





# NDRF NEWSLETTER Vol 9 ISSUE JUNE 2021







Online Webinars Meetings Publications

DIRECTOR NATIONAL DESIGN AND RESEARCH FORUM The Institution of Engineers (India) No.3, Dr. B.R. Ambedkar Veedhi, BANGALORE-560001 Phone : 080 - 2226 4336 Multi-Disciplinary & Interdisciplinary Approach to Innovative Academic Project Ideas/Opportunities for Engineering Graduates



NDRF and KIT- Kalaignarkarunanidhi Institute of Technology had Jointly organised a webinar on 'Multi-Disciplinary & Interdisciplinary Approach To Innovative Academic Project Ideas/ Opportunities For Engineering Graduates' on 3<sup>rd</sup> June 2021. The webinar was specially organised to motivate the students in the ongoing global pandemic and gave career guidelines, and project opportunities in Multi-Disciplinary Engineering. 472 students from 9 departments (Aeronautics, Agricultural, Bio Medical, Bio Technology, CSE, ECE, EEE, Mechanical and MBA) had attended the webinar.

The Speaker of this webinar was **Dr. K. Ramachandra**, Former Director at Gas Turbine Research Establishment, DRDO, Ministry of Defence, Government of India and Former Director of NDRF.

Welcome address was given by Dr. M. Ramesh, Vice Principal, KIT- Kalaignarkarunanidhi Institute of Technology. The webinar was inaugurated by **Padmashri Dr. Mylswamy Annadurai**, Chairman, NDRF & Vice-President, TNSCST. Felicitation address was given by **Dr. V. Dillibabu**, Scientist DRDO and Director NDRF.

The focus of the webinar was multi-Disciplinary projects, research opportunities, entrepreneurship opportunities and development of new project ideas.

Dr. K. Ramachandra presented entrepreneurship areas in the health care, agriculture and societal applications. He explained with examples how Innovation can be done with networking of Biology, Agriculture, Medical, Engineering and Social Sciences. He also gave an example of crop spraying drone developed in collaboration with NDRF for farm productivity, and suggested student project opportunities with artificial intelligence for specific application like spraying, soil testing, pesticide deduction, Insecticide screening etc. He also discussed about Aqua-culture Technology with Drones for water quality monitoring, fish surveillance, pH scale and other critical value measuring. He further explained about the application of Bio- printing of organ and skin tissue, Additive Manufacturing, product enhancement of Aero engine parts, metal parts by this method. He further explained about underwater vehicle technology and briefed about the National Program on Underwater Vehicles. He also discussed about the harvest of renewable energy resources viz: wind, solar and emphasised on the development of horizontal axis wind turbine. He also shared his views on technology development on Automotive and Aerospace Engineering applications.

### **TECHNO SPOTLIGHT - I**



National Design and Research Forum in association with J&K, IE(I) State Center had conducted an online event 'Techno Spotlight-1' on 19<sup>th</sup> June 2021.

The 'Techno Spotlight' event is a platform to demonstrate Innovative Technologies by the students and the start-ups. **The online event was inaugurated by Padmashri Dr. M. Annadurai, Chairman NDRF, Vice-President TNSCST,** Felicitation Address was given by **Dr. V. Dillibabu**, Scientist DRDO & Director NDRF.

**Dr. K. Gopalakrishnan,** Council Member, IEI, **Dr. Reeba Korah**, Professor & Interim Dean, Alliance College of Engineering and Design, Alliance University and technical advisors of NDRF Dr. C. J. Jagadesha, Lt. Gen. V. J. Sundaram participated as panelists.

The session was attended by 100 plus participants from different states. **National Skill Development Forum's (NSDF)** online platform was used for the event.

The Technical presentation was divided into two sessions followed by Question and Answer session at the end.

**Session-1**: Students of Alliance Deemed University, Bangalore, had presented on the following projects.

1. Computer- Based Covid-19 Detection and Classification. Team Members: Raksha A, Satyabhama Singh and Anindita Das

- 2. Interactive Learning Platform for Orbital Mechanics Using Python. Team Members: L Ramkiran, Monisha Patel A, Thoshitha R Kumar and Manjunath
- Session-2 : Start-up's presentation was given by Nikhil, Ashwin and Tarun from TSC Technologies Pvt. Ltd, Bengaluru and demonstrated their project on CSPD Ground Control Station Setup v3.0.

Welcome address was given by Mr. Mukund Kumar, Asst. Manager (Technical), NDRF. In the end, the session was concluded by vote of thanks by Mr. Sankar Reddy, Manager, NDRF.

#### **Invited Talk**

## UAVs: Research and Career Opportunities for Engineering Students



An 'Invited Talk' was organised by IE(I), **Pune Local Centre**; National Design and Research Forum (NDRF), on 26<sup>th</sup> June 2021. **The online event was on UAVs: Research and Career Opportunities for Engineering Students.** 

The speaker for this event was **Dr. V. Dillibabu**, Scientist, DRDO and Director, NDRF. During the lecture, Dr. V. Dillibabu, gave a brief introduction on Drones, present applications and general applications of drones in human life.

He further explained the application of drones in swarm and the role of artificial intelligence to execute specific tasks. He explained the anti-drone technologies and their applications.

Dr. V. Dillibabu discussed on the research areas such as Innovative Payload Technologies, Artificial Intelligence & Robotics, Communication Technologies etc. Further he explained about Technology Readiness Levels (TRL) to choose the research area in UAVs.

He also explained the present market scenario in the UAVs and employment opportunities. He further suggested and explained career paths in higher studies, training programs, drone projects by different organisations, students' start-ups and government funding.

In the end Dr. V. Dillibabu interacted with the participants and answered their queries. The welcome speech was given by **Prof. K. K. Ghosh, Chairman, IEI, Pune Local Centre.** Ms Rinisha Nikhade briefed about the webinar and gave vote of thanks.

The program was attended by Students, Faculty Members, Technical Advisors of NDRF, IEI members and others participants from different places in India.











IEI-HQ Brain Storming Session was organized on 31<sup>th</sup> May, 2021 through virtual mode on the theme of Engineers Achievement and Role in COVID Control and Management in the august presence of President, IEI, Vice Presidents, IEI, Chairman, CATE, IEI, Chairmen, Division Boards, Committees, Fora and Organ.

**Padmashri Dr. Mylswamy Annadurai, Chairman, NDRF** had attended the meet and made a presentation on "Anti Covid - 19" Technology proposals of NDRF. In his address emphasized on exploration of post COVID opportunities, more R&D by IEI in association with national R&D bodies, industry and academia to develop and implement healthcare products, which include air breathing PPE kits, mobile oxygen concentrators, application of drones for sanitization and COVID control, cleanliness drive through development of Bio-toilets etc.

## Meeting with Chief Minister of Tamilnadu



on 25<sup>th</sup> June 2021 Padmashri Dr. Mylswamy Annadurai, Chairman, NDRF & Vice-President, TNSCST called on Thiru M. K. Stalin, Chief Minster of Tamilnadu to brief on the development of Banana Fiber Extraction System and related value added production set up being developed by NDRF.

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