

# **International Conference on Devices, Intelligent Systems and Communications** (DISC-2024)

**8<sup>th</sup> – 9<sup>th</sup> November, 2024**

**Dept. Of Electronics & Communication Engineering**

**J.B. Institute of Engineering & Technology  
(UGC Autonomous)**

**Hyderabad**

## **Welcome to DISC 2024,**

**The premier conference showcasing cutting-edge research and innovations across a spectrum of disciplines. DISC2024 brings together researchers, scholars, and practitioners from diverse fields including Electronics and Communication Engineering (ECE), Electrical and Electronics Engineering (EEE), Software and Computer Engineering (SCE), Artificial Intelligence and Machine Learning (AIML), Civil Engineering, Mechanical Engineering, Information Technology (IT), Electronic and Computer Management Engineering (ECM), and Management.**

**The conference serves as a platform for researchers to exchange ideas, present their latest findings, and explore avenues for collaboration and innovation. Join us at DISC2024 to delve into the forefront of engineering and technology, shaping the future landscape of our interconnected world.**

## ABOUT JBIET

As one of Telangana's top ten most preferred institutions, JBIET strives to impart very high technical engineering and professional education standards. JBIET aims to mould young learners into globally competitive professionals who are professionally deft, intellectually adept, and socially responsible. The expert faculty at JBIET inculcate the best values and principles, adhering to a modern curriculum; while the students imbibe pragmatic perception and a pro-active nature, which spurs them towards exploration and advanced inquiry, resulting in valuable insights. The Placement record of JBIET over the years is proof of our right efforts in enabling the best in class engineering, technical, and professional education to aspirants.

## ABOUT CONFERENCE

DISC 2024 conference showcases cutting-edge research and innovations across a spectrum of disciplines.

DISC 2024 brings together researchers, scholars, and practitioners from diverse fields including Electronics and Communication Engineering (ECE), Electrical and Electronics Engineering (EEE), Software and Computer Engineering (SCE), Artificial Intelligence and Machine Learning (AIML), Civil Engineering, Mechanical Engineering, Information Technology (IT), Electronic and Computer Management Engineering (ECM), and Management.

## IMPORTANT DATES

Submission Start : 01.07.2024  
Submission Deadline : 30.09.2024  
Acceptance Notification : 15.10.2024  
Camera Ready Submission: 25.11.2024  
Registration Starts : 01.11.2024

## PROCEEDINGS PUBLICATION

All accepted and registered papers will be submitted for publication in AIP Conference Proceedings, Indexed in Scopus & WoS

## MODE OF CONFERENCE

Hybrid Mode

## REGISTRATION CHARGES

Students & Research Scholars : Rs. 10000/-  
Faculty and Academia : Rs. 11000/-  
Participants from Industry : Rs. 15000/-  
Participants without paper : Rs. 3000/-  
Authors (Foreign Origin) : USD 150

## FOR DETAILS VISIT

[www.discon.com](http://www.discon.com)



SCAN QR CODE FOR WEBSITE



J.B. Institute of Engineering  
& Technology

UGC Autonomous  
Accredited by NAAC & NBA

Hyderabad, Telangana,  
India, 500075



WoS & Scopus Indexed

## 2nd International Conference on Devices, Intelligent Systems, and Communications (DISC 2024)

8th - 9th November, 2024



Organized by  
The Department of Electronics  
& Communication Engineering

## SCOPE

The topics include, but are not limited to:

- Low Power Devices
- Intelligent Systems
- Communications
- Micro Electro Mechanical Systems
- Renewable Energy
- Modern Structure & Machine
- Management Science
- Bioelectronics Sensors
- Internet-of-Things (IoT)
- Adhoc Sensor Networks
- Data and Network Security
- Distributed Computing
- High-Performance Computing
- Blockchain Technology
- AI, ANN, ML
- Deep Learning, Cloud Computing
- Big Data, Data Science
- Electric Vehicle Technology
- Renewable Energy Integration
- Power Quality Improvement
- Energy Storage Systems
- CAD Thermal Engineering
- Robotics
- Optimization Technologies
- Advanced deep learning applications in human life
- Sustainable Concrete Materials
- Earthquake Resistant Designs
- Geotechnical Investigations in Civil Engineering
- Air and Noise Pollution

## KEYNOTE SPEAKERS

- Prof. V. Ramgopal Rao, Former Director, IIT Delhi and Group Vice-Chancellor, BITS Pilani Campuses.
- Dr. Sarat Kumar Patra, Director NIT Agartala.
- Dr. Sayan Chatterjee, Professor, Department of ETE, Jadavpur University.
- Dr. Tahesin Samira, Pukyong National University, Korea (S).

## PATRONS

- Sri. J.V. Krishna Rao, Secretary, JBES
- Dr. Ch. Sanjay, Director, JBES
- Dr. P.C. Krishnamachary, Principal, JBIET

## CONFERENCE CHAIR (S)

- Dr. Towheed Sultana, HOD-ECE
- Dr. L. Vaikunta Rao, Dean, R&D

## CONVENER (S)

- Dr. Anindya Jana, Professor
- Dr. Prasanta Kumar Pradhan, Professor

## COORDINATOR (S)

- Mr. Rajkumar D Bhure, Associate Professor
- Mrs. Kiran Pakmode, Assistant Professor

## EDITORIAL BOARD

- Dr. Himanshu Sharma, Associate Professor
- Dr. P Dural Pandy, HOD-EEE

## CONTACT US

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## TECHNICAL COMMITTEE

- Prof. V. Ramgopal Rao, Former Director, IIT Delhi and Group Vice-Chancellor, BITS Pilani Campuses.
- Dr. Sarat Kumar Patra, Director NIT Agartala.
- Dr. Sayan Chatterjee, Professor, Department of ETE, Jadavpur University.
- Dr. Jee-Youl Ryu, Department of Information and Communications Engineering, Pukyong National University.
- Dr. Sal Kumar Tara, Secretary, IEEE, Hyderabad Chapter.
- Dr. Badri Narayan Subudhi, Associate Professor, IIT Jammu.
- Dr. Pyari Mohan Pradhan, Associate Professor, IIT Roorkee.
- Dr. Priya Ranjan Muduli, Assistant Professor, IIT BHU.
- Dr. Oliver Faust, Associate Professor, ARU, Cambridge.
- Dr. Satya Sai Jagannath Nanda, Associate Professor, MNIT Jaipur.
- Dr. Srishail Hiremath, Assistant Professor, NIT Rourkela.
- Dr. Satyendra Singh Yadav, Assistant Professor, NIT Meghalaya.
- Dr. Rajamohamed C, Eng(UK), Fellow (Advance HE UK), Assistant Professor, University of Bahrain.
- Dr. D. Devaraj, Senior Member, IEEE, Senior Professor, Department of Electrical and Electronics Engineering, Kalasalingam Academy of Research and Education, Tamil Nadu.
- Dr. Sheik Mohammed Sulthan, Deputy Director, Centre for Transport Research, Assistant Professor, Faculty of Engineering Universiti Teknologi Brunei, Gadong A, Brunei Darussalam.
- Prof. D. Krishna Reddy, HOD, Electronics and Communication Engineering, Chaitanya Bharati Institute of Technology, Hyderabad.
- Prof. Y. Vijayalata Chair, IEEE Hyderabad Section, Dean, Computer Science, Vardhaman College of Engineering, Hyderabad.
- Dr. K. Naga Sujatha, Professor & HOD, Department of Electrical and Electronics Engineering, JNTUH, Telangana.
- Dr. G. Suresh Babu, Professor, Department of Electrical and Electronics Engineering, Chaitanya Bharati Institute of Technology, Hyderabad.
- Prof. Nitesh Purohit, HOD ECE, IIIT, Allahabad.
- Dr. Prasuna Chakraborty, Director & Dean Research, SPSU, Udaipur.
- Prof. Suba Rao Y.V, Osmania University, Hyderabad.
- Prof. Atul Negi, Osmania University, Hyderabad.
- Mrs. Jyoti Pancholi, Senior Scientist, ECIL, Hyderabad.

# Session Planning

Presentations Sessions Rooms Contents

## Bioelectronics Lab 1St session

Session Chair: Dr. Pradhan

🕒 Friday, November 8, 2024 at 11:30:00 AM GMT+5:30 – Friday, November 8, 2024 at 1:00:00 PM GMT+5:30

📍 Bioelectronics Lab

- **Optimized Plant Leaf Disease Detection and Fertilization Recommendation System using Computer Vision and Convolutional Neural Networks**  
KESANA VANISRI (CMR TECHNICAL CAMPUS) ;  
Dr. BAGAM LAXMAIAH (CMR TECHNICAL CAMPUS)
- **Improving Performance of RF IC Multilayer Spiral Inductor**  
Sammeta Rajendra Kumar (ACE Engineering College)
- **VEHICLE ACCIDENT AVOIDANCE AND DETECTION SYSTEM IN IOT**  
Roopini G (Svpcet)
- **IoT LoRa Network For Mobile Devices Based on Improved AMILCC Technique**  
Sandhya Rani (J B Institute of Engineering and Technology) ;  
Dr K Sreenivasulu (G.Pullaiah College of Engineering and Technology :: Kurnool) ;  
Job karuna sagar B J (Joginapally B.R.Engineering college)
- **IoT Based Module for Monitoring and Control of Various Agricultural Parameters**  
Sumagna Patnaik (BEC) ; SARAVANAN S (B V Raju Institute of Technology)
- **Chip Design Flow of 6T, 7T, 8T and 9T Static Random Access Memory Using VLSI Development Tool**  
AMIT GUPTA (J B INSTITUTE OF ENGINEERING AND TECHNOLOGY  
Hyderabad, Telangana, India) ;  
Siva Chakra Avinash Bikkina (Ramachandra College of engineering) ;  
Bonam Raghavaiah (Ramachandra college of Engineering ) ;  
MLSN Lakshmi (Ramachandra College Of Engineering)

## I2 Hub-A 1st session

Session Chair: Dr. Pradhan

🕒 Friday, November 8, 2024 at 11:30:00 AM GMT+5:30 – Friday, November 8, 2024 at 1:00:00 PM GMT+5:30

📍 I2 Hub-A

Rakshitha C (reva university) ;  
Selvan C (National Institute of Technology, Tiruchirappalli)

- **Renal Cell Carcinoma Classification: Deep Learning with MLflow, DVC, and AWS CI/CD Deployment**  
Niveditha J (Reva university)
- **Supervised Machine learning for Road anomaly detection and Drivable area segmentation using Self-Supervised Label Generator**  
Towheed Sultana (J B Institute of Engineering and Technology)
- **Optimized Route Planning and Charging Management for EV Navigation**  
Tanaya Dahatonde (VIT Pune)
- **A Novel GNN-Based Method for Hierarchical Summaries**  
Vijaya Pothuri (Salesforce Inc.)
- **U-NET MODELS FOR LIVER TUMOR DETECTION**  
AMIT GUPTA (J B INSTITUTE OF ENGINEERING AND TECHNOLOGY  
Hyderabad, Telangana, India)

## Bioelectronics Lab 4th session

Session Chair: Dr. Pradhan

🕒 Saturday, November 9, 2024 at 2:00:00 PM GMT+5:30 – Saturday, November 9, 2024 at 4:00:00 PM GMT+5:30

📍 Bioelectronics Lab

- **Deep Learning-Based Tuberculosis Detection from Chest X-ray Images**  
Mary Gadmuru (JBIET) ; Mahesh Enumula (Bhagwanth university) ;  
GIRI M (Siddharth Institute of Engineering and Technology)
- **BRAIN TUMOR DETECTION BASED ON DEEP FEATURES CONCATENATION AND MACHINE LEARNING CLASSIFIERS WITH GENETIC SOLUTION**  
Dr.M SUBBA RAO (ANNAMACHARYA UNIVERSITY)
- **Experimental Analysis of Thermal Treatment Temperatures Effect on Aspect Ratio of Alpha Particles in Micro-Structure of Ti6Al4VTitanium Alloy**  
Dr.ANOOP KUMAR SHUKLA (JB INSTITUTE OF ENGINEERING &  
TECHNOLOGY)
- **Distinguishing Authentic and Manipulated Online Hotel Ratings through Machine Learning and Deep Learning Approaches**  
Dr. G. Arun Thomas (JBIET)
- **AI-Driven Blog Post Creator from YouTube Content using GPT**  
Jabez T (srm institute of science and technology)

- **UCS: Unified Chatbot Solution for University Payments, Enrollment, Exam Schedules, and Results**

SHAIK MAHAMMAD RAFI (ANNAMACHARYA UNIVERSITY) ;  
SHAIK NASEEMA (ANNAMACHARYA UNIVERSITY)

## I2 Hub-B 3rd session

Session Chair: Dr. Pradhan

🕒 Saturday, November 9, 2024 at 11:00:00 AM GMT+5:30 – Saturday, November 9, 2024 at 1:00:00 PM GMT+5:30

📍 I2 Hub-B

- **Fog computing-based Neural Circle-Driven Finite Element Fusion model for optimization of Microgrid-connected WSN with load balancing**  
Narsappa Reddy (JB INSTITUTE OF ENGINEERING AND TECHNOLOGY)
- **CLOUD BASED ACCIDENT ALERT AND DETECTION SYSTEM USING IOT**  
Sugamya Katta (Chaitanya Bharathi Institute of Technology)
- **THE STRATEGIC APPLICATION OF POLICIES TO ENHANCE EMPLOYEE BENEFITS**  
Dr DANDA UDAYA SHEKHAR DANDA (JBIET)
- **Scalable Convolutional Neural Network Model for Early Pneumonia Detection**  
swathi pabbati (Annamacharya University)
- **FAKE JOB POST DETECTING: USING MACHINE LEARNING TO IDENTIFY FRAUDULENT RECRUITMENT**  
Sarika Daruru (Annamacharya University, Rajampet) ;  
Suresh Palepu (Annamacharya University)

## I2 Hub-B 1st session

Session Chair: Dr. Pradhan

🕒 Saturday, November 9, 2024 at 11:30:00 AM GMT+5:30 – Saturday, November 9, 2024 at 1:00:00 PM GMT+5:30

📍 I2 Hub-B

- **Convolutional Neural Networks with Hyperspectral Imaging for Revolutionising Disease Identification and Classification in Agriculture.**  
swaraj sadhu (Technical Education)
- **Modern Traffic Safety Solution with GSM &GPS Enabled Speed Detection**  
shilpa Durugappa (REVA UNIVERSITY )
- **Cardio-forg: Crafting Proactive Solutions in Children for Heart Health with Echo Z-Score & Normal Electrocardiogram**

🕒 Saturday, November 9, 2024 at 11:00:00 AM GMT+5:30 – Saturday, November 9, 2024 at 1:00:00 PM GMT+5:30

📍 Bioelectronics Lab

- **Effect Of Cracked Section Properties On The Resilience-Based Seismic Evaluation Of A Building**  
Naresh Bhukya (J B Institute of Engineering and Technology)
- **Automatic Medicine Dispensers used in Primary hospital in Online Doctor Medical Consultation using Machine Learning Technique**  
Akula jyothi (JBIET)
- **Exploring the Antibacterial Efficacy of SrTiO<sub>3</sub> and GO in the Absence of Light: Mechanisms, Synergies, and Applications**  
satya sai (JBIET) ; Kiran Pakmode (J.B. Institute of Engineering & Technology)
- **DEEP NEURAL NETWORK FOR BRAIN TUMOR DETECTION: A CNN AND RETINANET APPROACH**  
JESSICA K F (SRMIST)
- **Effective ultrasound assisted Pd(II)-catalyzed cascade selective C–H bond transformation of indoles and quinones**  
Ashok Ettam (gitam univesristy)

## I2 Hub-A 3rd session

Session Chair: Dr. Pradhan

🕒 Saturday, November 9, 2024 at 11:00:00 AM GMT+5:30 – Saturday, November 9, 2024 at 1:00:00 PM GMT+5:30

📍 I2 Hub-A

- **EXPLORING RANDOM PROJECTION TECHNIQUES FOR FACE RECOGNITION: A SURVEY OF MACHINE LEARNING APPROACHES**  
Rajesh A (SR UNIVERSITY) ; Rajchandar Kannan (SR University)
- **Awareness level on technological innovations in banking sector- A study of select Banks**  
Dr.Aitha Cheralu Cheralu (J.B.Institute of Engineering and Technology)
- **Classifying Social Media Posts using Machine Learning and Natural Language Processing**  
SHAIK MAHAMMAD RAFI (ANNAMACHARYA UNIVERSITY) ;  
SHAIK NASEEMA (ANNAMACHARYA UNIVERSITY)
- **PRIORITIZING WEATHER AND NON-WEATHER FACTORS FOR IMPROVED FLIGHT DELAY PREDICTIONS**  
komandoor karpagavalli (Annamacharya University,Rajampet)

Seelam Srikanth (REVA University)

- **Power Quality Improvement of a Proposed Single-Source Switched-Capacitor based 13-Level Boost Inverter during off-Grid and Grid Conditions**  
SYED BI (Annamacharya University-Rajampet)
- **Design modeling and cost benefit analysis of a 74.1kw grid connected rooftop solar PV power system using PVsyst**  
siri goud (malla reddy engineering college)
- **User Perspectives on Sustainable Transportation: AHP Analysis of Public Bike Sharing System in Bengaluru**  
Seelam Srikanth (REVA University)
- **Sustainability in Public Transport: Assessing Customer Satisfaction for Feeder Bus and Metro Integration in Bengaluru**  
Seelam Srikanth (REVA University)

## I2 Hub-B 2nd session

Session Chair: Dr. Pradhan

🕒 Friday, November 8, 2024 at 2:00:00 PM GMT+5:30 – Friday, November 8, 2024 at 4:00:00 PM GMT+5:30

📍 I2 Hub-B

- **Impact of Crossing Behavior of Pedestrians on Traffic Flow Characteristics at Urban Mid-Block Locations**  
Ramireddy Sushmitha (G. Pulla Reddy Engineering College)
- **Implementation of Insurance Claim Fraud Detection and Analysis Using Hybrid Machine Learning Technique**  
Saidulu I (QIS College of Engineering and Technology)
- **CNN Based Criminal Face Identification System Using Video Surveillance**  
Vinay P (Vijay Rural Engineering College)
- **A Novel Healthy Indian Cuisine Recipes Recommender-System Based On Ingredients**  
Ravichandra J (Vijay Rural Engineering College)
- **Design and Implementation of an Enhanced Cloud Security using ABE and ABD**  
Pradeep Millli (Malla Reddy Engineering College for Women)

## Bioelectronics Lab 3rd session

Session Chair: Dr. Pradhan

**Transient Analysis Of Multiple Drivers Connected To Multiple Receivers Through Lossy Dispersive Coupled Interconnect Lines System For CMOS Digital Integrated Circuits (10m)**

Dr. Janani R (Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya)

**Biomimetic and Biological Sensing Technologies for the Assessment of Water Contaminants**

THALUKA RAJ (CMR TECHNICAL CAMPUS) ;  
K Maheswari (CMR TECHNICAL CAMPUS,HYDERABAD) ;  
Nuthanakanti Bhaskar (CMR Technical Campus, Hyderabad, Telangana) ;  
K Srujan Raju (CMR Technical Campus) ;  
Jonnadula Narasimharao (CMR Technical Campus) ; rakshita okali (CMRTC)

**Effective Error Reduction of OFDM Systems Using Optimal Preface Based Maximum Likelihood Based Channel Estimation**

Bhure Kumar (J B Institute of Engineering and Technology) ;  
Naresh Kumar (B V Raju Institute of Technology)

**An Effective Real Time Sign Language Recognition Using Yolo Algorithm**

Swapna N (Vijay Rural Engineering College)

**NEURAL NETWORK BASED FAKE NEWS DETECTION USING NLP TECHNIQUE**

Pradeep Millli (Malla Reddy Engineering College for Women)

**Congenital Heart Disease through Different ML and Deep Learning Techniques**

Dr.shravan bommalakunta (J.B. Institute of Engineering & Technology)

**Designing a Microstrip Patch Antenna for Cognitive Radio Applications**

AMIT GUPTA (J B INSTITUTE OF ENGINEERING AND TECHNOLOGY  
Hyderabad, Telangana, India) ;  
Siva Chakra Avinash Bikkina (Ramachandra College of engineering) ;  
Himanshu Sharma (J B Institute of Engineering and Technology) ;  
Bonam Raghavaiah (Ramachandra college of Engineering)

**mmWave MIMO Beamforming for Large Scale Antenna by Uniform Planar Array**

PRASANTA PRADHAN (JBIET)

## oelectronics Lab 2nd session

Session Chair: Dr. Pradhan

🕒 Friday, November 8, 2024 at 2:00:00 PM GMT+5:30 – Friday, November 8, 2024 at 4:00:00 PM GMT+5:30

📍 Bioelectronics Lab

**Investigating the Impact of Xanthan Gum on Properties of Artificial Micaceous Soils**

## **KEYNOTE SPEAKERS/ PATRONS/ CONFERENCE CHAIR/ CONVENER/ COORDINATOR**

### **KEYNOTE SPEAKERS :**

- Prof. V. Ramgopal Rao, Former Director, IIT Delhi and Group Vice-Chancellor, BITS Pilani Campuses.**
- Professor Arun kumar Pujari, HOD of AI & CSE, Advisor & Professor Emeritus Mahendra University- addressing the Gathering.**
- Dr. Sayan Chatterjee, Professor, Department of ETE, Jadavpur University.**
- Dr. Vijay Kumar Agarwal, Scientist “E” DRDL Hyderabad**

### **PATRONS :**

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- Dr. Ch. Sanjay, Director, JBES**
- Dr. P.C. Krishnamachary, Principal,**

### **CONFERENCE CHAIR (S) :**

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- Dr. L. Vaikunta Rao, Dean, R&D**

### **CONVENER (S) :**

- Dr. Anindya Jana, Professor**
- Dr. Prasanta Kumar Pradhan, Professor**

### **COORDINATOR (S):**

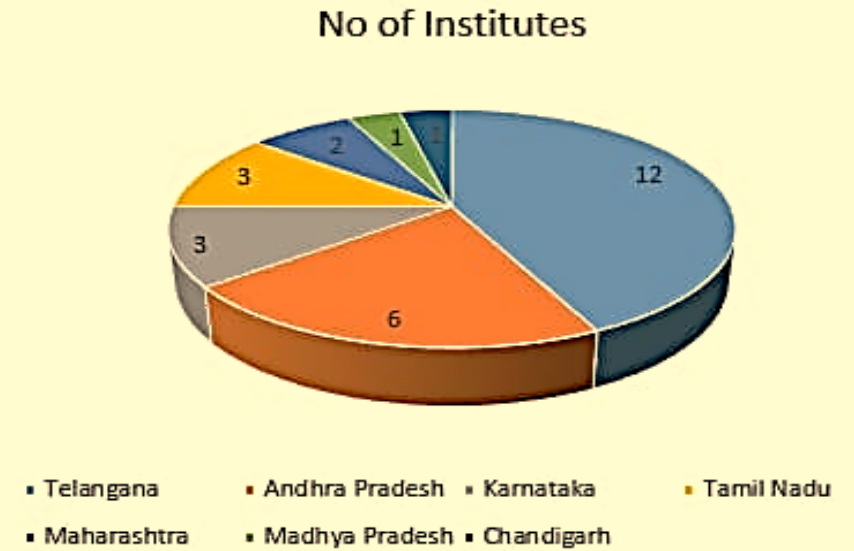
- Mr. Rajkumar D Bhure, Associate Professor**
- Mrs. Kiran Pakmode, Assistant Professor**

# Registration/Acceptance status

State	No of papers	State	No of Institutes
Telangana	30	Telangana	12
Andhra Pradesh	20	Andhra Pradesh	6
Karnataka	15	Karnataka	3
Tamil Nadu	10	Tamil Nadu	3
Maharashtra	5	Maharashtra	2
Madhya Pradesh	1	Madhya Pradesh	1
Chandigarh	3	Chandigarh	1



Total paper Received-84



Accepted/ Registration -40



**Inauguration of DISC-2024 by Keynote Speakers and guest of Honor**



**Dr. Sayan Chatterjee, Professor, Department of ETE, Jadavpur University.-key Note speaker**





**Dr. Vijay Kumar Agarwal, Scientist "E" DRDL Hyderabad-addressing key note speech.**



**Dr. Vijay Kumar Agarwal, Scientist "E" DRDL Hyderabad-guest of Honor on valedictory function.**



**Professor Arun kumar Pujari, HOD of AI & CSE, Advisor & Professor Emeritus Mahendra University-addressing the Gathering**



**Prof. V. Ramgopal Rao, Former Director, IIT Delhi and Group Vice-Chancellor, BITS Pilani Campuses-Key note Speaker**

# Glimpses

