Vishnu Institute of Technology, the scion of Shri Vishnu Educational Society was established in 2008 and is currently the eleventh educational institution to disseminate education under the aegis of this society. Nascent that it is, it combines in its matrix the lofty idealism of its Founder Chairman the Late Padmabhushan Dr. B. V. Raju, a distinguished industrialist, philanthropist and an eminent educationalist; the experience and vigour provided by the Chairman Sri K.V. Vishnu Raju, a man of holistic vision and his team comprising dexterous administrators, reputed academicians and brilliant line of students. They constantly strive to make the institution join the ranks of prestigious technical institutions.

**Campus**

The Campus, sprawling over 100 acres, is located in the verdant atmosphere of Vishnupur in Bhimavaram. It is in the very vicinity of the town and is well connected by road. VISHNU also provides hostel facilities to the students who opt for a residential mode of education. The hostels are constantly updated and provide an atmosphere conducive to pursue education.

**Hands on Experience**

To make the instruction in VISHNU more practical-oriented, special focus is on hands on experience. The Assistive Technologies Lab run in collaboration with the University of U Mass, USA helps students to combine technology with a humanistic outlook. Gadgets for the physically challenged are designed and developed here by the students under the guidance of eminent professors both from the Institute and abroad. VISHNU aims at empowering students with technical skills and can-do entrepreneurial spirit. The IBM Software Centre of Excellence in the campus provides the students with the best of quality technical education there by increasing the skill set of each student and faculty for a great career.
Department of Information Technology

The mission of the department is to advance and enhance computer science engineering fundamentals to build the intellectual capital of students. The IT Department endeavours to be an important resource centre for the development of computing systems and applications.

The department was established in the academic year 2008-09 with an annual intake of 66. It offers 4 year B.Tech. This program affiliated to JNTU Kakinada & approved by AICTE. The department has number of well equipped Laboratories and provides excellent facilities for learning.
HELM OF AFFAIRS

Academics are a continuing process of exploration, growth and sustenance. Today information explosion has brought about many changes. New ideas are generated, new interpretations are given and new applications are invented. The equations are changing very fast both in education and at the work place. Every day brings in new demands. One has to constantly upgrade to cope with the fast emerging trends. A software professional once said “We are training people in technologies to find solutions for problems that have not yet been identified”. Moreover the roles and responsibilities of professionals are ever expanding making it imperative to move beyond the confines of the classroom and the stipulated curriculum and focus on the skills needed to cater to the needs of the society. Hence it has become imperative to all the stakeholders in education to arm themselves with the necessary knowledge, skills and attitude to keep themselves abreast of the rapid changes.

That explains everything—the Chairman’s message to the faculty to constantly update themselves with the emerging new technologies and concepts, the focus on research, paper presentations and publications, undertaking new projects, adopting new technologies for information collection and dissemination as well.

“The key to growth is the introduction of higher dimensions of consciousness into our awareness” -- Lao Tzu.

That is what the message of our Chairman does, to motivate us to action.

The stimulus has been given...

it’s time for response.

Department Activities

IOS Workshop by Mr. Hemanth Alluri & Anudeep from INIMOS on 08-07-2013.

A guest Lecture on "Importance of Digital Media" was conducted on 12th November 2013 at Vishnu Institute of Technology. Resource Person: Prof. Cynthia L. Baron, Academic Director, North Eastern
University, Massachusetts, USA on 12-11-13.

**Soft Skills Training by R.S.R Murthy-AIRFORCE**

Vishnu Institute of Technology organized a Guest Lecture on "SOFTSKILLS & COMMUNICATIONS" for B.Tech & MBA students on 13 July 2013. Dr. D Suryanarayana, Principal, Prof. K Srinivas, faculty and students participated in the Event. Resource Person: Wing Commander R.S.R Murthy (AIRFORCE) Associate Vice-President H.R R.S.R Murthy is an astute professional with 31 years of experience in handling functions pertaining to: - Strategic Planning - Strategic HR Operations - Performance Management - Recruitment & selection - Training & Development - Compensation Management - General Administration - Process Development & Enhancement - Change Management - Team Management The program is interactive, participatory and includes readiness and reinforcement activities.

**Guest Lecture on Data Mining for II B.Tech students**

The departments of CSE and IT organized a Guest Lecture on "Data Mining" to II B.Tech students on 23-12-13. Dr. N Naveen, Associate Professor, Department of CSE, Madanapalle Institute of Technology and Science acted as resource person. The resource person gave an outlook of data mining and explained the applications of data mining by taking real world examples.

**Guest Lecture on “Applications of Data Structures” Professor, Ramachandra Engineering College to II B.Tech students on 23-12-13**

Mr. D Uday Kumar attended an interactive session on motivation by Sri Sachidananda at SVECW on 31-8-13.

Mr. B. Revanth & K. Rupendra Sing attended AICTE sponsored National seminar on "Mobile
Computing & Mobile Application Development " at SRKR Engineering College between 7-11-2013 to 9-11-2013.

"Importance of Digital Media" - conducted on 12th November 2013 Resource Person: Prof. Cynthia L. Baron, Academic Director, North Eastern University, Massachusetts, USA.

Departmental club Activities

DOIT – IT Software Club, Presentation on Photoshop Features, C Programming Competition, Quiz competition.

FRESHERS DAY - A Gala Celebration

Fresher’s day was grandly celebrated at Vishnu Institute of Technology in Smt. B. Seetha Indoor Auditorium on 23rd Nov, 2013.

It was a great evening aimed at building a bond of friendship and nurturing fellowship among the student fraternity.

Cultural programmes were the highlight of the day which saw all the juniors and seniors participate with full zest. Dances, songs, skits and games kept the audience enthralled throughout.

The entire campus reverberated with the joy of the students.

National Education Day celebrations @ Vishnu
National Education Day was celebrated on 11th November 2013 at Vishnu Institute of Technology commemorating the Birthday of Bharat Ratna Maulana Abul Kalam Azad, the first education minister of Independent India.

Addressing students on this occasion, Principal Dr. D Suryanarayana paid tributes to the eminent educationist. He explained to the students the contribution of this visionary to the field of education.

He exhorted the students to follow the path set by our great intellectual and to make education a tool to excel.

Earlier in the day, literary events like Group Discussions, Poster Exhibition, and Quiz etc. were conducted with the theme of "Importance of Education : Science and Society". Prizes were given away to the winners. The highlight of the event was a documentary on Maulana Abul Kalam Azad and the importance of this day.

**Chairman's Interaction with I B.Tech students**

-- *Live by honour, live by excellence*

Come freshers and there is an inspiring interaction with our Chairman Shri K.V. Vishnu Raju. This, always, has been the practice at SVES. On October 2013 our
Chairman interacted with the I B.Tech students of Vishnu Institute of Technology. As a person at the helm he provided a broad picture of education encompassing academics, skills, both core skills and life skills and a positive attitude. He called for a kind of intellect which is fostered by logical and analytic skills tempered with a spirit of scientific inquiry.

He emphasized on discipline as the criterion which keeps a check on one's career, as honor and knowledge both are important. He motivated the students to acquire skills beyond the university curriculum and be globally competent. Foreign languages, Vishnu FM and TV Academy, ATL Lab, IBM Centre and many more facilities on the campus are, he pointed out, just some of the ways that enable the students to strengthen their arsenal. Motivated to the core, the students interacted with the Chairman asking many questions as to how they could upgrade themselves to international standards.

Dussera -Ayudha Puja @ Vishnu

On the occasion of Dussera, Ayudha Puja was performed at the machinery laboraties in the college premises where all the staffs and students participated and performed the puja for starting another new year more successfully with the blessing of the devi.

I B.Tech Induction Programme :: 2013-14

The Induction Programme acquaints the parents and students with the B.Tech course and the college. The programme starts with an Inaugural on 03 October 2013. The next day the students are taken on a campus visit so as to familiarize them with the campus and its facilities. This will be followed by Interaction with the Principals of various colleges of the campus and the HODs of VIT. Through this interaction students and parents get a lot of valuable information regarding the strategies to follow and practices to adopt during the course. An Orientation programme will be conducted for three days to introduce the course structure, syllabus and resources to the students.

Welcome to the Fresher’s !
Vishnu Institute of Technology has once again achieved the distinction of getting all the seats filled. We extend our heartfelt gratitude to all the parents and students who have supported us all through. We shall continue to contribute our best and expect the parents and students to cooperate with us.

**Workshop on Assistive Technology Solutions in Minutes**

Workshop on "Assistive Technology Solutions in Minutes" by Dr. Therese Willkomm and her team from New Hampshire University, USA was conducted from 15-12-2013 to 20-12-2013. Dr. Therese Willkomm, Ms. Wenasa and Ms. Emily of New Hampshire University, USA are the resource persons for this workshop.

Dr. Therese Willkomm and her team members have expounded the tools and material for making the projects in the workshop. All the III B.Tech.

Students have participated enthusiastically with the hands-on approach through out the session.

**Faculty Activities**

Mr. D Uday Kumar attended an interactive session on motivation by Sri Sachidananda at SVECW on 31-08-2013

Mr. M.V.Subbarao, B.Revanth and Mr. D.Uday Kumar published paper titled "MRI Brain Image Classification using probabilistic neural network and tumour detection using clustering technique," in IJCST volume -2, oct -2013, pagno-16.

Mr. B. Revanth & K. Rupendra Sing attended AICTE sponsored National seminar on "Mobile Computing & Mobile Application Development " at SRKR Engineering College between 7-11-2013 to 9-11-2013.

Placement Activities


AMCAT exam-I was conducted for final year students. 20 final year IT students took the exam. Total of 233 students took the exam on 28-10-13.

Placement @ NTT DATA

Ms. B. Deepthi Lakshmi of IV B.Tech, IT (Regd. No: 10PA1A1204) got selected in NTT DATA Recruitment Drive. NTT DATA is a global company specializing in software product and technology innovation. Hearty Congratulations on selection at NTT DATA Recruitment Driv 3. with 6 Lakhs per Annum on 29-12-13.

Hearty congratulations to students on selection @ NTT DATA

NTT DATA organized campus recruitment drive at Vishnu Institute of Technology on 29-12-13.

Engineering students from various reputed institutes participated in the drive.

Student Activities

20 students from III B.Tech IT attended one day workshop on “Cloud Computing” at SVES-Bhimavaram by Mr. D Uday Kumar, Executive Director, AT & T on 31-08-2013.

09 students from III B.Tech IT participated in Assistive Technology Lab (ATL) on 25-07-13.

Articles

Geographical Routing with Location service in Intermittently Connected MANETS

---------By N S K Pradeep

III-IT
**Introduction:**

Combining mobile platforms such as manned or unmanned vehicles and peer-assisted wireless communication is an enabler for a vast number of applications. A key enabler for the applications is the routing protocol that directs the packets in the network. Routing packets in fully connected mobile ad hoc networks (MANETs) has been studied to a great extent, but the assumption on full connectivity is generally not valid in a real system. This case means that a practical routing protocol must handle intermittent connectivity and the absence of end-to-end connections. In this project, we propose a geographical routing algorithm called location-aware routing for delay-tolerant networks (LAROD), enhanced with a location service, location dissemination service (LoDiS), which together are shown to suit an intermittently connected MANET (IC-MANET). Because location dissemination takes time in IC-MANETs, LAROD is designed to route packets with only partial knowledge of geographic position.

**DTN routing in opportunistic networks:** Routing in DTNs with opportunistic contacts is challenging since contact times and durations are not known in advance. Three examples of location unaware routing protocols for this environment are Randomized Routing, Epidemic Routing and Spray and Wait. In Randomized Routing only a single copy of a packet is present in the network. When two nodes meet a packet is handed over to the other at some set probability. This means that a packet randomly walks around in the network until it reaches the destination. This routing principle is better than keeping a packet at the source node until it comes in contact with the destination provided that the transmission speed is faster than the mode movement or if node movements are local.

In Epidemic Routing packets are distributed to all nodes in the network (or at least a considerably large subset of nodes) giving a high
cost in both transfer and storage overhead. In Spray and Wait a packet is distributed to a small number of nodes. The nodes receiving the packet store it and the first node to meet the destination will deliver the packet. Spray and Wait can be an efficient protocol if the nodes that carry the packet cover a large part of the network with their mobility. [4]

If the nodes are location aware and the (approximate) location of the destination is known then one can perform geographic routing. Li et al. have modified GPSR to better handle short temporary disruptions due to obstructions, node mobility or interference in relatively sparse networks (55 nodes/km² compared to our even more sparse scenario that has 10-30 nodes/km²). By using temporary storage (up to 2 seconds) and having a set of possibly reachable neighbors they substantially increased the delivery ratio compared to GPSR. LeBrun et al.] have performed geographical routing in a very sparse (0.3-4.4 nodes/km²) delay tolerant network with a stationary destination. Using a request-response mechanism beaconing is limited to the nodes that have data to transmit.

**Beacons-less routing:**

Most routing protocols require knowledge of the neighbors of a node to make their routing decisions. This information is generally gathered by the use of beacons, messages broadcasted regularly that will be heard by all nodes within communication distance. A problem with beacons is that the gathered neighbor information is always to some extent old. Another issue is that beacons consume bandwidth, bandwidth that could be used for data transmissions. A problem for energy-constrained networks is that beacons consume energy irrespective of whether there is data to transmit or not. Heissenbüttel et al. study the impact of incorrect neighbor information due to beaconing for position based routing protocols. An example of a beacon-less routing protocol is BLR by
Heissenbüttel et al. BLR is a geographic routing protocol where nodes broadcast a packet when they want to send it. Nodes within a defined forwarding area are eligible to forward the packet and the actual node to forward a packet is determined by a timer function. For the best node the timer will expire first and it will then broadcast the packet. The other nodes waiting to forward the packet will hear this transmission and cancel their transmissions. If the greedy forwarding fails then a backup mode is entered and the packet is forwarded along the edge of a planar subgraph until the packet comes closer to the destination than it was when the backup mode was entered. To conserve energy and bandwidth BLR uses unicast routing for a period of time after a route has been established. To be able to handle position error and mobility of the destination a reactive local routing algorithm is used in the vicinity of the destination. When a natural disaster strikes, the critical infrastructure that supports our society can be completely disabled for long periods of time. After an earthquake or flood, we cannot expect telecommunication services such as GSM or UMTS to function. Moreover, due to the interdependencies between different types of infrastructures, disruptions can also be caused by more commonly occurring incidents such as heavy storms. Currently, many types of communication media are used by first-responder communities, ranging over specialized equipment, standard telecommunication devices and the Internet. While the specialized equipment (satellite, TETRA based systems, JTRS, UTF radio, etc) may resist a setback during disasters, the most likely scenario is that GSM, 3G, etc will be severely overloaded, if not destroyed. Experience has shown that when large number of actors is involved in major disasters, the specialized equipment can beneficially be complemented with ad hoc communication over commodity devices. These networks can be set up quickly without central management,
where no infrastructure exists, and allow communication at a very low cost. An experience report from the Katrina hurricane demonstrates the usefulness of being able to set up spontaneous networks in disaster areas.

**Location Aware Routing for Delay-tolerant Networks (LAROD)**

LAROD is a geographical routing protocol for DTNs that combines geographical beaconless routing such as BLR and CBF with the store-carry-forward principle. In its essence LAROD uses greedy packet forwarding when possible. When greedy forwarding is not possible the node holding the packet (the custodian) waits until node mobility makes it possible to resume greedy forwarding. To obtain the location of the destination LAROD inquires a location service. In order to forward a message towards the destination a custodian simply broadcasts the message. All nodes within a predefined forwarding area are eligible to forward the packet and are called tentative custodians. All tentative custodians set a delay timer (td) specific for each node, and the node whose delay timer expires first is the selected new custodian. Upon becoming a custodian the node forwards the message in the same manner as the previous custodian. The old custodian that sent the message and most other tentative custodians will overhear this transmission and conclude that a new node has taken over custody of the packet. It is possible that not all nodes in the forwarding area will overhear the broadcast made by the new custodian thereby producing packet duplicates. This will increase the load in the system but also enable exploration of multiple paths to the destination. When the paths of two copies cross only one copy will continue to be forwarded. To prevent a packet from indefinitely trying to find a path to its destination all packets have a time to live (tTTL) expressed as duration. When the TTL expires a packet is deleted by its custodian.