Theme of the program

NECC'19 (National E Cycle Championship) is an initiative of Zunik Energies Pvt Ltd, Tides, IIT Roorkee with the objective of providing an opportunity for the students, to explore the 'Electrical and Mechanical Stream' solutions for the day-to-day mobility needs of people. Zunik Energies Pvt Ltd conducts annually various events in different levels of powered electrical vehicles with an aim to promote 'Environment Friendly and Economical' ways of transportation in India. Participation is sought from all the engineering colleges across the country. The event tasks undergraduate engineering students to conceive design and fabricate a prototype of a two-wheel configuration vehicle (e-cycle), capable of seating one (or) two passengers and powered by human and electric hybrid power. Students have to work in a team to take part in various events aimed to judge the design, cost, marketing potential, technical parameters, safety, dynamic characteristics, durability of the vehicle (e-cycle). Participation in the event is a two stage process comprising of the college level assessment, wherein the teams are required to demonstrate the prototype and readiness for the event, followed by the main event at MVGR College of Engineering, Vizianagaram, Andhra Pradesh. The team that achieves the highest cumulative points in all parts of the main event stands out as the winner.

Initiated this academic year 2018-19, under the patronage of CEO (Zunik Energies), the First edition of the event is slated for 24th – 30th June 2019 at the sprawling campus of MVGR, Vizianagaram, AP. This unique initiative of Zunik Energies Pvt Ltd, to incubate the thought process of 'environment consciousness' is an impetus for the students and the auto industry alike. The industry benefits from the ready to perform engineers and potential leaders carved out by such events. NECC'19 has received immense support from the industry, with patrons such as Tata Motors, Tech Mahindra, Reva to name a few.

Various Events and Workshops at NECC

E- Cycle Racing,

Smart Mobility,

Power converters for Smart Mobility;

Power Converters,

Chargers for Electrical Vehicles;

Stalls of Promoters /Sponsors;

DSP/FPGA Controlled V/F Drive for EV Applications;

Award for Innovations related to EV Technology;

Patenting & B-Plan Competition

Theme of Championship

The idea of Amazing Power Season focus on fabrication of vehicle which performs exceptionally well in laden conditions on smooth horizontal roads as wells as on grades. Amazing Power performance will be observed through various static checks and dynamic events in this season. However, focus on aerodynamic and build quality parameters will continue. Vehicles may be checked rigorously to evaluate the build quality of the vehicles (e-cycles) before presenting them to dynamic events.

About Organizing Company (Zunik Energies Pvt. Ltd)

Vision:

Zunik Energies Pvt Ltd incubated at Tides, IIT Roorkee is promoted by entrepreneurs with experience in developing power projects. It is passionate about contributing to a world which does not depend on power from fossil fuels. Its aim is to accelerate the adoption of renewable energy sources across the world to conserve our environment and provide an eco-friendly, sustainable and conflict-free power supply through the adoption and development of cutting edge power electronic technologies.

Mission:

Zunik Energies Pvt Ltd is committed to develop and implement technologies that will accomplish a clean reliable energy supply and implement the cutting edge technologies based on international best practices to address the nation's challenges of moving towards clean, reliable, secure and competitive energy supply.

About Hosting College

Maharaj Vijayaram Gajapathi Raj College of Engineering was established in the year 1997 under the aegis of "MANSAS" educational trust, founded by the Raja Saheb of Vizianagaram, Dr. PVG Raju in 1958. The college is located at Vijayaram Nagar campus, Chintalavalasa, Vizianagaram, Andhra Pradesh. The college offers 7 B.Tech. programmes namely EEE, ECE, Mechanical, Civil, CSE, Chemical Engineering and IT & P.G. programmes in Power Systems, Machine Design, VLSI, CSE, Structural Engineering, CNIS and Business Administration. It is accredited with "A" grade by NAAC of UGC. Also UGC has conferred Autonomous status to the college. The college gifted with serene atmosphere amidst green plantation is making its untiring efforts to attain its objective of imparting qualitative technical education. In addition to curricular programs, the institute constantly strives to update its faculty and students by conducting Workshops, Conferences, Seminars and Guest lectures in the emerging fields.

Objectives of the program

- Awareness about smart mobility
- All India event bringing MVGR student hub of e mobility with ZUNIK-MVGR collaborative efforts
- To encourage the students in the research for taking an active interest in doing the EV projects for moving towards the eco-friendly ways, using which we can reduce the environmental pollution.

Jury/Resource Persons for Different Events

1. Dr. M K Pathak, Associate Professor, IIT Roorkee
2. Dr. B L Narasimha Raju, Associate Professor, NIT Warangal
3. Dr. S. G. Kadwane, Professor, Nagpur University
4. M Venkateswarlu, Amar Raja Pvt. Ltd.

Convenors

Dr. Sarat Kumar Sahu, Professor and Head
Smt. Poojitha Rajana, CEO, Zunik Energies Pvt. Ltd.
Sri. Dogga Raveendhra, CTO, Zunik Energies Pvt. Ltd.

Coordinator

Dr. M Kannam Naidu, Associate Professor
Mr. K.S. Ravi Kumar, Associate Professor
Mr. Siva Kumar Dandu, Director, Zunik Energies Pvt. Ltd.
Mr. Lokeswara Rao K, Director, Zunik Energies Pvt. Ltd.
Mr. Achyuth Kumar, Manager, Zunik Energies Pvt. Ltd.
Mobile: +91 8008692734, Phone: +91 9381694994(O)
E-mail: necc@zunikenergies.com
Event website: www.necc.zunikenergies.com/

Awards

#	Award Name	1st	2nd	3rd
1	Championship	50K + C +M	30K + C +M	20K + C +M
2	Light Weight	3K + C +M	C +M	-
3	Best Design	3K + C +M	C +M	-
4	Best B-Plan and Cost Report	10K + C +M	C +M	-
5	Best Research Paper	3K + C +M	C +M	-
6	Best Woman Participant	3K + C +M	C +M	-

Apart from these awards, there will be several awards will be offered to contestants during various events and workshops at NECC'19.

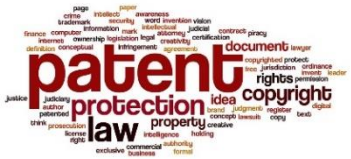
Registration fee: **Registration form is available online at** www.necc.zunikenergies.com/registration-portal/ and payment can be through online mode only on or before March 31st, 2019. The registration form can be downloaded from the event web site.

The filled-in form can be sent to necc@zunikenergies.com

Workshop-1: E-cycle development

As we all know by now the electric bike is more than a mere passing fad. This electric vehicle workshop will give the knowledge about mathematical calculations of electric vehicle selection of motor, battery and hands on practice of electric vehicle and analysis of mechanical chassis and trends and improvements of electric converts for electric vehicles.

Workshop-2: Patenting



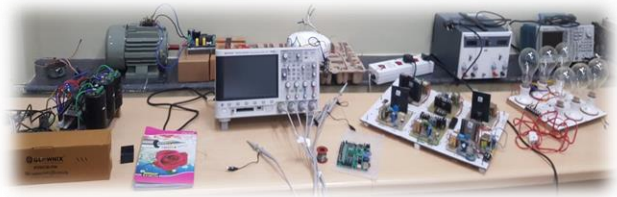
There is a need to make researchers understand the Usages of patent information, IP Law, importance of IPR and Protecting technical innovation/ using patents and patent information for R&D. The workshop will focus to create awareness on different aspects of Patent and Intellectual Property Rights. Through this workshop the participants will be able to have a better understanding of the following issues/concepts.

- Protecting technical innovation/using patents and patent information for R&D.
- Using patent information
- IP Law
- IP, R&D and knowledge transfer

Workshop-3: B-Plan

This workshop aims to foster entrepreneurship among different students and provides an integrative learning experience. It provides them a platform for refining their business ideas and strategies to bring them to execution.

Workshop-4: DSP/FPGA based v/f IM drive for EV applications



This workshop deals with the DSP / FPGA controlled v/f IM drives for EV applications. It focuses mainly on how to control an induction motor using DSP/FPGA based V/F drives.

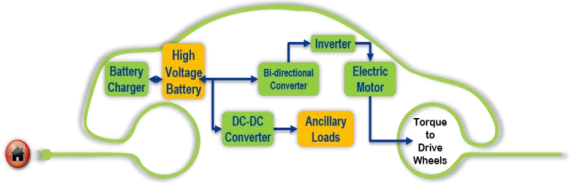
Workshop-5: Smart Mobility

Smart mobility is a new and revolutionary way of thinking about how we get around — one that is cleaner, safer, and more efficient. This workshop on Smart mobility deals with the following aspects.

- Flexibility
- Efficiency
- Integration
- Clean Technology

Two more aspects of smart mobility are accessibility and social benefit, which means that it is should be affordable for everyone and help provide a better quality of life.

Workshop-6: Power converters for smart mobility



The workshop deals with the importance of power electronics within the task of providing sustainable, flexible and cost-efficient individual mobility in the upcoming years. Conversion from renewable energy sources to electrical energy by power electronic devices has played vital role in working of micro grids, grid interfacing, power management for automation, electric vehicles and performance evaluation technology development. This workshop offers an opportunity to discuss recent trends in DC-DC & DC-AC converters for applications in grid and electric vehicle technologies

Workshop-7: Chargers for electric vehicles

This workshop is designed to provide real life information about PEVs and charging infrastructure available, so they can make better educated decisions on the local charging infrastructure.

The agenda includes:

- Plug-in Vehicle Technology and Market present
- Plug-in Vehicle Charging Infrastructure Technology
- How Do People Charge Their Plug-in Vehicles?

And Many More Events...

Incubated Startup of TIDES, IITR
Zunik Energies
Fulfill Power Dreams

MVGR College of Engineering (A)

Proudly presents

National Level E-Cycle Championship (NECC'2019)

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MVGR Student Chapter

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IET

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at 8pm
Worth to watch
We depart to report

Organized by

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