



April-June 2023

CLAIRVOYANCE

DEPARTMENT OF
INFORMATION TECHNOLOGY

E-NEWSLETTER

MADHAV INSTITUTE OF TECHNOLOGY
& SCIENCE, GWALIOR

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Award/Prize/ Recognition by Faculty Members

- **Dr. Tej Singh, Assistant Professor, IT**, recognized as “NPTEL Enthusiast and NPTEL Believer ” for the Jan-Jul 2023 academic session from IIT, Madras.

Talk Delivered Outside the Institute

- **Dr. Saumil Maheshwari, Assistant Professor, IT** delivered a lecture on “Digital India” at Govt. PG college Guna on 27th June 2023.
- **Dr. Sanjiv Sharma, Assistant Professor, IT** delivered a lecture on the track “Digital India” at Govt. PG college Guna on 27th June 2023.

FDP/STC Attended (Outside the Institute)

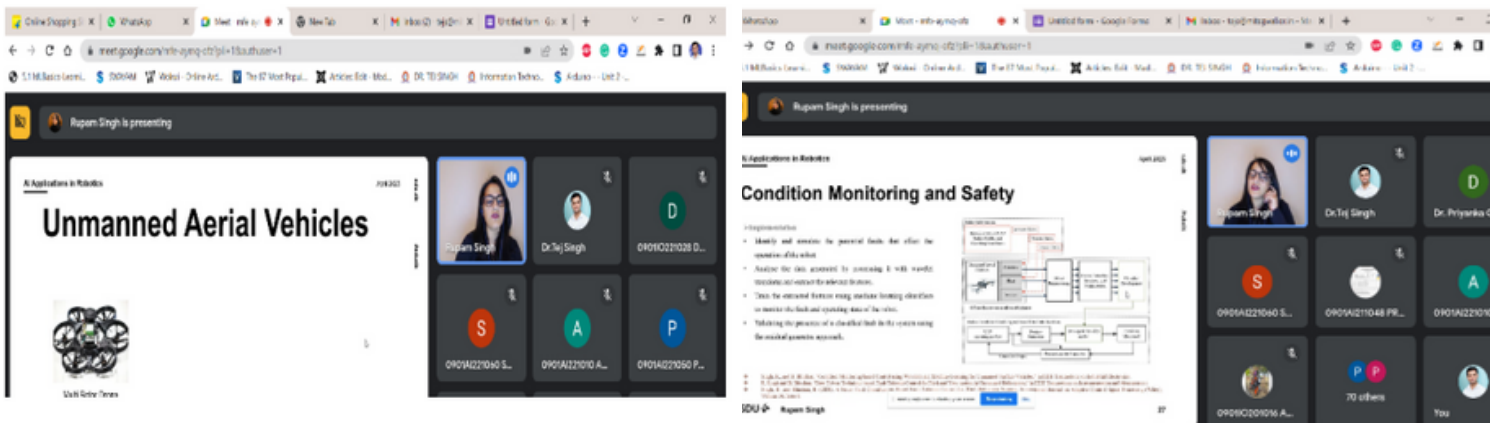
- **Dr. Tej Singh** attended the STC on "Recent Trends in Machine Learning and Deep Learning for AI Applications" being organized in the Department of IT, DTU from 5th to 9th June, 2023.
- **Dr. Aditya Dubey** attended Faculty Development Program on "INTELLECTUAL PROPERTY RIGHTS" from 22/05/2023 to 26/05/2023 organised by Dr. MGR University.
- **Dr. Aditya Dubey** attended Faculty Development Program on "Applications of Technology in Environmental Sustainability from 17/04/2023 to 21/04/2023 organised by NITTTR, Chandigarh.
- **Dr. Aditya Dubey** attended Faculty Development Program on “Open Source Technologies from 24/04/2023 to 28/04/2023 organised by NITTTR, Chandigarh.

- **Dr. Aditya Dubey** attended Faculty Development Program on “Green Energy Materials and Technology” from 01/05/2023 to 05/05/2023 organised by NITTTR, Chandigarh
- **Dr. Aditya Dubey** attended Faculty Development Program on “Smart Materials and Nanotechnology” from 15/05/2023 to 19/05/2023 organised by NITTTR, Chandigarh
- **Dr. Aditya Dubey** attended Faculty Development Program on “Evaluation and Setting of Question Papers” from 08/05/2023 to 12/05/2023 organised by NITTTR, Chandigarh
- **Dr. Aditya Dubey** attended Faculty Development Program on “Technology Integration and NEP 2020” from 12/06/2023 to 16/06/2023 organised by NITTTR, Chandigarh
- **Dr. Aditya Dubey** attended Short Term Training Programme on “21ST CENTURY COMMUNICATION THROUGH DIGITAL MODE (APPS AND GADGETS)” from 05/06/2023 to 09/06/2023 organised by NITTTR, Bhopal
- **Dr. Dhananjay Bisen** attended 5-Day workshop on Applied Mathematics and Computing (12-16 June 2023) organized by Department of Mathematics and computing, MITS Gwalior.
- **Ms. Shubha Mishra** attended a 5- day Short Term Training Program on Security & Privacy Trends in IoT (12-17 May 2023) organized by Department of Computer Science & Engineering, NIT Patna.
- **Dr. Aditya Dubey** attended Training on “Child Protection and Child Rights in Disasters and Emergencies from 19 Jun 2023 to 21 Jun 2023 organised by National Institute of Disaster Management, Ministry of Home Affairs, Government of India in collaboration with University of Kashmir

- **Dr. Aditya Dubey** attended Training on “GIS Mapping for Disaster Mitigation and Risk Reduction” from 09 May 2023 to 11 May 2023 organised by National Institute of Disaster Management, Ministry of Home Affairs, Government of India in collaboration with Miranda House - University of Delhi

Expert Talk organized at Institute Level

- **Dr. Tej Singh**, organized an online International level expert talk on the topic “**Application of AI in Robotics**” by **Dr Rupam Singh**, Assistant Professor, SDU, Denmark on **05-04-2023**.



Book Chapter Published

- Shrivastava, S., **Johari, P.K.** (2023). Analysis of Wormhole Attack Detection in Customized Ad Hoc Network. In: Saraswat, M., Chowdhury, C., Kumar Mandal, C., Gandomi, A.H. (eds) Proceedings of International Conference on Data Science and Applications. Lecture Notes in Networks and Systems, vol 551. Springer, Singapore. https://doi.org/10.1007/978-981-19-6631-6_57

"Life is like riding a bicycle. To keep your balance, you must keep moving." - Albert Einstein

NPTEL/ATAL/COURSERA/INTERNSHALA course attended by the faculty

- **Dr. Aditya Dubey** Completed one subject Introduction to Automata, Languages and computation conducted by NPTEL (Jan-Apr 2023) with FDP.
- **Dr. Dhananjay Bisen** Successfully completed 8 modules of NITTT 2023 (AICTE approved)
- **Dr. Vibha Tiwari** successfully completed two NPTEL-AICTE FDP courses , Joy of computing using Python and Data analytics using Python.
- **Dr. Bhagat Singh Raghuwanshi** Successfully completed 8 modules of NITTT 2023 (AICTE approved)
- **Dr. Tej Singh** has successfully completed (05) NPTEL/NITTT with FDP courses : 1. Introduction to IoT 2. Effective Writing 3. Teaching and Learning 4. Yoga and Positivity for Managing Carrer and Life 5. Professional Ethics and Sustainability.
- **Dr. Priyanka Garg** has successfully completed (02) NPTEL with FDP courses : 1. Introduction to IoT 2. Foundation of Cloud IoT Edge ML.
- **Dr. Kritika Bansal** has successfully completed (03) NPTEL with FDP courses : 1. Introduction to IoT 2. Control Engineering 3. Machine Learning.
- **Dr. Aditya Dubey** successfully completed Course on “Creating Responsive Web Pages using Bootstrap 4” and “CSS3” on 03/06/2023 organised by Infosys
- **Dr. Nookala Venu**, Assistant Professor, IT successfully completed Two NPTEL-AICTE FDP courses , Data Mining and Data Analytics with Python.

**"Genius is one percent inspiration and ninety-nine percent perspiration."
- Thomas Edison**

Student Club Activities organized

- Skyroads club has Conducted & hosted "Valorant Rumble," dated 01/04/2023 uniting 40+ students in 8 teams from different institutes. The tournament showcased impressive gaming skills, attracting 250+ views on YouTube. A cash prize of 1200 Rs. was awarded, and participants received certificates under the coordinatorship of Neha Bhardwaj.
- Skyroads Gaming Club has Conducted & hosted "BGMI Showdown," dated 16/04/2023 gathering 80+ students in 20 teams for a competitive online battle in BGMI. Impressive gaming skills were on display, attracting 300+ YouTube views. The cash prize pool of 1500 Rs. was distributed among the top teams, and participation certificates were awarded under the coordinatorship of Neha Bhardwaj.
- Skyroads Gaming Club organized the successful "BGMI Scrims" event at MITS Gwalior on 22/04/2023. With 76 skilled players in 19 teams, the tournament showcased impressive gameplay. The live-streamed event had 300+ views and 20+ concurrent viewers. Winner certificates were awarded to the top 3 teams, creating a memorable experience for all participants. The event was coordinated by Prof. Neha Bhardwaj.
- Skyroads Gaming Club has Conducted & hosted the successful "TDM Tournament" at MITS Gwalior, on 28/04/2023 attracting 48 skilled players. The event featured solo and squad rounds of intense competition in BGMI. Live-streamed with 400+ views, winners received cash prizes and certificates. The event was coordinated by Prof. Neha Bhardwaj.

Latest Technologies

Quantum Computing: Pioneering the Future of Computation

In recent years, one groundbreaking technology that has captured the imagination of scientists, engineers, and enthusiasts alike is quantum computing. Quantum computing is an emerging field that harnesses the principles of quantum mechanics to perform computations beyond the capabilities of classical computers. Unlike classical bits used in traditional computing, which represent either a 0 or a 1, quantum bits or qubits can exist in multiple states simultaneously, thanks to superposition and entanglement.

The potential of quantum computing is staggering, promising to revolutionize various industries, from cryptography and drug discovery to optimization problems and artificial intelligence. As quantum processors become more powerful and stable, they offer the ability to solve complex problems that are practically infeasible for classical computers.

One of the most significant achievements in quantum computing has been the creation of quantum computers with a sufficient number of qubits to outperform classical supercomputers in specific tasks. Tech giants and specialized startups have been fiercely competing to develop quantum processors with increasing qubit counts, enhancing their error-correction techniques, and improving overall performance.

Quantum computing is not without its challenges, though. Building and maintaining quantum computers require extreme precision and a controlled environment to avoid decoherence, which disrupts the delicate quantum states. Moreover, creating fault-tolerant quantum circuits is essential for error-free computations, and research is ongoing in this area.

As researchers and engineers make strides in quantum computing, they are also exploring its potential impact on artificial intelligence and machine learning. Quantum machine learning algorithms offer the promise of faster and more efficient data processing, unlocking new insights and discoveries.

Furthermore, quantum communication is another fascinating aspect of this technology. Quantum key distribution, based on the principles of quantum entanglement, provides unbreakable encryption, ensuring data security in a world threatened by quantum computing's potential to crack classical encryption methods.

While quantum computing is still in its nascent stages, the strides made in this field have ignited a technological race to achieve "quantum supremacy" — the point at which quantum computers can solve problems that are practically impossible for classical computers to tackle within a reasonable timeframe.

In conclusion, quantum computing holds tremendous promise for reshaping the technological landscape. As researchers overcome existing challenges and unlock the full potential of quantum computers, the implications for various industries and scientific disciplines will be profound, leading us into a new era of computation and problem-solving. The future of technology is undeniably entwined with the mind-bending world of quantum computing.

**"If you want to live a happy life, tie it to a goal, not to people or things."
- Albert Einstein**