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SAMPADA

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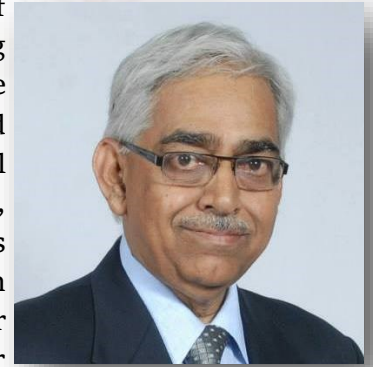


Edition

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EDITORIAL

UVCE our alma mater started in 1917 by Sir M.V as students of Mysore state who wanted to pursue engineering were not getting admissions in the two engineering colleges at Madras and Poona. The college of Engineering was started in Bangalore with Civil and Mechanical branches to provide sufficient number of civil/mechanical engineers to build dams/irrigation projects in the state. Later in 1924, Electrical engineering was added to help to establish new power plants in the then state – Mysore. The first hydro power plant established in 1905 at Shivansamudram by Sir Sheshadri Iyer to meet the power demand of Kolar Gold mines was not adequate and 1 new hydro power plants were established in Shimsha and Jog - the Mahatma Gandhi Hydroelectric power plant to meet the growing power demand.



UVCE was the best engineering college in the state when we passed our Pre university (PUC) in 1960 and was the first choice of all us to pursue engineering education be it Civil, Electrical or Mechanical engineering. The staff in Electrical Engineering department - the branch chosen by me after my third year BE course (It was then a 5 year course as PUC was a one year course) was headed by Dr Paul Raj and with number of faculty deputed from the then Electricity Board like Prof V Byrappa who had both theoretical and Practical knowledge having worked in power plants, transmission and distribution system in design, engineering & management.

After my graduation in 1965 with BE Electrical degree. I had to move only 100 yards across K.R circle diagonally opposite to our college to the Mysore State electricity Board to join as Assistant Executive Engineer - one step higher than the usual entry level of Assistant Engineer. This lateral entry required a year's training in Power plants at MGHE Jog/Sharavathi and in various wings of Transmission & Distribution in the then MSEB. I was a maintenance engineer in charge of a 120 MW hydro power plant when I was just 22 years old and it was a very challenging job as MGHE power plant was then a major power plant in the state. Later on I moved to Bangalore and worked in Load dispatch centre managing all power plants in state, Load scheduling, export of power to then Madras state, etc. I worked in planning, design, construction of 220 kv/ 110 kv/66kv & 33kv substations that were coming up under the Five year plans all over the state for over 15 years. Later I had the opportunity to plan new sub-stations in Bangalore City centre like in MG Road/near cantonment railway station, etc laying long distance EHV cables first time in the state to bring bulk power to city centre. The 400kV substations at Somanahalli, Hoody and Nelamangala were also planned around the city to bring bulk power to the growing Bengaluru city in 90's. Was Additional Secretary of then KPTCL looking after all technical issues, tariff revisions etc and played a vital role in bringing in Solar water heaters in homes in the state to encourage use of Renewal Energy to reduce T&D losses—all this when world was still discussing measures to reduce CO2 emission under Kyoto protocol.

I had very challenging jobs as Chief Engineer in Mangalore covering all T&D issues in 9 districts including Mysore/Mandya and brought in several changes to improve power reliability like reducing tower foot resistance to reduce 220kv line interruptions. Later working as CEE Bangalore rural with large number of agricultural loads brought in new challenges requiring new measures. Later in 2001-02 unbundling of the power sector was done as per national policy with separate transmission company KPTCL and separate Distribution Companies like BESCOM/ MESCOM etc. Hence I became the first Director Technical of BESCOM. Brought in new concepts like energy audit to reduce distribution losses and established meter retail outlets to speed new connections as also computerization of billing to streamline the whole process. All in all it was Sir MV's vision, my alma mater and great teachers at UVCE who inspired me to do serve the state and its people for 37 years. I also worked as a consultant for another 12 years after my retirement in 2003.

Working in a public utility having a large consumer base & with lot of resistance to change/ political pressure was a real challenge. Both Power sector and UVCE is undergoing lot changes and the new challenges need new approaches.

The impact of fossil fuel power plants on climate change due to large amount of CO₂ emission and need to go in for Renewable energy like wind/solar/ hydro power brings new challenges in power system operation. Power flow earlier was one way from power plant to consumer but now with solar PVS on roof top of homes, consumer of power have become producer of power also and the two way power flow brings new challenges in distribution network/reactive power planning/metering etc. The new power system engineers coming out of our UVCE have to be made aware of all these changes by changing/modifying their syllabus. Such review of syllabus would be needed in other branches also.

This edition of "Sampada" covers several articles/experiences of alumni who worked in public sector undertakings and in government departments like me. I am sure they and many more working in state government & public sectors have made major contribution to state/country's development fulfilling the dreams of Sir M V. I thank the authors who contributed articles for this edition of Sampada.

Our UVCE will soon become an autonomous institution and will be on par with IITs. In order to meet these standards, better infrastructure, 100 % qualified staff/labs would be required. Also, the fees may have to be increased which may cause some problems to students coming from lower strata of society. There is a need for creating scholarships and funds with contribution by all alumni. All of us have to pay back to our alma-mater which has given us so much in our life.

UVCEGA formed in 2019 with sole purpose of providing a platform for alumni to come together, meet and guide the present students and help them with scholarships, laptops, campus interviews etc. Very good work is being done by UVCEGA headed by Major General Neelakantappa and several youngsters to meet these objectives. I sincerely thank them for their dedicated work and assure my support to all of them.

- Venkata Subbarao, 1965 Batch

Team SAMPADA would like Thank Mr. Venkata Subbarao Sir for joining us this edition and penning the editorial. This is a very special edition focusing on bringing awareness and providing guidance regarding public services opportunities.

OBITUARY



We are deeply saddened to inform you that one of our Senior Alumni, Padma Vibhushan Awardee and eminent Aerospace Scientist Prof. Roddam Narasimha Sir passed away on December 14th 2020. He contributed greatly to some of India's major scientific programmes including ISRO and the Light Combat Aircraft (LCA).

Our condolences and thoughts are with his family and pray his soul rests in peace.

We will have a special dedication for him in our next Sampada Edition.

We were fortunate to listen to him during the UVCE Payana event on Jul, 2018. His thoughts on the occasion of the milestone of UVCE's Centenary Celebrations on what should be the road forward and how it should be modelled into a top-level institution will always be the guiding light for us. Here is the youtube video of this Speech - <https://youtu.be/sRagrdNSZ-I>

ELECTRIFYING CONVO WITH VEERARAGHAVAN SIR

Team Sampada: Could you tell us about yourself briefly?

TNV: My name is T N Veeraraghavan. I graduated from UVCE in the year 1976 from the Electrical Branch. I was the First Rank Holder and hence in the convocation I was the recipient of the GOLD MEDAL. I then joined IISc in the School of Automation and completed the 1st semester M.E. It was then that I got selected as Engineer Trainee by BHEL and was posted at Bangalore. BHEL had just then taken over REMCO and MPL (opp IISc) - both of them State Govt Undertakings. Considering the family situation at that time I decided to discontinue my studies and join BHEL after ascertaining that there is no possibility of me getting transferred at least for another 10 years. I was not at peace at all since I had to leave School of Automation which is, as it is, difficult to get and also since I am not a Post Graduate. Since this feeling was strong, after I joined BHEL in 7 years I got into part time MBA at Central College BU. I completed MBA with Financial Management Specialization in 1986 and again was the recipient of the GOLD MEDAL in MBA.



I joined BHEL as Engineer Trainee in the Control Equipment Division - a new unit being established in REMCO Campus. We were the first batch of Engineer Trainees and therefore had to shoulder additional responsibilities of establishing the unit - starting from establishing systems and facilities. I was posted in the Final Testing Dept and had to establish facilities and also learn Testing of Equipments including Procedures and Relevant Standards. I started with Power Electronics. Later controls for HP Boiler, Steam/Hydro Turbines and auxiliary Equipments in Thermal, Hydro and Nuclear Power Plants were added. The Unit also came to be known as Electronics Division or EDN in short.

I was trained at KWU Germany (part of SIEMENS) who was BHEL's collaborator for Steam turbines at their works in Germany for testing of Electronic Automation Package for Steam turbines (EAST). Later when Gas Turbine Controls was introduced, I was deputed to M/s General Electric at USA for training on Gas Turbine Controls Testing. My mission was to save costs as well as FE. With a lot of difficulty I could manage to successfully get the jigs manufactured and get them proven at our works!

At this stage I was transferred to the Engg Dept dealing with Controls and instrumentation, later to Marketing and then the Project Mgmt and Commercial Divisions. It was a sort of Reverse Integration for me - starting from shop floors and then on to Marketing and Comml. Upto the level of Sr. DGM I was promoted always in the First attempt with one Flier Promotion at the level of Manager. Also was fortunate to get Bosses who were very supportive. In a Public Sector getting this much is not easy to come by! I then went on to become Gen. Manager in the Unit. I was then Incharge of all functions except Production.

I got promoted as Executive Director and Transferred to The Transmission Business Group (TBG) in Apr'2010. A big shift from Electronics(<24V) to predominantly Mech. group to very high voltages upto 765KV AC and 800 KV DC! During my tenure we could get a very valuable order for 800KV DC Transmission from the NE to Agra. It was a joint bid with ABB and called for maximising our share of eqpts produced within the country and proving our Engg and manufacturing capabilities after initial qualification.

After about 18 months here, I was horizontally transferred to BHEL's Ranipet unit dealing with Boiler Auxiliaries as its CEO. We achieved the highest T/O of >4000 crores and profit>1000 crores the highest of this unit till date. I was finally elevated to the position of a Director on the BHEL Board as Dir(Engg, R&D) which brought with it the responsibility of monitoring the whole organisation for operations. It was unfortunately only for a short duration of 6 months but with the year end also included. As part of cost reduction, I had ideas to try out Engg Audit which could not materialise!

Team Sampada: What are some of your college memories that you cherish

TNV: A few instances I remember are as below:

Our batch was the last one with 5 years duration for B.E. (10+1+5 Regime) and the first one with Semester scheme. We had to do 10 semesters. It was the IX Sem Electrical Lab Practical Exam. By lots I got the easiest experiment i.e. OCC of an Induction machine. My exam mate was a repeater. Sri M V Krishnappa was the Internal Examiner. For conducting the experiment both of us will get equal marks. Sri MVK was a very sincere, dedicated and a tough teacher. He has been my teacher for almost all Lab classes and he knows me. He isolated me and asked the external examiner to keep me engaged in Viva and did not allow me to go near the machine. He was making the repeater do all work related to the expt and harassing him by not clearing the wiring done and hence switching on the machine. The candidate was profusely sweating. It was close to 10 am and the exam is supposed to get over at 10 30 am. I was also under a lot of stress as machine is not even switched on. Ultimately he made me explain to my mate what was the mistake and asked me to go ahead. We could barely manage to complete the expt and plot the Chacs. Sri MVK was telling me later that the 'repeater will anyway pass the exam but let him also learn a little!'

We had a subject called 'Field Theory' in VII Sem. It was nightmarish to think of the exam since what was being taught in class was just going at least over the head! I was almost all days after the class following the faculty. He used to dodge me, ask me to refer to some books. Ultimately I went with the books also. That is when he threw up his hands and admitted he is unable to help me. I used to go on all weekends to my friend who was studying in BMS College. The faculty teaching there was much better, I understood. No emails then! Had to write down all the notes sitting at my friend's house at Jayanagar as I was staying in the Cantt area.

Like I said earlier, I got married and joined MBA classes at the Central College in the same month i.e. Oct 1983. Unfortunately that year the First year evening classes started very late in Oct. I had to go to HOD with the marriage Invitation. And Behold! He started firing me saying that I am irresponsible and I have spoiled the chance of some other responsible guy who would have made use of the opportunity better. I tried to convince him that it is my own marriage that was fixed much earlier. All on Deaf years! Imagine my plight when again in 2nd year I had to go to him saying I am deputed to Germany by BHEL for 3 months. Oh! I will never forget. He threatened me saying he will see how I pass that year! I went to Dr Hanumanthappa who later became the VC. He pacified me and assured that he will enable me write the exam if I attend all classes on my return and clock at least 60% attendance. On my return I religiously attended all classes, sometimes even walking out of meetings incurring the wrath of my bosses! Ultimately I wrote the exam and also got the Gold Medal. Even after I finished the course I had no courage to go to the HOD!!

Team Sampada: Could you provide some advice to our current students

TNV: While mobile phones, Social Media etc have their own advantages and use, we must be aware of the Flip side also! Addiction, Wastage of time and loss of concentration have become the order of the day. Sometimes result in Lost Opportunities, Depression, suicides etc. Use them only to further the interest of the activity/job on hand.

Try to link at least one application for each concept studied in Theory. For example, I always felt that Electrical circuit theory should bring out clearly the basic property of Inductors/capacitors etc i.e. Inductor opposes change in current/Capacitor opposes change in voltage etc which is used in Filter design, apart from the usual Formulae for Impedance calculations and circuit characteristics. Practical aspects always facilitate proper understanding, work confidence and Improved Retentivity.

While IT is another area which has impacted our existence, it is not the only option. There are lots of other areas to work with. There are enough opportunities and challenges in other industries. People who can solve problems single-handedly are highly respected. Remember that nothing can match the professional satisfaction you get when you solve a long standing and tricky problem. Being a little spiritually inclined helps a lot in facing problems and being effective. Give a serious thought to this. Our culture is very rich!

Team Sampada: Do you have any suggestions for our UVCE Alumni Fraternity

TNV: I was always thinking on this. Can we organise some sessions for teaching staff to bring out the importance of the role they play in shaping future Engineers? Probably they have also an important role in a few suggestions given in 4 above.

Link up a particular concept/ subject being studied by students to an application like an Industry who work on the basis of that concept/subject. Like an industry manufacturing electrical machines and the theory of machine design. Get the concept and nuances explained by an expert in the industry. Presence of the faculty handling the subject in the class will be helpful. Later test the absorption students had. Alumni could help arrange such a visit. Otherwise name sake industrial visits are made and they are no better than casual loitering!

You are already doing this - Facilitate sanction of funds from Govt agencies to upgrade facilities in various labs.

TALKING PSE OPPORTUNITIES WITH MOUNA

Team Sampada: How about introducing yourself briefly to our readers?

Mouna: I am Mouna from 2009 batch UVCE. Currently, working as an Assistant Engineer in KPTCL. I joined KPTCL immediately after my graduation and have been serving in the Transmission Department ever since. Being in Govt job has its own privileges and challenges. I have enjoyed this role and considered it as an opportunity to learn and grow in this field.



Team Sampada: We would like you to tell us about your career a bit more so that we can create some awareness among the students.

Mouna: I currently work at a receiving station as a Shift Engineer. There are different internal departments in KPTCL - RT (Relay Testing), MT (Metering), SLDC (State Load Despatch Center), TL&SS (Transmission Lines and Substations), P&C (Planning and Co-Ordination), T&P (Tendering and Procurement), R&D (Research and Development), various ESCOMs etc. Based on your interest and ability, you will be allotted the department. We were lucky that only in our batch, they recruited based on Engineering Merit and I was one among them. Otherwise, commonly there will be an entrance test, interview process etc for all the candidates interested to be part of the KPTCL. Everyone thinks that it will be very smooth and easy since its Govt job. In reality it is not so. We will need to work on Sundays too based on the assigned work-load. Many times, during emergencies, we will have to stay back during late evenings as well. Because the work we do directly affects the people and businesses, the onus is more.

Team Sampada: Many of the current students will be interested to know about the Govt career opportunities in the sector that you are in. Can you explain a bit about that?

Mouna: To the current students, I have one advice - If you are interested to serve the society and public while also having secure job (satisfaction and safety), you can join the government service, it can be any department.

For specific to my department, you have to keep checking KPTCL website for new recruitment announcements. As many of you are aware, due to various administrative reasons, sometimes the recruitment gets stalled too. You have to be extremely patient and composed while aspiring to join a Government service. If you are applying for Junior Engineer (Electrical or Civil) posts, generally it will be Written Round for 100 marks. It consists of your field of expertise - Electrical or Civil related questions and General Awareness & Aptitude questions. The topics will be of very fundamental in nature, testing your basic understanding of your field of expertise. For example, in Civil the questions will be about Structural Analysis, Building Planning and Drawing, Traffic Engineering, Environmental Impact Assessment etc; whereas in Electrical, the questions will encompass Network-Analysis, Field Theory, Transformers and Induction Machines, Signals and Systems, Transmission and Distribution etc. So, having a strong understanding of the fundamentals are the basic necessity for applying for these positions. You can reach out to alumni in the department to know more. There are many UVCE alumni in my department who have many numbers of experience and very high positions.

REMINISCING UVCE MEMORIES - NANJUNDE GOWDA

Team Sampada: Can you please tell us about yourself and your career journey?

BRN: I am B R Nanjunde Gowda from Chikmagalur District, presently put up in Bengaluru. I am from 1977-1982 Civil Batch. After graduation, I had joined for Post Graduation in our college during 1982-83, but forced to quit. I joined as Lecturer in Govt Polytechnic Kushalnagar through PSC. Later, in 1984, I joined PWD. I was posted to one of the most backward taluk, Chincholi in Gulbarga District, as Assistant Engineer. Our supervisor was an experienced engineer who guided us (bunch of young engineers) about the various procedures of working in Department.

As a basic Construction Engineer, I really enjoyed my roles and responsibilities which had many challenges and I was able to handle them successfully. In retrospect, I think it was an apt position for the execution line of Engineers to get involved in the projects and learn more about the nature of job. It helped me to understand that one can taste the success only by working responsibly.

I worked in PWD and Irrigation Departments for more than 20 years. Later, I served at BBMP as Assistant Engineer and Assistant Executive Engineer for around 10 years and executed various projects. One of the most challenging project that I have executed was Mysuru Road project in Bengaluru. I was in charge of the stretch of 2km - from Sirsi Circle to Gali Anjaneya Temple - removing the electricity and water lines, shifting the trees, constructing RCC Drain and Duct for shifting the service lines, getting the land on TDR without compensation for widening of the road. I have some wonderful memories of the works during this tenure.



Team Sampada: Could you share some of the most memorable memories from your college days that you reminisce even today?

BRN: Our strength was around 80 in total (Section - A and B together including Six Girls). We were forced to commute using the "University Bus" since the Civil Branch was located at Jnanabharathi Campus. When we reached the campus on the first day, I felt like new journey in my life has started. But, the feeling did not remain for long. Some of the seniors stopped me and one of my classmate, just before entering the classrooms and plucked my Hero-pen and some English Novel book from my classmate. The seniors were a bit rude and advised us about the manners the juniors should behave with seniors and later returned our materials. That was my first experience with ragging. Next day, an unexpected development took place. The same seniors started ragging for second day, but one of our classmate actually manhandled one of our senior and that ended the ragging forever for our batch. Our batch was nick named as "rowdy batch".

Further it was difficult for many of us to adjust to new environment. The main concern was that our classmates had started segregating on the basis of Rural and Urban base. Most of the students from rural background were from Kannada medium but were very strong in academics. Also many of these students had got passed with Distinction. But this was not the case for long. We all became good and intimate friends within a short span of one month. Most of local (urban) classmates were very helpful and guided us whenever we needed. We were lucky to have some very good faculty.

As the famous saying goes "STUDENT LIFE IS GOLDEN LIFE", we really enjoyed our college days. Extensive Survey Camp for 30days at Ghati Subramanya Area with all the senior faculty members was a memorable experience. Study tour to Cauvery Basin Irrigation Project, PHE study tour to BWSSB Projects in and around Thorekadanahalli and Thippagondanahalli, Wheel and Axle Plant, Madras (Chennai) Port and Concrete research institute Chennai, KPC projects (Kali power projects and related projects with Goa visit) and ALL INDIA tour for 30days are most unforgettable memories that I reminisce even today.

Team Sampada: How was your journey as an engineer when compared to the times now where there are more technological advancements?

BRN: My journey as an engineer is no way comparable to the times now where there every information is available at the tip of the finger and that the whole world has become single global village. During our college days and infact nearly for 15 years into our service, we all used T-Square, Slide Callipers, Set Square, Drawing board and different Pencils etc for all practical purposes. Today, it makes me proud and glad about what we were able to accomplish with the available resources.

But it is not the situation now! One can use computer/mobile for all kinds of work and can get any and all required details in Google with a single click. It has made most of the tasks very easy and less time consuming. According to me, one of the disadvantages is that most of our youngsters not developing their memory power. They do not rely on the details in their memory as one can get anything needed on the internet.

Overall, recent technological advancements help to work more efficiently, communicate with each other easily and develop economically by using these advanced technological solutions.

Team Sampada: Can you please tell us about yourself and your career journey?

BRN: I can confidently say that the current students are very lucky, as they learn a combination of subjects (hybrid learning) and hence can switch over to any field of their interest. For example, a Civil student can switch over to software field, provided he/she is good in programming and computer technology. This increases the career opportunities – be it private or government – and enables them to switch at any point based on their area of expertise.

I would like to advise the current students not to miss social interaction – be it family members, neighbours, friends, faculty, classmates, colleagues etc. They should attend the classes regularly, respect the faculty, should refer good books and focus on their academics along with other hobbies. In this competitive world, they should develop confidence and leadership skills. All the students should compulsorily be part of the Educational Tours, which will help in the future.

Team Sampada: As one of the senior alumni members, how do you think the college should utilize the experience of the alumni?

BRN: UVCE Senior Alumni are spread all over the world and part of many International and National Importance companies and Govt service as well. They are involved in various projects has the enormous experience in many fields like planning, designing, estimating, tendering, execution, maintenance etc. Many eminent alumnus are there in research and development field as well. So UVCEGA and college should identify the best senior alumni members and arrange for frequent seminars to utilize their experience and share it with the current generation and others.

UVCEGA CORNER

- From UVCEGA, we had invited the Principal, Dean, Heads of the Departments and all the faculty to discuss the needs of the departments and how the alumni can help in improving the student requirements. It was almost 2 hour long discussion and some good points were noted. We also had some ex-faculty (who are also the alumni) share their views on making UVCE a better competitive institution. We will be sharing the details shortly on how you can join hands in these initiatives.
- "Mental Wellness for the Entrepreneurs" - a Session organized by Entrepreneurs forum of UVCEGA on 29th November. This session included a keynote by Ms.Rathi Murthy, CTO at Verizon Media followed by an address by Dr C R Chandrashekhar, Retd Professor from NIMHANS, and expert in Mental Health and Wellness. To begin with, Mr Randhir Hebbar, Co-Founder of Convergytics & Blik.ai shared his thoughts. The event was anchored by Rupa Rao of HealtheLife Ventures.
- Background planning activities to get alumni from the US to be part of the mentoring program for students with innovative ideas. Apart from this, UVCEGA is working on the Sub-Committees of alumni to work with each Department for some initiatives.

EXPLORING THE WATER RESOURCE SECTOR WITH YOGESH

Team Sampada: Can you please tell us about yourself to our readers?

Yogesh: Well, I'm Yogesh, Assistant Engineer, Water Resources Department. Completed Bachelors in the year 2007 and joined the Department in the year of 2009. Although, I have a keen interest in the research field especially water use efficiency in the present situation and future conditions. In 2018, I finished my master's at IIT Roorkee and am presently appearing for Ph.D. in the stream of Water Resources from the UVCE, Civil Engineering Department. During leisure time, traveling keeps me occupied as a hobby; it is the perfect way to use time, have a break (physically and mentally) from a dull routine. Travel is part of education and part of the experience.



Team Sampada: Can you please give some heads up or tips to the students on the various opportunities available in the Water Resources Department?

Yogesh: Water Resources Department (WRD) is one of the major departments in the Government of Karnataka and manages the State's surface water resources for irrigation, drinking, industries, and other purposes. Water is under the State list and water resources management is only through the government & its agencies. Engineers from Civil/Construction Technology & Management and Mechanical streams can join the services in WRD through the recruitment by Karnataka Public Service Commission (KPSC) for the post of Junior engineers (for Diploma holders), Assistant Engineers & Assistant Executive Engineers (BE/BTech holders).

Engineers in the department are involved in water management in the canals, canal construction, and maintenance, engagement with stakeholders, preparing Detailed Project Reports & estimates of new projects, to name a few. In Karnataka, the government has established four nignams and are involved in managing surface water resources. The government has also established specialized institutions such as

- Advanced Centre for Integrated Water Resources Management (ACIWRM): for implementing Integrated Water Resources Management & capacity building of engineers
- Command Area Development Authority (CADA): for interventions to reduce the difference between irrigation areas created & utilized, engagement with water user co-operative societies
- Karnataka Engineering Research Station (KERS): for technical investigations & studies
- Water and Land Management Institute (WALMI): for water & land management and farmers engagement

An engineer in the WRD will be posted to work in any of the nignams or specialized institutions. WRD provides a plethora of opportunities in action research. Hydrological and Hydraulic modeling are now a decision tool in WRD. Hydrological modelling involves rainfall-runoff modelling, river basin & sub-basin scale modelling to arrive at water accounts and integrated water resources management, climate change modelling to assess the impacts on water resources. Hydraulic modelling is deployed for dam break analysis, flood maps etc. The hydrological data collected by WRD and other departments over a while and real time data gathering has also huge potential for adopting machine learning and artificial intelligence. Openly available Earth Observation datasets are being utilized for more informed decisions in water resources management. WRD is also developing a robust Water Resources Information System for dissemination of information to stakeholders wherein there is scope for software enthusiasts to take their learnings to reach the last mile. Engineers are also encouraged to adoptively engage with stakeholders within the ambit of rules & regulations for water management with focus on equitable distribution.

Team Sampada: How do you think, as common citizens, and also especially as Engineers we can help in water conservation?

Yogesh: Water and cement are extravagantly used things in the world but unfortunately, water cannot be produced. We understand from hydrologic cycle that the water available at any point of time on the earth remains same but the quantum of distribution varies.

Water and related resources are stressed for many reasons including uncoordinated use by different sectors, uncontrolled use, increasing demand and development, and frequent drought. Cape Town, South Africa city almost ran out of water in 2019. According to recent World-Wide Fund for Nature study by 2050, 3 of every 5 very high-water risk cities in the world are from India.

Water conservation should start from one's home. All shall make a practice of accounting water utilization and optimize unnecessary consumptions. Engineers to emphasize innovative and low-cost technologies for the treatment of fresh and greywater. Water consumption to look in a different perspective from the current demand based to entitlement regime. Data plays a crucial role in water conservation, engineers can disseminate water related information to stakeholders nearby and support them in making informed decisions.

Team Sampada: We would like you to tell us about your career and your roles & responsibilities in detail so that we can create some awareness among the students.

Yogesh: Joined as an Assistant Engineer in Water Resources Department in the year 6443. From 2009-2012 I've assisted in the Rehabilitation and resettlement (R&R) Division, Hipparagi Barrage project under Karnataka Neeravari Nigam Limited. Later on, in the year 2012 shifted to Inter-State Waters (ISW) wing, inter-State rivers at the most senior constitutional court, Supreme Court of India up to 2016. And while I enjoyed the work that I did, I'd love the chance to reach the supreme judicial of India. In the year 2016, got an opportunity to pursue Master's Degree course at Indian Institute of Technology, Roorkee on deputation from the State Government and accomplished in the year 2018. From 2018 onwards working for Advanced Integrated Water Resources Management (ACIWRM). I've been in the water resources department for over ten years now.

Team Sampada: Many of the current students will be interested to know about the Govt career opportunities in the sector that you are in. Can you explain a bit about that?

Yogesh: In addition to subject knowledge, a technical job in Government also requires managerial acquaintance. Students shall also have an understanding of stakeholders and their requirements viz., crop and watering requirements in the agriculture sector, water quality in drinking and industrial sector, etc. Recruitment notifications for state government are usually notified by Karnataka Public Service Commission (KPSC) ([website: http://www.kpsc.kar.nic.in/](http://www.kpsc.kar.nic.in/)) whereas that of quasi-government bodies such as boards, corporations, nigams & societies are done by the bodies themselves. All recruitment notifications will be published in the leading newspapers and through websites.

General studies and current affairs of the State are also a pre-requisite for the recruitment exams. Exam pattern for Junior Engineer posts (diploma holders) & Assistant Engineer posts (degree holders) is a broadly objective type consisting of two papers viz., subject paper and general studies followed by the personal interview. Exams for Asst. Executive Engineers post (degree holders) will be of theoretical subject paper, general studies followed by personal interview.

Students to note that on an average the minimum time for completion of recruitment process i.e., notification to declaration of results may take up to one year and sometimes even more.!. Further reporting to job after declaration of results may take up to 6-month time considering verification requirements.



IN CONVERSATION WITH PARIJATHA

Team Sampada: Can you introduce yourself briefly to our readers?

Parijatha: I am Parijatha, alumnus of 2010 EEE Batch. I was born in Bangalore, completed my schooling in St Lourdes English school and Sri Vani Girls High School. Participated in several co curricular activities which helped me broaden my thought process in all aspects. After PUC, I joined UVCE in the year 2006 owing to the reputation the college had which exposed me to various dimensions of thought process which in turn molded me to become a better person.



Team Sampada: We would like you to tell us about your career and your roles & responsibilities in detail so that we can create some awareness among the students

Parijatha: While studying at UVCE I was offered job in 6 companies in campus selection. The environment of UVCE is conducive in campus selection process with guidance from seniors. I worked for iGate Global Solutions Pvt. Ltd for 3 years. While working there I was feeling that I was capable to do more than just coding/software development, so I joined Govt. Services. Being a UVCEian this shift was not difficult since UVCE had given me all the strength and confidence to achieve for what I aspired for.

On clearing the exam and interview, I was appointed as Asst. Director of Factories, in the Department of Factories, Boilers, Industrial Safety and Health where I am entrusted to protect the rights of the laborers working in the organized sector with respect to their health, welfare and safety. A major section of our society comprises of laborers who face several fundamental issues. I take pride in solving their problems, thus bringing a change in their life. As Asst Director of Factories, I work as a bridge between Govt and Laborers - as a representative of the government I have to protect rights and safety of laborers and also implement government programmes effectively and thus bring harmony among all stakeholders.

Team Sampada: Many of the current students will be interested to know about the Govt career opportunities in the sector that you are in. Can you explain a bit about that?

Parijatha: UVCEians can be found in each and every department in the government. I strongly believe that UVCEians are more capable to crack any govt exams. The only requirement is one has to attempt for it.

Primarily, I suggest, all students to undergo campus selection and get through such that they have 1 or 2 offers from private sectors. This will give them the required confidence and edge over others to crack govt competitive exams. The candidates must concentrate on current affairs along with necessary technical knowledge to clear the exams. There are ample of opportunities in several departments of the govt which looks forward to serve the public. The departmental websites and newspapers can be looked into for vacancies and openings.

Team Sampada: How do you think the alumni working in Govt sector can help UVCE? And how can UVCE Graduates Association help?

Parijatha: Placements in UVCE or securing a government job is due to the path set by our seniors which is followed. I feel alumni and UVCEGA will help in providing better infrastructure to college and also guidance to the students to excel in their careers exponentially and reach to greater heights.

THANK YOU BATCH OF 1970!

We, TEAM SAMPADA would like extend a huge Thank You to the Batch 1970 for donating 5 New Computers to our college Library for use. This helps the administration and students greatly.



EMPOWERING THE NATION - PRASHANT

Team Sampada: Could you give a brief introduction about yourself?

Prashanth: I am Prashanth, alumnus of 2009 ECE Batch. Currently a Deputy Manager at Bharat Electronics Limited, a PSU under the Ministry of Defence. I have the privilege of working in a wide spectrum of technologies which includes Military Radios, Electronic Warfare systems etc. It is also a matter of pride that we directly address the technical needs of our countries armed forces. BEL gave me the opportunity to pursue my Masters in Signal Processing and Communication at Defence Institute of advanced technologies (DIAT), Pune and taking me back to those good old college days. I am an ASQ Certified Reliability Engineer. The journey of this certification process opened up a new dimension of Technical Project Management.



Team Sampada: How did UVCE aid you, help in developing skills and facing the issues?

Prashanth: UVCE has been a temple of infinite knowledge where a student's future is molded and shaped by grit and passion for technology. Greater the passion and effort one puts during a student's life, farther he is catapulted towards the ultimate goal. I am proud to say that all of my good friends who studied with me in this institute are well placed in their lives, thanks to UVCE.

UVCE has been instrumental in rekindling my love for science and technology by indulging us in practicality of the otherwise theory based curriculum. It is said that with age, even the bricks and mortar comes to life, This College is truly alive thanks to the passionate students it attracts and the great history it creates.

Team Sampada: Could you describe your career till date and mention few challenges/opportunities during this journey in BEL?

Prashanth: There is a saying that we should never be emotionally attached to the company you work with. This statement probably does not hold in the case of DPSUs, which predominantly works to empower the countries armed forces with the latest Military technology. The emotion is one of the driving factors to provide reliable and quality products to the customers. The engineers working here are proud to be part of this organisation and are passionate about the work they do. I am not an exception, as this organisation has opened up challenges right from the time we stepped in it.

This Company provides the freedom for one to grow in the field of interest and also excel, the mentorship which the seniors provide, the interactions with our esteemed customers opens up a new dimension of thought process. Innovation and quality are the driving factors behind the success. With the "Atmanirbhar Bharat" call from the Prime Minister of India, our future seems exciting and challenging at the same time.

Team Sampada: Share your thoughts and advice on how the current students following engineering passion mould their learning journey?

Prashanth: It is clear that the engineers of this decade have an uphill task of being abreast with the fast paced technological advances happening around the world and being a part of this growth story. We are at a juncture where the countries overall development is in our hands. India is in dire need of Technological leaders who can steer this country in the right direction.

For something this profound to happen, day to day effort one puts in the right direction towards the right goal is the need of the hour. Innovation and Continuous learning should be the mantra for the present generation.

TS: If given an opportunity, what are the three things that you would like to improve in UVCE?

Prashanth: Institutions like UVCE must be a hub for research and innovation. The three aspects which I would like to improve in UVCE are :

- Close Tie-up with industrial organisations which would enhance the knowledge sharing and make the student industry-ready.
- The curriculum must naturally ignite passion for tech by linking it with the present industrial trends.
- I would like to see UVCE grow to become one of the world class premiere institutions in the near future.

UVCE RENOVATION UPDATES



PRIDE OF UVCE

Recently, the US-based Stanford University has recently released a list that represents the top 2 per cent of the most-cited scientists in various disciplines. The exhaustive list has 1,59,683 persons, representing fields like physics, material sciences, chemical engineering, plant biology, energy and others. (Read More: [Link 1](#), [Link 2](#)). Of these we were delighted to see Dr. T S Mruthyunjaya (1963 Mech) and Prof. Gopalakrishnan Srinivasan who are from our UVCE fraternity. And we reached out to them to get their thoughts and learn more about their journey.

BREAKING BARRIERS OF SCIENCE - PROF GOPALAKRISHNAN

Team Sampada: Can you please give a brief profile about yourself to our readers?

Prof GS: I am Professor Gopalakrishnan. I received my BE Degree from UVCE, Master's Degree in Engineering Mechanics from IIT Madras and Ph.D from School of Aeronautics and Astronautics from Purdue University, USA in the year December 1992. Before proceeding to USA for my doctoral studies, I briefly worked at NAL Bangalore in the Structures Division. After my Ph.D., I was a Postdoctoral Fellow in the department of Mechanical Engineering at Georgia Institute of Technology. In Nov 1997, I joined the Department of Aerospace Engineering at IISc Bangalore, where currently I am the KSIIDC Chair Professor. My main areas of interest are Wave Propagation in complex media, Computational Mechanics, Smart Structures, Structural Health Monitoring, MEMS and Nano Structures.



I have extensively published my work in many top rated international journals—having written a total of 210 international journal papers, 6 graduate level textbooks, two undergraduate books, 12 book chapters, and 150 international conference papers. Along with h-index of 48 in Google scholar with nearly 8200 citations, which is highest in India for any researchers in Aerospace domain.

I received many awards/honors for my work which include, International Structural Health Monitoring person of the year awards 2016 instituted by SAGE Publications, Fellow of Indian National Academy of Engineering, Fellow of Indian Academy of Sciences, Associate Fellows AIAA, Distinguished Alumnus Award - Indian Institute of Technology Madras, Satish Dhawan Young Scientist Award by Government of Karnataka, Biren Roy Trust award of Aeronautical society of India, Alumni Award of excellence in research at IISc in the year 2013 and the Royal Academy of Engineering, UK Distinguished visiting Fellowship.

I was the head of the Aerospace Project assessment and Review Committee of The National Programme of Micro and Smart Systems (NPMAS), DRDO, Government of India, where I was responsible for delivering many micro devices required for many aircraft/spacecraft and missile platform of the country. Within the IISc, I have held various administrative positions - Chair of Department of Aerospace Engineering (2015-2019), Associate Chairman for Center for Scientific and industrial Consultancy and was the founder Chairman of Intellectual Property cell. I have till date guided 23 Ph.D's, 7MSc (Engg) and 23 M.E/M.Tech students.

Team Sampada: Based on your experience in "Materials", share an overview about this field to the readers who would like to know more about it

Prof GS: Materials is a very vast and well researched field. There are different types of materials like metals like Aluminum, steel, Titanium etc, Polymers such as plastics, epoxy etc., hybrid materials like composites, where in strong fibers such as carbon, glass or epoxy are oriented in particular direction and bonded with polymers such as epoxy. I primarily work in aerospace materials where today the need of the hour is to have lightweight materials for obtaining fuel efficient and long endurance aircrafts. In this regard, composites fit the above definition of having light weight aircraft that can fly longer by consuming less fuel. All the recent aircrafts coming out have over 60-70 % of it is made of composites. Today, India's Light Combat Aircraft (Tejas aircraft) is made of composites. India's Advanced Light Helicopter (ALH) is made of composites, so is Boeing's Massive 787 aircraft and Airbus's A-380 aircrafts are made of composites.

Materials research is also about engineering the materials at the atomistic scale so as to obtain the required properties at the macro scale using computer simulations. I also work in this area and this area is called the "Integrated Computational Material Science". Here, at the atomistic scale we can determine the texture of the materials by suitably adjusting the orientation of the atoms and the grain boundaries so as to get the required properties at the bulk scale. For example, if we need a material to sustain high impact loads, we can perform texturing of the material by properly orienting the crystal orientations and grain boundaries so that required properties to sustain impact can be obtained.

Another important material related research that is highly relevant to aircrafts is the understanding of the corrosion in metals. Corrosion occurs due to environmental conditions which eat away material of the aircraft thus reducing its strength, which eventually leads to cracks and this can lead to catastrophic accidents. Billions of dollars are spent world wide to understand corrosion mechanisms. I work in understanding how corrosion pits are formed under both environment and stress. I can keep writing about the importance of materials in our day-to-day life. Here, I have given you a glimpse of how material research is important in the context of Aerospace Engineering.

Team Sampada: It would be great to know some of your milestones and challenges in this field in the past 30+ years

Prof GS: Although several advances in Material Science and Engineering have been made in the last 3 decades, the important area that has emerged is in the area of Nanotechnology. Nanotechnology is an area where one engineers a material at the atomistic scale to get the required properties. This was made possible with the fabrication of the first Atomic Force Microscope in early 70's and determination of Carbon Nanotube as an allotrope of carbon. Other allotropes of carbon are the Graphite and Diamond. At the same time, Richard Smalley of Rice University observed the existence of another form of Carbon allotrope, namely Fullerene. Nanotechnology is currently revolutionizing the world in its applications in diverse disciplines such as electronics, biology, material science, mechanical and aerospace engineering fields.

Another area which is making a big impact in material science is in the area of Metamaterials. Metamaterials are those materials which are inserted in the regular structures to change its behavior. Some of the examples of metamaterials are the Auxetic Materials (Material with negative Poisson's ratio), Pentamode materials etc. For example such structures can be used to reduce excessive vibration, noise or even adaptively change the shape of the structures.

Yet another area that has emerged is in the development of bio-inspired structures. For example, if you look at the way insects fly, can we mimic insect flight in an unmanned air vehicle? We all know that woodpeckers can peck very thick wood and can pierce it. In doing so it generates a force of the order of 1000-1500 g. In spite of this high force, the woodpecker brain, which is about 5cm from the beak is intact and nothing happened to it. This is because, if we look at the woodpecker beak structure, they are in terms of sutures which acts as filters to the high energy coming from the beak and attenuates the high frequency waves coming from the pecking. If such suture structures are put into structures that are subjected to high intensity blasts, we can design blast resistant structures. With the emergence of 3-D printing and additive manufacturing, it is possible to design and fabricate such complicated structures

Team Sampada: It is a matter of pride for us UVCEians, you being featured in the "Top 2% Scientists" in this domain. Can you tell us how you came to know about this news? Also, how the younger alumni/ current students need to work to achieve such a milestone in their career?

Prof GS: I am also very proud to be Alumnus of UVCE. I came to know about the news from from long time friend Dr Ganagan Paratp, a very distinguished scientists himself and who has dedicated his time after retirement from NAL to do research in Scientometrics, an area of research to determine the impact of scientists in an area, a discipline, for the country or even across institutes in a country.

My advice to younger generations is to have passion in whatever you do. We all do not work for awards. Awards are by-products of your hard work. Research is not everybody's cup of tea. It requires Patience, Perseverance and Passion, which I call 3P qualities. Failures are part of research and you need failures to enjoy the success at the end. If you have these qualities, I am sure every youngster in our country can achieve any milestone

REVOLUTINIZING DESIGN PRACTICE! - DR.MRUTHYUNJAYA

Team Sampada: Can you please give a brief profile about yourself to our readers?

TSM Sir: I am an alumnus of the present UVCE from the 1963 Mechanical Engineering batch. The College back then was a part of Mysore University. After graduation, I worked for some time in REMCO (presently BHEL) and joined IISc in 1964 to continue my studies. I completed my ME (Machine Design) degree from the Department of Mechanical Engineering in 1966 and joined the Department as a faculty member the same year. As faculty member I obtained my PhD degree from IISc for research in the area of Mechanisms. At IISc, I taught courses on various subjects including Materials, Mechanisms, Mechanical Design, Engineering Design, and Product Design. I also guided a number of Masters & PhD students in their research work on topics in the fields of Mechanisms, Robotics and Design. I served as Chairman of the Centre for Continuing Education (CCE) during 1992-99 and founding Chairman of the Centre for Product Design & Manufacturing (CPDM) during 1998-2003. On sabbatical leave from IISc during 1986-87, I served as Visiting Professor in the Dept of Mechanical Engineering, Ohio State University at Columbus, Ohio, USA.



After retiring from IISc in 2003, I served for short durations as Principal in R L Jalappa Institute of Technology, Doddaballapur (2004), and in Nehru College of Engineering and Research Centre, Pampadi, Thrissur Dt, Kerala (2005-6). Since 2008, I am with the School of Postgraduate Studies (SPG), Nettu Technical Training Foundation (NTTF), Peenya, Bengaluru, heading their PG Programme in Product Design & Engineering. NTTF is well known among industries for its practice-oriented Diploma and PG courses.

Team Sampada: Based on your experience in "Design Practice", share an overview about this field to the readers who would like to know more about it

TSM Sir: The recent Stanford University study has assessed scientists around the world for their career-long citation impact till the end of 2019 using data from Scopus, the citation database of peer-reviewed literature. The study covers 8 million scientists in all fields of research classified into 5 broad domains which are further divided into 22 fields and 176 sub-fields. As per this scheme, my research publications are included as part of Design Practice & Management sub-field which is part of Built Environment & Design field coming under Applied Sciences domain. I am ranked 1st among 5 researchers from India who make it to the list of top 2% scientists in Design Practice & Management.

My research publications, to be precise, are in the field of Synthesis & Analysis of Mechanisms and Manipulators. Engineering students' first introduction to Mechanisms happens as part of ToM (Theory of Machines) course which, nowadays, is split into KoM (Kinematics of Machines) and DoM (Dynamics of Machines) courses. Invariably, as it happened in my case also during my study at the College, the students find the Mechanisms part rather abstract and difficult to grasp. Understanding and interest develop when the topic is studied in some depth as an UG elective or a PG subject. The subject is of central importance in the design of any machine because the associated mechanism is to the machine as the skeleton is to the human body. Proper design of the mechanism is essential for proper function of the machine. Mechanism design involves Structural Synthesis, Dimensional Synthesis and Mechanical Design. Mechanisms can be Linkages, Gear Drives, Cam & follower systems, Hydraulic piston-cylinder mechanisms and so on. As far as structural synthesis is concerned, other types of mechanisms can be considered in terms of equivalent linkages. Significant part of my research contributions is in Structural Synthesis of Linkages, which in mechanism design is akin to conceptual design stage in engineering system design. At this stage, the need is to generate all possible structural configurations of the mechanism for the mechanism design problem being tackled. My work can help in achieving this need and thereby enable generation of different and better solutions for the problem.

TS: Could you share some of your achievements & challenges in this field in the past 40+ years

TSM Sir: I belong to the second batch of ME (Machine Design) students at IISc. This Programme was started in the Mechanical Engineering Department of the Institute in 1963 by my teachers, Profs.(Late) M R Raghavan and P Srinivasan who, incidentally, were alumni of UVCE. I owe my interest in Design to Prof. Raghavan. I began taking part in handling lecture and laboratory classes in Material Behaviour soon after joining the Department and after a couple of years, was asked to initiate a full course on Mechanisms which I myself had not studied. Initially, it was frustrating with neither me nor my students satisfied. Gradually I gained competence and confidence as I delved deep into the subject. I taught this course till my retirement in 2003.

Over the years, I carried out my own personal doctoral research, guided a number of ME students in their dissertations and MSc (Engg.) & Ph D students in their thesis work all in the field of Mechanisms. Personal and joint-authored publications resulting from these researches have received wide attention and continue to be cited even now over 20-30 years after their publication. Many of these publications appear in Mechanism and Machine Theory (MMT), the leading international journal in this field. MMT, when it completed 50 years of publication in 2016, published a list of 50 most cited papers from among 3711 papers published in the journal during 1966-2015 and presented Mechanism and Machine Theory Award of Excellence for authors of top-10 most cited papers. Five of my papers including one self-authored and four joint-authored with my doctoral student, B Dasgupta, appeared within this list. Of the joint-authored papers, two came within the top-10 list occupying the second & fourth place for which both my student and I were presented the Awards. Several of my students in the field of Mechanisms have served or are still serving in top academic positions in IISc, IITs & Engineering Colleges and R&D positions in ISRO, BARC & Industry.

Another area of my teaching & research is Design. I have taught Methodology of Creative Design for over 30 years at IISc and am still teaching it at the School of Postgraduate Studies, NTTF, Peenya, Bengaluru. At the IISc, I initiated the M Des. Programme in Product Design & Engineering in 1997 which is run by the Centre for Product Design & Manufacturing (CPDM) established in 1998. I was the first Chairman of CPDM and nurtured its growth during 1998-2003. CPDM has over the years emerged as an internationally known school for design education and research. The two researchers, Prof Amaresh Chakrabarti & Prof G K Ananthasuresh, who are ranked 2nd & 3rd from India under Design Practice & Management are also part of CPDM the former being present Chairman and the latter being Associate Faculty at CPDM. For my work in the Design field, I was conferred the Raghavan-Adarkar Award for outstanding contribution to design science, education & research at the IcoRD-19 (International Conference on Research into Design) Conference held at the IISc on January 9, 2019.

TS: It is a matter of pride for us UVCEians, you being featured in the "Top 2% Scientists" in this domain. Can you tell us how you came to know about this news for the first time? And also, how the younger alumni/current students need to work to achieve such a milestone in their career?

TSM Sir: I heard the news with great surprise for the first time from a past M Des student of mine who is at Mumbai. He had come to know about it through a message from CPDM Chairman who had shared this happy news with all alumni of the Centre.

Younger alumni of UVCE who are involved in research as part of their profession or otherwise should unhesitatingly go ahead and try to publish their work. Even if not accepted for publication, reviewers' comments & suggestions will be of great value for improvement. This is how one builds up one's research competence & reputation. Failures are, without doubt, stepping stones to success in this field of endeavor.

Speaking of current students, PG students of UVCE can definitely aspire to do good publishable research as part of their Master's project assuming they have the aptitude for research, put in hard work and are properly guided. If successful, they can pursue their passion for research further through doctoral study or by joining R & D establishments. UG students may not have opportunity for involving in research as their Core subjects will generally be of introductory level. But they can definitely try to improve their knowledge and develop research aptitude in subject of their choice by taking up study of relevant advanced subjects as Electives.

Successful inculcation of aptitude for research or design & development work in students depends to a large extent on to what extent faculty are involved in such work. Here comes the need for the College to have sufficient qualified faculty in numbers with reasonable individual teaching load to enable them to involve themselves in research on topics within the area of their teaching. This will help teachers develop research competence and further enhance their teaching competence. Faculty can come up with individual or joint project proposals and attract sponsorship from outside agencies and get them carried out through students' final projects.

It is essential for engineering students to develop interest, aptitude & capability for design of products, processes & systems for benefit of society. In this respect, awareness of methodology of design problem solving is essential. This methodology is discipline-independent. I am not sure if a course in this respect is available & offered in UVCE. If not, an introductory course on engineering design needs to be offered to all students before they branch out into different disciplines like Mechanical Engineering, Electrical Engineering, etc. The course should impart knowledge of systematic methodology of engineering design problem solving including aspects of creativity and various techniques available in design literature for idea generation.

EXPLORING THE RAILWAY INDUSTRY - SURYA SAGAR

Team Sampada: Can you briefly introduce yourselves to the Sampada readers and also talk about your career & role in detail so that we can create some awareness among the students.

SS: Hello! I am Surya Sagar, an alumnus of UVCE from the Mechanical batch of 2018. I currently serve in the Indian Railways as a Junior Engineer in the Engineering department. I work in a team responsible for maintaining the running tracks, making sure they are in fit and durable condition with coordination of relevant departments of the Indian Railways. Our goal is to support high-speed travel without compromising on ride, stability and passenger comfort. Indian Railways serve around the clock ensuring delivery of essential goods as well as connecting villages and cities of the country. It is my privilege to be part of this world-class organization.



TS: What suggestions would you like to give to the current students who are interested to pursue their career in this field?

SS: My advice to the readers aspiring to serve in government enterprises is to follow three simple steps. The first step is to select the public sector and department which meets your eligibility. Read the notification in detail and be well informed of the screening process. The second step is to discuss and collect information from relevant sources and people. Then chalk out an exam strategy with a realistic time table in line with your schedules and screening test. The third and most important step is to keep yourself motivated in order to persevere in your preparations with utmost devotion and consistency without neglecting your health.

TS: How was your preparation for the field you're in at present?

SS: Coming to my efforts put towards achieving this goal, I didn't lose faith in myself and my deity. I put small but consistently progressive efforts in order to meet my daily study goals. I had the challenge of trying to balance self-study along with corporate life. However, I pulled myself together and kept studying, revising and testing my preparation to the maximum possible extent. I believed in myself and went on with a positive attitude to reach my goal.

TS: How do you think, as alumni, you will be able to contribute towards supporting the students? What kind of platform would be helpful?

SS: In order to plan and work effectively, you need to talk, discuss and seek guidance from relevant resources and people. I urge you to make use of the UVCE community. I have talked to some of the guys, and have shared my experiences and learned a lot from them too. Lastly, I suggest you prioritize your goal, keep distractions at bay and never stop trying.

THE ISRO DREAM! - MANOJ

Team Sampada: Can you please introduce yourselves to the Sampada readers?

Manoj: I am Manoj A, fondly known as Nayaka in college. I am from the batch of 2018 Information Science Engineering. I am now working as a Jr. Scientist at the ISRO U.R. Rao Satellite Centre in Bengaluru. To embark on a career at ISRO had been a dream of mine which came true. It was 2013 when I first visited ISRO and dreamed of getting a job there, which eventually happened, all thanks to UVCE. Currently, I'm working on mission Aditya L1 as a software regression analyst whose further details can't be disclosed due to security reasons.

TS: We would like you to tell us about your career and your roles & responsibilities in detail so that we can create some awareness among the students.

Manoj: My suggestion would be to plan well for the preliminary exam for all Government offices and not focus on just one as there is a multitude of opportunities in many Government offices, not just ISRO. There is DRDO, OFB, AAI, BHEL, BEL, SEBI, NIC and CII to name a few. I would say, apply to every office as each office has their own research forms so getting into any one of them is not child's play, it is definitely a major task and feat to get into them.

TS: What suggestions would you like to give to the current students who are interested to pursue their career in this field? How was your preparation to the field you're in at present?

Manoj: Exams will be based on general aptitude, current affairs, computer science aptitude and English grammar. I would suggest students prepare for the same by reading the newspaper every day and referring to prescribed textbooks. I believe meticulous and steadfast preparation using these simple tools will go a long way.

TS: How do you think as alumni you will be able to contribute towards supporting the students? What kind of platform would be helpful?

Manoj: As an alumnus, I will always have my contact lines open to my alma mater. Therefore, if a student requires any help regarding the Government office examinations, interviews and related information, they can contact me. Furthermore, I can help out with the exam preparation for exams like UPSC and other SSC exams as well.

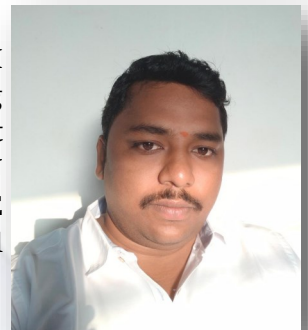
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PERSEVERANCE AND MORE! - IN CONVERSATION WITH RAMESH

Team Sampada: Can you please introduce yourself?

RK: My name is B Ramesh Kumar. I graduated from UVCE 2009 in EEE. I had joined UVCE via lateral entry to 3rd semester. I am currently working at KPTCL. Recently I got promoted from Assistant Engineer to Assistant Executive Engineer (Electrical) and got posted to HOTLINE SUBDIVISION KPTCL MUNIRABAD which is very specialized and interesting field of LIVE line maintenance wherein I need to go through the training from National Power Training Institute shortly.



TS: We would like you to tell us about your career and your roles & responsibilities in detail so that we can create some awareness among the students.

RK: To begin with, when the online application was floated by KPTCL in the year 2009, I was very much interested to serve in the Govt and hence applied for it. My selection into KPTCL was purely on merit basis in the year 2010 as ASSISTANT ENGINEER.

During in initial days, ie, 2010 to 2012, I was working as maintenance incharge of 110/11KV master unit substation at Koppal wherein I learnt about periodical maintenance of substations so that we can provide reliable and uninterrupted power supply to the consumers.

Later, I worked in MAJOR WORKS SUBDIVISION KPTCL MUNIRABAD as Assistant Engineer from 2012 to 2020 where in I learnt about: Preparation of Estimates for newly proposed EHV substation and Lines; Supervision of each and every construction activities of 110kV and 220kV level substation and lines in the jurisdiction of Koppal district; Commissioning of capital works/ new projects within stipulated target time; Major part of the work was to install new towers in agriculture fields duly resolving severe RIGHT OF WAY / way leave issues.

TS: Many of the current students will be interested to know about the Govt career opportunities in the sector that you are in. Can you explain a bit about that?

RK: After 2010, many engineers have got recruited on the basis of Written Examination. The Curriculum for these examinations involve technical and aptitude questionnaires. Various Nature of works of KPTCL are distributed across various departments: Planning and coordination; Tendering and procurement; Project monitoring; Technical audit and Quality control wing; Hot lines wing of KPTCL; Transmission Lines and substations maintenance wing; Meters and Relay Testing wing; Major works wing of KPTCL. Based on the requirement and your skillset, you will be allocated the department. Also, you will be provided with appropriate training

TS: How do you think the alumni working in Govt sector can help UVCE? And how can UVCE Graduates Association help?

RK: Alumni working in government sector can become asset to UVCE by promoting and encouraging students by sharing their technical experiences via seminars, so that new Engineers will be get aware about role of associated wings in engineering at Govt level. They can create awareness about new technologies adopted in various sectors of engineering. UVCE Graduates Association can help the budding ENGINEERS by conducting seminars on opportunities in government sector and also arranging industrial visits and field training to the students.

ANOTHER FEATHER IN THE CAP FOR IEEE UVCE

IEEE UVCE recently won the Regional Exemplary Student Branch Award for Region 10 Bangalore Section. This award, presented annually provides public recognition to Student Branches in each region for their exemplary operations, commitment, and consistency with the goals of IEEE.

Team IEEE UVCE has been meticulously organizing many events throughout the year. Our Annual Flagship events - Kagada 2019, Impetus 19.0, CodeFury 2.0 were a tremendous success and saw over a thousand students from across the state participating in the events. Kagada, our Annual National Level Technical Student Conference, has won "The Darrel Chong Student Activity Award" twice in 2016 and 2019. These events also provide a gateway to connect with various industry professionals. The Tech Talks on Firmware, Machine Learning, and Image Processing are some examples wherein our members got first-hand expertise from industry professionals. NCode and Voltorb, our monthly coding and electronics challenges respectively, help students to practically apply their technical skills by solving various problem statements. Semester-Long C++ course was arranged to help students strengthen their fundamentals of programming skills and to build concept project ideas into code.

IEEE UVCE SB not only helps build students' technical skills but is also keen on making them a valuable asset to society. The event "Ottige Kaliyona", provides an opportunity for students to help underprivileged children to learn about computer applications and widen their approach to things. "Food for cause" is another initiative where volunteers come together and sell food at Kagada, to support an NGO which takes care of senior citizens. Our team even organized a Blood Donation Camp in association with the Regional Blood Transfusion Center. The pure joy of achieving something as a team, of being on a beautiful journey filled with learning, growing, and giving back is what the team often strives for and truly drives us at our student branch. This wouldn't be possible if we didn't collectively work together as a team. IEEE UVCE is proud of the hard work put in over the months and how it has steered us towards this achievement.



VISIONUVCE SCHOLARSHIPS SAGA

Team VisionUVCE is pleased to announce our 10th annual scholarship program this year and are extremely happy to be able to help students of UVCE. This year with the pandemic crisis and floods in many parts of Karnataka, students' needs for monetary support has increased and we hope that you continue to extend your support to these students through VisionUVCE. We have conducted interviews of 100+ students on 12th December, out of around 180+ applicants.



SCHOLARSHIPS

393 **30 LAKHS** **9**
SCHOLARSHIPS **AMOUNT** **YEARS**

Year	No of Scholarships	Amount
2011-12	9 – 9 Full (7.5k)	Rs. 67, 500/-
2012-13	13 – 13 Full (7.5k)	Rs. 97, 500/-
2013-14	28 – 16 Full (7.5k), 12 Half(3.5k)	Rs. 1, 62, 000/-
2014-15	35 – 17 Full (7.5k), 18 Half(5k)	Rs. 2, 17, 500/-
2015-16	44 – 22 Full (7.5k), 22 Half(5k)	Rs. 2, 75, 000/-
2016-17	60 – 30 Full (10k), 30 Half(5k)	Rs. 4, 50, 000/-
2017-18	72 – 28 Full (10k), 44 Half(5k)	Rs. 5, 00, 000/-
2018-19	70 – 6 Special (15K), 25 Full (12k), 39 Half(6k)	Rs. 6, 24, 000/-
2019-20	63 – 1 Special (15K), 33 Full (12k), 29 Half(6k)	Rs. 5, 85, 000/-

VU SCHOLARSHIP PROCESS

- We invite the applications from students. The students will need to fill the Application Form every year (irrespective of if they have received Scholarships previous year). We try to identify the need and necessity for the students along with his/her background details (including academic, finance, interests, purpose, family details). Based on these, we filter the candidates for interviews. The shortlist numbers vary based on the applications received.
- During interview, alumni from various batches are asked to interact with the students on a general basis and evaluate the necessity. Since, there is no constraint to begin with, the alumni are able to judge without any pre-determined notions.
- After the interviews are done, we all come together and each panel is given an opportunity to share their views and present the case of how many should be awarded scholarships from their panel and why they deserve it. On a case-by-case basis, other alumni can question the need or suggest alternatives. Finally, the list is decided based on everyone's consensus. Based on the funds available and additional requirement, next action plan is prepared.
- The Scholarships are awarded in the presence of Principal, Chairpersons of various Departments, Faculty and other senior alumni in a very simple and small event in the college premises.

2020 - 21 SCHOLARSHIP UPDATES

- Around 180+ applications along with short self-videos (on why they deserve scholarships) are received and being scrutinized.
- The students parents will be updated after the final awardees are decided. There are three tasks that will be expected from the students who will be awarded the Scholarships (announced shortly)

Interviews will be held online on 12th December, 2020

A/c Name: VISIONUVCE

A/c No: 510101004799657

A/c Type: Current

Bank: Corporation Bank

Branch: Nrupathunga Rd

IFSC Code:CORP0000175

Any queries/ suggestions, write to - contact@visionuvce.in; call - +91-9740111552 (Satish)

PLACEMENT OFFICE : 2020-21 WALKTHROUGH

UVCE, being one of the oldest Engineering colleges of India has always been successful in attracting the best talent across the state. And, this in turn has captivated the companies around the globe to visit the campus for recruiting the students. Training and Placement Office of UVCE has always tried its best to make sure that the students get placed in the some of the best companies. In the previous year (2019-20), UVCE has hosted around 134 companies out of which 62 companies have visited UVCE for the first time. Atlassian, Harman, Refinitiv, Persistent Systems, Epsilon, Manhattan Associates, Finflux, Reliance Jio, Clumino, BlogVault, Moonraft, Cermati, Fluke IDC, TheMath Company to name a few.

Even the package offered to the students have been the best in the market, some of which have been top-tier companies in the respective fields. More than 500 offers have been made to students across various streams for the students of 2020 batch. Apart from this, Internship Offers have been made by Cisco, Rakuten India, SAP Labs, Juniper Networks, Texas Instruments, Oracle, Volvo, Philips, Accolite, Ivanti etc to both UG and PG students.

We from, VisionUVCE, have always requested the alumni to pitch in and help in getting their organization visit the campus for recruitment. This year, particularly with the pandemic, there is a even bigger challenge in front of the current batch of students (2020-21). On behalf of Training & Placement Office, we request all the alumni to be extra considerate and talk to their connections in their respective companies and make sure the voice is heard. Feel free to share the same with your other connections and help the students of UVCE to secure their career. You can reach out to us if you need any co-ordination or even directly contact the TPO at info@campusuvce.in.

THE RIGHT WAY TO SUCCESS

Along with reaching out to the alumni, we from VisionUVCE, feel that it is equally important to reach out to the current students, on how to face the challenges, make use of the opportunities and move up. So, we asked Nayana, who has bagged a very good job through the campus, to share her thoughts to motivate her friends and juniors.

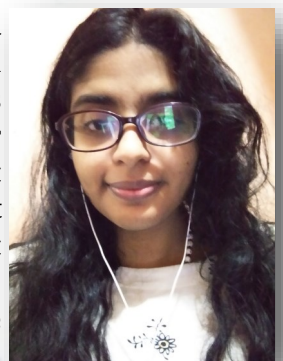
Growing up I've always wanted to find something productive that I'd really enjoy. At UVCE, I was given the most important gift one could get, the gift of time. I utilized this opportunity into finding coding as my favorite way to pass my time. It was never a burden and hence it has not been a challenge to fall into the habit of it. The happiness that I got from each solution being accepted, and the drive from every error definitely kept me going. Everyone's appreciation was a cherry on top.

Coding has helped me not only in my career life but also in finding a network of people with whom I could connect. It improved my focus in problem solving, thereby increasing my focus in day to day activities as well. Contests have never been easy. I like to challenge myself at the tougher ones to keep myself humble at all times, in the quest to learn continuously. It can be disappointing at times, but what's important is the process and not the result itself. Since the process is enjoyable and imparts knowledge, it ended up being the reward I chased.

My motivation draws from not only making myself proud but also the people I care about. Being recognized for my skills and made the NCode lead for 2 years, I have been glad to have made the best use of it.

Placement season in UVCE this year started around September. My preparations for it wasn't very different from my daily routine however I did brush through some important subjects. The Placement Office did the herculean task of bringing good companies to our college during these tough times. They were also extremely helpful to each one of us during the placement process. I am very happy that I could secure a job on campus given that it is very tough outside.

I've learned to appreciate every form of praise, whether it was from my supportive professors or spreading the interest in coding among others. I'm very grateful for every opportunity that UVCE has given me.



- Nayana Saji, 4th Year CSE