JNTUA monthly e-magazine

January 2022

TECH ANANTH

... infinite technology

VICE CHANCELLOR's DESK

SUCCESS STORIES OF ALUMNI

Dr. G.Sateesh Reddy

Rama Akkiraju

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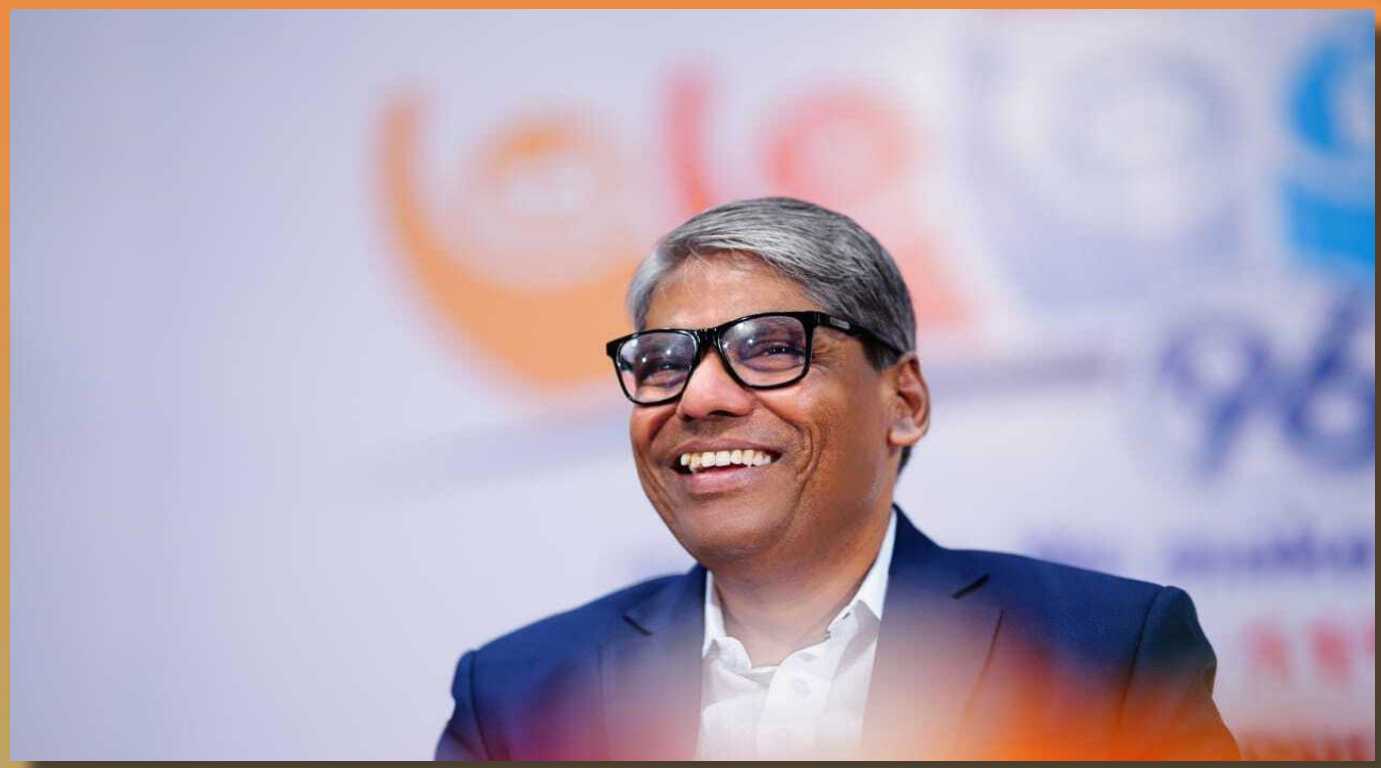

RANGA JANARDHANA

HONORABLE VICE CHANCELLOR

VICE CHANCELLOR'S DESK

It gives me immense pleasure to inform you all that an e-magazine by name'TECH ANANTH'is being published from January 2022 onwards. This is a Monthly e-magazine envisaged to contain the information and articles related to the latest developments in Science and Technology. The articles may be contributed either by the faculty of Constituent and Affiliated colleges and by the students also. The E-magazine is also expected to include the major activities happening in various units under JNTUA. The basic purpose of this magazine is not only to showcase the activities and the achievements of the students and the faculty, but also to create awareness and enthusiasm in the faculty and the student community about the latest technologies and success stories. I congratulate all the staff involved in bringing out the e-magazine and wish that it will serve its purpose effectively. I appreciate all the efforts made by the Editorial Team in bringing out this e-magazine in a very good form within a short time. I hope and wish that the faculty and the students of JNTUA will utilize the opportunity provided by this e-magazine.

JNTUA & CONSTITUENT UNITS

JNT UNIVERSITY ANANTAPUR

Jawaharlal Nehru Technological University Anantapur (JNTUA) was formed in 2008 by an act of the then State Government of AP by dividing the erstwhile combined Jawaharlal Nehru Technological University (JNTU) into three Technological Universities and one Architecture and Fine Arts University. The JNTUA was given jurisdiction over the four districts of Rayalaseema and also Nellore District. Since its formation, the JNTUA has grown in a steady pace and established itself as a premier Technological University in this region.

Under the fold of JNTUA, four constituent Institutions are functioning as listed below:

- JNTUA College of Engineering, Ananthapuramu
- JNTUA College of Engineering, Pulivendula
- JNTUA College of Engineering, Kalikiri
- Oil Technology and Pharamaceutical Research Institute (OTPRI)

In addition to the above, JNTUA has 90 Engineering Colleges, 35 Pharmacy Colleges and 27 stand-alone MBA/MCA and 2 Integrated colleges affiliated to it. Among them, 24 institutions have been granted autonomous status, 55 institutions have been recognized under 2(f) & 12(B) status of the UGC, 32 institutions are accredited by NAAC and various programs offered by 23 institutions are accredited by NBA.

The University is offering B.Tech. courses in 22 different branches of Engineering besides B. Pharm. and Pharm. D. courses under UG Programs. It also offers 72 specializations in P. G Programs which include 51 M.Tech., 12 M. Pharm., 02 M.Sc., 06 M.B.A., M.C.A., and Pharm. D. (P.B.) courses. Research programs in 14 disciplines related to the fields of Engineering, Science, Pharmacy, Management and Humanities are also offered by the University.

JNTUA College of Engineering, Ananthapuramu

JNTUA College of Engineering, Pulivendula

JNTUA College of Engineering, Kalikiri

CONSTITUENT UNITS OF JNTUA

JNTUA Oil Technological Pharmaceutical Research Institute

The College of Engineering, Anantapur was started at Guindy, Madras in 1946 and shifted to Anantapur in 1948. The college was initially affiliated to Madras University during 1946-1955 and to Sri Venkateswara University, Tirupati during 1955-1972. In 1972, by an Act of State Legislature, JNT University was established at Hyderabad and the College of Engineering, Anantapur went into the fold of JNTU. Later in the year 2008, by an Act of AP State Legislature, JNTU was trifurcated into three independent universities viz., JNTU Hyderabad, JNTU Kakinada and JNTU Anantapur. JNTU College of Engineering, Anantapur became a constituent college of JNTUA and was renamed as JNTUA College of Engineering, Ananthapuramu. The JNTUA College of Engineering, Pulivendula, was established in the year 2006 and Oil Technology Research Institute (OTRI), Anantapur, which as established in the year 1948 also became constituent unit of JNTUA. A new constitent college,by name JNTUA College of Engineering Kalikiri was established in the year 2013 under the fold of JNTUA. The OTRI was later renamed as Oil Technology and Pharmaceutical Research Institute (OTPRI) in 2016. JNTUA started department of Management in the year 2009 which is later renamed as School of

OLDEST INSTITUTIONS AFFILIATED TO THE UNIVERISTY

NBKR Institute of Science & Technology, established in 1979, is one of the oldest Institute affiliated to JNTU Anantapur. The college was founded by Late Sri N. Janaradhan Reddy, who was a former Chief Minister of the erstwhile united Andhra Pradesh

Late Sri N. Janardhan Reddy

The college offers B.Tech programmes in are Civil Engineering, Electronics and Communication Engineering, Mechanical Engineering, Computer Science and Engineering, Electrical and Electronics Engineering and Information Technology. M.Tech programmes are offered in Power Systems, Computer Science & Engineering, Digital Electronics & Communication Systems, Advanced Manufacturing Systems. Institute is accredited by NAAC with "A" grade. All B.Tech courses are accredited by National Board of Accreditation (NBA) under Tier 1. UGC awarded the status of "College with Potential for Excellence (CPE)" to the Institute. The Institute is recognised research centre by JNTUA for offering Ph.D programmes.

KSRM College of Engineering (Kandula Srinivasa Reddy Memorial College of Engineering), Kadapa is an autonomous institute affiliated to JNTU Anantapur. The college owes its existence to the keen interest of Late Kandula Obul Reddy to develop technical education in Rayalaseema region of Andhra Pradesh. It is in the year 1980 that K.S.R.M. College of Engineering was established to perpetuate the memory of Late Sri. Srinivasa Reddy, youngest son of Late Sri Obul Reddy. Sri Srinivasa Reddy, a brilliantstudent of III year Mechanical Engineering at Delhi College of Engineering, New Delhi, met with his untimely death in a scooter accident on 18th Oct, 1979.The college was formally inaugurated on 14 November 1980 by Sri T. Anjaiah, the Chief Minister of Andhra Pradesh and it started functioning from the academic year 1980-81.

Late Sri Kandula Obul Reddy

The college offers B.Tech programmes in are Civil Engineering, Electronics and Communication Engineering, Mechanical Engineering and Computer Science and Engineering. The college started post graduate programme in CAD/CAM (ME), Geo-technical Engineering (CE), Power Systems (EEE) & Computer Science and Engineering (CSE) and Digital Electronics and Communication Systems (ECE).The institution is granted Autonomous status by UGC, Accredited by NAAC&NBA, Recognised as research centre by JNTUA for offering Ph.D programmes.

GPREC G.Pulla Reddy Engineering College is the brainchild of Late Sri G.Pulla Reddy, (popularly known as Sweets Pulla Reddy in A.P.) the renowned philanthropist and a great humanist. One of the oldest technical Education Institutions, in the State of A.P., the College is run by the G. Pulla Reddy Charities Trust (GPRCT), Hyderabad. It was established through the State Govt. order No. G.O. Ms.259, dated 14.09.1984. The College was inaugurated by the renowned ophthalmologist, Padma Bhushan Dr. P. Siva Reddy, on the 22ndof February 1985. It has been functioning as an autonomous institution since 2006 and currently affiliated to JNTU Anantapur.

Late Sri G. Pulla Reddy

The B. Tech programmes offered by the college are Civil Engineering, Electronics and Communication Engineering, Mechanical Engineering, Computer Science and Engineering, Electrical and Electronics Engineering, Computer Science and Technology, Computer Science and Business Systems, CSE (Artificial Intelligence & Machine Learning), CSE (Data Science) and the M. Tech programmes offered by the college are VLSI and Embedded Systems, Computer Science & Engineering, Structural Engineering.The institution has Autonomous status by UGC since 2006-07, Accredited by NAAC of UGC thrice with " A+ " Grade, All Five UG programs are accredited by NBA of AICTE, Recognized as the "College with Potential for Excellence (CPE)" by UGC.

Dr. G. SATEESH REDDY

Chairperson of the Defence Research and Development Organisation

DRDO TRYST WITH ALUMNI OF JNTUA CEA

ON THE OCCASION of Diamond Jubilee of Ananthapur Engineering College, it is nostalgic to recall those days spent in the campus. Those were memorable and delightful days of our life and all the students of JNTU, ATP agree with me on this. When we entered the Engineering college campus with lot of hope, enthusiasm, energy and determination to achieve something, which we did not know at that time. The Campus welcomed and embraced us and showed abundance grace which we still experience. It was a simple place with no frills. Only excitement & entertainment was going to Clock Tower in college bus in the evening and having "kara podi dosa" in Durgabhavan & cinema in Neelam or some other theatre. For Ananthapur town, Engineering students were an elite lot and looked up with respect. It was a small town and we were spotted distinctly on the streets. The old campus, as it was called at that time was housed in sheds of World War-II Vintage barracks. With a lot of tree cover & greenery, a rare spectacle in Ananthapur also had a small stream passing at the edge of it. Every day after break students walk almost a Km to college compound to OC, YB (yellow blocks) & NB (New Blocks) were more sophisticated and elitist. The mess food was very tasty and nutritious. Students used to throng to their for Saturday Uthappam with podi soaked in oil, Masala Dosa of Sunday, Chapathi & curd both on Saturday night.

As far as studies are concerned, it was fun and at the same time fierce competition among students to excel. Lecturers & Professors were inspiring. Each one had their own way of teaching, mannerism and imprint on students. Electrical lab was dreaded by all and many preferred to skip and get zero rather face the tough team of examiners. As ECE students, a new branch of engineering, it was tough to teach as well as to understand. But, the whole team Prof Venkatram Reddy, Mr Jinaga, Mr Sagar, Mr Sounderajan, Mr Prabhakar and Mr EV Prasad did a great job in instilling some basics in us which shaped our career.Teaching of Radar by Prof Soma Sekhar which made me to buy the original US edition of this book " Radar Systems" by Skolnic after a full day search in Bangalore market. Those teachings of microprocessor & Radar have created everlasting interest in those subjects and inspired to work and excelling further in our careers. We are still in touch with Prof Ventram Reddy, Prof Jinaga and Prof Soma Sekhar.

Professors were passionate about the subjects they teach and strived to impart knowledge into students. Each one is a stalwart in their subjects and owned specialisation, Late TBK, Late Namjappa, CBK were the professors, even students of ECE respect them even though they are from civil & mechanical departments. The college building built on the stone is an iconic structure. Principal House along with ladies hostel is in OC, always available to students. Whether for help, emergency medical condition at midnight or for agitation, Principal house was the destination. Dr Naidu, medical officer, who will not examine patient without lighting a cigarette even in the middle of night, is unforgettable person. The special feast was always fondly awaited by all students. Only one TV room in OC gave a memorable experience of watching '83 world cup and celebrating maiden win by India with a procession at odd hour of the day.

Many of us landed up in DRDO labs, as providence have it. Each one of us, made our mark in career at DRDO. Thanks to the qualities instilled in us at Engineering College, Ananthapur by the ambience, environment and staff. Contributed to the organizational goals and now hold key positions. As, others who excelled in different fields and held the College of Engineering, Ananthapur flag high, we have also made our mark in Defence R&D of the country in our fields of specialisation. In view of 75 celebrations of JNTUA CEA postal cover was designed by the students along with the help of Postal department, Ananthapuramu and the same was released by Postal department Superintendent non-teaching staff, students and alumni participated in the event.

RAMA AKKIRAJU

IBM Fellow, CTO AIOps, Forbes ‘Top 20 women in AI’ 2017, Fortune ‘A-team for AI’ 2018, Co-Chairman CompTIA AI Council

MEET OUR "NEVER SAY DIE" WOMEN

I grew up in a lower-middle-class family in the city of Hyderabad in South India. Our family valued education and saw it as the main means to lift ourselves up. Many of my cousins and my brother were engineers in the family. So, I naturally gravitated towards studying engineering. After completing my bachelor's degree in Electronics Engineering at JNTUA College of Engineering in Anantapur, I followed my brother's lead to go for higher studies in the United States of America.

My father, Mruthyum Jaya Rao Akkiraju, motivated me, encouraged me, and supported me in every possible way during my formative years. When I dreamt of going to the USA to pursue higher education, he made it happen by taking a loan to pay for my travel and University tuition. He didn't worry about how he would pay back that loan when he was so close to retirement (thankfully, I was able to pay that loan back after I got a job). He never held me back for anything. That is a huge deal in India because, in some parts of our country, girls are still considered a liability, and not worth the investment of education. I'm so grateful that my father did not subscribe to such beliefs and gave me and my sisters an equal chance alongside our brother. If it weren't for my father, I would not be where I'm today.

I got a master's degree in Computer Science from Utah State University in the USA and joined IBM Research, in New York. There, I met so many inspiring people. Researchers who invented so many things and won so many awards including Nobel prizes in Physics, Fields medal in Mathematics, National Academy of Science and Engineering awards. These people inspired me to stretch myself, aim high, and work hard to achieve the set goals. I'm grateful to so many mentors, coaches, and colleagues at the workplace that taught me a lot of important things. Many of the projects that I worked on at IBM over the years have to do with applying Artificial Intelligence (AI) to solving real-world problems. Among the things that I'm most proud of are the following projects: (i) developing algorithms for scheduling paper production on paper machines, (ii) a World Wide Web Consortium (W3C) standard in the area of Semantic Web Services, (iii) analytical products my team and I built for optimizing the solution design of large technology projects, (iv) a set of AI models that my team and I built to model people's personality traits, their emotions, sentiments and communication tones, and (v) applying AI for optimizing IT operations management. Each project enriched me and stretched my imagination and skill sets.

I continue to work at IBM even today. Along the way, I have been named IBM Fellow, the highest technical title given to a select few individuals in over 100-year history of IBM. Did I mention that somewhere in between I did an MBA from New York University's Stern School of Business and received a gold medal for highest academic achievement? Other accolades followed. I have been named by Forbes magazine as one of the 'Top 20 Women in AI Research' in May 2017 and have been featured in 'A-Team in AI' by Fortune magazine in July 2018. In addition, Enterprise Management 360 magazine recognized me as one of the 'Top 10 pioneering women in AI and Machine Learning' in April 2019. I have co-authored over 100 technical papers, have 40+ issued patents, and have 25+ pending. I have been the recipient of 4 best paper awards in AI and Operations Research areas. It's been an adventurous journey so far! I look forward to the challenges, and opportunities each day brings. I still fondly remember my four years at JNTU, Anantapur. Those were the best days of my life. Happy, worry-free days of learning and time with friends in the good-old Shilpa Ladies hostel.

I mentor many early-career professionals, undergraduate students, and high school children these days. They often ask me about the secret to achieve success in their careers. This is my advice to them all. You must find your own way and scale the mountain ahead of you - one step at a time, one problem at a time, one project at a time, one goal at a time. There's no need to be intimidated. The key is to stay focused on the big picture and tackle problems using your own unique strengths and talents.

MY ADVICE TO YOUTH:

- Always have role models and mentors that you can talk and get inspiration from.
- Aim high. Figure out the intermediate milestones you need to achieve to get to your final goal and work towards them one milestone at a time.
- I never thought I would make it to an IBM Fellow but here I'm. If I can make it here, you can too in whatever field you choose to be in.
- Smart people don't wait for opportunities to come along. They create their own opportunities. You have to clear obstacles that are in your way, yourself, to clear the path.
- Be your own spokesperson. Use social media to your advantage.

- Science and technology are constantly evolving. Learning has to be continuous and lifelong.

BE WISE : GENERALISE AND COMPUTERISE

By
Prof. E. Keshava Reddy
Department of Mathematics, JNTUA

GENERALISE

Mathematics has always thrived on generalizations of its concepts and results. But do not generalize just for the sake of generalization. Generalize because generalization gives power and deep understanding and also gives one a sense of exhilaration.

COMPUTERISE

Computers were developed by mathematicians to increase the power of mathematics by an order of magnitude. This increased power should be fully utilized in learning, teaching and applications of mathematics. Why should our stuents continue to solve only quadratic and cubic equations when with the help of computers they can find all the complex roots of equations of any degree what so ever? Our students finding the sum of AP, GP or of simple series only but with the help of computers they find the sum of any convergent series to any degree of approximation and can get the asymptotic expressions even for divergent series. The students can find solutions of all ordinary and partial differential equations and system of such equations numerically to any degree of approximation by using computers rather than continue to integrate only differential equations which admit of closed form solutions.The Eigen values or Eigen vectors of n×n matrices where n may be even 10,000 or more can even invert matrices of high orders by using Computers instead of only 3×3 or 4×4 matrices.

Our students can integrate almost all complicated functions which posses anti-derivatives, continue to use bulky logarithmic and trigonometric printed table when they can get all these on scientific calculators,n-valued logics can be available to them by using computer and students can continue to deal with fuzzy sets instead of crisp sets only.

Students should not be satisfied by showing that solutions to certain problems exist and why they can actually find the solutions now since they can find these. Students can make bold conjectures in number theory because they can do large experiments and verify their conjectures even for large numbers with the help of computers and also deal with complicated computational identities with the help of computers to generate and prove.

Students should not confine themselves to linear mathematics when computers can enable them to have a deep insight into non-linear Mathematics. No need to make drastic and unrealistic assumptions in all branches of applied mathematics and engineering, when they can solve more realistic problems without making drastic assumptions, with the help of computers.

Mathematics and Statistics students and teachers have great computational powers at their command through computers and these have become easier to use through the use of special software symbolic interactive computer algebra and statistical programmes like Maple V, Mathematica, Mathematics Laboratory, R-programming, Origin, SPSS, Matlab etc.

Every mathematics department must be equipped with this wonderful power. Every department should have a mathematics laboratory equipped with 20-30 PC's loaded with all the computer software programmes. The total cost for such a laboratory will be 25 lakhs of rupees. What is more important is that every teacher should become familiar and friendly with the computers and computer programming languages.

JNTUA 2021 ROUND UP

ISO Certification

JNTUA is certified by ISO with 9001, 14001 50001, 27001 and JNTUA College of Engineering, Ananthapuramu , JNTUA School of Management Studies, Ananthapuramu JNTUA Oil Technological and Pharmaceutical Research Institute, Ananthapuramu granted with ISO 9001 certification .

National and International Rankings

Times Higher Education Asia Rankings 2021: Rank 401+
Times Higher Education World University Rankings 2021: Rank 1001+
QS Asia University Rankings 2021: Rank: 551 – 600
QS India University Rankings 2021: Rank: 74
Emerging Economies University Rankings 2021: Rank 401-500
NIRF Ranking 2021 (University): Rank 151-200
AIIRA 2021 Rankings – Band Promising

APECET 2021

JNTUA has successfully completed responsibility entrusted for conducting the state Level Examination of Andhra Pradesh Engineering Common Entrance Test (APECET) -2021 on behalf of Andhra Pradesh State Council of Higher Education(APSCHE).

Multidisciplinary Education & Research University (MERU)

As part of the National Education Policy, JNTUA has been considered by Government of Andhra Pradesh as one among six Universities to be transformed into Multidisciplinary Education and Research University (MERU). In this regard, the university submitted a proposal to APSCHE with a budgetestimate of Rs. 1296 crores specifying timelines for establishing new schools with required infrastructure facilities, offering multi disciplinary academic programs and creating facilities to enhance research ecosystem along with phase wise budget requirements.

IPR Facilitation Centre

The University established Intellectual Property Rights (IPR) Facilitation Centre with the funds sanctioned by the Ministry of Micro, Small and Medium Enterprises, Govt. of India to look after various activities like information services, IPR Training Programmes, workshops, IP Counselling & Advisory services IP Filing Services (Patent, Copyrights, Trademarks , Industrial Designs,Geographical Indications (GI) etc), Patent Searches & Landscaping, Technology and competitor watch IPR Legal status.

JNTUA Consortium for e-Resources

With the National concept of one nation one subscription the University has initiated JNTUA Consortiumof e-Resources with an objective to provide access to scholarly content and other electronic teaching and learning resources with competitive pricing and also to promote inter institution interaction and co-operation among the Constituent & Affiliated Engineering and Pharmacy institutions.

Curriculum Revision

The university has conducted UG and PG Board of Studies meetings and revised the curriculum of all the programmes in line with NEP 2020. The UG curriculum mandates that students to opt for five skill oriented courses relevant the industry, including two basic level skill courses, one on soft skills and other two on advanced level skills. More practical component has been introduced at UG & PG level to facilitate and improve practical skills of the students. A major change brought in the curriculum is the introduction of B.Tech (with Honors) or a B.Tech (with Minor) giving an opportunity for the interested and meritorious students to earn additional credits either in same or related domain. Mandatory internships during summer and in final semester both industrial and social are included in the revised curriculum. The revised curriculum offers flexibility to students with credit mobility through MOOCs and Exit option as per NEP 2020.

E - CONTENT DEVELOPMENT

AP State Council of Higher Education has entrusted the responsibility of E-Content development to the two Technological Universities, JNTUA & JNTUK , in the state of Andhra Pradesh for the courses of B.Tech and B.Pharmacy as per the new curriculum suggested by APSCHE.

Microsoft Upskilling Programme

The State Government has taken an initiative of upskilling the students of the State on a massive scale with the help of Microsoft Corporation(India), first of its kind in the country. AP State Council of Higher Education has rolled out the programme and 1,62 ,000 students across the State will be benefited through the Microsoft's Future Ready Solutions Industry Certification which enable students to acquire the technical skills to become eligible workforce in sectors such as IT Infrastructure, Data Science and Computer Science. JNTUA has been allocated Microsoft Certification keys for 30 courses where in 25000 students of the University will be benefited.

Collaboration with AICTE

The University is identified as a Nodal Centre by AICTE for Technical Book Writing in Telugu . The University is offering Fellowship programs under AICTE Doctoral Fellowship (ADF) scheme and the Full-Time Ph.D. scholars are being admitted in different Engineering Disciplines under this scheme. AICTE and JNTUA have an MoU under which AICTE provides 50% of the Financial Assistance to the University for conducting training and skill upgradation programs for the faculty members and non-teaching staff.

MAJOR EVENTS

ELEVENTH CONVOCATION OF THE UNIVERSITY

The Eleventh Convocation of JNTUA was conducted on 24th April 2021. On this occasion, Hon'ble Governor of Andhra Pradesh Shri Biswa Bhushan Harichandan, in his speech added that the convocation is a milestone for the University as it is time to set new goals and move forward with high standards and congratulated all the scholars who received their Ph.Os, UG and PG students who received gold- medals. The eminent personalities attended the XI Convocation of JNTUA are Prof. Anil D Sahasrabudhe , Chairman, AICTE attended as Chief Guest, Dr.Audimulapu Suresh , Honourable Minister for Education, Andhra Pradesh as Guest of Honour.Prof. Y. Venkatarami Reddy,Former Member, UPSC, New Delhi was conferred with Honoris Causa.

In the convocation, 203 Ph.D. Degrees are awarded to the successful research scholars and the toppers of various branches of Engineering were awarded Gold Medals and Certificates of Merit during the Convocation. The number of students who applied for degrees in absentia was 15233 for undergraduate courses, 1413 for postgraduate courses and 7 for Doctor of Pharmacy.

FACULTY ACHIEVEMENTS

•Dr.Dilip Kumar of Chemical Engineering has been granted a patent for an invention entitled “A Photoelectrochemical Water Splitting Device” in accordancewiththeprovisionsofthePatentsAct,1970.

• Dr. C. Sasidhar, Professor of Civil Engineering is appointed by the Central Government as the Member of State Level Environment lmpact Assessment Authority,Andhra Pradesh. Also , received Merit award by the district collector, Anantapur on Republic Day, 26th January 2021.

• Dr. P. Sujatha, Professor of EEE conferred with Best Women Engineering Teacher Award , Dr. S.V. Satyanarayana , Professor of Chemical Engineering with Best Researcher Award , Dr. C Sashidhar with Best Civil Engineering Teacher by ISTE for the year 2020.

•Dr. G. V. Subba Reddy, Professor of Chemistry received Andhra Pradesh Scientist Award for his contribution in the field of Chemistry, Dr. C. Shobha Bindu, Professor of CSE received Andhra Pradesh Scientist Award for her contribution in the field of Computer Science & Engineering and Dr. E. Keshava Reddy, Professor of Mathematics for his contribution in the field of Mathematics by Andhra Pradesh State Council of Science and

• Dr. S. Vasundra, Professor of CSE received Merit award by the district collector,Anantapur on Republic Day, 26th January 2021.

• Dr. C. Shoba Bindu, Professor of CSE elected as Fellow of Andhra Pradesh Akademi of Sciences, Amaravathi , A.P.

BEST TEACHER AWARDS BY THE UNIVERSITY

JNTUA for the first time instituted the BEST TEACHER AWARDS to recognize the outstanding contributions of some of the finest teachers in the constituent and affiliated colleges of the university and to reward teachers who have shown zeal and enthusiasm in their work. The university has sought nominations from the Constituent, Autonomous and Affiliated institutions for Best Teacher award consideration for the year 2021. The university has received 36 nominations from the constituent and affiliated institutions. A committee is constituted at the university level to scrutinize the received applications of the nominated faculty. The parameters like teaching and contribution to academia, research, extension activities and other

The *following are selected by the university for the Best Teacher Awards and are felicitated on 15-09- 2021 :*

1. *Prof. V.VenugopalReddy ,JNTUACollegeof Engineering,Pulivendula*
2. *Prof. M.V.Subramanyam ,SanthiramEngineeringCollege ,Nandyal*
3. *Prof. T. BramhanandaReddy , G. Pulla Reddy Engineering College, Kurnool*
4. *Prof. P. Ramalingam, Raghavendra Institute of Pharmaceutical Education & Research, Ananthapuramu*
5. *Prof.K.BhaskarReddy, Sree Venkateswara College of Pharmacy, Chittoor*

Also , the following senior faculty of the university are honoured with merit awards

1. *Prof. M.N.Giriprasad, Director, Academic Audit, JNTUA*
2. *Prof. K. Rama Naidu, Director, IQAC, JNTUA*
3. *Prof. K. PrahladaRao , JNTUA College of Engineering, Anantapur.*

MAKEATHON 2.0

Skill Development and Incubation Centre, JNTUA hosted a project exhibition called "Makeathon 2.0" on 2nd October 2021 Organised and Cordinated by Dr.G.Mamatha, in association with AP State Council of Higher Education, Science City of Andhra Pradesh, IBM & OpenPower Foundation. The premise behind this event is that to-day's challenge will lead to tomorrow's invention. The Makeathon 2.0 attracted more than 50 teams from all around India.

Chief Guest of the event Prof K. Hemachandra Reddy, Chairman APSCHE, Dr. Jayarami Reddy Konda, Chief Executive Officer, Science City of Andhra Pradesh, Vice Chancellor Prof G. Ranga Janardhana, Prof. C. Sashidhar, Registrar were present on the occasion and distributed prizes and certificate for the winners of the competition.

INTERNATIONAL STUDENTS' DAY CELEBRATIONS

International Students Day was celebrated for the first time in JNTUA on 17th November 2021.Foreign National students studying in different colleges and courses hailing from different nations like Bangladesh, Afghanistan, Sri Lanka, Sudan, Kenya, Egypt, Mozambique, South Africa, Gambia, South Sudan, Uganda, and Tanzania participated in the celebrations. Many events and competitions were conducted on this eve and prizes and participation certificates were distributed on the day of event. Blekinge Institute of Technology, Sweden announced scholarship worth of 5000 SEK (approximately INR 4.3 Lakhs) to 6 students who are studying collaborated dual degree B.Tech. programme offered by JNTUA.

PLATINUM JUBILEE OF JNTUACEA

JNTUA College of Engineering, Ananthapuramu celebrated 75 years of existence in the month of December, 2021.

Release of Postal Cover on 13-12-2021

In view of 75 celebrations of JNTUA CEA postal cover was designed by the students with the help of Postal Department, Ananthapuramu and the same was released by Postal Department Superintendent and Hon'ble Vice-Chancellor of the University. University officials, Teaching faculty, non-teaching staff, students and Alumni participated in the event.

F I T JNTUA 4K Run on 15-12-2021

As a part of 75 years celebrations of CEA, 4k run was organized from Center of the Anantapur town (Tower clock) to JNTUA CEA campus. All the faculty members, students and alumni participated in the run. It was started in the morning at 6.30 AM and Former chairman of APPSC, Former member, UPSC and Former Vice-Chancellor of JNTUA, Prof. Y. Venkatarami Reddy garu started the 4k run. Honorable Vice-chancellor and other University officials, Teaching faculty, non-teaching staff, students and Alumni participated in the event.

Torch relay and Alumni Interaction on 16-12-2021

As a part of 75 years celebrations of CEA, Torch relay was started by Prof. Y. Venkatarami Reddy, Hon'ble Vice Chancellor and Principal in the foyer of main building. All the faculty members, non-teaching staff, students and alumni participated in the event. The torch relay started in front of college main building and the Torch was passed to various departments in a sequence along with the students and concerned heads of the departments. The torch relay went on for 75 minutes and Honorable Chairman, APSCHE Prof. K. Hemachandra Reddy and Former Vice-Chancellor of VTU Prof. Balaveera Reddy received the torch along with Rector, Registrar of the University.

Alumni interaction was arranged in the Mechanical Engineering Department seminar hall and all the distinguished alumni shared their memories and suggestions. Honorable Chairman, APSCHE, Prof. K. Hemachandra Reddy addressed the gathering. Many of the alumni interacted with students in various departments. In the evening, cultural activities were conducted in the University auditorium.evening, cultural activities were conducted in the University auditorium.

Sports day on 17-12-2021

On this day Hon'ble Vice Chancellor of the University attended as chief guest for sports day celebrations. Chief Guest, Rector of the university and Principal started various sports events with a welcome Parade and March by the NCC Students. Torch relay was organized by various team captains and finally alumni of the college received the torch. Various sports activities were conducted in the college playground for faculty, non-teaching staff, Alumni and Students. Prizes were distributed for all the winners and runners.

In the evening session Moon light dinner was arranged for all the faculty, non-teaching staff, alumni and students in front of college main building. Some cultural events were arranged along with the dinner. Alumni members actively participated in the events.

Pylon Inauguration & Closing ceremony on 18-12-2021

On the last day of celebrations Chairman, DRDO, Dr. G. Sateesh Reddy graced the function as Chief Guest and Chairman, APSCHE Prof. K. Hemachandra Reddy graced the function as Guest of Honour. The Pylon commemorating the 75 years celebrations which was constructed with the help of 91-94 batch students was inaugurated by Chief Guest along with alumni and all stakeholders.

Three day Platinum Jubilee celebrations reached a crescendo here on Saturday with around 500 college alumni of yester years participating in the celebrations. It was a beautiful sight to see the active participation of the Alumni who exhibited a sense of belonging and ownership of the college they loved. The 1979-83 batch went a step ahead and signed an MOU with the University for the development of the incubation centre and innovation laboratories in the campus. They would be investing more than Rs.50 lakhs on the centre. Besides more than 100 Alumni from abroad interacted with the university Vice Chancellor Ranga Janardhana and other functionaries online, offering suggestions for taking the university to pinnacles of glory while some have come forward to invest on projects that would take the university technologically to heights of excellence. Almost all the galaxy of VIP's present on the dais were the alumni of the college including the vice-chancellor. Most of the speakers went down the memory lane recalling the college atmosphere, demography of the old campus and the quality of teaching and education five decades down the line.

Prof. K. Hemachandra Reddy, Chairman of AP Council for Higher Education who also was the college student in the 1980's motivated and inspired students to make quality and excellence the hallmark of their performance. Many of the college Alumni of yester years were instrumental in carrying the fame of the college to shores beyond. They had made a mark in the government and even outside by impacting their professions and standing apart in their service to their country

Vice-Chancellor Ranga Janardhana advised the students to kindle innovative spirit and by the time the students leave the campus they should indulge in innovation and get patent rights for their innovation. Engineering college principal P.Sujatha, the first woman principal presented a report dwelling on the college history from 1946 to date. Retired teachers of the college were felicitated by the dignitaries on the dais. Later in the afternoon all the alumni who attended the function were felicitated by the Guest of Honour, Vice Chancellor, Rector, Registrar and Principal.

The three day celebration-switnessed colorful cultural ceremonies and performances involving lively music and dance programs by students and of course the Alumni.

GREAT SCIENTISTS

MICHAEL FARADAY: AN INSPIRING LIFE

BY
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Michael Faraday, who is considered as one of the greatest scientists the world has ever produced, was born in a very poor family in London on September 22, 1791. He attended a local school until he was 13, where he received a basic education, and his family could not afford to get him educated beyond that level due to their poverty. To earn money for the family he started working as a delivery boy for a bookshop. He worked hard and impressed his employer. After a year, he was promoted to become an apprentice bookbinder.

BOOKBINDING AND DISCOVERING SCIENCE

Michael Faraday was eager to learn more about the world he did not restrict himself to binding the shop's books. After working hard each day, he spent his free time reading the books he had bound. Gradually, he found he was reading more and more about science. Two books in particular that captivated him are The Encyclopaedia Britannica (his source for electrical knowledge) and Conversations on Chemistry written by Jane Marcet. He became so fascinated that he started spending part of his meagre pay on chemicals and apparatus to confirm the truth of what he was reading.

INTRODUCTION TO HUMPHRY DAVY AND MORE SCIENCE

Faraday's education took another step upward when William Dance, a customer of the bookshop, asked if he would like tickets to hear Sir Humphry Davy lecturing at the Royal Institution. Sir Humphry Davy was one of the most famous scientists in the world at that time. Faraday jumped at the chance and attended four lectures about one of the newest problems in chemistry – defining acidity. He watched Davy perform experiments at the lectures. This was the world he wanted to live in, he told himself. He took notes and then made so many additions to the notes that he produced a 300 page handwritten book, which he bound and sent to Davy as a tribute.Davy's reply was immediate, kind, and favourable. In 1813, when Davy damaged his eyesight in an accident with nitrogen trichloride, he decided to employ Faraday as an assistant. Coincidentally one of the Royal Institution's assistants, John Payne, was sacked and Sir Humphry Davy had been asked to find a replacement; thus he appointed Faraday as Chemical Assistant at the Royal Institution on 1 March 1813.Very soon Davy entrusted Faraday with the preparation of nitrogen trichloride samples, and they both were injured in an explosion of this very sensitive substance.

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FARADAY'S EARLIER EXPERIMENTS IN CHEMISTRY

Faraday's earliest chemical work was as an assistant to Humphry Davy. Faraday was specifically involved in the study of chlorine; he discovered two new compounds of chlorine and carbon.

Faraday invented an early form of what was to become the Bunsen burner, which is in practical use in science laboratories around the world as a convenient source of heat Faraday worked extensively in the field of chemistry, discovering chemical substances such as benzene (which he called bicarburet of hydrogen) and liquefying gases such as chlorine. The liquefying of gases helped to establish that gases are the vapours of liquids possessing a very low boiling point and gave a more solid basis to the concept of molecular aggregation. In 1820 Faraday reported the first synthesis of compounds made from carbon and chlorine, C2Cl6 and C2Cl4, and published his results the following year. Faraday also determined the composition of the chlorine clathrate hydrate, which had been discovered by Humphry Davy in 1810.Faraday is also responsible for discovering the laws of electrolysis, and for popularizing terminology such as anode, cathode, electrode, and ion, terms proposed in large part by William Whewell. Faraday was the first to report what later came to be called metallic nanoparticles. In 1847 he discovered that the optical properties of gold colloids differed from those of the corresponding bulk metal. This was probably the first reported observation of the effects of quantum size, and might be considered to be the birth of nanoscience.

MICHAEL FARADAY'S SCIENTIFIC ACHIEVEMENTS AND DISCOVERIES

It would be easy fill a book with details of all of Faraday's discoveries – in both chemistry and physics. It is not an accident that Albert Einstein used to keep photos of three scientists in his office: Isaac Newton, James Clerk Maxwell and Michael Faraday. These three are the sources of inspiration for Albert Einstein. Einstein used to say that Faraday is a great Experimentalist, Maxwell is a great Theoretician and Newton is a combination of both.

Faraday is best known for his work regarding electricity and magnetism. In 1821, he built two devices to produce what he called "electromagnetic rotation". From his initial discovery in 1821, Faraday continued his laboratory work, exploring electromagnetic properties of materials and developing requisite experience. Faraday's breakthrough came when he wrapped two insulated coils of wire around an iron ring and found that upon passing a current through one coil, a momentary current was induced in the other coil. This phenomenon is now known as mutual induction.

Faraday was an excellent experimentalist who conveyed his ideas in clear and simple language; his mathematical abilities, however, did not extend as far as trigonometry and were limited to the simplest algebra. James Clerk Maxwell took the work of Faraday and others and summarized it in a set of equations which is accepted as the basis of all modern theories of electromagnetic phenomena. On Faraday's uses of lines of force, Maxwell wrote that they show Faraday "to have been in reality a mathematician of a very high order – one from whom the mathematicians of the future may derive valuable and fertile methods." The SI unit of capacitance is named in his honour: the farad. Interestingly, although in Faraday's lifetime people had started to use the word physicist, Faraday disliked the word and always described himself as a philosopher.

THE END

Michael Faraday died aged 75 on August 25, 1867, in London. He was survived by his wife Sarah. They had no children. During his life, he was offered burial in Westminster Abbey along with Britain's kings and queens and scientists of the stature of Isaac Newton. He turned this down, in favour of a more modest resting place. His grave, where Sarah is also buried, can still be seen in London's Highgate Cemetery.

A VISIONARY DREAMING TO TRANSFORM UNIVERISTY INTO A MOST HAPPENING

Securing National Assessment and Accreditation Council (NAAC) recognition for the JNTUA, affecting changes in the curriculum for giving choice to students to choose the correct courses and incorporation of skill development courses are some of the important initiatives taken by the Vice Chancellor G.Ranga Janardhana, soon after taking over one year ago.

Talking to 'Tech Ananth' in connection with his completion of one year in office, Ranga Janardhana said that 10 months of internship in industry for the engineering students had been made compulsory and this move will give them industry exposure enhancing employability. Skilling of the students as per the industry needs is given utmost importance. The university has conducted UG and PG Board of Studies meetings and revised the curriculum of all the programmes in line with NEP 2020.

Asked about his vision of JNTUA, the Vice Chancellor elaborated on his plans to see the university emerging as one of the top ten universities in the country. The university should be a happening place on the research front with students securing funding for a host of research projects from prestigious institutions in the country. The vision is to tie-up with Industries for establishing start-ups in the campus. A strong Alumni network creation for involving them in the realization of his vision for the university. JNTUA should be the most sought after campus for anyone to step in and get involved. Multi-disciplinary research is what we are presently aiming at, he added.

Asked what is the alternative to increasing joblessness among the students, the university Vice Chancellor advised the engineering graduates to graduate from 'job seeking' to 'job giving' by growing-up into entrepreneurs and change the academic and industrial landscape of the country. Every engineering graduate should set up his own small scale industry to provide for himself and 20 others with jobs.

Students should convert their creative ideas into productive industries and go aflame for Industry with passion, commitment, determination and self confidence. Help and hand holding will definitely follow them. Sitting idle and complaining will not help advance one's cause or passion, Janardhana suggested. Students should find avenues for support and help and reach the stage of making prototypes of their goals to prove that they mean business with their dreams.

The Vice Chancellor also promised to walk the extra mile to help students in this regard by working with Kia Motors to ensure that the prospective student entrepreneurs of JNTUA are given opportunity in Kia Motors to establish ancillary Industries as there is scope for setting up 300 such ancillary units in the Penukonda region. He would also make efforts to ensure that Kia ropes in JNTUA students for Research and Development projects.

The JNTUA under the leadership of Vice Chancellor Prof. Ranga Janardhana is witnessing development and expansion on the infrastructure front and in a span of one year Incubation cum Skill Development Centre, Administrative building and Hostels for PG and International students' hostels are on the verge of completion. The goal is to make the university fully residential.

On the sports development front, a 400 meter synthetic track, Tennis and Basket Ball courts are also being developed. The university vice-chancellor is confident of transforming the institution campus into the most happening place in a span of two years.

LENS TECH

Release of JNTUA DIGITAL DIARY & Planner on 01-01-2022

Eco Friendly Deepavali Celebrations at JNTUA

19th Executive Council Meeting Conducted at JNTUA on 08-10-2021

Corner Stone laid by Prof. K. Hema Chandra Reddy for Pharmacy block on 18-07-2021

JNTUA Calendar released by Shri Y.S. Jagan Mohan Reddy,
Hon'ble Chief Minister of Andhra Pradesh on 24-12-2021

Foundation stone laid by Dr.Audimulapu Suresh on 06-07-2021
for Pharmacy block & Hostels

JNTUA P.G Boards of Studies Meeting held on 6th & 7th November 2021

Cultural Programs

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR

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