

## Expert Lecture on "Applications of IoT Systems for Environmental Monitoring"

Organized by CSE Department on 04-10-2024

An expert lecture on the topic "Applications of IoT Systems for Environmental Monitoring" was organized on 14th October 2024 by the CSE and Electronics Departments at the university auditorium. The keynote speaker, Dr. Shubhankar Majumdar, Assistant Professor in the Electronics Department at the National Institute of Technology (NIT) Meghalaya, provided an in-depth discussion on the innovations happening in environmental monitoring through IoT (Internet of Things). He explained how IoT systems can help monitor environmental changes such as air quality, water quality, temperature, humidity, and pollution levels.

This session proved to be highly informative for both students and faculty, raising awareness about the importance and potential of IoT in environmental monitoring.

The program was attended by Prof. Manish Ahirwar (Head of CSE Department), Dr. Piyush Kumar Shukla, Associate Professor (CSE Department), and Dr. Sanjay Sharma (Head of EC Department), who shared their insights on the development of IoT in this field and its future impacts.

All the students from both departments were present at the event.

## Three-Day Short-Term Training Program on "Programming in JAVA"

Organized in CSE Department on 08-10-2024

A three-day Short-Term Training Program (STTP) on "Programming in JAVA" was organized for the students of the 3rd semester in the CSE Department from 08th to 10th October 2024. During this program, students were taught JAVA programming and were also instructed on how to create some projects using JAVA.



Placements in the Department	
Package	Number of Students
11 - 18 LPA	06
6 - 11 LPA	24
4 - 6 LPA	18
2 - 4 LPA	16

List of Students selected in GATE/CAT/GRE			
Batch 2020-2024			
S.No	Enrol No.	Name	Exam Details
1	0101CS201007	Aditya Singh	GATE
2	0101CS201015	Aniket Asati	GATE
3	0101CS201019	Ankit Chouhan	GATE
4	0101CS201035	Darshan Patil	GATE
5	0101CS201038	Deespesh Patel	GATE
6	0101CS201089	Pranjal Khare	GATE
7	0101EC201134	Tapish Patidar	GATE
8	0101CS201010	Akansh Gwalwanshi	GATE
9	0101CS201130	Vaibhav Patidar	GATE
10	0101CS201110	Saloni Onkar	GATE
11	0101CS201032	Ayush Jain	GATE
12	0101CS201004	Adarsh Bharthare	GATE
13	0101CS201002	Aastha Shrivastava	GRE

### Publication News :

1. Book published of Dr. Manish Ahirwar, Prof. Uday Chourasia named as "Data Science and Analytics" in Book rivers.
2. Book published of Dr. Piyush Kumar Shukla named as "Intelligent Sensor Node Based Systems Applications in Engineering and Science" in Press-CRC Press Taylor & Francis Group.
3. Paper published in 6 Research papers in Scopus, 10 Papers in SCIE ,and 5 papers in UGC Journals.

## NCC Event at UIT RGPV: 24-11-2024

An Inspirational Step Towards a Healthy India – Marathon

On the occasion of the 76th anniversary of NCC, the NCC unit of UIT RGPV organized a 5 km marathon. A total of 74 participants enthusiastically took part in this event. The marathon was held with the aim of raising awareness about a healthy lifestyle and fitness. On this occasion, NCC officers Lieutenant Dr. Kaustubh Dwivedi, Brijendra Kumar, Dr. Sanjay Sharma (Head of Department), Dr. Manish Ahirwar, and Dr. Manoj Pandey (APJ Hostel Superintendent) encouraged the participants. They emphasized that such events promote discipline, endurance, and physical fitness among youth. Staying fit and healthy is essential not only for students but for society as a whole. At the end of the marathon, the winners were honored with medals and certificates.

## Expert Lecture on "Real-Life Applications of Mathematics in Computer Science & Engineering" 08-10-2024

Dr. Piyush Kumar Shukla, Post Doctorate (Computer Engineering), Ph.D. (CSE), Honorary Adjunct Professor, Kunsan National University, South Korea, and Associate Professor, Department of CSE, UIT-RGPV, Bhopal, M.P., India.

Event: JAGRAN SCHOOL OF ENGINEERING (JSEN), JAGRAN LAKECITY UNIVERSITY, Bhopal, Madhya Pradesh, India.

Mathematics plays a pivotal role in shaping modern Computer Science & Engineering (CSE). Dr. Piyush Kumar Shukla explores how various mathematical concepts are applied to solve complex engineering problems in real-world scenarios. Mathematics is not just a theoretical field, but a tool that drives advancements in computer science.

Dr. Piyush Kumar Shukla's Contribution: As a renowned expert and recognized as one of the world's top 2% scientists by Stanford and Elsevier, Dr. Shukla continues to contribute to the academic and practical applications of mathematics in computer science. His work bridges the gap between theoretical mathematics and its real-world implementation in modern technologies.

This discussion highlights the profound and often overlooked connection between mathematics and computer science, emphasizing its significance in the continued development and success of technology in our daily lives.



### Department of Computer Science & Engineering

**Editors :** Prof. Uday Chourasia, Prof. Manish Ahirwar, Prof. Shikha Agarwal, Prof. Piyush Shukla, Prof. Raju Baraskar, Prof. Rajeev Pandey

**Student Coordinators :** 1. Abhishek Dixit, 2. Aditi Tiwari, 3. Gourav Mishra, 4. Anand Shukla

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## CSE-UIT RGPV @Newsletter-2024



# Department of Computer Science & Engineering UIT RGPV Bhopal

Nov- 2024



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## Engineers' Day - Innovations Benefiting Society

Date: 15-09-2024

Indore is making strides in engineering innovations, with local engineers contributing significantly to groundbreaking research that benefits not just the city but the entire country. During the challenging times of the COVID-19 pandemic, when resources were in high demand, engineers from Indore worked tirelessly to develop innovative solutions, working from home and college labs. Their work continues to impact various sectors, and on Engineers' Day, we take a look at some of these exciting new researches.

AI Chip for Unlimited Data Storage

Prof. Dr. Santosh Vishwakarma and his team from IIT Indore's Electrical Engineering and Centre for Advanced Electronics have been working on a revolutionary AI computing chip for the last two years. This chip will not only improve self-driving cars by eliminating errors but will also reduce the dependency on cloud servers. Dr. Santosh explained that current machines often face delays when they need to make fast decisions, especially when retrieving data from cloud servers. This new AI chip will process data much faster, potentially in a fraction of a second, and make cloud servers redundant in certain situations. The chip's development is expected to be patented soon and, after further refinement, will be commercialized, providing significant growth in the semiconductor sector.

AI for Waste Segregation

Professor Pooja Gupta from SGSITS, who previously worked on innovations such as automatic sanitizer dispensers and UV machines for disinfecting food during the pandemic, has developed a new AI-powered solution for waste segregation. Collaborating with Prof. Upendra, Prof. Piyush Shukla from RGPV, and Amit Chaudhary, a researcher at Harvard University, they have designed an automatic waste segregation system using AI, ML, image processing, and sensor technologies. This system can effectively separate wet and dry waste, as well as glass, plastic, and biodegradable waste. The project is called "Automatic Garbage Segregation," and it aims to address the city's ongoing struggle with mixed waste. The system uses high-quality cameras and AI-ML to accurately identify and sort different types of waste materials.

These innovations showcase how engineering is making significant contributions to societal needs, from AI advancements in cloud computing to solutions for efficient waste management, demonstrating the ever-expanding role of technology in improving our daily lives.

## Vision and Mission of the Institute and Department

### Vision of Institute:

To disseminate affordable quality technical education for producing globally competent, technically proficient and socially responsible technical manpower to meet global challenges.

### Mission of Institute:

To establish University Institute of Technology, RGPV, Bhopal as a centre of excellence for imparting technical education through technological interventions for the sustainable development of the nation.

### Vision of Department:

To nurture and enlighten the budding talents into socially committed & dexterous Computer Science & Engineering professionals, possessing a robust foundation and adaptable attitude for rapid technological advancements in the field along with sustainable ethical values, to meet global challenges.

### Mission of Department:

**M1:** To persistently endeavor for the consistent development of student by providing them robust foundation in knowledge arena by enabling to imbibe the very essence and philosophy of computer science & engineering domain.

**M2:** To continuously strive for the overall development of student by educating them in blooming cutting edge technology.

**M3:** To curate a conducive environment for exploring, analyzing and applying knowledge to improve technical & interpersonal skills of student.

**M4:** To inculcate ethics, environmental awareness and societal commitment which will contribute to personal and professional growth in the interest of society.

**M5:** To provide conducive environment for exploring and applying knowledge to improve interpersonal and technical skills.

### Program Educational Objectives Statement (PEOs)

**PEO1:** To Attain professional competency in the fast growing area of computer science & engineering.

**PEO2:** To be able to apply knowledge of basis science and core engineering to pursue higher education, research and also able to work in competitive multidisciplinary environment.

**PEO3:** To flourish as a socially committed computer science & engineering grandaunt, possessing state of the art domain knowledge, entrepreneurial skill, problem solving & research attitude, good.

### Program Specific Outcomes (PSO's)

**PSO1:** Have you ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, network security, IoT and networking for efficient design of computer-based systems of varying?

**PSO2:** Are you able to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success?

**PSO3:** Have you ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, and a zest for higher studies.



*"Learn everything that is good from others, but bring it in, and in your own way absorb it; do not become others."  
"Whatever you think that you will be. If you think yourself weak, weak you will be; if you think yourself strong, you will be."*

- Swami Vivekananda

## TREE PLANTATION PROGRAM ON NEW YEAR CELEBRATION 01-01-2024

A tree plantation program was organized in the CSE department of UIT RGPV on the occasion of the New Year celebration. On this occasion, students and teachers collectively planted several saplings. The program was organized with the aim of environmental conservation and reducing pollution.

The chief guests of the program were Prof. Sunil Kumar Gupta (Pro Vice Chancellor), Prof. Sudhir Singh Bhadoriya (Director), Prof. Prashant Jain (Controller of Examinations), and Prof. Prabhat Patel (Deputy Registrar, Examinations). All the faculty members, staff, and students of the CSE department participated in the event. They spoke to the students about the importance of environmental conservation and encouraged them to plant more trees.

During the program, the students planted various types of plants and also took responsibility for the care of the plants.

The objective of the program was not only to spread awareness about environmental conservation but also to inspire students to become responsible citizens towards the environment.

At the end of the program, Prof. Manish Ahirwar (Head of the CSE Department), Prof. Uday Chaurasia, Prof. Piyush Shukla, and others congratulated the students for their hard work and dedication and encouraged them to continue working for environmental conservation in the future.



## Rajiv Gandhi Technological University Family Celebrates

### 75th Republic Day - 26th January 2024

On 26th January 2024, Rajiv Gandhi Technological University and the Technical Teachers' Association family celebrated the 75th Republic Day. On this occasion, the university family sang patriotic songs and respectfully hoisted the national flag.

The Vice-Chancellor of the university and other distinguished guests paid tribute to the martyrs who sacrificed their lives for the country's independence and the establishment of the Republic. They appealed to the citizens of the country to work towards maintaining the unity and integrity of the nation.

The university family organized various cultural programs, including patriotic songs, dance, and drama. These performances filled the audience with a strong sense of patriotism.



## Program on Swami Vivekananda Jayanti (Youth Day)

### at UIT RGPV's CSE Department 12-01-2024

A program was organized in the CSE department of UIT RGPV on the occasion of Swami Vivekananda Jayanti (Youth Day) on 12th January 2024. On this occasion, various faculty members addressed the youth and highlighted the ideals and thoughts of Swami Vivekananda.

Prof. Manish Ahirwar (Head of the CSE Department) discussed the life and messages of Swami Vivekananda. He said, "Swami Vivekananda ji gave us the message of self-confidence, courage, and endurance."

Prof. Uday Chaurasia inspired the youth to incorporate Swami Vivekananda's thoughts into their lives. He said, "Swami Vivekananda ji taught us that we must work hard to achieve our goals and never give up."

Prof. Raju Barskar motivated the youth to adopt Swami Vivekananda's ideals in their lives. He said, "Swami Vivekananda ji taught us that we should work for our society and nation and serve them."

Prof. Rajeev Pandey encouraged the youth to practically apply Swami Vivekananda's thoughts in their lives. He said, "Swami Vivekananda ji taught us to maintain balance in our lives and continuously strive to achieve our goals."

At the end of the program, the youth took a pledge to incorporate the ideals and thoughts of Swami Vivekananda into their lives.



## Students of the CSE Department, UIT RGPV Bhopal Excel in GATE 2024



Students from the Computer Science and Engineering (CSE) Department at UIT, RGPV Bhopal have delivered an outstanding performance in the GATE 2024 exam. This year, the university's students achieved impressive scores in various subjects, which not only enhance the university's reputation but also open new doors to career opportunities.

The Graduate Aptitude Test in Engineering (GATE), a key entrance exam for Indian engineering graduates, saw CSE students showcasing their hard work and dedication. The remarkable results have provided students with opportunities for higher education in prestigious institutions such as IITs and NITs.

Dr. Manish Ahirwar, Head of the CSE Department, expressed pride in this achievement, saying, "Our students have performed excellently in GATE 2024 through their hard work and dedication. This is the result of the continuous guidance from our teachers and the students' commitment. We wish them all the best for their future endeavors."

Professor Piyush Kumar Shukla, Professor Rajeev Pandey, Professor Raju Baraskar, and Professor Uday Chourasia also appreciated the students' success and congratulated them.

The students credited their success to the university's educational environment, training programs, and the ongoing support of the faculty. The successful students of GATE 2024 described it as the outcome of their hard work and dedication, with aspirations to reach even greater heights in the future.

Following this success, CSE department students are excited about the career opportunities ahead and are moving towards securing admissions in several top-tier institutions.



## Motivational Program for Newly Admitted Students in the CSE Department

A motivational program was organized for the newly admitted students in the CSE department. During this event, the students participated in a tree plantation program aimed at raising awareness about environmental conservation. The students planted various saplings on the campus and took a pledge to protect the environment.

On this occasion, the department's head, Dr. Manish Ahirwar, Mr. Uday Chaurasia, Associate Professor Raju Barskar, Associate Professor Shikha Agarwal, and all faculty members of the CSE department addressed the newly admitted students.

Dr. Manish Ahirwar wished the students success as they begin their academic journey and motivated them to achieve their goals. Mr. Uday Chaurasia introduced the students to the academic environment and available resources in the CSE department. Associate Professors Raju Barskar and Shikha Agarwal encouraged the students to set their goals and move forward with self-confidence.

This event served as an inspiration for the students, making them aware of their academic and social responsibilities while motivating them to contribute to the creation of a healthy and green environment.



plantation event at the Computer Science and Engineering (CSE) department of the University Institute of Technology (UIT), Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV), Bhopal: On the occasion of the orientation program, the CSE department of UIT RGPV Bhopal organized a plantation event. The event aimed to promote environmental awareness and encourage students to take an active role in preserving nature.

## Garba Celebration Organized in the CSE Department on 03-10-2024

A cultural program was organized in the CSE department on the occasion of Navratri. To introduce students to Indian culture, a Garba dance event was held under the guidance of the CSE department. The main objective of this event was to connect students with Indian culture and the traditions of Navratri.

Garba means "womb" or "inner lamp," and it symbolizes the worship of Goddess Durga and the divine feminine energy. During the nine days of Navratri, people light lamps in clay pots, called "Garbi," which are believed to symbolize the strength and energy of Goddess Durga, and Garba dance is performed around these pots.

Students and faculty members participated in this event with great enthusiasm and devotion, celebrating this important aspect of Indian culture.

Such events not only give students an opportunity to connect with their culture but also promote social and cultural harmony.



## Teacher's Day Celebration: 05-09-2024

Teacher's Day was celebrated with great enthusiasm in the Department of Computer Science and Engineering (CSE) at UIT (University Institute of Technology), RGPV Bhopal. This event served as an important occasion for students to express their gratitude and respect towards their teachers.

On this occasion, Dr. Manish Ahirwar, Head of the CSE Department, stated, "Teacher's Day is a day to express our reverence and gratitude towards our teachers. We celebrate this day by thanking them for their hard work and dedication."

The ceremony was attended by a large number of students, faculty, and staff members. The event became a memorable and inspirational day for the entire institution, offering everyone the opportunity to understand and reflect on the importance of education.

This year, the Teacher's Day celebration was organized under the leadership of Dr. Manish Ahirwar (HOD, CSE). The event was graced by prominent faculty members including Professor Piyush Kumar Shukla, Professor Rajeev Pandey, Professor Raju Baraskar, Professor Uday Chourasia, and all the department faculty members.



### स्वस्थ भारत की दिशा में एक प्रेरणादायक कदम मेराथन