New products/processes/methods/techniques developed

S. No.	Title of Product	Name of Faculty	Short Description of Product	Year of Product Developed
1	Software for Remaining Life Estimation of Distribution Transformers	Arya Kumar Bhattacharya	Uses past events and sensor readings to estimate remaining months of life of a distribution transformer.	2016-2017
2	Optimal Trajectory Synthesis of Aerial Interceptors	Arya Kumar Bhattacharya	Optimization of trajectory of missiles launched from parent aircraft to strike adversarial head-on targets	2016-2018
3	Software for optimal service of Orders in a Warehouse	Arya Kumar Bhattacharya	Software that starts with a series of Orders and Agents and a network of items stacked in a warehouse and decides the optimal paths and item-pick-up sequences based on an efficient algorithm	2019
4	Expert System for control of an Industrial Reactor for continuous optimal performance	Arya Kumar Bhattacharya	Clear from title. This software based on Game Theory, though developed generically, is built on the specifics of a Blast Furnace in a Steel manufacturing facility.	2020
5	wireless device: Wi-Guy	Dr. Subbarao Boddu	SDR based wireless communication learnign kit designed especially to understand the present day advanced wireless communicaton technologies	2020
6	Pay-per-Use Charger for Electric Vehicles	Dr. Bharghava Rajaram	Add-on to an EV charger, which accepts payments via UPI, and switches on Charger for stipulated duration based on recharge amount	2019
7	RF NL mitigated Energy-efficient 5G Communication System	Dr. Bulusu Sri Satish Krishna Chaitanya	Next generation broadcasting/5G system with very good RF energy efficiency by mitigating RF impairments	2019
8	Solar PV Array Emulator	Dr. Sreedhar Madichetty	It will emulates the characterstics of a solar pv	2017

			emulator	
9	Computer Controlled VFD based Induction Motor (Software)	Dr. Sreedhar Madichetty	It will control the speed of induction motor	2020
10	DC Microgrid research testbed	Dr. Sreedhar Madichetty	Its a research bed for educational and training purposes	2018
11	12 to 220V DC-DC Converter	Dr. Sreedhar Madichetty	It will boost 12 V DC power to 220V DC	2020
12	Sensorless Drive system for PMSM Motor Drive	Dr Gopinath G R	It will facilitate removal of speed and position sensor for increased robustness, and cancels the effects of noise in industrial environments	2019
13	Active Power Filter	Dr Gopinath G R	Active Power Filter developed for research and training purposes	2017
14	"Reduction of the crest factor and joint predistortion for amplification of multi-carrier systems (International patent published in 2018)"	Dr. Bulusu Sri Satish Krishna Chaitanya	Joint optimization of PAPR reduction and High power amplifier linearization in 5G multi-carrier systems	2018
15	Modified Lightweight Deflectometer	Dr. Hari Prasad	LWD device is portable and used to calculate the deformation modulus of any layers of earthwork/pavement	2019

Teams Contribution

Developed an autonomous UV surface disinfectant robot	AY 2020-2021
Designed and manufactured off road racing buggy (SAE Baja 2020)	AY 2019-2020
Designed and manufactured Autonomous underwater vehicle (Black Pearl)	AY 2019-2020
Designed and manufactured remote controlled fixed wing aircraft (MEC Aero Club) in two different weight classes	AY 2019-2020
Designed and manufactured off road racing buggy (ESI 2019)	AY 2018-2019
Designed and manufactured remote controlled fixed wing aircraft (MEC Aero Club)	AY 2018-2019