

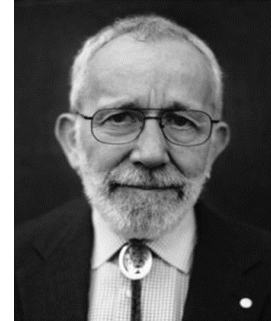


Aspire

Achievements in Sports, Projects, Industry, Research and Education

All About Nobel Prize- Part 77

JOHN ROBIN WARREN



John Robin Warren, born on 11th June 1937 in Adelaide, is an Australian pathologist, Nobel Laureate and researcher who is credited with the 1979 re-discovery of the bacterium *Helicobacter pylori*, together with Barry Marshall. The duo proved to the medical community that the bacterium *Helicobacter pylori* is the cause of most peptic ulcers.

Robin Warren was born to Roger Warren, one of Australia's leading winemakers and Helen Warren, a nurse. He was in a way inspired by his mother and his Uncle Luke Verco, who was a captain in the Army Medical Corps during the Second World War and later, a country general practitioner, to pursue medicine. He had an impoverished childhood due to the Depression and wartime restrictions.

He attended Westbourne Park School and St Peter's College, Adelaide, where he joined the army cadets and was a keen reader and photographer. In 1954 he was diagnosed with grand mal epilepsy but he still gained a Commonwealth scholarship to the medical school of the Adelaide University in 1955, followed by a residency at the city's hospital, where he met his future wife, Winifred Williams.

Warren served as registrar in clinical pathology at the Royal Adelaide Hospital, followed by work as a lecturer in pathology at the Adelaide University. From there he moved to the Royal Melbourne Hospital where he finished his training in 1967 and was promptly taken on as a senior pathologist at the Royal Perth Hospital.

When Warren began his prizewinning research, physicians believed that peptic ulcers (sores in the stomach lining) were caused by an excess of gastric acid, which was commonly blamed on a stressful lifestyle or rich diet. In 1979 he first observed the presence of spiral-shaped bacteria in a biopsy of the stomach lining from a patient. It defied the conventional wisdom that bacteria could not survive in the highly acidic environment of the stomach, and many scientists dismissed his reports.

Over the next two years, he collected numerous examples and showed that the presence of the spiral shaped bacteria (*Helicobacter pylori*) were usually related to chronic gastritis. In 1981, he was joined by Barry Marshall, and together the pair wrote two papers, in 1983 and 1984, linking the infection to duodenal ulcer and culturing a new organism. While microbiologists had no barriers to overcome about the causes of gastritis and peptic ulcers, the wider medical community remained hard to convince.

The same year, in an act born to some extent of frustration to prove to the medical community, Marshall deliberately infected himself by drinking a solution swimming with the bacterium. But many clinicians still remained unmoved. It wasn't until the early 1990s that the evidence of Marshall and Warren became impossible to ignore, at which point pharmaceutical development and clinical practice underwent a shift towards eradication of *H pylori* to treat ulcers.

In 1997, Winifred was diagnosed with pancreatic cancer and died. Having cared for her throughout her illness, Warren decided the time had come to retire.

In addition to the Nobel Prize in Physiology or Medicine in 2005, Warren has received numerous national and international awards including the Medal of the University of Hiroshima (1996), the Centenary Florey Medal (Adelaide 1998), the Medal of the University 'La Sapienza' of Rome (2005), the Gold Medal of the Australian Medical Association (2006) and the Distinguished Pathologist Medal (International Academy of Pathology (Australia), 2007). He was made a Companion of the Order of Australia in 2007. Warren was elected a Fellow of the Australian Academy of Science in 2006.

Source: <https://www.nobelprize.org/prizes/medicine/2005/warren/biographical/>

Info to Alumni- Campus Update

Dr.S.V.Albal has forwarded this message on MATLAB License Online learning resources available with our Campus-Wide License. As a reminder, with this license all faculty, students and staff members has access to download MATLAB and associated products for use on personal machines using your **SSN College of Engineering** MATLAB portal. Cloud-based tools are also available to all faculty and students.



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5. Once logged in on the Portal, you would automatically be associated to the **SSN College of Engineering** MATLAB Campus-Wide License.

If faculty are unfamiliar with using MATLAB in an online learning environment, this short tutorial about Teaching with MATLAB will help them [get started](#). Teaching resources are available [here](#).

Info to Alumni- Department Update

Website data Updated

With the help of Mr.Anand V Raman, Asst manager Marketing, all our data has been ramped up in our website, including faculty profiles.

Go ahead and discover more about your faculty and the dept.

You are invited to see a new feature “Tech Capabilities of Mech” at

http://www.ssn.edu.in/wp-content/uploads/2020/04/mech_capabilities.pdf

This is a highlight of what all we can do as a dept.

PI use this as brochure to introduce yourself in any forum



Anand V Raman

1.Appreciation for Review

Thank you for your outstanding service as a reviewer to TIIM. *Your recent review of a manuscript submitted to TIIM has been rated as 5* (in the scale of 1-5, with 5 being the highest) by the Editor. Your critical review has helped us to take the right decision on the manuscript. Such critical reviews are crucial in maintaining high quality of our journal.

I am also delighted to inform you that the impact factor of TIIM has crossed 1.0 last year, for the first time since it has been established. This is largely due to hard work and dedication of reviewers like you. With your continued support, I am sure that TIIM will scale newer heights in the years to come. Thank you once again. A Certificate of Appreciation as a sign of gratitude from TIIM is attached.

**Note From Editor of
Transactions of
The Indian Institute of Metals.**



Normally, reviewers are appreciated for the quantity of reviews-not on quality of review. This is a very rare occasion where the quality Of review has been appreciated, perhaps, for having saved a good paper, by proper suggestions to rectify ___ VeA.

2.Selected for Second phase in Smart India Hackathon- Hardware edition

This mail is on behalf of Vishal Mohan (3rd year mech - 122), Vigneshwar Veeravagu (3rd year mech - 119).

We are happy to inform you that we got selected for phase 2 evaluation for SIH Hardware 2020 Finale. The problem statement is "**Development of an underwater Remotely Operated Vehicle (ROV) for Inspection of the HRT (Head Race Tunnels) in Hydro-Electric Plant**" under the Ministry of Power.

We were already a part of the consortium project offered and funded by our college. The project was to develop an underwater Remotely Operated Vehicle. So, we worked for this problem statement and applied for it.

The team consists of two members from each Mechanical, ECE and EEE. We worked on the design, material selection and fabrication of the vehicle chassis. The ECE team worked on the control and navigation system of the vehicle and the EEE team worked on the power distribution and Battery Management System. We successfully built the vehicle from scratch and did various tests in the swimming pool and were successful.

3.SMART INDIA HACKATHON 2020 – Selected for next phase

TEAM DHRUA Mentor Dr.S.Sureshkumar

The problem statement needs us to make public transport attractive and encourage more and more people to use it. We conducted a survey through Google Form. Seat availability, accurate live tracking of the bus, and safety measures were the most welcomed reforms among the public. The proposed BUSTIE system can be implemented in the existing models with minimal hardware and infrastructural changes. We divided the BUSTIE system into three variants, namely - basic, semi-deluxe, and digital.

TEAM DHRUA



Rohinidevi S V
CSE – III yr
312217104131



R. Adithya
ECE – III yr
312217106302



Roshan Ram
Dayal D
MECH – III yr
312217114083



Pydipati
Praneeth
Kumar
MECH – III yr
312217114312



S. Survesh
MECH – III yr
312217114104



Shri Harri V
MECH – III yr
312217114094

BUSTIE system is a smart, efficient step towards the digitalization of the conventional public transport system.

20/01/2020- Internal Hackathon was conducted and we were shortlisted for the next power presentation round along with 6 other hardware teams out of 17 teams.

28/01/2020- Power Presentation round was conducted and we were one of the 2 hardware teams which were selected for SIH main 2020.

With 10/02/2020 has a deadline the video and documents explaining the prototype were uploaded in the official SIH 2020 portal.

15/04/2020- The results were published and our team was selected for further phase of evaluation.



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[ONLINE TRAININGS](#)

75	Ministry of Railways	BB459	2	Rg_V2	Vansh Gupta	DR. AKHILESH DAS GUPTA INSTITUTE OF TECHNOLOGY & MANAGEMENT
			3	SIH-AD-3	K. Adhymanan	ALAGAPPA CHETTIAR GOVERNMENT COLLEGE OF ENGINEERING AND TECHNOLOGY
			4	BUDDHIMAN YANTRAMANA	RAMAKRISHNAN T	PRATHYUSHA ENGINEERING COLLEGE
			5	GeekCoders	Ritik Sunil Dhedia	ST. JOHN COLLEGE OF ENGINEERING AND MANAGEMENT
76	Ministry of Housing and Urban Affairs	BC72	1	BetaX	S. BALAKRISHNA	GAYATRI VIDYA PARISHAD COLLEGE OF ENGINEERING
			2	Phoenix	Janakrangan E	Madras Institute of Technology Campus
			3	Kratos	Harshveer Singh	G. B. PANT GOVT. ENGINEERING COLLEGE
			4	DHRUA	Rohinidevi S V	SRI SIVASUBRAMANIAN NADAR COLLEGE OF ENGINEERING
77	Ministry of Housing and Urban Affairs	BC73	5	AARPLS	ANKIT DILIP GAIKWAD	PIMPRI CHINCHWAD EDUCATION TRUST'S PIMPRI CHINCHWAD COLLEGE OF ENGINEERING AND RESEARCH
			1	YANTRIK	T.S. SURYA NARAYANAN	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY RAMAPURAM CAMPUS
			2	PARYABARNAM	Shashi Kant Thakur	CAREER POINT UNIVERSITY, HAMIRPUR
			3	DREAM CRUSHERS(MICRO)	VARSHAA M	Sri Ramakrishna College of Arts and Science for Women
78	Ministry of Housing and Urban Affairs	BC80	4	Warners2.0	Shubham Gorakshanath Gorde	AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER
			5	EVCreator	Nale Ganesh Dattui	Shahajirao Patil Vikas Pratishthans S.B.Patil College of Engineering, Vangani, Tal. Indapur, Dist.Pune 413106
			1	LANNISTERZ	BALA VIGNESH R	BANNARI AMMAN INSTITUTE OF TECHNOLOGY
			2	EL DIABLO	Pallabi Sarkar	MEGHNAD SAHA INSTITUTE OF TECHNOLOGY
			3	Tardegades	Lakshita Jyothiraj Pillay	VIDYALANKAR INSTITUTE OF TECHNOLOGY
			4	MEGABYTES	BHARGAV KAR	BIRLA INSTITUTE OF TECHNOLOGY, PATNA

Research Publications

Dr.L.Poovazhagan, Assoc.Prof./Mech., published a paper titled "Accumulative roll bonding behavior of Al8011/SiC metal matrix nanocomposites" in the International journal of Materials Today: Proceedings (Scopus indexed, Elsevier publications). It is co-authored by the full time research scholar Mr Amith.S.C.

Dr.L.Poovazhagan, Assoc.Prof./Mech., published a paper titled "Investigations of tribological behavior of Al-Mg-Si/SiC nanocomposites by ultrasonic assisted casting method" in the International journal of Materials Today: Proceedings (Scopus indexed, Elsevier publications). It is co-authored by the full time research scholar Mr Amith.S.C.



The paper by A.Praveen kumar and M.Nalla Mohamed on "Influence of plain end-cap on the energy absorption characteristics of cylindrical tubular structures for lateral impact vehicle collisions" has been published in the journal Thin-Walled Structures 138 32–45 (2019) & 149 (2020) 106562. (Thompson Reuters IF: 3.488)

Dr.S.Sureshkumar writes--I am pleased to inform you that my part time research scholar's (Mr. S. Dharani Kumar, 16142997116) paper titled "**Experimental Ballistic Performance Determination of Friction Stir Welded Magnesium (AZ31B) Targets**" has been accepted for publication in International Journal of Mechanics Based Design of Structures and Machines, Taylor & Francis Inc. (Clarivate Analytics, Impact factor: 1.986)



The ballistic experiments were conducted at GFSL (Gujarat Forensic Sciences Laboratory) Ahmedabad. For the characterization work, the faculty internal fund received from SSN management has been utilized. We thank our management for their extensive financial support. At present **Mr. S. Dharani Kumar** is working as Assistant Professor in "Sri Eshwar College of Engineering", Coimbatore.

Dr.AKL writes---I am happy to inform that one of our research papers titled "An insight into the stress corrosion cracking resistance of friction stir processed and micro arc oxidation coated ZE41 grade magnesium alloy" authored by K. Radhika (PhD scholar), A. K. Lakshminarayanan is published online in the journal of mechanical engineering science, Sage publication (Clarivate analytics impact factor – 1.345).





I am so delighted on informing you that our paper titled **“Evaluation of the mechanical and electrical properties of spark plasma sintered titanium carbide reinforced alumina ceramic composite”** has been accepted for publication in Archives of Metallurgy and Materials (Clarivate Analytics indexed, IF – 0.691), authored by **Dr. G. Selvakumar**, S. Ram Prakash, and Dr. K. Rajkumar.

The other paper titled **“Study on preparation of Al - SiC metal matrix composites using powder metallurgy technique and its mechanical properties”** (Co-authored) has been accepted for publication in Materials Today: Proceedings (Scopus indexed journal).



S.Ram Prakash

Scholar P.Sabarinathan writes--

I am a research scholar in the Department of mechanical engineering working under Dr. V.E. Annamalai. During these quarantine days, while it is happy to be at home, it is also difficult staying back, without going anywhere. This is just a reflection on how I utilised the available time.

In these days, the experimental results are much useful for writing papers. Without those results it is hard to be engaged at home. Luckily, we had conducted lots of experiments in taking up the internally funded student projects under my guide and I had all those data.



In these last two months of quarantine, **4 papers have been accepted in Thomson Reuters indexed (Sci) journals.** This period was quite important in the sense that we had to upload, answer queries, revise the paper, submit copyright forms etc.

1. **Sabarinathan P, Annamalai VE**, Rajkumar K., Sustainable application of grinding wheel waste as abrasive for abrasive water jet machining process. Journal of cleaner production, 261, 121225, 2020, Elsevier, **(Impact Factor 6.395)**.
2. **Sabarinathan P, Annamalai VE**, Removal of Aluminosilicate Bond and Process Optimization on Recovery of Sol Gel Alumina Abrasive Grain from Abrasive Industry Waste, Silicon, Springer, **(Impact Factor 1.21)**. (Accepted paper in online).
3. **Sabarinathan P, Annamalai VE**, Balakrishnan R and Akhil C Kuriakose. Process optimization for recovery of fiber backing from coated abrasive discs, Chemical Engineering Communication, Taylor and Francis, **(Impact Factor 1.431)**. (Accepted paper).
4. **Sabarinathan P**, K. Rajkumar, **V.E. Annamalai** and K. Vishal, Static and dynamic behavior of micrometric agro prunus amygdalus particulate distributed inter polymer layer-kenaf composite, Polymer Composites, Wiley, (Paper Accepted), **(Impact factor-2.268)**.

The item listed as 3 above, is an internal funded student project, sanctioned by SSN trust. Apart from this, data of another internal funded student project which was a collaborative work with Civil department, was also converted into a paper and communicated to “Construction and building materials” journal.

I am very much thankful to our SSN Management for providing the stipend during these quarantine days.

Industry Connect

Dr.D.Ananthapadmanaban, Associate Professor and Treasurer, Indian Institute of Production Engineers, Chennai Chapter attended the monthly Executive meeting of IPE through Zoom video conferencing (19.4.20)



Programs Attended



Dr.R.Prakash, attended **seven days Webinar series** for Motorsport Vehicle Teams, organised by Rajarambapu Institute of Technology, Uran Islampur, Maharashtra in association with SAENIS Efficycle (8/4 to 14/4)

This webinar is mainly focused on Motorsport Vehicle development in the areas of Finance, Electric and Hybrid Electric Vehicles, BMS, CAE for Motorsport Vehicles, Advance Driver Assistance System, Material for Motorsport Vehicles, Business Plan and Manufacturing Process for Motorsport Vehicles. Webinar series includes online quiz and lectures from eminent scientists and academicians from leading educational institutions and research organizations.



Dr. N. Lakshmi Narasimhan, Associate Prof/Mech, Attended a Webinar on 'Smart Thermal simulation: A holistic technology for electronic devices and equipment' (21/4)

The Speaker was Mr. Karthik Sundarraj, Technical Manager – CFD Solutions, Indo-Pacific, Hexagon, MSC Software. The webinar covered the capabilities of Cradle CFD software and Case Studies using the Software. It gave an insight on real time Industrial heat transfer and Fluid Flow problems addressed using CFD tools covering a wide range of industries. My special Thanks to the speaker for the nice exposure given !!

Dr.N.LakshmiNarasimhan writes..

My FT Ph.D. Research Scholar, T. Amalesh finished writing his second paper and will be submitting the paper before this weekend to a top journal. He has already started his third paper. One paper got already accepted and due for Aug 2020 issue with SAGE Proc. IMechE Part-A J. of Power and Energy. He is in discussion with me on a daily basis.

We are also planning to submit a proposal to DST SERB before May 2020.



Project proposal submitted

Dr.S.Vijayan and Dr.R.Sundareswaran of Mathematics dept submitted a research proposal titled **Optimization in positioning of Virtual Testing Centre to enhance the testing facility for Covid-19 using Semi Graph Theory** to DST . (requesting a funding of Rs. 6 lakhs)



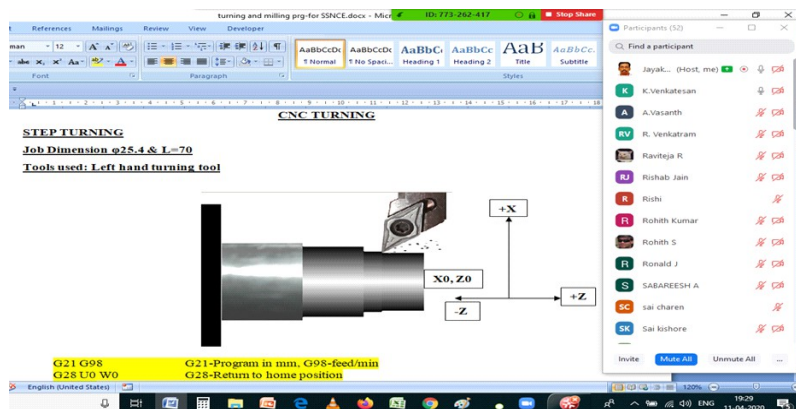
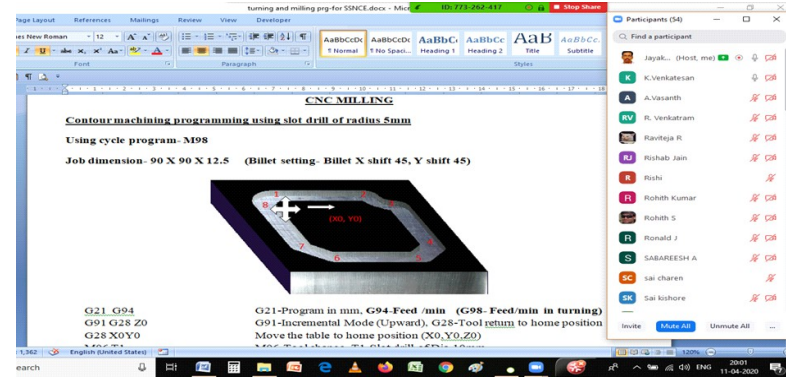
Info to Alumni- Department Update

Online Classes Info

Dr.K.Jayakumar

I conducted online Zoom classes for **2nd year Mechanical-C section for 5 periods** in the following time and days to cover the **Vth unit of Manufacturing Processes II** subject. Students were interacted at the end of each class and especially during learning of CNC programs. I also added assignment 1- questions in the LMS on 31-3-2020 and asked them to submit on 8.4.20. **All 68 students have submitted the assignments through email to me.**

Sl. No	Date	Time	Syllabus covered	No of students attended (out of 68)
1	6.4.20	9.30 am	Broaching-Surface and continuous types	54
2	7.4.20	2.00 pm	NC Machines-Classifications	56
3	8.4.20	9.30 am	CNC Machines-Types-Constriction details	51
4	9.4.20	11. 00 am	CNC Program basics-Turning Programs	52
5	10.4.20	11.00 am	CNC Program basics-Milling Programs, Machining centre	54



Dr.M.Selvaraj

Syllabus completion: subject Dynamics of machines for IV sem A section - Conducted classes online – II unit second part – Gyroscope and V unit second part – balancing of reciprocating pares

Dr. R. Damodaram

April 6th 2020 and April 7th, conducted online sessions for Mechanical II year A Section for the course Engineering Metallurgy. Zoom app was used to communicate with students.

April 1st 2020, April 6 and 22 April, conducted online sessions for I year (II SEM) EEE A Section for the course Basic Civil and Mechanical Engineering. Zoom app and WebEx app was used to communicate with students.

Dr.L.Poovazhagan

Syllabus coverage: M.E (II Sem Manufacturing Engineering), Subject: Polymers and composites – Syllabus completed through online teaching mode. Students submitted an assignment through online.

Dr.M.Dhananchezhian

UME 1402 Manufacturing processes II Class : 2 year A sec.

1. 1.4.20 8.00 - 9.00 AM Unit V - NC classifications, Advantages, Limitations, Applications – (attended 35)
2. 2.4.20 11.30 AM - 12.30 PM NC, DNC, CNC - difference. CNC Constructional details, Special features - (attended 43)
3. 3.4.20 8.00 - 9.00 AM CNC machining centre, Part programming fundamentals - (attended 34)
4. 6.4.20 10.00 - 11.00 AM G-codes, M-codes, Part programming of lathe basic operation cycles -- turning, step turning, chamfering, taper turning, Contouring, Threading and Grooving - (attended 33)
5. 8.4.20 8.00 - 9.00 AM CNC part programming for Turning, Milling and Drilling (Canned cycle). Wafer machining - (attended 34)

Subject II : ME 8694 Hydraulics and Pneumatics, Class : 3 year B Sec

1. 9.4.20 10 - 11 AM Unit V - Installation, Selection, Maintenance, Trouble shooting and Remedies in Hydraulics and Pneumatics - (attended 9)
2. 10.4.20 10 - 11 AM Design of hydraulic and pneumatic circuits - Applications. Low cost automation. Hydraulic / Pneumatic power packs - (attended 7)

Dr.G.Satheeshkumar

For II sem Mech B, allotted an assignment -2 minutes video based on the experiment conducted at home on a problem statement of their choice with a deadline of 11.05.2020.

For IV sem Elective subject TQM, allotted an assignment -5 minutes video/audio based on the topic allocated along with PPT were collected; All accessible on LMS



Dr.Vimal Sam Singh

Completed the syllabus for II Year B.E students for “Product Design and Development”. Based on lectures, assignments have been allotted to students to complete.

Completed three and half units for I Year M.E Manufacturing for “Additive Manufacturing”. Currently in progress with Unit IV.

Dr.K.Rajkumar

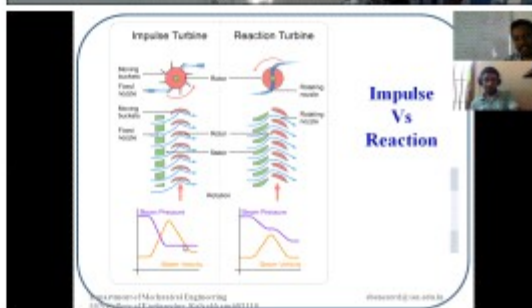
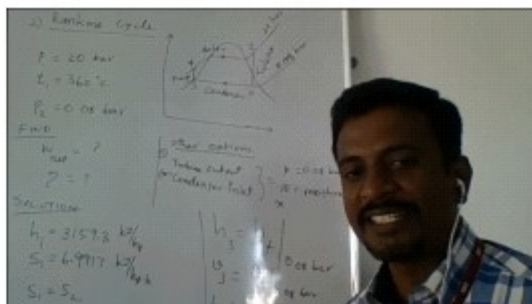
The Basic mechanical syllabus is completed through an online platform for first-year BME students

Dr.R.Prakash

I have completed II sem EEE B sec online class on today (2.4.20) 9 to 9.40am.

Mr.D.Ebenezer

1. ME- Energy-PEY1201 - Applied heat Transfer- 17 classes so far - Will be completing the entire syllabus by Saturday 25-Apr (Today)
2. BE- Chemical- UME1251 - Basic Mechanical Engineering -9 classes so far - Completed the entire syllabus
3. Updated my PPTs for all classes (UG & PG) in such a way that they can understand each concept, derivation and problem step-by-step as we do in class so that they can follow it without trouble.
4. Updated my LMS for both UG and PG with the PPT and the recordings from Zoom class.

Rankine cycle Problems and Turbines**2020-4.3-Turbines**

5. Prepared and uploaded individual assignments for both classes (UG and PG) and clarifying their doubts as they solve & send their solutions.

All zoom classes are recorded and being uploaded in LMS along with PPT.

Reflections by Thirthaa- first year Chemical engg (on Ebe's Classes)

Despite the unanticipated circumstances, our thermodynamics classes have been faring smoothly. It had been a subject I truly enjoyed before, and the online classes do it unparalleled justice. We did not face any issues in grasping the concepts...and the lessons by whiteboard made us feel like it was just another day at college. Many thanks to Ebenezer Sir for making our learning efficient and effective!

Dr.N.Nallusamy**Details of online classes handled during April 2020**

Class: Second semester M.E. Energy Engineering

Subject: PEY 1202 - Measurement and Control for Energy Systems

Course Teacher: Prof. N. Nallusamy



Sl. No.	Date and time	Topics covered
1	Mar 31, 11:00 AM	Compact Data Loggers
2	Apr 3, 11:30 AM	Working of Hot Wire Anemometer and Heat Flux Sensors
3	Apr 4, 10:00 AM	Telemetry in Measurements
4	Apr 6, 10:00 AM	Errors in Measurements
5	Apr 7, 10:00 AM	Experimental Planning and Selection of Instruments
6	Apr 8, 11:00 AM	Static and Dynamic Characteristics of Instruments
7	Apr 10, 11:00 AM	Statistical Analysis of Data
8	Apr 13, 11:00 AM	Intelligent Instruments
9	Apr 14, 11:00 AM	Open loop control systems
10	Apr 17, 11:00 AM	Closed loop control systems
11	Apr 18, 11:00 AM	Problem solving on Error Analysis – Statistical analysis of experimental data
12	Apr 22, 10:00 AM	Continuous and Discrete Process Controllers
13	Apr 27, 11:00 AM	Two step and Proportional Control Modes
14	Apr 28, 9:00 AM	Integral and Derivative Control Modes

Dr. M.Suresh

I have completed 100% syllabus for the subject "Heat and Mass Transfer" for III year B section students. While in college, I had covered 3 full units and 75% of 4th unit. During this lock down period, I covered the remaining 25% of the unit 4 and full 5th unit. I used 3 video lectures and 12 audio lectures along with PPT and PDF documents (Each lecture was a 30 minute lecture). All these contents were uploaded in LMS.

Dr.K.Babu

1. Completed the syllabus of ME6015 Operations Research (Final Year Elective) with online classes handled for 18 hrs.
2. Completed 80% of the syllabus of MF7201 Optimization Techniques in Manufacturing (PG) - online classes for 20 hrs and is still going on.

Dr.S.Rajkumar

1. Conducted online classes about 7 sessions (each session about 60 – 75 minutes) from 01.04.2020 to 08.04.2020 and completed the syllabus of UME1403 Thermal Engineering for the IV semester Mechanical Engineering 'B' section.

2. Conducted online classes about 2 sessions (each session about 75 minutes) from 02.04.2020 to 03.04.2020 and **completed the syllabus of ME8096 Gas Dynamics and Jet Propulsion** for the VI semester Mechanical Engineering.

Dr.S.Sureshkumar

Conducted review classes for the Course **(ME8692 - Finite Element Analysis)** to provide an overview for the course **“ME8692 Finite Element Analysis”** for Third year Mechanical Engineering students. The “zoom app” was used to communicate the students.

Around 25 students have attended the online class. For each unit, three sessions were handled to refresh the concepts and problems. The following schedule was followed to complete the special online class.

Sl. No	Date	Unit No	Topic
1	03-04-2020	Unit-1	Weighted residual method / Raleigh Ritz method
2	06-04-2020		
3	08-04-2020	Unit-2	One dimensional bar/ beam element – static analysis and dynamic analysis
4	10-04-2020		
5	15-04-2020		
6	16-04-2020	Unit-3	2-d scalar field problems : CST element : derivation and problems Higher order elements
7	17-04-2020		
8	20-04-2020		
9	21-04-2020	Unit-4	2-d vector field problems : axisymmetric elements : derivation and problems
10	22-04-2020		
11	23-04-2020	Unit-5	Iso-parametric formulation, numerical integration and truss element problems
12	24-04-2020		



Dr.K.L.Harikrishna

Conducted On-Line classes for the subject **“Engineering Mechanics”** for the first year Mechanical students of “A” section upto 27.04.2020.

Sent Assignments by mail to third year mechanical B students - Assignment 4 & 5 for the subject **“Design of Transmission Systems”**. Same was collected(by email) and evaluated



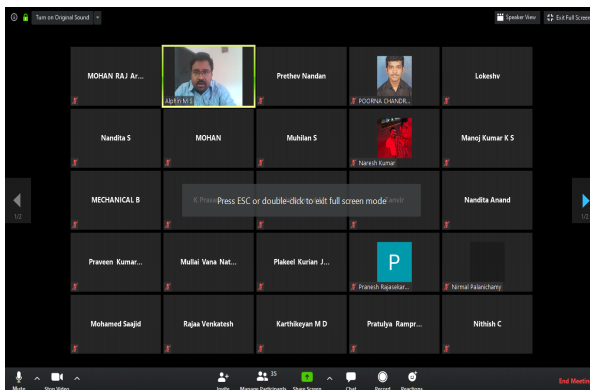
Dr.B.Anand Ronald

Gave Assignments on

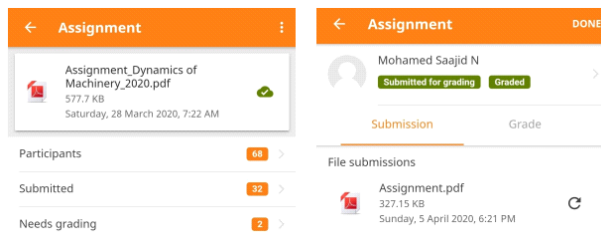
- MEASUREMENT OF SURFACE FINISH, for the subject PMF 1202 Advances in Metrology and Inspection
- LASER INTERFEROMETERS for the subject PMF 1202



Dr.M.S.Alphin



Online class conducted for
II year Mech B students for
Dynamics of Machinery



Excellent approach of capturing
while we write on paper, using a
cell phone holder . Ideal for all
problem based subjects.
Pl visit the link – VeA

Reflections of A.Mohanraj, on Alphin's demo videos

First of all I would like to thank you on
taking efforts for conducting online video
lectures.

The video lectures that were conducted not
only for dynamics but also for all the other
subjects were extremely useful. And
especially Dynamics of Machines, being a
subject which requires a lot of understanding
on the concepts was handled really well.

The way the concepts were taught with
relevant examples were extremely useful and
it also helped us in clear understanding of
the concepts.

The videos that were shown on solving
problems helped us to understand the
method of solving pretty easily and it was
also helpful for us to refer the videos
whenever we had any doubts.

So once again I thank you and all the other
faculties who took the effort to arrange
online lectures and help us during this
quarantine period.

Assignment given to students and
graded through LMS. Students have
submitted the scanned assignment
online.

Created Problem demonstration videos

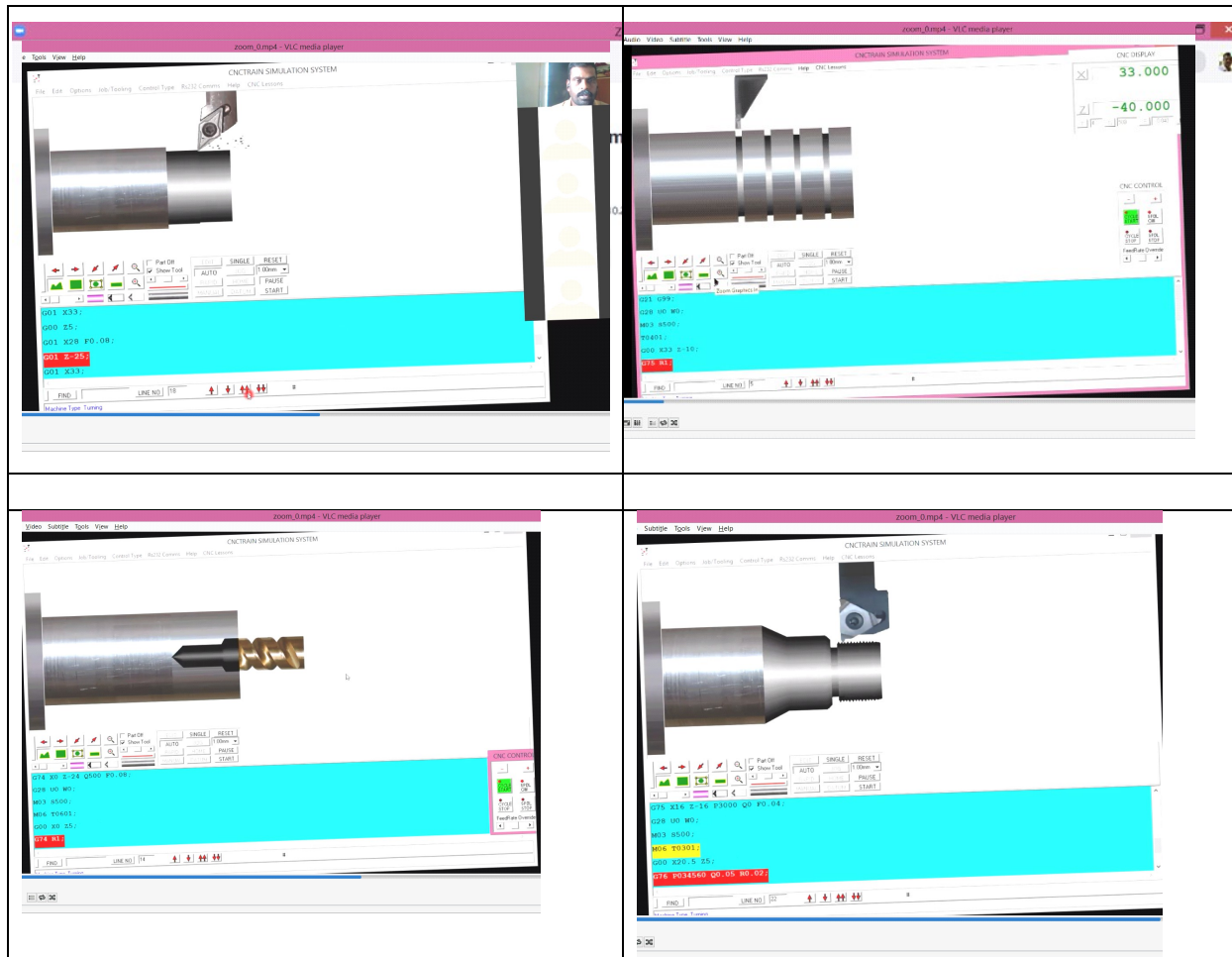
<https://youtu.be/9UY-EvcqS4I>

<https://youtu.be/3OLpjYt4Mc>

Manufacturing Processes – II (TCP) -This course is a theory cum practice subject and all the students already completed 10 experiments out of 12. Two more experiments need to be completed by the students, which needs physical presence to operate the machines. However, two experiments are based on



the programming and simulation using a software. To complete these experiments, two online sessions were conducted on 6th & 7th April 2020. The CNC Train Software Screen was shared to the students during this session and CNC programs taught to the students in the earlier online sessions were executed. Single Block Simulation (line by line) was used to discuss the working function of each block (line) of a part program. Different lathe operations namely turning, facing, grooving, threading and drilling was demonstrated.



Faculty Reflections

Dr.V.E.Annamalai

How productive was working from Home? (other than online classes)

- **Completed** Design Thinking for Innovation by University of Virginia- thru Coursera. (score 17/18)
- **Completed** compiling and revising the web site.
- **Started** a new course for Lifelong learning for alumni - on "Life Skill Program on Surviving in industry", through our LMS itself.
- **Now working** on "Engg Principles and Practice" content development with AKL. (with Dr.Samudra in the loop)
- **Communicated** a paper. (through Research Scholar Sabari's work from home)

Dr. R. Damodaram

Attended one day online webinar talk on Additive manufacturing in Academics held on 13 th April 2020

Attended NPTEL talk "Use of additive manufacturing for disaster management" by Dr. Murugaiyan, IIT Madras on April 18, 2020.

Attended NPTEL talk "Joy of teaching " by Dr. C. Balaji IIT madras on April 19.



Dr.K.Babu



Enrolled for two new courses on Coursera
Advanced Manufacturing Process Analysis by University at Buffalo and
Excel Skills for Business: Essentials by Macquarie University.

Communicated two journal papers.

Dr.L.Poovazhagan

- Published two papers in the "International journal of Materials Today: Proceedings, Scopus Indexed, Elsevier Publications".
- Two journal papers communicated to international journals. Both are full time scholar papers.
- Attended two NPTEL lectures. (i) Joy of teaching (ii) Additive manufacturing.
- Registered for one online FDP course.
- Registered for one online course at COURSEA. The title of the course is "Let's talk about COVID-19". One week of lecture was completed.

Dr.K.Jayakumar

- I prepared and submitted one paper titled "Machining characterization of SS304 through WEDM" to Materials Testing Journal which is in AU annexure-1. It is part of my PhD scholar's work.
- Ongoing- Preparation of one more paper from my part time PhD scholar's work is going on

Dr.D.Ananthapadmanaban

- Communicated a paper out of undergraduate students D.Jagannathan, K.Madhavan's research work for possible publication in the International Journal of Innovations in Management,Engineering and Science.
- As Treasurer of The Indian Institute of Production Engineers(IIPE),Chennai Chapter, attended an Executive meeting of IIPE via Zoom Video meeting on April 19th,2020 between 10.30 and 11.30 A.M.
- Registered for the Coursera course-Introduction to Psychology,offered by Yale University.

Dr.K.Rajkumar

Overview on completion of the syllabus by the faculties who are handling courses for the VIII SEM –B section and report submitted to HOD/Mech

My research paper titled - 'Mechanical and free vibration properties of skin and core designed basalt woven intertwined with flax layered polymeric laminates' has been accepted in Part C: Journal of Mechanical Engineering Science, Clarivate analytics impact factor 1.345

Revision of research paper has been submitted to the Journal of Engineering Tribology
Proof corrected for the Journal of cleaner production and Part C: Journal of mechanical science



- Thermo- plastic composite paper writing work is ongoing with Vishal research scholar
- Totally 6 research papers from the various publishers have been reviewed
- A research paper on WEDM of composite is communicated to Springer journal
- Studying through the NPTEL lecture series on Machining of materials
- Participated class committee meeting convened by Dr.M.S.Alphin, through an online platform

Dr. N. Nallusamy

Submitted a technical paper titled "Performance and emission analysis on the effect of exhaust gas recirculation in a tractor diesel engine using pine oil and soapnut oil methyl ester" to Elsevier journal "Fuel". [Co-author: Vedhagiri Venkatesan, PhD scholar]

Dr. N. Lakshmi Narasimhan

Attended a Webinar on 'Smart Thermal simulation: A holistic technology for electronic devices and equipment' on Tuesday, April 21, 2020, at 10:00 AM IST.

Dr.M.Suresh

- Attended a 4-day online course on "Examination Reforms" conducted by AICTE during April 22 to 25. I have enclosed a detailed write-up on this course. I have also enclosed the AICTE Exam Reform Policy document.
- Registered for an online course on "Positive Psychology" in Coursera (6 week course from April 25 to June 8).
- Started to write a journal paper based on the work of my research scholar.
- I have completed the NPTEL course on "Steam and gas power systems" and am awaiting final exam. I have submitted all 8 assignments for this course and the average marks for assignments is 23.6 out of 25.

Dr.S.Rajkumar

Completed the eight week course on “Steam and Gas Power Systems” offered by NPTEL.

Registered for six week course of “Professional development: Improve yourself, always” offered by Macquarie University in Coursera which is under progress.

Attended one day Webinar on “Smart Thermal simulation: A holistic technology for electronic devices and equipment” offered by MSC Software Corporation on 21.04.2020.



- **Completed attending** the “Seven Days Webinar Series for Motorsport Vehicle Teams” (from 22.04.2020 to 29.04.2020).
- **Preparation of manuscript** for a book chapter titled “The potential of various alcohol fuels for advanced internal

Dr.M.Selvaraj

Project Guidance: Given project guidance to students – Interpreting results – preparing reports.

ICMECHD 2019 conference work: Book publishing work – communicating to authors regarding corrections and updates – making changes in the book through publisher and other communications.

Workshop attended: 3 Days Online Workshop on “Design of Experiments-An Engineering Perspective” 25, 26 & 27th April 2020 (Special Batch).

Course attending: Initiating and planning Projects - University of California - 6 weeks, on going



Dr.M.S.Alphin

- Submitted a revision for a paper Submitted for a International Journal
- Conducted Class Com meeting thru Zoom

Dr.B.Anand Ronald

- Registered for "The 3D Printing Revolution" course offered by "University of Illinois at Urbana-Champaign", through the Coursera platform.
- Registered in the National Digital Library of India website, co-ordinated by IIT Kharagpur and sponsored by MHRD.
- Compiled Monthly Activities .

Dr.S.Vijayan

- Registered for the course “Supply Chain Management: A Learning Perspective” , offered by Korea Advanced Institute of Science and Technology.
- Submitted a research proposal to MATRICS

Dr.S.Sureshkumar

- **Communicated** a journal paper titled “Failure Investigation on High Velocity Impact Deformation of Boron Carbide (B4C) Reinforced Titanium/ Glass Fiber Reinforced plastic Fiber Metal Laminates” to Journal of Materials Science. The co-authors for the paper are **Shankar P.A and Lalith Kumar K** (2017 passed out students).
- **Communicated** a journal paper titled “Effect of Ceramic Particles Reinforcement on the Ballistic Resistance of Friction Stir Processed Thick AA6061 Surface Composite Targets” to journal of Mechanical Engineering Science, based on the work of Mr.U.Maharajan (part time research scholar)
- Currently working on developing two proposals

“Fatigue and fracture Mechanics analysis of aircraft landing gear wheels” to be submitted to CVRDE Chennai, within 2-3 months.

“Fracture Mechanics analysis of gas turbine blades” to be submitted to GTRE Bangalore, based on initial discussions during October 2019 and now awaiting the next discussion.

Dr.K.L.Harikrishna

- Undergoing the course on “**Data Sciences**” through the platform of Coursera, offered by Johns Hopkins University, Maryland, USA.
- Reviewing our new Textbook on “Engineering Mechanics” with my Co-author.
- Research progress was reviewed (Bi-Monthly) for my research scholars through mobile phone.

Dr.K.S.Vijaysekar

- Enlisted for a course on “ Machine Learning” taught by Professor Andrew Ng who is an Adjunct Professor of Computer science at Stanford University .
- Enlisted for a course on “The Science of Well Being” taught by Professor Laurie Santos who is a Professor of Psychology and Head of Silliman residential college at Yale University,
- Conducted a one week online review class for 1 hour daily on Finite element analysis for the benefit of my III year A batch students
- Started and progressed well in writing a Text book on “Finite Element Analysis”.
- Listened to Mr. Dananjaya Hettiarachchi on ‘Conversations’ online on the Facebook page of the Shiv Nadar Foundation on April 3rd at 6 pm.

Dr.Vimal Sam Singh

Completed a Journal review for “International Journal of Materials Engineering Innovation” Inderscience Publishers.

Completed 2 weeks and progressing on week 3 for the 5 week Coursera course “Introduction and Programing with IoT boards”.

Uploaded a revision for a paper to IETE Journal of Research.
Completed question paper setting for End Semester Theory Examinations.



This is Nandita.S from 2nd year Mechanical-B.

Student's reflections on Working from Home

It's been more than a month since lockdown began.

I have been doing a few interesting courses to upgrade my hard and soft skills during this quarantine period.

1. I have completed an online course offered by TCS ion named "Career Edge- Knockdown the Lockdown". This was a 15 days course, offered to develop the business skills and improve business etiquette.

2. I am continuing the course "Foundations of Datascience" with One-Fourth Labs, a startup of IIT-M. I started my data science course in the month of February.

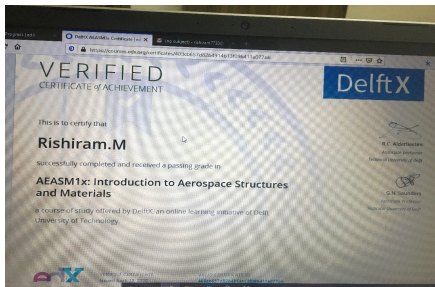
3. I am also learning python from Udemy, named "Masterclass in Python", since learning a language would be helpful.

These are the few quarantine activities that have kept me busy.

I'm Rishiram M from third year mechanical B .

I have completed 2 online courses from edx portal offered my foreign universities.

- 1.introduction to engineering simulations(by cornell university)
- 2.introduction to aerospace structures and materials(by delft tu).



I am Pranesh Rajasekaran (181002116) , MECH B, 2nd year

I am now undergoing an online certification course on AUTOCAD by INTERNSHALA.

We are also ready to undergo some other courses suggested by our department for further studies.

I am A SABAREESH from second year mechanical C . I've been doing 'Introduction to psychology' in Coursera and ' Introduction to airplane performance' course through npTEL.

I am Tharun VS(181002175) form Mechanical department'C' section Second year.

I am doing a course on Coursera on the topic "Ecology: Ecosystem Dynamics and Conservation" and a NPTEL course on "Introduction To Airplane Performance"

STUDENT ACTIVITIES:

(Many online courses have been completed by students - pl see Annexure)

- Vimal Kumar Bharathi B R, of second year, attended a webinar conducted by Skill Lync on Automotive Sketching (4/4).
- Raghav Arvind T, 3rd year, cleared German Examination A2 Level under Goethe Institute, Chennai. (17/4)

WRITE Up ON THE WEBINAR ON DEVELOPMENT OF THINKING ABILITIES RELEVANT FOR ENGINEERING EDUCATION-Dr.D.ANANTHAPADMANABAN

My research scholar Arthur Jebastian and I just now finished attending a webinar on-Developing thinking abilities relevant for Engineering Education. Date-28/04/20 Time- 6.00 to 7.00 P.M. Speakers were-Dr.K.P.Mohanan(Ph.D-M.I.T-U.S.A),Vignesh Ramakrishnan(Ph.D- NUS,Singapore) and Vaideeshwaran-Consultant with the World Bank.



- The current situation has forced all of us to change our line of thinking and modes of work. In this context, my research scholar Mr.Arthur Jebastine suggested that we both could attend a webinar on development of thinking abilities.
- The webinar started at 6.00 P.M on 28th April,2020. Dr.K.P.Mohanan (Ph.D from M.I.T, U.S.A) started the discussion on doubting and questioning. He started with a very simple question-namely -Is there air in your room? How do you know? He made us aware of rational justification and also presented a simple case on logical contradiction.
- Dr.Vignesh (Ph.D from NUS-Singapore) gave examples of 4 scenarios of formulating specific problems and then extending it to general problem. One of the scenarios was-
 - 1.How to make sure that the gardener does not forget to close the valve after watering the plants
 - 2.How to make sure that valve is closed after watering the plants?
 - 3.How to make sure that water is not wasted while plants are watered?
- Mr.Vaideeshwaran, a consultant with the World Bank talked about the problems in large infrastructure projects. His view was that Engineers quickly want to get a solution to a problem by just following the same solution used for that problem in some other country, without going into the specific context of our country. Engineers also seem to be in their comfort zone. For example-Design Engineers want to be in design Mr Vaidi was of the view that a Design Engineer should also know some manufacturing, construction and other aspects of Engineering. Transdisciplinary enquiry was the need of the hour.
- During the session, there were 2 questions with multiple choice that were asked and polling was conducted among the participants. The answers were also discussed.
- On the whole, this webinar gave us some ideas on new ways of thinking relevant to Engineering education in our country.

REPORT OF THE WEBINAR ON ART OF WRITING RESEARCH PAPERS- Dr.D.ANANTHAPADMANABAN

Dr.Ananthapadmanaban and his research scholar Mr.Arthur Jebastine attended a webinar entitled-Art of writing research papers.

- The webinar was conducted between 11.00 A.M and 12.00 P.M on 29th April, 2020 by Dr.K.P.Jaya, Director(Research),Anna University.
- Around 4000 participants throughout the country had registered for this free webinar ,but only 1750 were allowed direct access to the webinar room.
- Dr.Jaya started her webinar by stating that publishing papers is just one part of research.
- The major part is that the Institution that one is working in should be able to put itself on a high global pedestal with the help of research done by its faculty.
- Research by a group contributes an infinitesimal level of advancement in the overall scheme of things. One should enjoy learning new things and new ideas and be prepared to accept failure/rejection.
- The talk was divided into 3 parts-(i) What is research(ii) How do we do research (iii)What are the different parts of a good research paper and how we go about choosing a proper Journal to publish and how do you writ each part of the paper like Introduction, Literature Review, Methodology, Results and Discussion and Conclusion.
- This talk came at the right time for my research scholar and me since we are in the process of writing a good research paper to be sent to one of the Annexure-I list of Journals given by Anna University.
- Some important points that came up in the webinar were-
- One has to write Conclusions somewhere during the early stages of preparation of the paper, highlight on our contribution to the already existing research work in our area . Revisit the Literature survey part after the whole paper is done and modify the Literature survey. Dr.Jaya was of the view that at least a dozen revisions are required before sending the final version of the paper.
- Lastly, an important lesson that we learnt was, not to fear failure.
- If by any chance, a paper is rejected, one has to rework, modify the work and send it again for publication. Common reasons for rejection of papers were elaborated.
- On the whole, my research scholar learnt a lot from the webinar and for me it was a revision of what I already knew.
- Both my research scholar and I felt that we are working as a team and that was the most important takeaway from this webinar.

1. I have enlisted for a course on “Machine Learning” taught by Professor Andrew Ng who is an Adjunct Professor of Computer science at Stanford University and the Co-founder of Coursera, who has taught to more than 100,000 students since 2011 and led to the development of the MOOC platform at Stanford. He has played key development roles in projects related to machine learning and AI at Google and Baidu as Founding Lead of Google Brain and Chief scientist at Baidu.



It is a real pleasure listening to him on the fundamentals of machine learning, taking one through concepts of supervised and unsupervised learning, how search engines use and adapt learning algorithms, how our email is sorted out into spam and non - spam ones, how the e commerce industry is tackling customer needs and buying behavior, how the world is using data today and much more in a friendly, free wheeling chat sitting on his uncluttered work desk with just him and his computer. The quizzes in-between the lectures are indulgent and thought provoking.

2. I have also had the pleasure of enlisting to a course on “The Science of Well Being” taught by Professor Laurie Santos who is a Professor of Psychology and Head of Silliman residential college at Yale University, and regularly hosts the happiness lab as a podcast. A Harvard educated Professor she candidly emphasis on the need to create a conducive environment to happiness and how to use tools to strengthen and measure one’s happiness especially in these testing times. A welcome course offering indeed, and I am happy to have enlisted for it at this juncture when the lockdown is becoming stressful.

3. I conducted a one week online review class for 1 hour daily on Finite element analysis for the benefit of my III year A batch students and was happy to have an audience on average of about 35 students over the week tuning in attentively and making the class memorable. At the end of every day’s class I mailed them assignment sheets concerning the topic just covered and they sound them useful as they shared the answers the following day. FEA being a difficult problem-based subject they were only too eager to refresh their preparations with the daily classes.

4 It has been a yearning passion of mine to write a Text book on “Finite Element Analysis” and I am happy to say that I maximized the present opportunity of being locked in, by tucking myself deeply into writing not less than 10 pages every day and on last count have written more than 300 pages of the text book interspersed with theory and problems, covering the Anna University Syllabus. I have finished 95% of the textbook and working on the last chapter on Plates and Shells now, which will be followed by framing end of chapter problems and solutions. Hopefully I can complete the entire Book in another week’s time and get the publishing proposal through with a reputed publisher. Pearson Publisher has already evinced interest in the proposal and is looking forward to my manuscript for further review and decision making.

5. I also had the privilege of listening to Mr. Dananjaya Hettiarachchi on ‘Conversations’ online on the Facebook page of the Shiv Nadar Foundation on April 3rd at 6 pm. His inspiring story from being a troubled youth to being awarded the World Champion of Public Speaking by Toastmasters International, life has been a roller coaster ride of self-discovery and growth. His winning speech was rated amongst the “Most talked-about speeches of 2014” by Fortune magazine. The live program attracted many ardent fans and followers and he spoke about how to speak daringly and without any inhibitions when on stage.

One day **online workshop** on **“Design Thinking based New Product Design”**

Workshop conducted Online

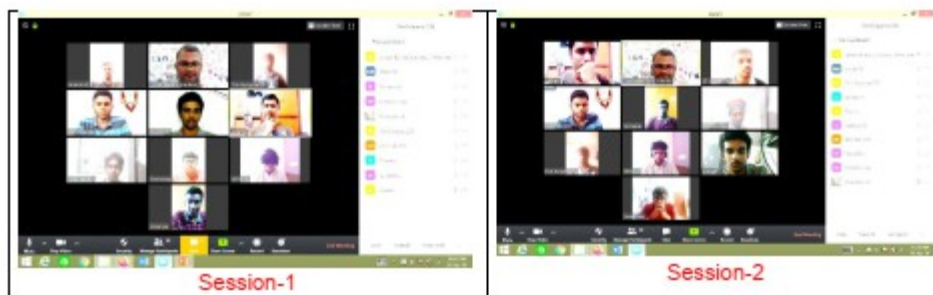
Dr. S. Suresh Kumar has organized a one day online workshop on **“Design Thinking based New Product Design”** using **“zoom app”** to Third year Mechanical Engineering students. Among the 20 registered students, around 10 students participated the workshop. Due to heavy rain and electricity problem, the remaining students couldn't attend.





Prior to attending the workshop, the participants were instructed to come with solutions for the two case studies which were shared to them earlier. In addition, a **“persona form”** was also shared to them. The two shared case studies are,

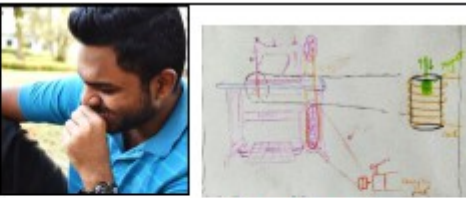
Session :1 (9.00 a.m to 10.15 a.m)	Introduction to new product design, need for innovation, understanding individual persona etc.,
Session :2 (10.30 a.m to 11.45 a.m)	Introduction to Design Thinking, difference between conventional design and Design Thinking, Global companies using principles of DT, steps involved in DT and Case studies.
	<ul style="list-style-type: none"> At the end of the second session, participants were informed to choose their own interested areas to develop a simple new product using the phases of DT. Guidelines were given to them to apply the different phases of DT (Empathize, Define, Ideate, Prototype and testing towards their new product design. Suggestions were given to them to make use of the communication systems/persons available around them for 'empathize' stage.
Session :3 (04.00 p.m to 05.00 p.m)	Development of Empathy map, redefinition of problem statement, idea generation techniques and additional case studies using DT
Session :4 (05.00 p.m to 05.45 p.m)	<ul style="list-style-type: none"> Participant's individual presentation about their designed new product. Utility of the DT phases (Empathize, Define, Ideate, Prototype and Testing) towards new product design was verified and suggestions were given to them for possible testing stage.

1. **Embrace baby warmer** : related to new product development for new born babies2. **Naandi Foundation's safe drinking water project (Hyderabad)**: related to social welfare project.Totally 4 sessions of each duration 1 hour 15 minutes was created using “zoom app” and the corresponding ‘session links’ and ‘pass words’ were shared to the participants. The session details are



Glimpse of new product innovation – innovated by Participants

<p>Name: Shri Hari K J</p> <p>Year and section: 3rd year and Mechanical Engg 'B' - Section</p> <p>Roll no: 312217114093</p>		 <p style="text-align: center;">Face mask model</p>
<p>Title of the problem domain: Problems for Medical personnel working with COVID-19 ambience</p> <p>Empathy: I spoke with my brother-in-law, who is a doctor, about the problems faced by medical personnel.</p> <p>Define: Doctors had a fear of attending patients who may not have COVID-19 but they are not sure about it. (How Might we change the attitude of medical person?)</p> <p>Ideate: Instead of covering the full body every time, we can use a face mask that covers the head portion and also provided with glass covering like in a helmet to see the patients.</p> <p>Prototype: A small prototype was fabricated using paper and rope.</p>		

<p>Name: Vishnu Srinivasa Prasad Year and section: 3rd year and Mechanical Engg 'B' - Section Roll no: 312217114125</p>	 <p style="text-align: center;">Concept model</p>
<p>Title of the problem domain: "How might we innovate a low cost solution to power backup?"</p> <p>Define: When the power to a city is cut-off, many places nowadays have a backup generator to temporarily solve the problem. But that isn't the case for slum dwellers. They literally have no other source of electricity apart from the minimal amount they receive from transmission lines. During such times, especially during night time, they would require the most basic of needs- lighting-in order to see.</p> <p>Ideate: This is possible with few attachments to a tailoring machine can provide them with Energy sufficient enough to keep batteries in charge for torches and lamps.</p>	

Name: Swame Nathan

Year and section: 3rd year and Mechanical Engg 'B' - Section

Roll no: 312217114106

Title of the problem domain : Changing of user behaviour

Empathize: discussed with my class friends and sister.

Define: How might we change the canteen environment?

Ideate : "smart dust bin"

Concept of smart dust bin

Sample persona form filled by the participant – R.Swamenathan, 3rd year Mechanical Engg 'B' Section.



Name of the student : R.Swamenathan	
Register No : 312217114106	
Year and section : 3 rd year, Mechanical B	
Date : 26-04-2020	
Background 1. Born and bred in Chennai. 2. Proud Indian and Thamizhan. 3. Middle class. 4. 94.8% in CBSE Boards.	Interests 1. Space science (cosmology) 2. Engineering 3. Books (literature) 4. Cinema and Music
Motivation 1. Happiness is making people around us smile. 2. To imagine and innovate. 3. To give back to society. 4. To make my family and nation proud.	Challenges 1. Laziness and procrastination 2. Fear of failure. 3. Overthinking. 4. Burden of unrealistic expectations of self (everyone can't be Einstein!)

Participant's feedback about the workshop

R.Swamenathan, 3rd year Mechanical Engg 'B' Section, writes...

Respected Sir,

Today's online workshop was of really good value to me as it introduced me not to a new engineering domain but a whole new philosophy. The stepwise process involved in design thinking will benefit me and all the participants whenever we approach any project or product development or even a domestic problem in our daily lives!!

As part of the workshop, I was asked to develop a new product idea for an amiable canteen environment at any educational institution or workplace. I underwent the 'Empathize' step of the design thinking process by interviewing some of my peers and working members of my family and defined (Step-2) the problem statement by listening to their needs and pain points and also catching upon some hidden insights and problems that I thought was relevant to the problem.

I then ideated (Step-3) by converting my thoughts into a diagram which also includes detailed explanations on the various functionalities of my 'Smart Dustbin' device concept which incorporates modern solutions from Machine Learning and Internet Of Things.

Attempting these hands on workshops on online mode is quite a Challenge.
My appreciations to SSK ----VeA

Webinar of Design Thinking

Dr. S. Suresh Kumar has attended three hours (9.30 am to 12.30 pm) webinar course on **“Design Thinking”** on 30th April 2020. It was organized by **“Society of Design Thinking Professionals (SDTP)”**. It is the world's largest community of certified DT Practitioners and is an exclusive community that focus DT and other Innovation Frameworks.

The webinar sessions were handled by **“Mr. Mayuresh Gore”**. He is an experienced retail design professional. He possesses good understanding of diverse retail environments and is well versed in global trends. He has consulted leading brands on retail store design, store architecture, design & project management and visual merchandising. He holds rich working experience of collaborating with large multi-cultural teams across developed & developing markets. He is valued for his ability to translate global trends to local markets.



The webinar started with introduction to DT, importance of DT and steps involved. Successful case studies in the fields of new product design, service sectors, healthcare units and banking sectors were also discussed. The following products are the interesting success stories using DT which were discussed during the webinar.

1. MRI-Scanning system into Pirate Ship

“Doug Dietz” an engineer who developed the MRI scanning machine, made an attempt to enhance the scanning experience of the kids. He created a **“CT Pirate Island adventure”** to look like a pirate ship and the kids loved the new experience.

Due to this innovation, the scanning experience has changed from **“frightening” to “enjoying”**



2. Swiffer by Proctor & Gamble

In the late 1990's all major household hygiene brands were fighting to create a more “potent” floor cleaning solution. After spending hours in the field, behavioural scientists at **P&G** realized that, consumers faced the challenge of spending hours in the process of cleaning the mop itself.

This situation has given a way for the new product called **“Swiffer”** which uses the **“razor and blades”** concept

3. Low cost incubator:

Researchers after conducting design research, realized that many of the hospital incubators were going unused because the babies who needed them were born in **villages 30 miles away**. The solution to the problem was a **tiny sleeping bag**, containing a paraffin-based pouch that, once warmed in a heater can maintain temperature for four hours.

The best part was that this can be used at home and during commute.



4. Bank of America (BoA)

This bank is the early 2000s faced a critical problem – **how to get consumer to open accounts?**

BoA hired a design research firm that observed and interviewed people on the streets. Critical insight formed was that people round up their cheque book entries and financial transactions as it was more convenient. And so was born their product **“keep the change”**. Every time one buys something BoA Visa debit card, the bank rounds up the purchase to the nearest dollar & transfers the difference from checking into savings account. The bank could gain **200,000 new customers** in one quarter.



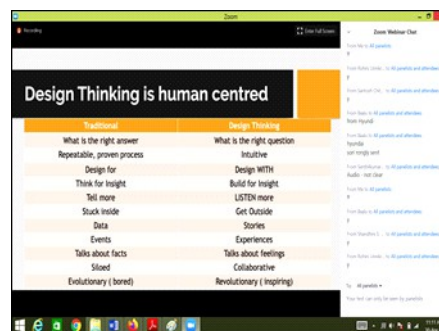
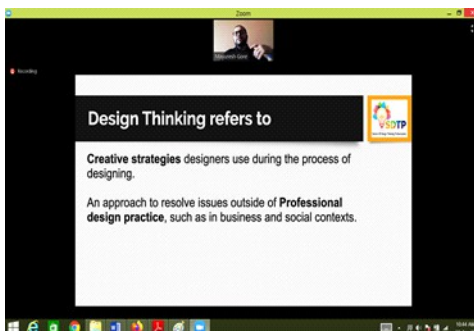
5. Airbnb

Airbnb conceptualized a platform that would allow people to trust **“strangers”** and rent their “own” spaces to the (including living room, kitchen, and even their bed). However **how could it design for trust?** **“Joe Gebbia”** (Co-Founder Airbnb) strongly believed that, the reviews of “strangers” from another set of “strangers” will break the mistrust barrier.

Airbnb has now become the leader in its category (valued at over USD 40Bn) but owns **absolutely NO** properties or assets.



In continuation with DT case studies, difference between conventional design and DT, DT Phases (**Empathize, Define, Ideate, Prototype and Testing**) and challenges were also discussed. Importance of **“Kano model”** which is a theory for product development and customer satisfaction was also highlighted. During the webinar simple exercises were given to understand the concepts of **“Visual Thinking”** and **“creative confidence”**. Following are the sample snapshots of the DT webinar attended.



Webinar photos

4 day workshop on Exam Reforms - AICTE

During April 22-25, AICTE organized an online workshop on Examination Reforms (four days)

AICTE is reforming the examination system. Their mail reads as
“This can best be accomplished through a group of faculty, trained for preparing question papers for assessing students for higher-order cognitive skills with focus on outcome-based learning. It is expected that each group of faculty trained will pioneer reforms in respective institutions. Further, along with a similar group in other universities- they can all spearhead the reforms and establish themselves as transformational leaders in the region. With the gradual expansion in the number of such trained faculty in different regions, universities across the country would be able to usher reforms in the examination system.”
Suresh from Mech was nominated. He shares his experience here.. -----VeA



I participated in a 4-day online Course on Examination Reforms organized by AICTE during April 22-25, 2020. This workshop was very useful and we can start implementing these reforms in our college. There were many online exercises and assignments.

The AICTE Examinations Reforms Policy document is available at

<https://www.aicte-india.org/sites/default/files/ExaminationReforms.pdf>.

I have given below the abstract of each session held during these 4 days.

Day 1 (April 22, 2020): Session 1 (10.00 – 11.30):

Topic: AICTE Exam Reforms by Dr. Ashok Shettar, VC, KLE Technological University, Hubballi.

Session Abstract:

1. 3 key elements of student education learning – curriculum, pedagogy and assessment
2. Assessment is the most important key factor in student learning.
3. 3 key drivers for exam reforms – adaptation of outcome based education framework, quality and employability of students, higher order abilities and professional skills for employability of students.
4. 3 key issues addressed by AICTE exam reforms report – Assessment strategy (For each program outcome, competencies and performance indicators have been written), improving structure and quality of assessment, assessing higher order abilities and professional skills.
5. Realistic measurement of attainment of course outcome is the weakest link in our education system.
6. PO-1 to PO-5 are technical outcomes PO-6 to PO-12 are professional outcomes.
7. Theory and lab exams shall test first 3 levels of Bloom's taxonomy namely Remembering, Understanding and Applying.
8. Course projects, mini/minor projects, capstone projects, open ended problems shall test next 3 levels of Bloom's taxonomy namely Analyzing, Evaluating and Creating.
9. Few action points for the institution: i) Intense orientation of faculty and academic leaders to adapt to these reforms, ii) Coming up with your own institution documents defining the assessment guidelines, iii) Starting with continuous internal evaluation and then using that experience, evaluating end semester exams, iv) Enhancing experimental learning experience that leads to holistic assessment, v) Using Information Technology (IT) to implement these exam reforms.

Day 1 (April 22, 2020): Session 2 (11.45-13.30):

Topic: Outcome Based Education by Dr. Prakash Tewari, Dean – Academics, KLE Technological University, Hubballi.

Session Abstract:

1. Importance of India's membership of Washington Accord (WA).
2. Continuation of membership depends on NBA accredited programs of engineering Institutions based on OBE
3. 5 reasons for adopting OBE: 1. To remain competitive globally, 2. To remain permanent signatory of WA, 3. To get NBA accreditation, 4. To adapt an educational framework that helps in building learner competencies and make students life-long learners, 5. To equip students with knowledge and skills required by the employer.
4. Detailed explanation about OBE.
5. Detailed explanation about PEO (3 to 4), PO (12 GA), PSO (2 to 4), CO (4 to 6), PO-CO mapping.

Day 2 (April 23, 2020): Session 1 (10.00 – 11.30):

Topic: Understanding GA and introduction to outcome based assessment by Dr. Prakash Tewari, Dean – Academics, KLE Technological University, Hubballi.

Session Abstract:

1. Knowledge oriented GA (PO-1), Skill oriented GA (PO-5, PO-9, PO-10, PO-11), Problem solving skill oriented GA (PO-2, PO-3, PO-4), Attitude oriented GA (PO-6, PO-7, PO-8, PO-12).
2. Writing Competencies and Performance Indicators for each PO (Listed in page no. 15 to 19 of the document "AICTE examination reform policy").
3. Curriculum innovation: Gap analysis of each PO leads to introduction of a new course.
4. Each exam/assessment question should be mapped to Performance Indicators.

Day 2 (April 23, 2020): Session 2 (11.45-13.30):

Topic: CO and their alignment with PO by Dr. Gopalakrishna Joshi, Dean – Curriculum Innovation and Program Assessment, Director – Center for Engineering Education Research, KLE Technological University, Hubballi.

Session Abstract:

1. Detailed explanation about writing CO, Course Articulation Matrix (CO-PO mapping), Program Articulation Matrix (PO-Program mapping).
2. Importance, characteristics and structure of CO.
3. Guidelines and checklist for writing CO.

Day 3 (April 24, 2020): Session 1 (10.00 – 11.30):

Topic: Bloom's Taxonomy and its use in designing assessments by Dr. Gopalakrishna Joshi, Dean – Curriculum Innovation and Program Assessment, Director – Center for Engineering Education Research, KLE Technological University, Hubballi.

Session Abstract:

1. Revised Bloom's Taxonomy: Remembering, Understanding, Applying, Analyzing, Evaluating, Creating.
2. Action verbs for each Bloom's Taxonomy Level (BL).
3. Discussion about lower order thinking skills (LOTS) and higher order thinking skills (HOTS). LOTS: first 3 BLs (Remembering, Understanding, Applying), HOTS: next 3 BLs (Analyzing, Evaluating, Creating). Assessment shall test 40% LOTS and 60% HOTS.

Day 3 (April 24, 2020): Session 2 (11.45 – 13.30):

Topic: Use and writing of assessment rubrics by Dr. Gopalakrishna Joshi, Dean – Curriculum Innovation and Program Assessment, Director – Center for Engineering Education Research, KLE Technological University, Hubballi.

Session Abstract:

1. Detailed explanation about writing rubrics for assessment.
2. Rubrics shall be written for course projects, mini/minor projects, open ended experiments, project based learning (PBL) modules, MOOCS, Co-curricular experience.
3. Rubrics need not be written for theory and lab courses, but if a theory or lab course has design activity, rubrics shall be written for that activity.
4. Some examples for rubrics were displayed and discussed.

Day 4 (April 25, 2020): Session 1 (10.00 – 11.30):

Topic: Understanding GA and bringing out changes in laboratory experiments by Dr. Prakash Tewari, Dean – Academics, KLE Technological University, Hubballi.

Session Abstract:

1. Some sample lab courses were displayed and activities for design, analysis and interpretation were discussed.
2. Lab experiments were categorized into demo expts, exercise expts, structured enquiry expts and open-ended expts. Cos and PIs were discussed for each type of expt.
3. Some examples of open-ended experiments were displayed and COs, PIs and rubrics were written for each expt.

Day 4 (April 25, 2020): Session 2 (11.45 – 13.30):

Topic: Improving structure and quality assessment by Dr. Prakash Tewari, Dean – Academics, KLE Technological University, Hubballi.

Session Abstract:

1. Meaning of complex engineering problem was discussed.
2. An assessment shall test higher level abilities of students, so complex engineering problems have to be solved by students.
3. To achieve this, clarity shall be brought to i) method of assessment, ii) alignment of assessment with desired CO, iii) level of learning needed by student to achieve.
4. Different assessment methods were discussed for written exams, lab exams, projects.
5. For every course, a course assessment plan (CAP), question paper structure (QPS) and quality and alignment matrix (QAM) have to be prepared at least 1 month before teaching that course. Some samples were displayed for CAP, QPS and QAM. These documents will be useful guidelines for question paper setters and reviewers. Also, this practice will lead to i) consistency in question paper quality, ii) alignment with CO, iii) clarity of expectation to the students.
6. Some examples of semester end exams model question papers were displayed for understanding purposes.

Student write up

Placement Assessment Test online...

Placement Coordinator- Naveen Krishna writes..

We conducted a model Placement assessment test with the help of the elected core committee members on April 4, 2020.
Around 75 students has taken the test and we expect more responses in the upcoming tests.



The test was conducted online.

All the questions were objective type.

We had 6 sections namely

1. Aptitude - 20 qns.
2. Thermal (including thermodynamics, thermal engineering & Heat and mass transfer)- 10 qns.
3. Theory of machines- 10 qns.
4. Design (including design of machines elements and design of transmission systems)- 10 qns.
5. Strength of Materials - 10 qns.
6. Manufacturing Technology- 10 qns.

The questions for each section was designed by different students namely Shailesh Kumar, Rishiram, Venkatesh MB, Raghav Aravind, Roshan Ram Dayal, Survesh and K Naveen Krishna.

The evaluation was done automatically, within Google forms itself.

Assigning the key

Scoring by Google forms

1. The answers are pre assigned while uploading the questions.

2. There are 6 sections of questions and the candidate taking the test can swap between the questions within the section. Only when he/she has completed the section can move to the next section.
3. Since this was a preliminary test there was no time limit given in completing the test.
4. Once the last section is submitted by the candidate, their obtained marks will be displayed on the screen and it is also stored in a database.

With Regards,
K Naveen Krishna,
312217114066,
Mechanical III Year,
Student Placement Coordinator.

Milrem Robotics, the leader of European ground robotics and InnoVfoam, the specialist in foam extinguishing technology are developing robot firefighting systems to assist or even replace firefighters in the most hostile environments.

The jointly developed firefighting solutions combine Milrem Robotics' unmanned ground vehicle (UGV) Multiscope Rescue and InnoVfoams various firefighting systems, specifically foam proportioning systems and fire monitors.



- The firefighting robots are remotely operated by firefighters who remain in a safe distance while receiving a complete overview of the operation area via various cameras, i.e. thermal and infrared, and sensors onboard the robot that can additionally detect gas or chemical leaks.
- The fire monitors can be operated independently from the UGV thanks to separate cameras on the UGV and the monitors allowing the vehicle to change position while maintaining a perfect overview of the fire. The system can also be complemented with additional preventive and repressive systems and autonomous functions.
- "In addition to fires in urban environments there are large scale forest and landscape fires every year that endanger the environment, the lives of inhabitants and especially firefighters. The systems we are developing with InnoVfoam can alleviate dangers firefighters face and help contain fires faster," said **Kuldar Väarsi, CEO of Milrem Robotics**.
- The Multiscope Rescue has a maximum payload capacity of 1200 kg and pull force of 21 000 N allowing it to be equipped with a variety of firefighting specific payloads including foam or water tanks, but also tethered drones for better situational awareness.
- Robot firefighters can also deliver heavy fire hoses to reach areas and enter structures that are inaccessible with bigger vehicles or may collapse on top of firefighters. In case of forest or landscape fires the robot firefighters can be airdropped to start limiting the spread of fires.
- InnoVfoams fire monitors can dispense water and foam from 2000 up to 20 000 liters per minute.
- The first joint product will feature InnoVfoams fire monitor skid unit Hydra on the Multiscope Rescue.

Watch the robot in action at <https://youtu.be/5cdtOLt93XA>

Source: <https://milremrobotics.com/milrem-robotics-and-innovfoam-develop-robotic-firefighters-2/>

ETHEREAL MACHINES PVT LTD

Ethereal machines are manufacturers of simultaneous 5axis CNC Machines and 3D Printers.

These CNC machines bring about conjunction between additive and subtractive manufacturing techniques. They currently have four products under their banner.

Ray is their smart dual extruder printer for everyday 3D printing needs. Halo, their 5 axis CNC machine and a 3D printer, is the world's first model which is consumer-oriented. Pentagram is their 5 axis CNC machine which enables the user to machine complex geometries. Finally, their Concrete 3D printer is the first of it's kind and they have filed a patent for the same.

Based out of the start-up hub of India, Bangalore, Ethereal Machines caters to clients across various fields and helps them establish successful businesses. Their clients range from various sectors including aerospace, tool and die, healthcare, jewelry, automobile, electronics, and education.

Ethereal Machines is recognized as a start-up under the 'Start-up India' and 'Make in India' scheme by the Government of India. They are also an ISO 9001:2015 certified company. They went on to win the prestigious Best Innovation Award 2018 at CES held in Las Vegas. **They are also the only Indian company to do so.**

Website: <https://etherealmachines.com/>

Reflections of an Alumnus

Lekhaj of 2012-16 batch, moved abroad for higher studies.
After his Masters in 2018, he joined ASML-
the company that makes machines that make the chips --VeA

Design Engineer – ASML Holding N.V. | M.Sc. Automotive Technology
(TU/e) | klekhaj@gmail.com

College was one of the most important steps in life. For me, College was more like an interface between my imaginary thoughts and reality. It inspired me to think. To think differently. It is like no other time in your life. It was the place where I got chance to prepare for the journey ahead called life.



Lekhaj Kooralla

While your everyday routine seems to revolve around unit tests, record works, labs and classes, you will soon realize that four years of college have completely flown by and you might be walking across that stage of graduating. But if you use your time efficiently, you would have achieved more skills than what you initially signed up for. Technical knowledge with Symposiums, Communication and management skills by contributing to cultural events, Friendships that last a lifetime, unforgettable memories and invaluable experiences are some of what will come together to prepare you for the journey ahead. I would like to share about the required skills that'll help you in your life and in your future career.

Three skills that play major role after Engineering: Technical depth in subjects, communication and management skills. To improve my technical depth, I along with my friends decided to learn more than what our curriculum teaches us. We initiated a go-kart team "TEAM PRECISIO". With the support of our HOD, staff and friends we were able to compete in various events like ISIEC, SUPRA SAE India etc. This knowledge helped me to understand my subjects to its fullest while perusing my masters in Automotive Technology in Eindhoven University of Technology (TU/e), Netherlands.

Communication skills is one of the key elements while working in a company. Sometimes it has a higher priority than technical knowledge. The ability to convey your content to others the way you want to helps you to reach heights in an organization. I achieved my communication skills by participating in symposiums and cultural events, sports, taking initiatives in organizing these events etc. By doing so you will improve your management skills for free.

With these skills which I developed during my Engineering, I was able to finish my Masters on time and get a Job in my field of study. I would also like to address the myth that "doing masters in Europe, we might have hard time find a job". This may not be valid for every country. It is necessary to have a clear vision on why you chose a particular university, your specialization (most important) and where you like to end up in your career. Choosing a university only by its reputation might not end up in your favor. It is very important to check if they offer a specialization in the field of your interest and also the scope of it in that country/surrounding countries.

Apart from all these, it is also necessary to learn the survival skills to live independently. Once you get out of college, you get to experience the reality. Yes, it is tough but can be brought into our control. I request all of you have a balanced life by developing extracurricular skills in addition to what our curriculum teaches us. Don't run away from challenges. Face them. Everything you learn while perusing your Engineering will be helpful in any one of the phases in life.

Congratulations on choosing this college and best wishes to move forward.

Amazing Innovation- 161

Heated Razor

THE PLEASURE OF A HOT TOWEL SHAVE IN EVERY STROKE

The Heated Razor by GilletteLabs activates and delivers instant warmth in less than one second at the push of a button and provides a noticeably more comfortable shave. Designed in Germany, The Heated Razor features adjustable temperature levels to achieve optimal comfort, and has Gillette's best blades combined with FlexDisc™ technology to maintain skin contact in order to give a smooth shave.

The Heated Razor Starter Kit comes with the Heated Razor, magnetic charging dock and plug, and 2 GilletteLabs blade cartridges. When you subscribe, get the starter kit on your first order and receive 4 blades (\$25) at your chosen reorder frequency. Heated Razor by GilletteLabs is compatible only with GilletteLabs [blade cartridges](#) designed exclusively for this product.



Source : <https://gillette.com/en-us/products/gillette-labs/heated-razor-by-gillette>

Amazing Innovation- 162

Self driving cars as Call-taxis

Shanghai ride-hailers can now call for an AutoX self-driving taxi



Autonomous driving tech company [AutoX](#) has partnered with the Alibaba Group's Amap mobility platform to offer folks in Shanghai the option to hail a ride in an AutoX RoboTaxi. Reported to be the first time such an option has been made available through a major ride-hailing platform in China, a ride-hailer makes a booking through the Amap mobile app. When the pickup and dropoff locations are entered, the app lists all of the available vehicles, including RoboTaxis.

Users can opt to select both a self-driving taxi and a human-driven ride simultaneously, and the app will work out which will arrive first and get things rolling. Where some autonomous taxi services might restrict users to fixed journey start and end locations, the AutoX vehicles can pickup and dropoff anywhere in the city. (Source – New Atlas)

Source : <https://www.autox.ai/en/>

Amazing Innovation- 163

Aeroplane seating post Corona-pandemic

Some airlines are introducing temporary measures to allow more space between passengers and reduce the spread of germs, such as [blocking off the dreaded middle seat](#). But one design firm has taken it a step further and developed a concept that redesigns the airplane seat itself—and it could change the way we fly for good in a post-coronavirus world.



The Italian company Avio Interiors released two new seat concepts that are designed to reduce the spread of germs in these notoriously tight spaces. The first concept, [Janus](#), reverses the position of the middle seat so that it faces the back of the plane and separates passengers in the same row with a transparent guard that wraps around the sides and back of each seat. Hypothetically, this would prevent you from spreading germs to the passengers on either side of you, even though you're mere inches away.

The second concept, [Glassafe](#), adapts current seat designs by installing the transparent shield guard between forward-facing seats, isolating each passenger from the shoulders up. This version still leaves your arms exposed, though, making them susceptible to germs contracted through direct contact with your neighbor if you happen to be battling for that middle armrest.

http://rev.vu/oDd0KJ?utm_campaign=Issue&utm_content=domain&utm_medium=email&utm_source=Compass

Amazing Innovation- 164

Simple solution to mask issue

Masks are crucial for curbing the spread of COVID-19, particularly among medical personnel. When you wear a mask all day, it puts pressure on the head and causes friction against the ears.

12 year old Quinn Callander developed a simple but effective “ear guard” that prevents the elastic bands on a mask from rubbing against the backs of people’s ears. He prototyped several designs with his 3D printer, landing on a wide plastic strap that goes around the back of the head. The strap has notches so the wearer can loop the mask’s elastic straps around whichever notches are most comfortable, allowing them to adjust the tension while keeping the mask firmly in place.



<https://www.fastcompany.com/90488090/this-boy-scout-invented-an-ingenious-solution-to-one-of-the-biggest-problems-with-masks>

Competitions

1.Hindustan Motorsports is organizing **HINDUSTAN FORMULA KARTING CHAMPIONSHIP-4**

Event Highlights-

- Live Scoring
- Onsite Prize Distribution
- Toughest Dynamic Test
- Placement Drive
- Professionals from India's leading automobile industry and motorsports club
- 24*7 Technical Assistance
- Online Virtual Round
- Professional Track
- DJ Night

Prize Money-12 Lakhs

Registration Fee-20,000 INR

Dates- 13-16 September,2020

Venue-Mohite's Racing Academy,Circuit-9,Kolhapur(M.H)

Contact Details- 88513-31576,70001-80509. Register your team at-www.hindustanmotorsports.com

2.Create the future contest

To get daily life and the economy back on track in these challenging times, it's going to take innovative ideas from engineers, researchers, and entrepreneurs worldwide. Now in its 18th year, the **Create the Future Design Contest** provides a global forum to share your ideas for new products and technologies that could generate jobs, improve public health & safety, protect the environment, and benefit society in other ways. Enter today at www.createthefuturecontest.com for a chance to win a top prize of \$20,000 USD. There's no cost to participate.

We invite you to enter as an individual or team in seven categories:

- Aerospace & Defense
- Automotive/Transportation
- Consumer Product Design
- Electronics/Sensors/IoT
- Manufacturing/Robotics/Automation
- Medical
- Sustainable Technologies/Future Energy

Your ideas can make a world of difference. To get started visit www.createthefuturecontest.com

Special Training opportunities

1.MHRD's Innovation Cell will be telecasting sixteen online sessions on various themes of Innovation, Entrepreneurship, IPR and Startups from 28th April onwards daily at 3.00 PM (except weekends).

For detailed schedule plan, speaker details, and links to join the e-sessions, please visit <https://mic.gov.in/iicwebinar.php>

The first e-session will focus on "National Innovation and Startup Policy (NISP) for Students and Faculty in Higher Education Institutions (HEIs)" and will be telecasted through our official YouTube channel on 28 April 2020 from 3:00 PM onwards.

Please visit below mentioned link to join the session and know more about the innovation and startup policy.

<https://www.youtube.com/mhrdinnovationcell>

This session will be delivered by Shri Dipan Sahu, National Coordinator of NISP, ARIIA, and IIC, MHRD's Innovation Cell.

e-certificates of participation will be given by June, 2020. For this, access the assignment link available on session page and submit to us within four working days from session telecast. Participants can also download the presentation through a link available on session page.

PFA:- https://drive.google.com/file/d/1nLGzk_B4vbp9FS83hac4b6c3MjNZP2d1/view?usp=sharing
<https://drive.google.com/file/d/1E59z1ntRgbCuaEZglF20agFOMe1PJdJS/view?usp=sharing>

Online Guest Lectures from NPTEL

NPTEL has been offering several Guest Lectures in interesting topics. Check out the links

What you missed on Career options..

Civil service as a career	Ms. Yogitha Controller of Defence Accounts, Southern Region	https://youtu.be/8CSmskRN3IA
Career in Merchant Navy	Capt. Kripakaran, Captain in Merchant Navy, Wallem Ship Management Inc	https://youtu.be/o1LRzzSFJEY
What Companies Expect while Hiring a Candidate?	Mr. Sajjad Ahmed, Director - HR, Talent Management Team, Capgemini	https://youtu.be/qAjT8W1puKw
Career options in Data and Analytics	Mr. Santosh Mahendiran, Managing Director, Standard Chartered	https://youtu.be/YoHRyiLd_kQ
Ideas that Shaped the Web	Mr. Ramanathan V. Guha, Google Fellow and VP, Google, May 2 , 6.30pm	https://youtu.be/BIEG-cuM27w
My Journey in Product Design, a Passion and a Career	Mr. Michael Foley Founder , Foleydesigns Private Ltd May3, 5pm	https://youtu.be/XxJdXR0T12Q
Career in Police Service and Personal experiences as an IPS officer	Dr. C. Sylendra Babu, IPS Director General of Police Railways (GRP), Tamilnadu, May 3, 6.30 pm	https://youtu.be/w_hwck6h_UQ

Forthcoming events

Syed Ammal Engineering College is organizing an International Conference on Advances in Applied Engineering and Technology (ICAAET-2020) to be held from **May 14 to 16, 2020**. Last date for paper submission April 20. For more information, Please visit conference website : <http://icaaet20.syedengg.ac.in>
For Paper Submission log on : <https://easychair.org/conferences/?conf=icaaet2020>

The Eighth European Conference on renewable energy Systems- ECRES will be held in Istanbul, Turkey, during **9-11 June, 2020**. E-mail: ecresinfo@gmail.com Web: www.ecres.net

The department of Mechanical Engineering, MEA Engineering College, Perinthalmanna is organizing National Conference on Advanced Technologies and Research in Mechanical Engineering (NCATRME20) during **17&18th June, 2020**. Abstract Submission : 10/04/2020

The Department of Mechanical Engineering of CMR Institute of Technology Hyderabad is organizing 2nd International Conference on Manufacturing, Material science and Engineering (ICMMSE 2020), during **7th and 8th August 2020** in CMRIT Hyderabad Telangana, India. For more information about the conference log on to <http://www.icmmse.in>. The submission deadline for papers is 15th July 2020.

The Third Malaysian International Tribology Conference will be held during **Sept 28-30, 2020** at Langkawi islands. MITC2020 official website: www.mitc2020.mytribos.org
Submission page: <https://www.mitc2020.mytribos.org/page-3/>
Submission link: <https://cmt3.research.microsoft.com/MITC2020>

The **2nd Innovative Product Design and Intelligent Manufacturing System: National Conference (IPDIMS 2020)** will be held at National Institute of Technology, Rourkela, India during **December 02 - 03, 2020**. Authors are requested to follow any of the following methods for manuscript submission: Online submission: <https://easychair.org/conferences/?conf=ipdims2020> (OR)

Submit the article via email: icipdims@gmail.com Last date April 15
Website: - <http://nitrkl.ac.in/Academics/Events/Conference.aspx>
<https://sites.google.com/view/ipdims/>

VIT Chennai announces an International Conference on PROCESSING AND FABRICATION OF ADVANCED MATERIALS (PFAM 28) to be held in the city of Chennai (Madras, Tamil Nadu) during **December 07-09, 2020**.
Last date for submission of Abstract is May 30, 2020. Conference website www.pfam28.com

The 50th Golden Jubilee conference of The International Conference on Computers and Industrial Engineering will be held at Egypt-Japan University of Science and Technology Campus, Alexandria, Egypt, during **25-28 October 2020**. This year the conference theme will be "Sustainable and resilient systems for a smart dynamic world", emphasizing the important role industrial engineering will play in the future smart and dynamic world of the Fourth Industrial Revolution (Industry 4.0) to meet disruption challenges in a sustainable way. More details at <https://ejust.edu.eg/cie50> . Last date for submission of papers/abstracts is May 1 2020 (info from Akhilnandh Ramesh-alumnus)

Life Skills Program for Surviving in industry – offered by Dr.V.E.Annamalai

Graduate Engineer Trainees enter a Company with great dreams inspired by the high profile presentations made by the HR teams. As soon as they enter the corporate world, they are greeted with doubt by a group of well settled executives and hostile employees, closely guarding their working methods as terrible secrets. The existing employees never let the GET come anywhere near any activity that can make an impact on the business. The reality is quite harsh- the GET soon feels unwanted among others in the company. The friend loving soul is left to lurch with loneliness and neglect.

S/he often hears people say

“Your age is my experience-better shut up and do what I say”.

Peer workers display an indifferent attitude of,

“You are wasting our time- Why can’t you do something better than cashing in on our knowledge!”

If you have gone through a similar situation, then there is something you need to know about surviving in industry – **those hard things I learnt during my sixteen plus years in industry- The Life Skills!**.

The proposed Life Skills Program is intended to introduce the corporate world to the GET, equip them with a systematic approach to look for improvements, and provide them with a set of tools that they can learn , without depending on the employees to teach them. These techniques will help any trainee to act smart and get into the limelight quite easily, by taking up projects that impact the business and resolving them innovatively.

On completion of the program, you will be able to

1. Identify problem solving opportunities
2. Choose and Apply the right tool for problem solving
3. Develop strategies to convince your peers and higher ups on your solutions
4. Manage relationships by understanding people behaviours

Mode of delivery

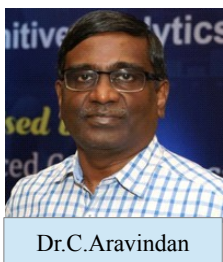
- This course will be offered through SSN’s Learning Management System, accessible thru Internet.
- It is proposed to be of around fifteen lectures, mostly ppts and pdf write ups that you can learn at your convenience.
- If possible , we may have one or two interactive sessions , after these lockdown situations change.

Requirement for completion

- Based on one online quiz and one assignment, course completion can be certified.
- Assuming three lectures / uploads per week, we may tentatively close by five weeks.
- No fees involved.

What next?

- If interested, please send a mail to annamalaive@ssn.edu.in
- Pl mention, name, batch (year of passing), current position, ssn mail id and mobile number.
- If you don’t remember your ssn mail id, we can retrieve it for you.
- You may also mention your specific requirements from the course, if any.



Dr.C.Aravindan

As soon as we got some requests for resetting ssn mail id, Dr.N.Lakshminarasimhan, got old ids from Placement records. Dr.K.S.jayakumar -dept mail admin recreated passwords and gave access. Alumni were able to access ssn mails again. Dr.C.Aravindan quickly created the course page in the LMS- even though it was the first time creating access to alumni cohorts. Thanks to all of them, the course has started on April 20, with 17 alumni of various batches, right from first batch- VeA

The Challenges



Dr. Muthu Senthil Pandian
SSN Research Centre

1. Indicators of Research and development

Contents in Science and Technology Indicators Tables: Research and Development Statistics 2019-2020 - March 2020, Released by Department of Science and Technology (DST), Ministry of Science and Technology, Government of India, New Delhi-110016, India

Around 47 indicators on Science and Technology indicators, including

India's Publication Output and its Share in World by Field of Science (SCI Database), 2011-16

Patents Applications from Persons in India and Abroad, 2000-01 to 2017-18

Patents Applications Filed in India by Foreign Countries, 2000-01 to 2017-18

Patents Applications Filed by Different States in India, 2012-13 to 2017-18

Patents Filed and Sealed in India, 1976-77 to 2017-18

Top Ten Indian Applicants for Patents from Scientific Research and Development Organizations 2013-14 to 2017-18

Top Indian Applicants for Patents from Institutes, 2013-14 to 2017-18

Top Ten Foreign Resident Applicants in India, 2013-14 to 2017-18

Year-wise Progress of Expenditure of Select Central Scientific Departments

Website Links:

<https://dst.gov.in/news/st-indicators-tables-2019-20>

<https://dst.gov.in/sites/default/files/S%26T%20Indicators%20Tables%2C%202019-20.pdf>

<https://dst.gov.in/>

2. Statistical Analysis of R&D expenses

The Department of Science & Technology (DST) is primarily a policy making body for S&T sector in India. The role and criticality of data in the formulation of evidence-based policies is paramount for building a strong and viable science, research and innovation ecosystem for the country. National Science and Technology Management Information System (NSTMIS), DST has been continuously engaged in generating Database for S&T sector since 1973 and for international comparability, UNESCO/OECD guidelines on standards/concepts/definitions have been adopted for collection of science statistics.

Salient findings of the national S&T survey launched in the year 2018-19 for compilation of the latest R&D Statistics and Indicators are presented here mainly in the form of graphical presentations. Scope and coverage of data on R&D expenditure and human resources has been enlarged by including multinational companies and enterprises not covered by the Department of Scientific and Industrial Research (DSIR) under its R&D recognition scheme. Further the survey analysis has been complemented and enriched by the secondary sources such as higher education in S&T, patents etc. including bibliometric analysis of scientific publications.

Planning and execution of the national S&T survey is an in-house exercise of DST. It is a culmination of the NSTMIS, DST team effort comprising Dr. Parveen Arora, Dr. A. N. Rai and Mr. P. K. Arya.

Website Links:

<https://dst.gov.in/news/research-development-statistics-glance-2019-20>

<https://dst.gov.in/sites/default/files/R%26D%20Statistics%20at%20a%20Glance%202019-20.pdf>

<https://dst.gov.in/>

Walt Bettinger, the CEO of Charles Schwab, learned a lesson in an unusual way back during his college days that has stayed with him throughout his career.

- He was in a business strategy course during his senior year. Going into the final exam, his goal was to maintain his perfect 4.0 grade point average. He had spent hours studying and memorizing information.
- When the teacher handed out the final exam, it was on just one piece of paper. Both sides were blank, which confused Bettinger and his classmates. The professor told the class that he had taught them all he knew but that one important question remained. He then asked the class to write down the name of the lady that cleaned that very building.
- Not knowing that Dottie cleaned the business building resulted in the future CEO of Charles Schwab, receiving his only failing college test score.
- Bettinger said that the test was a great reminder of what really matters in life and that you should never lose sight of people who do the real work. He has since made an emphasis to get to know every Dottie that he has worked with ever since.
- Who are the Dottie's in our lives?
- Secretaries. Custodians. Uber drivers. Cafeteria workers. Civil servants. Community volunteers. The list goes on and on.
- How we treat or think about others says much more about who we are than what it says about the other person.
- Are we concerned about others? Do we take an interest in those around us? Do we take care of those who take care of us?

Ralph Waldo Emerson once said

“Every man that I meet is in some way my superior and in that way, I learn from him.”

- **Do we value the people around us?**
- **We can be the reason that somebody believes in the good of mankind today.**
- **We can be the reason that someone smiles today.**

Jamy Bechler,

Motivational Speaker & Team Consultant



Your grandfather bought you a toy car.
 You were too attached to it.
 One day while playing, it fell and broke into pieces.
 It was a sixty rupee toy car.
 You cried and wept, and all the adults in the family told you,
 "That's okay. We will get you another car."
 But in that immaturity you didn't understand. You kept crying for this.

- Your mother cut that apple into two pieces, gave one to you and the other to your sister. The moment it was given, your sister took the first bite. The moment she took the bite, you said "That is the bigger piece. Why you gave me a smaller piece?" Mom said, "Okay, take another full apple." "No. Why you gave her the bigger piece?" You kept crying!!!
- You have grown another forty years in your life. Right now you are driving a sixty lakh rupees BMW and from behind that taxi guy had hit your car. Everything in your intellectual maturity knows - your anger, your worries, your crying, your screaming, your shouting, your bad words, nothing will remove that dent till it goes to a workshop. Yet you go through all that emotions.
- You get an increment letter and it says, your salary has been increased by Rs.1.20 lakh per year. You are excited. You call your wife and tell, "I said you know, this organization recognizes effort. I have got an increase of Rs.10,000 per month. Now, do not speak bad about my organization anymore!!!"
- Then you found out that your colleague has got twelve thousand rupees increment. The issue is not ten thousand. He has got twelve thousand. How can he get twelve thousand? Call your wife again, "You are right. There is no recognition. Only buttering works these days."

• **And if you look into your life sweetheart, "When you were a kid, you cried for a sixty rupee toy car and now as a grown up you cry for a sixty lakh car. When you were a child, you believed others were getting the bigger piece of apple and now as a grown up you feel others are getting more salary than you."**

When you look into your life you actually realize, "You have not grown, only your toys have grown."

We all "Grow Up", but we need to "Go Up". Growing up is not a choice, but Going up is our Choice.

#WishingMostAndMore

Have a great wonderful day & great week

R.Ramakrishnan

This issue has an annexure on Coursera,
 Listing online learning efforts
 by mech faculty and students.

Industry connect



Kind Attention – Tamil lovers

இனிய பேச்சுத் தமிழில்
அரிய கருத்துக்களை
அறிந்து கொள்ள
இவரின் பதிவுகளைக் கேளுங்கள்

Mr.V.Kumarasubamanian , formerly GM- Learning and Development, Institute Industry Interaction Centre, Tube Investments of India, and Member of our Dept Advisory Committee, has started a Youtube channel. He is sharing his learning for everybody's development.

His videos are available in the link <https://www.youtube.com/channel/UCuV75Q7jH8esjtFc2VnHsmw>

- First read the welcome message and then by the serial numbers
- His first series is about the twelve virtues suggested by Aristotle.
- The talk is interesting, with examples from Epics, from Contemporary people and from Thirukkural.
- You can visit the link everyday. He uploads one per day around 8 pm

The Team behind Aspire...



Vinaya Krishna



Saran Prasanth



Akshay Kanna



Anupa Sri



Mohitha U.M