

| Sr No | Date of Approval | Department | PI/ Co-PI | Agency | Project Title | Approved Budget | Year |
|-------------|------------------|------------|---------------------|----------|--|-----------------|------|
| 2015 | | | | | | | |
| 1 | Jun-15 | MTS | Dr Shakil R. Sheikh | HEC-SIOP | Energy saving in buildings in Pakistan | 500.000 | 2015 |
| 2 | Aug-15 | CS | Dr.Asad Naeem | ICT R &D | 3D Stereoscopic Drone | 100.000 | 2015 |
| 3 | Aug-15 | EE | Anwar Saeed | ICT R &D | Hand Controlled Qua Copter | 91.500 | 2015 |
| 4 | Aug-15 | CS | Saqib Rashid | ICT R &D | E-mail Scheduler | 13.750 | 2015 |
| 5 | Aug-15 | CS | Dr.Asad Naeem | ICT R &D | Car number Plate Recognition | 100.000 | 2015 |
| 6 | Apr-15 | DAME | Dr Jhanzeb | NESCOM | A CFD Study on Dynamic Coefficients of Labyrinth Seals | 50.000 | 2015 |
| 7 | Apr-15 | ME | Dr Nigar | NESCOM | Experimental and Numerical Analysis of Notched Woven Fabric Composites under Compression | 50.000 | 2015 |
| 8 | Apr-15 | IAA | Dr Israr | NESCOM | Implementation of Signal Processing Algorithms on FPGAs for Target Classifications | 50.000 | 2015 |
| 9 | Apr-15 | EE | Dr Fida | NESCOM | Design and Development of Mock-up degaussing System | 50.000 | 2015 |
| 10 | Apr-15 | EE | Dr Fida | NESCOM | Magnetic Loop Induction Treatment | 50.000 | 2015 |

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|-------------|------------------|------------|-------------------------|-----------|
| 2016 | | | | |
| 1 | May-16 | MTS | Dr.Zareena Kausar | SIOP |
| 2 | Jun-16 | MTS | Dr.Shakil Rehman Shiekh | SIOP |
| 3 | Sep-16 | EE | ENGR. Ayesha Abbasi | IGNITE |
| 4 | Sep-16 | MTS | Dr. Noman Naseer | IGNITE |
| 5 | Sep-16 | MTS | Dr. Muhammad Umer | IGNITE |
| 6 | Sep-16 | EE | M. Tilal | IGNITE |
| 7 | Sep-16 | MTS | Engr. Hammad A. Nazir | IGNITE |
| 8 | Sep-16 | MTS | Engr Akhtar Khurshid | IGNITE |
| 9 | Nov-16 | DMAE | Dr Jehanzeb Masud | NESCOM |
| 10 | 26-Dec | DMAE | Dr Israr Hussain | PAC-Kamra |

| Project Title | Approved Budget | Year |
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| To prepare high school students for college and career (introduction of Robotics and automation) | 1.000.000 | 2016 |
| Workshops for introducing sustainable energy related technologies to school students | 880.000 | 2016 |
| Design and Development of Grid-Tie Inverter | 58.380 | 2016 |
| Brain Controlled Wheel chair | 70.000 | 2016 |
| UGV Assistance Robot Capable of Maneuvering Through Cluttered Environment by means of UAV | 70.000 | 2016 |
| Blind Spot detection system for Vehicles | 62.000 | 2016 |
| Automatic Vehicle Gear Transmission | 70.000 | 2016 |
| Prototype Windmills Power Fluctuation Control System, | 70.000 | 2016 |
| Thermal Analysis of Cryogenic Refrigeration using Computational Fluid Dynamics (CFD) assisted Methodology | 100.000 | 2016 |
| Multi-Sensor Data Fusion For Tactical Data Link (TDL) in JF-17 Aircraft | 980.000 | 2016 |

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|-------------|------------------|-------------------|------------|---------------------|----------|--|-----------------|---------------------|------|
| 11 | May-16 | 9 | Physics | Dr.Saima Rafique | SRGP | Gold nanoparticles based electrophoretic discrimination of cancer related point mutations | 465.000 | 7500 | 2016 |
| 2017 | | | | | | | | | |
| 1 | May-17 | 24 | EE | AVM Saleem Tariq | HEC-ACAD | Strengthening and upgradation of electrical engeneering | 3.000.000 | | 2017 |
| 2 | Apr-17 | 36 | EE | Dr Syed Ahmed Pasha | NRPU | System Identification of High Dimensional Dynamics Point Process System | 1.765.354 | 304.216 | 2017 |
| 3 | May-17 | 36 | Phy | Dr M Atif | NRPU | Synthesis and characterization of Core Sheel Like Structured Multiferroic Nano-Comosites for Energy Storage Application | 9.578.659 | 1.249.390 | 2017 |
| 4 | Apr-17 | 30 | AUSOM | Dr. Khuram Shehzad | NRPU | Positioning for maximal Gain; how the human welfare output of export processing zones in a developing country's context can be mazimized | 1.765.354 | 230.264 | 2017 |

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| 5 | May-17 | 24 | MTS | Dr. M Umer Khan; Co-PI: Dr Zareena Kausar | NRPU | Reconfigurable energy enhanced architecture for efficient utilization of stored energy | 1.765.354 | 272.165 | 2017 |
| 6 | Apr-17 | 12 | Physics | Dr Rizwan Akram (PI), Dr. M Atif (COPI) | SRGP | Development of theromelectric materials via modelig,simulation and experimental Approach | 459.000 | 0 | 2017 |
| 7 | Aug-17 | 24 | PHY | Dr. M Atif | No.TDF-044 | Synthesis of ferrites based plymer sheets for radar absorbing applications | 13.996.000 | 4.175.000 | 2017 |
| 8 | Jun-17 | 24 | DMAE | Dr. Liaqat Ali Khan | No. TDF-116 | End to end secure communication over voice channel | 9,338,00 | 121.800 | 2017 |
| 9 | Dec-17 | 10 | EE | Mummajid-Ul-Mudassir | NESCOM | Detection and Estimation of frequency Hopping Signals | 100.000 | 15.000 | 2017 |
| 10 | Jun-17 | - | DMAE | Dr Jehanzeb Masud | PAC-Kamra | JF-17 SST Integration Aerodynamics Shape for One Shape (F-7P SST) and Two Pylons | 15,00,000 | 600.000 | 2017 |
| 11 | May-17 | 36 | IAA | Dr Israr Hussain | PAF | Design of Tactical adhoc wireless network | 500.000 | 110000 | 2017 |
| 12 | Feb-17 | 36 | IAA | Dr Israr Hussain | NCW-TECH | Indigenously Developed wireless Channel Emulator | 80.895.129 | 1143846 | 2017 |

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| 13 | Feb-17 | | CS | Dr. Asad Naeem | IGNITE | A Novel 3D Automated Live Cricket Batting Coach: Skeletal Joint Analysis of Batting Players against Textbook Cricket Shots by Experts | 22.500.000 | | 2017 |
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| 2018 | | | | | | | | | |
| 1 | Jun-18 | 24 | MTS | Dr Zareena Kausar | NRPU | Intention based control of prosthetic devices for transhumeral amputee using hybrid signals | 7497276 | 977906 | 2018 |
| 2 | Jun-18 | 24 | Phy | Dr Saima Rafique | NRPU | Aptamer Based Label-free Electrochemical Detection of Oral Cancer Gold Nanostructures | 3976715 | 584811 | 2018 |
| 3 | Jun-18 | 36 | Phy | Dr. Rubina Nasir | NRPU | Genetic algorithm based methodology for solution of coupled ordinary differential equations | 8246288 | 1075603 | 2018 |
| 4 | Jun-18 | 36 | Phy | Dr Zulqurnain Ali | NRPU | Multifunctional magneto-electric nanoparticles loaded with anticancer drugs for cancer therapy | 8176903 | 1066553 | 2018 |
| 5 | Jun-18 | 36 | Phy | Dr Mozaffar Hussain | NRPU | Structure and properties optimization of resource saving NdFeB based permanent magnets | 10343698 | 1349178 | 2018 |
| 6 | Jul-18 | 24 | Phy | Dr Waqas Khalid | NRPU | Electrochemical detection and remediation of contamination in water at Micron level | 6.069.102 | 791622 | 2018 |
| 7 | Dec-18 | 9 | CS | Dr. Shireen Tahira | SRGP | Detection and Prevention of SQL Injection Attacks | 274.000 | 0 | 2018 |

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| 8 | Nov-18 | 9 | CS-Multan | Kaleem Razzaq Malik | SRGP | Methodology to Improve motivating factors in E-Learning Pedagogy | 214.900 | 0 | 2018 |
| 9 | Dec-18 | 10 | HUM | Shoaib Sultan | SRGP | Generate Environmental Awareness among Trainee Teachers in Tertiary Education | 355.000 | 0 | 2018 |
| 10 | Nov-18 | 6 | Math | Dr. Sardar Muhammad Bilal | SRGP | Computational analysis of Ferromagnetic nano-fluids | 273.994 | 0 | 2018 |
| 11 | Oct-18 | 12 | Math | Dr Waqas Sarwar Abbasi | SRGP | Control of Vortex Shedding and Suppression of Flow Induced Forces Around Bluff Bodies of Square Cross Section Aligned Inline | 478.000 | 0 | 2018 |
| 12 | May-18 | 12 | Physics | Dr.Shakeel Mahmood | SRGP | Study of CP Violation in rare decays of Mesons | 285.000,000 | 0 | 2018 |
| 13 | Nov-18 | 24 | MTS | Dr. Zareena Kausar | No. TDF02-223 | Development of an assistive device for independence and mobility of paraplegic patients | 14000000 | 1.901.250 | 2018 |
| 14 | May-18 | 24 | DMAE | Dr. Ibraheem Haneef | No.TDF02-268 | Digital Land Mapping for Mega Projects | 13.809.000 | 2.071.350 | 2018 |
| 15 | Aug-18 | – | CS | Dr Shaharyar Kamal | IGNITE | Android Malware Detect | 60.000 | – | 2018 |
| 16 | Aug-18 | – | CS | M Sajid Riaz | IGNITE | Sign language translation info text & speech using motion device | 50.000 | – | 2018 |
| 17 | Aug-18 | – | CS | Syed Atif Muqarrab | IGNITE | AU Classroom | 60.000 | – | 2018 |

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| 18 | Aug-18 | – | MTS | Dr Zafarullah Koreshi | IGNITE | Thermoelectric Incubator | 70.000 | – | 2018 |
| 19 | Aug-18 | – | MTS | Dr Rana Iqtidar Shakoor | IGNITE | Design & Development of Real Time Gyro-Stabilized Platform | 70.000 | – | 2018 |
| 20 | Aug-18 | – | MTS | Syed Hammad Nazeer | IGNITE | Design and Fabrication of FNIRS Machine for Data Acquisition from Human Brain | 70.000 | – | 2018 |
| 21 | Aug-18 | – | MTS | Dr Noman Naseer | IGNITE | Embedded System for Automatic Detection of Heart Disease using ECG machine | 70.000 | – | 2018 |
| 22 | Aug-18 | – | EE | Mr. Adnan Jafar | IGNITE | Self Balancing Bicycle | 78300 | – | 2018 |
| 23 | Aug-18 | – | EE | Ayesha Salman | IGNITE | Mind controlled robot for handicaped people | 99.076 | – | 2018 |
| 24 | Aug-18 | – | EE | Dr Shaharyar Saleem | IGNITE | Virtual reality based 3D survillance system | 57.600 | – | 2018 |
| 25 | Aug-18 | – | EE | Engr Bahman R Alyaei | IGNITE | Multi Source (Solar power using a multi-level inverter, WAPDA Generator) Power System Variable Load and Automated Shifting | 70.000 | – | 2018 |
| 26 | Dec-18 | 6 | DMAE | Sijal Ahmed (PI) Mr. Irfan Ahmed(CO) | NESCOM | Shape optimization of aero-engine exhaust systmes for thermal signature suppression | 150.000 | – | 2018 |
| 27 | Dec-18 | 6 | DMAE | Sijal Ahmed | NESCOM | Design Optimization and manufacturing of single stage centrifugal compressor | 80.000 | – | 2018 |

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| 28 | Oct-18 | 36 | DMAE | Dr. Jehanzed Masud | PAF | Store clearance analysis of EBWS with REK in JF 17 | 1.900.000 | 760.000 | 2018 |
| 29 | Mar-18 | 36 | CS | Dr. Kashif Kifayat | HEC-PC | National Center in Cyber Security (NCCS) | 257.780.000 | | 2018 |
| 30 | Mar-18 | 36 | MTS | Dr. Rana Iqtidar | HEC-PC | National Center in Robotics & Automation (NCRA) | 84.751.000 | | 2018 |
| 31 | Oct-18 | Ongiong | IAA | Dr. Suhail Akhtar | Shaheen Aerotraders (PAF) | Indegenous Development and Testing of Stanag VGA converter Card for I/O level Tester | 1.650.000 | 477.500 | 2018 |
| 32 | Jan-18 | Completed | HUM | Dr Sham Haider | SRGP | Exploring Students Perception of Access to English in Access Program | 280.000 | 10000 | 2018 |
| 33 | Jan-20 | Completed | Ausom | Idress Khawaja | OPF | State Art Degree Awarding Institute | 1.808.190 | 725201 | 2018 |

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| 2019 | | | | | | | | | |
| 1 | Jun-19 | 36 | HUM | Dr. Wasima Shahad | NRPU | Development of Corpus (Pak Genetext) and Gender Based Study of Language Through-Based Techniques | 1.920.258 | 250468 | 2019 |
| 2 | Feb-19 | 9 | CS | Dr Iqbal Murtaza | SRGP | Development of a visual cortex inspired network intrusion detection system | 155.400 | 0 | 2019 |
| 3 | Apr-19 | 9 | Math | Dr Muhammad Saqib | SRGP | The development and application of novel algorithm for two dimensional nonlinear burgers Huxley system | 311.000 | 0 | 2019 |
| 4 | Apr-19 | 9 | Math | Dr Iqra Shahzadi | SRGP | Blood flow analysis for bifurcated stenotic artery with hybrid nanofluid | 304.000 | 0 | 2019 |
| 5 | Jun-19 | – | MTS | Engr. Atiq ur Rehman | IGNITE | Weather data simulation and experimental calculations of heating and cooling loads | 63.920 | – | 2019 |
| 6 | Jun-19 | – | MTS | Dr Zareena Kausar | IGNITE | Design and implementation of aeroponic farming | 78.600 | – | 2019 |
| 7 | Jun-19 | – | MTS | Dr Shakeel Rehman | IGNITE | Design and fabrication of tree plantation drone | 80.000 | – | 2019 |
| 8 | Jun-19 | – | MTS | Dr Noman Naseer | IGNITE | Design and fabrication of a wearable exoskeleton for power augmentation of arm | 80.000 | – | 2019 |
| 9 | Jun-19 | – | MTS | Dr Zareena Kausar | IGNITE | Automatic bottle filling/capping system with IOT and SCADA interface | 79.500 | – | 2019 |

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| 10 | Jun-19 | – | EE | Dr.M. Adil Khan | IGNITE | Controlling solar water pump using variable frequency drive by android application | 29.240 | – | 2019 |
| 11 | Jun-19 | – | EE | Mumajjed ul Mudassir | IGNITE | Design and fabrication of 3D scanner and printer | 79.874 | – | 2019 |
| 12 | Jun-19 | – | EE | Dr.Muhammad Adil Khan | IGNITE | Electric vehicle with regenerative braking and battery protection system | 69.000 | – | 2019 |
| 13 | Jun-19 | – | EE | Dr.M. Adil Khan | IGNITE | Stepper motor controlled automated light sensing photo voltaic window blinds | 75.000 | – | 2019 |
| 14 | Jun-19 | – | EE | Dr.Muhammad Adil Khan | IGNITE | Solar power fine dust/smoke removal system using cockroft walton circuit | 60.300 | – | 2019 |
| 15 | Jun-19 | – | EE | Dr.Muhammad Adil Khan | IGNITE | Design and implementation of shunt active power filter for power quality | 24.600 | – | 2019 |
| 16 | Jun-19 | – | EE | Dr.Shahryar Saleem | IGNITE | Design, implementation and characterization of constant temperature anemometry circuits for MEMS wall shear stress sensor | 76.180 | – | 2019 |
| 17 | Jun-19 | – | EE | Dr.Muhammad Adil Khan | IGNITE | Hybrid electric vehicle | 77.000 | – | 2019 |
| 18 | Jun-19 | – | EE | Dr.Shahryar Saleem | IGNITE | Glove for blind people | 24.787 | – | 2019 |
| 19 | Jun-19 | – | EE | Engr. Atiq ur Rehman | IGNITE | Guidance and monitoring system for AU parking | 80.000 | – | 2019 |
| 20 | Jun-19 | – | CS | Mr. Imran Ihsan | IGNITE | Fallup' fall risk assessment and prediction based on gait analysis | 58.000 | – | 2019 |
| 21 | Jun-19 | – | CS | Dr. Kashif Kifayat | IGNITE | Developing a proof of concept of search and locate drone swarm for disaster hit areas in Pakistan | 80.000 | – | 2019 |

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| 22 | Jun-19 | _ | CS | Mr. Imran Ihsan | IGNITE | Glucoguard | 55.000 | _ | 2019 |
| 23 | Jun-19 | _ | CS | Mr. Imran Ihsan | IGNITE | Grand training auto | 70.000 | _ | 2019 |
| 24 | Jun-19 | _ | CS | Mr. Imran Ihsan | IGNITE | Blind Eye | 65.544 | _ | 2019 |
| 25 | Jan-19 | 8 | DMAE | Dr Jehanzeb Masud | NESCOM | Thermal Analysis of Cryogenic Refrigeration using Computational Fluid Dynamics (CFD) assisted Methology | 100.000 | _ | 2019 |
| 26 | Jan-19 | 10 | EE | Mummajid-Ul-Mudassir | NESCOM | Task Management, Self Test & Diagnostics of Warehouse Robotic Network | 40.000 | _ | 2019 |
| 27 | May-19 | Completed | DMAE | Dr. Jehanzed Masud | PAF | JF-17Supersonic Drop Tank Analysis | 1.500.000 | 600.000 | 2019 |