Based Farm Monitoring System Using Sony Spresense | Joel Raju & Nourin Noushad N M | Prof. Dr. Supriya M H |
| 11 | MPR/11 | Underwater Image Segmentation Using Attention Mechanism | Mahalekshmi Anil | Mr. Mithun Haridas T P |
| 12 | MPR/12 | Handwritten Digit Recognition | Nihala M A | Mr. Arun A Balakrishnan |
| 13 | MPR/13 | IoT based farmland monitoring and alert system | Prajin P S | Mr. Mithun Haridas T P |
| 14 | MPR/14 | Text Recognition From Images | Sandra E K | Dr. Tripti S Warrier |
| 15 | MPR/15 | Water Quality Monitoring System Using IoT | Shahana Sherin P K & Prakash S | Dr. Nalesh S |
| 16 | MPR/16 | Square Enclosed Circle Microstrip Patch Antenna for Head Imaging | Shamin Shaju | Ms. Kumary V Y Vidhu |
| 17 | MPR/17 | Temperature Breach Prediction Using Machine Learning for Blood Bag Transport | Sharon E | Mr. Mithun Haridas T P |
| 18 | MPR/18 | GSM based pre-paid energy meter | Shobhithkumar M P | Mr. Arun A Balakrishnan |
| 19 | MPR/19 | Sentiment Analysis Using Machine Learning | Sneha T S | Prof. Dr. Supriya M H |
| 20 | MPR/20 | Analysis of Image Processing Algorithm for Unsupervised Segmentation Models | Sudhina D | Mr. Mithun Haridas T P |

**2023**

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| 1 | MPR 2023/1 | Perspective on the correlation of depression and quality of life. | Alet Treevan | Prof. Dr. Supriya M. H. |
| 2 | MPR 2023/2 | Artificial intelligence in disease diagnosis. | Fasna Shirin P.N. | Prof. Dr. Supriya M. H. |
| 3 | MPR 2023/3 | Positioning for search and rescue in GPS- denied area by distributed WiFi RSS- based DOA modules. | Alan Peter | Mrs. Kumary V.Y. Vidhu |
| 4 | MPR 2023/4 | Polarimetric UAV- deployed FMCW radar for buried people detection in rescue scenarios. | Ajith K.R. | Mrs. Kumary V.Y. Vidhu |
| 5 | MPR 2023/5 | Hawk-Eye: an AI powered threat detector for intelligent surveillance cameras. | Joyal C.J. | Mrs. Kumary V.Y. Vidhu |
| 6 | MPR 2023/6 | Overview of Terahertz antenna | Gloriya D’silva | Mrs. Kumary V.Y. Vidhu |
| 7 | MPR 2023/7 | Landmine detection using drone. | Vivek Menon | Dr. Nalesh S. |
| 8 | MPR 2023/8 | Supercharged semiconductor; Gallium oxide. | Shriraja.S. | Dr. Nalesh S. |
| 9 | MPR 2023/9 | Anomaly detection for medical IoT control services against external attacks. | Faseena Nusra C.C. | Dr. Nalesh S. |
| 10 | MPR 2023/10 | On- chip voltage regulator. | Muhammed Razi M. | Dr. Nalesh S. |
| 11 | MPR 2023/11 | Pre- trained image processing transformer. | Divya R.B. | Mr. Arun Balakrishnan. |
| 12 | MPR 2023/12 | Hybrid OCC- LiFi system with dimming capability. | Vysakh K. S. | Mr. Arun Balakrishnan. |
| 13 | MPR 2023/13 | GeFL: gradient encryption- aided privacy preserved federated learning for autonomous vehicles. | Sujil S. | Mr. Arun Balakrishnan. |
| 14 | MPR 2023/14 | Privacy protection framework for android. | Anzil Antony | Mr. Arun Balakrishnan. |
| 15 | MPR 2023/15 | VANET based embedded traffic control system. | Jayasankar C. | Dr. Tripti S. Warrier |
| 16 | MPR 2023/16 | Break light system in advanced Driver Assistance Systems (ADAS) | Vignesh C. R. | Dr. Tripti S. Warrier |
| 17 | MPR 2023/17 | Logic in memory. | Rahima K. | Dr. Tripti S. Warrier |
| 18 | MPR 2023/18 | Design and implementation of secure cryptographic system on chip for Internet of Things | Manoj T.G. | Dr. Tripti S. Warrierk |
| 19 | MPR 2023/19 | Object detection in real time based on improved single shot multi- box detector algorithm. | Revathi R. | Mr. Mithun Haridas T.P. |
| 20 | MPR 2023/20 | Speed bump detection for intelligent vehicle system. | Vishnu M. | Mr. Mithun Haridas T.P. |
| 21 | MPR 2023/21 | Deep learning for technical document classification. | Kamalakannan K. | Mr. Mithun Haridas T.P. |
| 22 | MPR 2023/22 | Prediction of personality traits using static facial images. | Thumpuran S Valavi | Mr. Mithun Haridas T.P. |
| 23 | MPR 2023/23 | Automatic obstacle crossing planning for a transmission line inspection robot based on multisensory fusion. | Reshmi R. | Mrs. Tessy Ninan |
| 24 | MPR 2023/24 | Soft, light weight wearable robots to support the upper limb in activities of daily living. | Khadeeja Salam | Mrs. Tessy Ninan |
| 25 | MPR 2023/25 | Snake robot gripper module for search and rescue in narrow space. | Muhammed Murshid C. K. | Mrs. Tessy Ninan |
| 26 | MPR 2023/26 | Autonomous fire fighting inside building by an unmanned aerial vehicle. | Ludhi Stanly Chirayath | Mrs. Tessy Ninan |
| 27 | MPR 2023/27 | Analysis and design of dual band fold shorted patch antennas for robust wearable applications. | Keerthi R. | Dr. Deepti Das Krishna |
| 28 | MPR 2023/28 | Packaging and antenna integration for silicon based millimetre- wave phased array: 5G and beyond. | Maneesh Kumar Singh | Dr. Deepti Das Krishna |
| 29 | MPR 2023/29 | Towards more accurate contactless fingerprint minutiae extraction and pose- invariant matching. | Arjun V Kumar | Dr. Deepti Das Krishna |
| 30 | MPR 2023/30 | Vehicle platform effects on performance of flexible lightweight and dual band antenna for vehicular communications. | Midhun K. S. | Dr. Deepti Das Krishna |