



RESEARCH

BULLETIN

Volume 7

No.1

Biannual

June 2018



Published by Research Wing of IQAC

VSR & NVR COLLEGE, TENALI

Autonomous

NAAC - B

www.vsrnvr.ac.in

iqac.vsrnvr@gmail.com

EDITORIAL COMMITTEE

Dr. B. Subba Rao Principal	:	Convener
Dr. L. Cyril Arun Kumar	:	Member
Dr. A. Gangadhara Rao	:	Member
Dr. K. Ankama Rao	:	Member

Contact Numbers: 08644-226961
Ext. 226, 222
Mobile No: 9885351231

ABOUT THE COLLEGE

VSR College was started in 1951 under the leadership of Sri. Nannapaneni Venkata Rao to provide Higher Education in and around Tenali and it was re-named as VSR & NVR College in 1980. It is one of the largest Aided Colleges in the state of Andhra Pradesh and affiliated to Acharya Nagarjuna University, Guntur. The college is having dedicated management and staff members and is provided with enormous infrastructure. The college was granted Autonomous status in 2005 and it was accredited in the grade of B by NAAC. The college offers a wide range of courses from Intermediate to Post-Graduate courses including Research programmes. The college is very rich with its Alumni who well settled as Academicians, Professionals, Industrialists, Cine-Actors, and National Sports Personalities etc.

AIM OF THE BULLETIN

The main aim of this bulletin is to inculcate the research tendency in the young buddies of this institution. This bulletin brings available research fields to the door step of the faculty, scholars and students. Now a day most of the students are attracted towards either Computers or Management or Professional related courses. This feeling is also expressed by the majority of Research Institutions it is just like Brain Drain. If this continues, the existence of the research on life sciences and other basic sciences, social sciences will become a question mark. Hence the institution feels to bring a research bulletin which will act as a platform for the research supervisors, faculty members and scholars to express and share their research work, findings and thoughts to inspire the students to motivate themselves towards research.

List of Lecturers with Ph.D

S.No.	Name of the Lecturer	Department
1.	Dr. G.Venkata Lal	Telugu
2.	Dr. L.Rajeev Babu	Telugu
3.	Dr. I.Kesava Rao	English
4.	Dr. A.Gangadhara Rao	Mathematics
5.	Dr. D.Madhusudhana Rao	Mathematics
6.	Dr. B.Subba Rao	Physics
7.	Dr. K.Ankama Rao	Physics
8.	Dr. K.Suresh	Physics
9.	Dr. N.Bujji Babu	Chemistry
10.	Dr. M.Sulochana	Chemistry
11.	Dr. K.Shobha Rani	Chemistry
12.	Dr. L.Cyril Arun Kumar	Zoology
13.	Dr. V.KrupaVani	Commerce
14.	Dr. G.Sowjanya	Commerce

List of Lecturers submitted Thesis for Ph.D

S.No.	Name of the Lecturer	Department	University
1.	Sri. Ch.BalaKrishna	Telugu	Central University
2.	Smt. K.V.Padmavathi	Telugu	Dravidian University
3.	Smt. M.Sri Vani	Library Science	Dravidian University
4.	Sri. S.Niranjana Rao	Phy.Education	Dravidian University

List of Lecturers with M.Phil

S.No.	Name of the Lecturer	Department
1.	Smt. M. Sudha Rani	English
2.	Smt. N. Sharmila Rani	English
3.	Smt. A. Subhashini	English
4.	Smt. E.Suneetha	English
5.	Sri. A. Muni Sankara Swamy	Politics
6.		

List of Lecturers registered for M.Phil / Ph.D

S.No.	Name of the Lecturer	Department	M.Phil / Ph.D	University
1.	Sri. D.V.Somaiah Sastry	Physics	M.Phil	ANU
2.	Smt. B.Jhansi Rani	English	Ph.D	Dravidian University
3.	Sri. P.Srinivasa Rao	English	Ph.D	Dravidian University
4.	Smt. M.Sudha Rani	English	Ph.D	Dravidian University
5.	Sri. A.M.S Swamy	Politics	Ph.D	Dravidian University
6.	Sri. D. Gangaiah	Economics	Ph.D	ANU
7.	Smt. K.Velanganni	Commerce	Ph.D	ANU

LIST OF RESEARCH SUPERVISORS OF OUR COLLEGE

S. No.	Name of the Research Supervisor	Department
1.	Dr. A. Gangadhara Rao	Mathematics
2.	Dr. D. Madhusudhana Rao	Mathematics
3.	Dr. B. Subba Rao	Physics
4.	Dr. L. Cyril Arun Kumar	Zoology

LIST OF RESEARCH SCHOLARS PERSUING/SUBMITTED/AWARDED M.Phil/Ph.D

S.No.	Name of the Research Guide	Department	Name of the Research Scholar	Pursuing/Submitted/Awarded M.Phil / Ph.D	University
1.	Dr. D.Madhusudhana Rao	Mathematics	K.Anuradha	M.Phil (Pursuing)	ANU
2.			M.Sajini Lavanya	Ph.D (Pursuing)	ANU
3.			M.Vasanthha	Ph.D (Pursuing)	KLU
4.			Ch.Srimannarayana	Ph.D (Pursuing)	KLU
5.			E.Meera Prasad	Ph.D (Pursuing)	KLU
6.			T.Sateesh	Ph.D (Pursuing)	ANU
7.			P.Praveen Kumar	Ph.D (Pursuing)	ANU
8.			G.SrinivasaRao	Ph.D (Pursuing)	ANU
1.	Dr. A.Gangadhara Rao	Mathematics	P.Prasanthi	M.Phil (Awarded)	ANU
2.			B.Prasad	M.Phil (Pursuing)	ANU
3.			K.V.V.S.Rao	M.Phil (Pursuing)	ANU
4.			J.M.Pradeep	Ph.D (Pursuing)	ANU
5.			P.Ramya Latha	Ph.D (Pursuing)	ANU
6.			S.Savithri	Ph.D (Pursuing)	ANU
7.			K.V.Nagalakshmi	Ph.D (Pursuing)	ANU
8.			T.Sreenivas	Ph.D (Pursuing)	ANU
9.			M.Sowjanya	Ph.D (Pursuing)	ANU
10.			D.Bhavani	Ph.D (Pursuing)	ANU
11.			T.Radharani	Ph.D (Pursuing)	ANU
12.			K.Kishore	Ph.D (Pursuing)	ANU
1.	Dr. B.Subba Rao	Physics	P.Prasanna Lakshmi	Ph.D (Pursuing)	ANU
2.			Sk.Irfan	Ph.D (Pursuing)	ANU
3.			S.Ravi kumar	Ph.D (Pursuing)	ANU
4.			J.Kishore Babu	Ph.D (Pursuing)	ANU

SEMINARS ORGANIZED

The Department of Commerce and Economics together organized one day National Seminar with a topic “Problems & Prospects of GST” on 17th February 2018. The organizing committee invited Smt. Anuradha (SBI Manager, Tenali) as Chief Guest and also invited Prof. Y.Lakshman Kumar, Director, Hyderabad Business School, Hyderabad as Keynote Speaker. To this seminar around 110 members attended and submitted their papers, among all the papers 63 papers were selected for publication after review process done by the committee and were finally published by VEDA (KY) Publications with ISBN NO: 978-93-87769-09-0. The book was released by our dignitaries at the time of Inaugural function.



Lighting the Lamp by our dignitaries



Release of the published book by our dignitaries



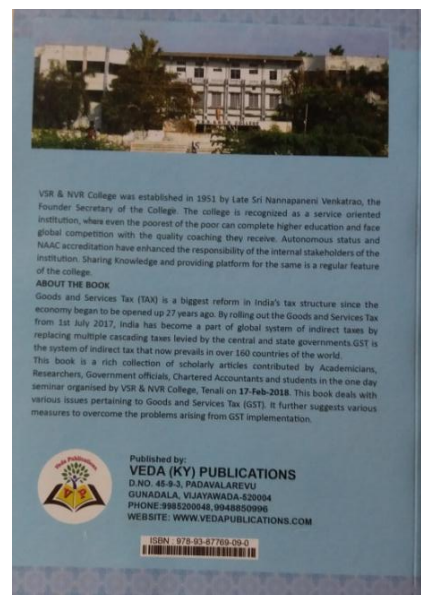
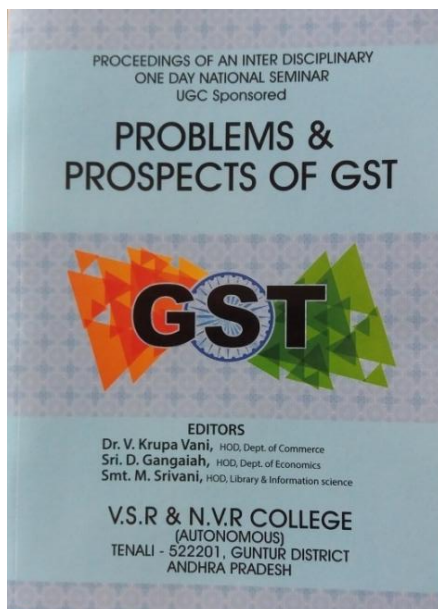
Dignitaries on the Dias



News paper clipping



Keynote Speaker delivering the Lecture



Photograph of the front and back pages of the published book

PUBLISHED PAPERS IN JOURNALS

Smt. B.Jhansi Rani, Department of English published a paper on “*The objectives of Learning English*” Published in International Journal of Education and Humanities, (Jan 2018), ISSN 2277-2405 (Special Issue), Vol: IX, No 1, pp 286 – 290

Dr. K.Suresh, Department of Physics gave Invited talk on “*Light converting inorganic phosphors for white light emitting diodes: An overview*” at AG & SGS College of Arts & Sciences, Vuyyuru and the presented talk was published as an article in International Journal of Engineering Research-Online (IJOER), Vol. 6, S1 (2018) pp 1-6 with ISSN No. 2321-7758 with Impact Factor 5.8701

SEMINARS / WORKSHOPS ATTENDED

Staff attended One day National Seminar on “Problems & Prospects of GST” organized by Department of Commerce & Economics, VSR & NVR College, Tenali, on 17th Feb 2018 and contributed around 21 papers out of 63 papers and all the papers were published by VEDA (KY) with ISBN NO: 978-93-87769-09-0.

Staff from various departments attended Workshop cum Seminar on “Translation and National Integration” at Acharya Nagarjuna University, Guntur from 18th - 25th, January 2018

Attended and presented a paper on “Recruitment and Selection in Digital Age” in Two day Inter National Seminar on “Recruitment and Selection in Digital Age” at Acharya Nagarjuna University, Guntur held on 24 & 25 Feb 2018.

Dr. G.Venkata Lal, Department of Telugu attended International Seminar on "Gurajada Samagra Sahityam – Sangasamskarana Krushi" organized by Department of Telugu, Aadikavi Nannaya University, Rajumundry, A.P. and presented a paper on “*Bahumukha Pragnashali Gurajada*” Published in Prakashikha, Vol-I (Feb-2018), ISBN No. 978-93-87540-23-1 pp 559 – 563

General Articles

Here is what Indian scientists achieved in 2018

Here is a collection of 15 such stories that gives a glimpse of important developments reported by Indian scientists during the year.



The year 2018 is ending with spectacular success of Indian scientists and technologists in the space and defense sectors, with a series of high impact missions. But that's not all Indian scientists achieved in 2018. Several scientific developments, new techniques and promising technologies in fields ranging from nanotechnology to space weather made headlines during the year. Here is a collection of 15 such stories that gives a glimpse of important developments reported by Indian scientists during the year.

A gel that can protect farmers from toxic pesticides

Most farmers do not wear any protective gear while spraying chemicals in fields, which often leads to pesticide exposure and toxicity. Scientists at the *'Institute for Stem Cell Biology and Regenerative Medicine'*, Bangalore developed a protective gel poly-oxime that can be applied on skin and can break down toxic chemicals into safe substances, preventing them from going deep into the skin and organs like the brain and the lungs. The research group plans to develop a mask that can deactivate pesticides.

World's thinnest material with novel technique

Pushing the envelope in nanotechnology, researchers at the *'Indian Institute of Technology'*, Gandhinagar have developed a material that is 100,000 times thinner than a sheet of paper. They synthesized a two-dimensional material of just one-nanometre in thickness (a human hair is about 80,000 nm wide) using Magnesium diboride a compound of boron. This is said to be the world's thinnest material. It can find a range of applications from next-generation batteries to ultraviolet absorbing films.

Gene editing applied to banana genome

Using the gene editing technique CRISPR/Cas9 researchers at the '*National Agri-Food Biotechnology Institute*', Mohali, edited the banana genome. This is the first such work in any fruit crop in India. Banana is the fourth most important food crop after wheat, rice and corn in terms of gross value of production. Gene editing could be deployed to improve nutritional quality, agronomical important traits as well as pathogen resistance in banana.

Discoveries to tackle Zika, dengue, JE and chikungunya

The *National Brain Research Centre (NBRC)* at Manesar has figured out cellular and molecular mechanisms that show how Zika virus causes microcephaly or small head size in babies. Researchers discovered that envelop protein of Zika virus affects proliferation rates of human neural stem cells and promotes premature but faulty neuron formation. Another study led by scientist at the Regional Centre for Biotechnology, Faridabad has identified a key protein which helps dengue as well as Japanese Encephalitis (JE) viruses replicate inside human body by inhibiting anti-viral cytokines. This finding could pave way for development of targeted drugs for dengue and JE. For detecting Chikungunya, a group of researchers from Amity University (Noida), Jamia Millia Islamia University (Delhi) and Maharishi Dayanand University (Rohtak), have developed a biosensor using molybdenum disulphide nano sheets.

Faster diagnostic tests for tuberculosis

Scientists at the *Translational Health Science and Technology Institute, Faridabad* and *All India Institute of Medical Sciences (AIIMS), New Delhi*, have jointly developed highly sensitive and rapid tests for detection of tuberculosis infection in lungs and surrounding membranes. Unlike current tests that use antibodies for detection of bacterial proteins in sputum samples, new tests use Aptamer Linked Immobilized Sorbent Assay (ALISA) and Electrochemical Sensor (ECS) for detection of a bacterial protein in the sputum.

Arsenic found in Punjab groundwater

Till now arsenic was a major problem in West Bengal, Bihar, Jharkhand, Uttar Pradesh, Assam, Manipur and Chhattisgarh. It was also known that there is arsenic contamination in groundwater in Punjab. Now a new study done by *New Delhi-based TERI School of Advanced Studies* has found that Punjab's floodplains are severely affected by arsenic contamination. In some wells, arsenic levels were found to be 20 to 50 times higher than the World Health Organization (WHO) prescribed limit.

Space weather warning model rules out 'mini ice age'

A team of scientists from the Indian Institute of Science Education and Research (IISER) Kolkata have dismissed the speculation that the upcoming sunspot cycle is going to be stronger, based on calculations using a model developed by them. The near-Earth and inter-planetary space environmental conditions and solar radiative forcing of climate over the upcoming sunspot cycle 25 will likely be similar or marginally more extreme relative to what has been observed during the past decade over the current solar cycle. *The method makes it*

possible to make predictions almost a decade before the next sunspot cycle activity peaks in strength.

New tool developed for autism screening

In many cases, autism is misdiagnosed as mental retardation and attention deficit hyperactivity disorder (ADHD). Early identification and interventions may help children with autistic disorders. To help this process, scientists at the *Government Medical College and Hospital, Chandigarh, have developed an Indian tool for screening children for autism.* The Chandigarh Autism Screening Instrument (CASI) is designed to help community health workers to carry out initial screening for autism.

Hope for Alzheimer's and Huntington's patients

Scientists at the Indian Institute of Science (IISc), Bengaluru, have figured out the way memory deficit develops in early stages, resulting in Alzheimer's disease. They have found that early breaking down of a protein, fibrillar actin or F-actin, in the brain leads to disruption in communication among nerve cells and consequently memory deficits. This knowledge can be used to develop early diagnosis test in future. In another study done in fruit flies, researchers at *Department of Genetics at Delhi University South Campus found that it was possible to restrict the progression of Huntington's disease by increasing insulin signaling in the brain neuronal cells.*

Green technique can address plaster of Paris pollution

A team of scientists at Pune-based National Chemical Laboratory (CSIR-NCL) has developed a technique that helps recycle plaster of Paris waste from hospitals in an eco-friendly and economical way. The new technique disinfects waste and converts it into useful products like ammonium sulphate and calcium bicarbonate. The technique can also be used to disintegrate PoP waste from idols immersed in water bodies.

Stone Age tools, genetic studies throw new light on early civilisation in India

The Stone Age tools discovered in a village near Chennai suggest that a Middle Palaeolithic culture was present in India around 385,000 years ago roughly the same time that it is known to have developed in Africa and in Europe. The discovery pushes back the period when populations with a Middle Palaeolithic culture may have inhabited India, and challenges popular theory that the Middle Palaeolithic was brought to India by modern humans dispersing from Africa only around 125,000 years ago or later. In the North, a population genetic study has revealed that the Rors who inhabit modern Haryana came to the Indus Valley when it was flourishing during the Bronze Age and inducted West Eurasian genetic ancestry.

Sikkim gets real-time landslide warning system

A real-time landslide warning system has been set up in the Sikkim-Darjeeling belt of north-eastern Himalayas which is highly vulnerable to landslides. The warning system consists of

over 200 sensors that can measure geophysical and hydrological parameters like rainfall, pore pressure and seismic activities. The system is capable of warning about 24 hours in advance. It has been deployed by researchers of Kerala-based Amrita University and Sikkim State Disaster Management Authority.

Computing capacity for weather forecasting gets a boost

During the year, the Indian Institute of Tropical Meteorology (IITM) upgraded its computing capacity for weather forecasting and climate monitoring, taking its total high performance computing (HPC) power to as high as 6.8 Petaflop. With this, India rose to the fourth position, next only to United Kingdom, Japan and USA in terms of dedicated capacity for HPC resources for weather and climate proposes.

Scientists use silk polymer to develop artificial vertebral disc

Scientists at Indian Institute of Technology, Guwahati, developed a silk-based bio-artificial disc that may find use in disc replacement therapy in future. The group has developed a fabrication procedure for a silk-based bio-artificial disc adopting a “directional freezing technique”. The disc mimics internal intricacy of human disc and its mechanical properties too are similar to those of the native ones. The use of a silk biopolymer to fabricate a biocompatible disc can reduce the cost of artificial discs in future.

Transgenic rice with reduced arsenic accumulation, flowering mustard

To address the problem of arsenic accumulation in rice grains, researchers at Lucknow based CSIR-National Botanical Research Institute developed transgenic rice by inserting a novel fungal gene, which results in reduced arsenic accumulation in rice grain. They cloned Arsenic methyltransferase (WaarsM) gene from a soil fungus and inserted it into rice genome. In another study, TERI School of Advanced Studies has developed an early flowering transgenic variety of mustard.

In other significant developments, the Department of Science and Technology launched a national mission on Cyber-Physical Systems with an outlay of Rs 3660 crore for five years. The Indian Institute of Astrophysics in Bangalore commissioned India’s first robotic telescope to keep an eye on the dynamic cosmos, while the ambitious India Neutrino Observatory (INO) project got a go ahead from the National Green Tribunal.

