

Funded Research Projects

S.No.	Title of Project	Programme	Funding Organization	Principal Investigator	Co-PI/ Team members	Funding Amount	Funding Period
ON-GOING							
1.	Mob-Air: Indigenously developed mobile air quality monitoring system for public health and safety	SRSP	Sindh HEC	Dr. Sundus Ali	Prof. Dr. Muhammad Imran Aslam, Prof. Dr. Irfan Ahmed	PKR 3.4 Million	2024-2026
2.	Analysis of Intelligent Reflective Surfaces in heterogeneous cellular network	MoST	MoST	Prof. Dr. Muhammad Imran Aslam	Dr. Sundus Ali	PKR 2.99 Million	2022-2026
3.	Bandwidth Efficient Inter ONU Communication Enabled Physical and MAC Layer Architecture for Next Generation PON	MoST	MoST	Dr. Rizwan Aslam Butt	Prof. Dr. Muhammad Imran Aslam	PKR 2.99 Million	2023-2026
4.	Machine Learning Enabled Prognostic Modelling For Predictive Maintenance	PhD Fund	NEDUET	Prof. Dr. Muhammad Imran Aslam	Dr. Hira Mariam	PKR 1.0 Million	2023-2026
5.	Xcelerium	Industrial funding	Xcelerium	Prof. Dr. Saad Ahmed Qazi	Dr. Muhammad Fahim ul Haque	PKR 60 Million	2022-2026
6.	MIMO Communication	PhD Fund	NEDUET	Dr. Muhammad Fahim ul Haq	Dr. Tahir Malik	PKR 1.0 Million	2022-
COMPLETED							
1.	NB-IoT ProSe: Proximity Services enabled NB-IoT for Reliable and Critical Communication in Low-Powered Applications	NRPU	HEC Islamabad	Prof. Dr. Muhammad Imran Aslam	Prof. Dr. Irfan Ahmed, Dr. Sundus Ali	PKR 6.9 Million	2023-2025
2.	Solar Nanogrid Clustering for smart cities	PhD Fund	NEDUET	Dr. Rizwan Aslam Butt	--	PKR 1 Million	2022-2025
3.	Intelligent Real time Fabric Weave Identification and characterization using visual sensors network for textile applications	PhD Fund	NEDUET	Dr. Rizwan Aslam Butt	Dr. Amir Qureshi	PKR 1 Million	2023-2025
4.	Mobility for bilateral stakeholder mapping for creating IoT networks for Climate Change	Going Global Partnership PAK-UK	British Council and HEC	Prof. Dr. Muhammad Imran Aslam	Prof. Dr. Irfan Ahmed, Dr. Sundus Ali, Ms. Ghulam	GBP 67,741	2023-2024

		Education Gateway			Fiza, Dr. Hira Mariam, Dr. Syed Talib Abbas Jafri		
5.	Performance Analysis of Terahertz Communication enabled Networks	PhD Fund	NEDUET	Prof. Dr. Irfan Ahmed	Dr. Sundus Ali	PKR 1 Million	2022-2024
6.	Smart IoT enabled ground birds farming	SRSP	Sindh HEC	Dr. Rizwan Aslam Butt	--	PKR 1.8 Million	2022-2024
7.	TEC Forecasting using GNSS Observation & Deep Learning Model	PhD Fund	NEDUET	Prof. Dr. Attaullah Khwaja	Dr. Rizwan Aslam Butt	PKR 1.0 Million	2022-2024
8.	Prototype Development of High Dimensional Quantum Key Distribution System for a Highly Secure Free-Space Communication System	SRSP	Sindh HEC	Prof. Dr. Muhammad Mubashir Khan	Dr. Tahir Malik	PKR 2.75 Million	2022-2024
9.	Routing Reliability Improvement in IoT-based-MANET	PhD Fund	MoST	Prof. Dr. Irfan Ahmed	Dr. Sundus Ali	PKR 2.99 Million	2020-2022
10.	Design, modeling and performance evaluation of efficient radio access network algorithms for evolved wireless network	PhD Fund	NEDUET	Prof. Dr. Muhammad Imran Aslam	--	PKR 1 Million	2019-2021
11.	Performance Improvement of Planar Metasurface Antenna using Composite Materials	PhD Fund	NEDUET	Prof. Dr. Irfan Ahmed	--	PKR 1 Million	2017-2021
12.	Uplink Performance Analysis of Millimeter Wave in Heterogeneous Cellular Network	PhD Fund	NEDUET	Prof. Dr. Irfan Ahmed	Prof. Dr. Muhammad Imran Aslam	PKR 1 Million	2018-2020
13.	Flexible testbed for D2D communication in 5G cellular networks	NRPU	HEC Islamabad	Prof. Dr. Muhammad Imran Aslam	Prof. Dr. Irfan Ahmed	PKR 6.59 Million	2017-2019
14.	Uplink Performance of Decoupled Heterogeneous Networks in varying Pathloss Environment	PhD Fund	NEDUET	Prof. Dr. Muhammad Imran Aslam	Prof. Dr. Irfan Ahmed	PKR 1 Million	2016-2019

NEDAASC FYDP FUNDED PROJECTS

S.No.	Project Title	Supervisor	Co-supervisor/ industrial advisor	Funding	Funding Period
1.	Development of Mobile Outdoor Air Quality Monitoring System Using LoRaWAN	Dr. Sundus Ali	Prof. Dr. Muhammad Imran Aslam	PKR 102,000	2024-25
	NB-IoT-enabled Monitoring of Environmental Health Risks	Prof. Dr. Irfan Ahmed	--	PKR 102,450	2024-25
2.	ML-Enhanced IoT-based Electrocardiogram (ECG) Monitoring System for Patient-Centric Solution	Dr. Sundus Ali	Prof. Dr. Muhammad Imran Aslam	PKR 73,000	2023-24
3.	IoT-Based Air Quality Monitoring and Control System	Prof. Dr. Muhammad Imran Aslam	Dr. Sundus Ali	PKR 93,610	2023-24

NGIRI IGNITE FYDP FUNDED PROJECTS

S.No.	Project Title	Supervisor	Co-supervisor/ industrial advisor	Funding	Funding Period
1.	ML-Enhanced IoT-based Electrocardiogram (ECG) Monitoring System for Patient-Centric Solution	Dr. Sundus Ali	Prof. Dr. Muhammad Imran Aslam	PKR 73,000	2023-24
2.	Beyond Sight: A Real-Time Navigation System for Visually Impaired'	Dr. Uzma Afsheen	Dr. Tahir Malik	PKR 84,700	2023-24
3.	Development of IoT Weather Station with NED Local MQTT broker and Dashboard'	Prof. Dr. Irfan Ahmed	--	PKR 27,750	2023-24
4.	'Smart Vehicle in Fog Environment: Accident Detection, Accident Avoidant and Notification System'	Engr. Ghulam Fiza	--	PKR 32,972	2022-23
5.	'IOT Enabled Smart Vertical Farming Monitoring System'	Engr. Saba Ahmed	--	PKR 56,454	2022-23
6.	Implementation of Smart farming using Digital Twin Technology	Dr. Sundus Ali	Engr. Mujtaba Ahmed Qadri (Siemens)	PKR 18,810	2022-23
7.	Adaptation of Smart contract in supply chain management using IoT	Dr. Sundus Ali	Engr. Taha Sajid (Comcast USA)	PKR 35,720	2021-22
8.	Energy Efficient Appliance Automation	Prof. Dr. Muhammad Imran Aslam		PKR 43,369	2021-22
9.	Non-destructive Classification of woven fabrics using Machine Learning	Dr. Rizwan Aslam Butt		PKR 46,500	2021-22
10.	Smart Virtual Training Mirror	Prof. Dr. Muhammad Imran Aslam		PKR 65,800	2021-22

11.	IoT based Air Monitoring System	Prof. Dr. Muhammad Imran Aslam	Dr. Sundus Ali	PKR 40,000	2020-21
12.	Smart Metering Using Power Line Communication	Prof. Dr. Irfan Ahmed	--	PKR 45,000	2020-21
13.	Real Time Air Quality Monitoring and Forecasting by Eye in the Sky	Dr. Muhammad Fahim ul Haque	--	PKR 79,910	2020-21
14.	Automatic Controlling and Monitoring of Underwater Environment System	Prof. Dr. Irfan Ahmed	--	PKR 83,000	2019-20
15.	Design & Fabrication of Wireless System Based Smart Wheelchair	Prof. Dr. Irfan Ahmed	--	PKR 94,000	2016-17
16.	Design & Fabrication of Wearable Antenna for BAN	Prof. Dr. Irfan Ahmed	--	PKR 80,000	2015-16
17.	Design & Fabrication of a Patch Antenna on Non-Conventional substrate	Prof. Dr. Irfan Ahmed	--	PKR 91,000	2013-14