

We had the privilege to meet Dr. M R Srinivasan, Batch of 1950 Mechanical Engineering who is a Nuclear Scientist. He played a key role in the development of India's nuclear power programme and the development of the PHWR. He is a recipient of Padma Vibhushan in 2015, Padma Bhushan in 1990, Padma Shri in 1984. Here are some excerpts from the interaction on his thoughts about *how should UVCE be shaped so that it can stay relevant for the next 100 years and impart knowledge to students & motivate them consistently*:

UVCE has certainly contributed significantly to training young men and women to become successful engineers, serving India and some of the other countries also with great distinctions. For the future while we will continue to train engineers of good quality, UVCE must also become a centre of research and development in many branches of engineering.

I visited UVCE some fifty years after graduation. I found the familiar heritage building and the library but was disappointed to note that the building space, laboratories, especially the equipment and workshops had not undergone any significant modernization. Considering the rapidity with which technology has progressed in the last five or six decades, UVCE has not risen to the extent it should have, to impart instruction in the latest areas of technology. I cannot but help feeling that collectively the Karnataka Government, the university and the UVCE leadership have not modernized the institution to keep up with the times. The concerned agencies have been happy to carry on pretty much in the old ways! From now on at least, we must all do whatever we can to transform UVCE into an institution that will train people to solve the problems that Karnataka and India will face in the twenty first century, in many technological areas.

There are many problems our society is facing such as climate change, air and noise pollution, traffic management, waste water recycling, solid waste recycling, employment generation, keeping our industries competitive in the global markets, energy efficiency, materials use efficiency, developing new material combinations, low cost and energy efficient residences and so forth. These are all engineering problems that affect the wellbeing of our society. The UVCE, with the help of it's faculty and students should take active part in evolving solutions to these and similar problems. We must train more of our students to be entrepreneurs and business leaders who will create jobs and wealth for the nation.

Alumni living in and around UVCE can catalyze the students to interact strongly with industry and application areas. UVCE faculty and student groups should invite alumni engaged in the practice of engineering to conduct seminars where by the students interact with practicing engineers, frequently and intimately.

We had the honor to interact with Dr. Roddam Narasimha and learn about his thoughts about the current technological advancements. Our beloved and proud UVCE Alumni, Dr. Roddam Narasimha who hails to the Mechanical Batch of 1953 and is a renowned Aerospace Scientist and Academician. He was honoured with the Padma Bhushan in 1987 and the Padma Vibhushan in 2013. Some of his thoughts about *how important is it for us to uphold the heritage of our college in this present world of new structures growing every day?*

Any College or University of distinction must maintain its legacy. That is what attracts good faculty and students, which is essential for maintaining, and even enhancing, the quality of the education provided: for each generation will be compared with the best in the past. By legacy I mean the history of the College, the great men who built the institution, and the achievements of its faculty and students over generations. Paradoxically, it is the fact of past achievement that inspires the faculty and students to do new things as the world of science and technology keeps changing ever more rapidly. Valuing our legacy does not mean doing the same old thing forever, but just the opposite: namely moving with new science and technology – in fact creating it and disseminating it to new generations, just as the pioneers did in the early years. A century-old institution that does not value its legacy is unlikely to survive in a changing world.

Students and alumni do not have to restrict their attention to small problems. For example, what is going to be the role of UVCE in the 21st century, when so many IITs, IIITs, NITs, and private colleges and universities are being set up all across the country? Alumni should take the lead in starting a major debate on the subject, and offer all help they can, based on their experience. Should UVCE continue as it is, or become something like an IIT, or convert to a Visvesvaraya Institute of Technology, or do something else? Alumni help can include advice and analysis, financial support to new, advanced programmes, facilitating visits of alumni as well as distinguished foreign scientists and engineers for collaborative programmes – so there is no limit to what can be done. But of course all this requires some dedicated people, at UVCE as well as elsewhere, who can devote time, energy and resources to map UVCE's future.

Dr. V K Aatre is a renowned Indian Scientist and a proud Alumnus from UVCE Batch of 1961 Electrical. He was the former head of the Defence Research and Development Organisation and also served as the Scientific Advisor to the Defence Minister. Aatre Sir was awarded the Padma Bhushan award in 2000 and Padma Vibhushan award in 2016. Here are the excerpts from the interview published and also the Panel Discussion that was conducted during UVCE Payana in 2018.

What we must do in order to revive our UVCE's spirit is to firstly gather the Alumni together. As alumni we must see what we can do in our best efforts, plan and execute in order to bring our alma mater to its old glory.

Fundamentally, the structure of the education system has to change. It must be much more problem-solving oriented. That should be what the upcoming engineers should be taught as part of the curriculum. We need to demolish the current system of silo-structured, branch focussed methodology. With 2 year solid background on all engineering aspects, the students should be allowed to take up electives based on their interest and latest technological advancements. UVCE should focus on these aspects if it has to look beyond 20 years horizon of sustainability.

Whatever the institution is lacking, considering if its Vision for the institute, then it has to come from the alumni, who are outside the system. If we look at any technological development, it is a group activity and the onus is on alumni to work as a group and push the developmental activities of the college further. The worry should not be about the trainings, infrastructure to begin with but the whole methodology needs to be the focus. Since it's a Govt Engineering college, we may not have a say on the Government interference, but we need to accept it and move ahead.

Dr. T S Prahlad is an Indian aerospace scientist and the Former director of the National Aerospace Laboratories (NAL), Bengaluru. He is the proud Alumnus of UVCE, batch of 1961. His contributions are reported in Indian civil aircraft development programmes of Hansa and NAL Saras and light combat aircraft development programme. He was awarded the prestigious Padma Shri award in 2004. Some of his thoughts on what *are the main areas of improvement we need to concentrate upon to improve our college?*

From what I know and have heard, the college building, infrastructure and laboratories seem to be in a rather bad shape and require considerable upgrading.

How do we attract the best of talent for teaching and research? Bangalore is a top place for higher education, scientific R&D and industry. How does UVCE make use of this environment? A long-term strategy for the college has to be worked out by the government and interested stake holders.

The students of today have many more resources to learn and excel compared to what we had. They should make the best use of them. Exploring new horizons (Artificial Intelligence, for example) is important for the new age students.

Dr. Prahlada Rao is an Indian missile scientist, former vice chancellor of Defence Institute of Advanced Technology and a former director of Defence Research and Development Laboratory. It was during his tenure as the director, DRDL initiated projects such as Astra, air to air missile system and Long Range Surface to air missile system for Naval application. He was honoured the Padma Shri by the Government of India in 2015.

There are some colleges and universities in the world which are over 150 years old. We need learn about what ticks them and how they have not vanished. Today there are newly formed colleges getting closed within few years. Whereas UVCE is going beyond the centenary year. What is the strength of this college? How has it lived so far and how will it continue to live? We should respect the heritage. It is a long-standing life and decades after decades, it has fostered young engineers. UVCE has got its own DNA, its own Ecosystem. People have commitment towards the college and we love our classrooms, the location of UVCE. We shouldn't forget our culture, history or our own ethics.

The college is every UVCEians own DNA which made us into an Engineer from nowhere. How can anybody neglect a college of such stature. In our days UVCE students used to be highly respected in Karnataka. This cannot be bought by money or other incentive but can be only drawn back by reinstating the glory for which we as alumni should work. So I feel all of us should come together, take UVCE to greater heights.

During one of the meetings, Prof T Yella Reddy, who is both alumni and ex-faculty of UVCE proposed an interesting approach as well to develop UVCE, which is very practical and one of the most feasible approaches. Here are few of the suggestions:

- A Governing Council for UVCE (GC_UVCE) will be formed. Composition: VC of BU, Principal UVCE, one or two forward looking faculty, one or two students, two secretaries of government, member of UGC, one or two from IITs / IISc or such, Alumni in positions / who can contribute help collect funds and such. The chairman will be an Alumnus and secretary may be the principal. This may be the model for the IITs and NITs.
- The grant funds will be handed over to the GC_UVCE and the fee collected will also be managed by this body. The GC_UVCE has to plan to fill the vacancies, build the infrastructure in, say, two years, consolidate for a year and go for the ranking and accreditation in the third. By the end of the fifth year a successful bid for autonomous status has to be made.
- If the process falters anywhere, an extension of 2 or 3 years will have to be sought, with reasons.
- During the first five years, exemption should be sought from the affiliation, ranking and accreditation procedures.
- The government funds (for the full faculty and spending + the fee collection) shall be auditable. Any extra funds will have to be raised by the GC_UVCE, from alumni to be frank.
- The GC_UVCE shall be held responsible for any proven mismanagement of funds.
- The GC_UVCE shall be empowered to assess the working faculty and appoint any new faculty without interference from the government or BU employing selection committees.
- The research funds for the projects of the faculty have to be from GoI institutions (DST, ISRO etc., UGC) private industry and such. Funds from the GC_UVCE shall not be made available.