Events Organised by CSE Department

Name of the Event: My Story- Motivational Session

Type of Event: Webinar/Workshop

Date of Event:

25/02/2025

Organisers:

Prof. Manoj Kumar(HOD), Dr. Pawan Singh Mehra, Dr. Anurag Goel

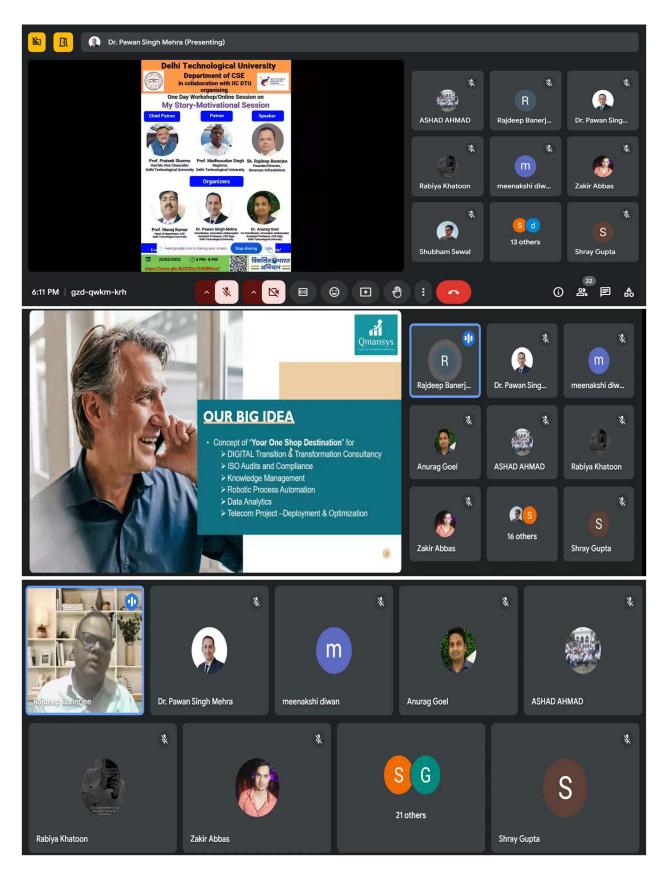
Brief Summary:

The Department of Computer Science and Engineering at Delhi Technological University, in collaboration with the Institute's Innovation Council, successfully conducted a motivational session titled "My Story" featuring Mr. Rajdeep Banerjee, Founder & Director of Qmansys Infosolutions. The event, organized under the guidance of Prof. Manoj Kumar (Head, CSE), Dr. Pawan Singh Mehra, and Dr. Anurag Goel, provided valuable insights into entrepreneurial success.

Mr. Banerjee, with his 20 years of telecom industry experience and notable certifications including ITIL 6 and Six Sigma Black Belt, shared his inspiring journey of establishing Qmansys in 2019. He candidly discussed the initial challenges, including revenue generation difficulties and pandemic disruptions, and how strategic pivots to AI-based solutions led to their first major deal with Ericsson in 2020. The company's subsequent expansion into 5G deployment partnerships and EV infrastructure development, achieving ₹100 CR revenue by 2022, demonstrated remarkable growth.

Mr. Banerjee emphasized five crucial lessons for entrepreneurs: domain expertise, adaptability, strategic networking, financial prudence, and impactful innovation. The interactive session concluded with practical advice on navigating startup challenges, leaving attendees with actionable insights and motivation to pursue their entrepreneurial aspirations.

This session effectively showcased how perseverance, innovation, and strategic partnerships can transform challenges into opportunities, aligning perfectly with DTU's mission to foster entrepreneurship among students and faculty. The department plans to organize more such inspiring sessions to strengthen the innovation ecosystem.



A Workshop on Recent Innovations in Quantum Cryptography

Type of Event:

Workshop

Date of Event:

14/08/2024

Organisers:

Prof. Vinod Kumar (HOD), Prof. Manoj Kumar(Dy. HOD), Dr. Pawan Singh Mehra, Dr. Anurag Goel

Brief Summary:

The Department of Computer Science and Engineering (CSE) at Delhi Technological University (DTU), in collaboration with the Institution Innovation Council (IIC), hosted a one-day workshop on "Recent Innovations in Quantum Cryptography" on 14th August 2024. The event brought together students, researchers, and faculty to explore advancements in quantum cryptography and its role in secure communication.

Dr. Akshi Kumar (Associate Professor, Goldsmiths, University of London), an expert in AI and quantum computing, delivered the first session. She discussed the synergy between AI and quantum cryptography, highlighting how AI algorithms could optimize quantum cryptographic protocols for enhanced cybersecurity. Her talk addressed current research trends, practical applications, and challenges like computational complexity and algorithm robustness in quantum environments. The interactive session sparked engaging discussions with attendees.

Dr. Om Pal (Associate Professor, University of Delhi), a distinguished researcher in quantum cryptography, led the second session. He focused on innovations in quantum key distribution (QKD), covering theoretical foundations, implementation hurdles, and real-world applications. Dr. Pal also analyzed vulnerabilities in existing methods and proposed mitigation strategies, supported by case studies.

The workshop saw active participation, with attendees keenly exploring the intersection of quantum cryptography and AI. It provided a platform for networking and collaboration, fostering a deeper understanding of the field's potential and challenges. The event underscored DTU's commitment to cutting-edge research and innovation, leaving participants inspired to contribute to this transformative domain.

<u>Glimpses</u>



Summer School on AI: Deep Dive into Deep Learning

Type of Event:

4 weeks Summer School for students

Date of Event:

10 June 2024 to 19 July 2024

Organisers:

Prof. Anil Singh Parihar, Dr. Kavinder Singh

Brief Summary:

The Department of Computer Science and Engineering organized a summer school titled "Deep Dive into Deep Learning" from 10 June 2024 to 19 July 2024. The program was designed to provide participants with an in-depth understanding of deep learning concepts, tools, and applications. It aimed to bridge the gap between theoretical knowledge and practical implementation, catering to both beginners and those with prior experience in the field.

Objectives:

- To introduce participants to the fundamentals of deep learning and its underlying mathematical concepts.
- To provide hands-on experience with popular deep learning frameworks such as TensorFlow and PyTorch.
- To explore advanced topics like Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Generative Adversarial Networks (GANs), and Transformers.
- To encourage participants to apply deep learning techniques to real-world problems through project-based learning.

Program Structure

The summer school was structured over six weeks, with a combination of lectures, practical sessions, and project work. The schedule was as follows:

- Week 1: Introduction to Deep Learning and Neural Networks
- Week 2: Convolutional Neural Networks (CNNs)
- Week 3: Recurrent Neural Networks (RNNs) and Sequence Models
- Week 4: GPT and Image captioning
- Week 5: Generative Models and GANs
- Week 6: Action recognition and Vision-Language models

Each week included:

- Lectures: Delivered by experts in the field, covering theoretical aspects.
- Practical Sessions: Hands-on coding sessions where participants implemented various deep learning models.

• Group Projects: Participants worked in groups to solve real-world problems using deep learning techniques.

Outcomes:

- Skill Development: Participants gained a solid foundation in deep learning and practical skills in using deep learning frameworks.
- Projects: Several innovative projects were developed during the summer school, showcasing the application of deep learning to various domains.
- Networking: The event provided a platform for participants to network with peers, faculty, and industry experts, fostering collaborations.

Photographs:



Online Session on World Quantum Day Celebration

Type of Event: Seminar

Date of Event:

15/05/2024

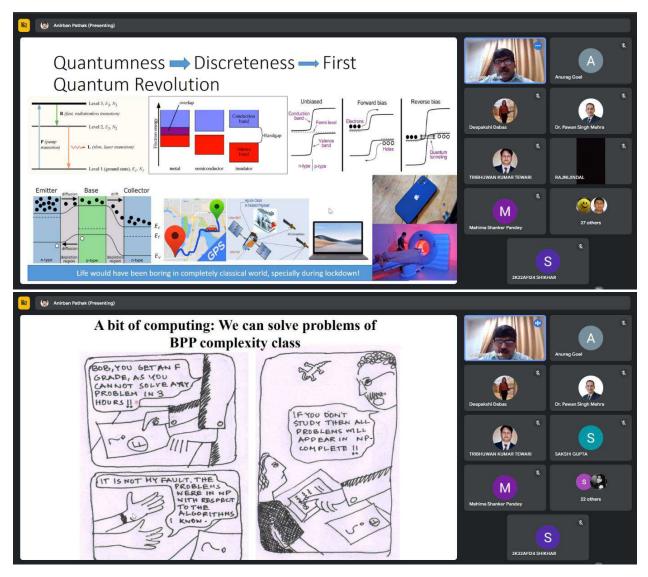
Organisers:

Prof. Vinod Kumar, Dr. Pawan Singh Mehra, Dr. Anurag Goel

Brief Summary:

The "World Quantum Day" seminar at Delhi Technological University (DTU) was a well-organized event featuring prominent figures such as Professor Prateek Sharma, Professor Madhusudan Singh, and Anirban Pathak. The seminar aimed to explore the advancements and potential of quantum computing, with an introductory speech by Dr. Rajni Jindal setting the tone for a day of insightful discussions and presentations. The seminar was organized by Professor Vinod Kumar, Dr. Pawan Singh, and Dr. Anurag Goel, who ensured a smooth flow of events. Anirban Pathak's main presentation, titled "An Introduction to Second Quantum Revolution," was the highlight of the seminar. Pathak discussed a range of topics, including recent news in quantum computing, resources available for students, and a basic understanding of quantum technology's unique aspects. He also provided a historical perspective on the first quantum revolution and explained India's growing interest in quantum technologies. Pathak covered the various classes of problems that quantum computing can solve, detailed the functionality of quantum and qubit gates, and explored the significant intersection of quantum computing and cryptography. Additionally, he discussed how quantum computing could potentially revolutionize the electoral process in India. The seminar concluded with a vote of thanks by Dr. Anurag Goel, who appreciated the contributions of the speakers and organizers, as well as the active participation of the attendees. The event was noted for its comprehensive coverage of quantum computing topics, enriched with diagrams and humor-filled comics that made complex subjects more accessible. Overall, the seminar provided valuable insights into the second quantum revolution and emphasized the importance of quantum technologies, particularly in the context of India's strategic initiatives in this field.





Introduction to High Performance Computing (HPC) and Its Applications in Artificial Intelligence (AI)

Type of Event:

One week Short-term training program

Date of Event:

7 - 11 August 2023

Organisers:

Prof. Rahul Katarya, Dr. Virendra Ranga, Dr. Sanjay Kumar, Mr. Kavinder Singh, Ms. Trasha Gupta, Mr. Rohan Pillai

Brief Summary:

The Department of Computer Science & Engineering at Delhi Technological University successfully conducted a one-week online short-term training program on "Introduction to High Performance Computing (HPC) and Its Applications in Artificial Intelligence (AI)" from August 7–11, 2023 in collaboration with CDAC, Pune. The course aimed to educate participants on High performance computing with a focus on Applications in Artificial Intelligence. More than 60 participants, including students, academicians, and industry professionals, registered from across the country. Furthermore, the aim of the STTP is to develop a highly professional HPC-aware human resources at all levels for meeting the challenges of the development of HPC applications as well as for managing, monitoring and running such complex HPC systems.

From Day 1 to Day 3 the sessions are taken by the CDAC Pune team with a focus on management and access to HPC systems. In the last two days, researchers and industry professionals delivered their sessions on applications of HPC in Artificial Intelligence. The STTP included various hands-on sessions too for the participants to have the practical exposure.





Demystifying Intellectual Property For Research Integrity And Economic Development

Type of Event:

Five Days Short Term Course

Date of Event:

13 - 17, March, 2023

Organisers:

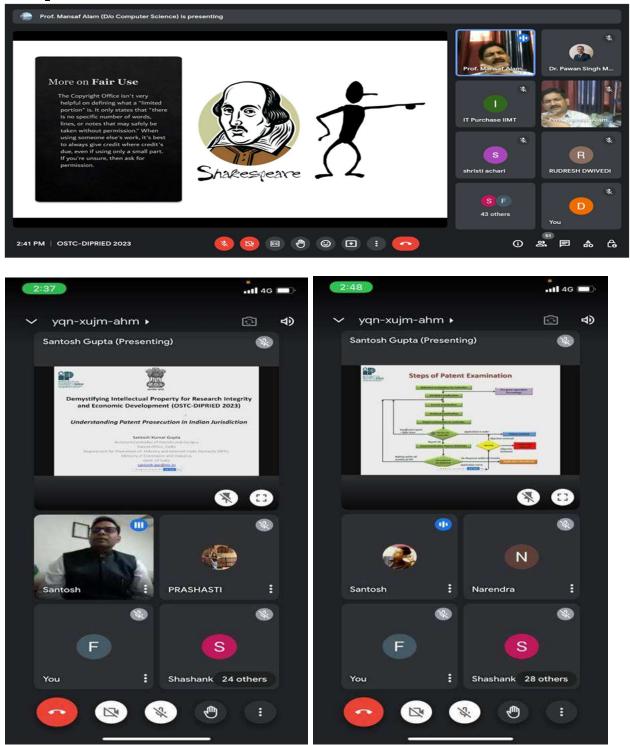
Dr. Vinod Kumar, Dr. Rajeev Kumar, Dr. Pawan Singh Mehra, Dr. Sanjay Kumar

Brief Summary:

The Department of Computer Science & Engineering at Delhi Technological University successfully conducted a one-week online short-term course on "Demystifying Intellectual Property for Research Integrity and Economic Development" from March 13–17, 2023. The course aimed to educate participants on intellectual property rights (IPRs) with a focus on Indian, U.S., and European laws, emphasizing ethical research practices, economic benefits, and the protection of ideas and inventions. A total of 136 participants, including students, academicians, and industry professionals, registered from across the country.

The course featured expert-led sessions covering diverse aspects of IPR. On Day 1, Mr. Kumar Anshu (Co-Founder, Bots 'N Brains) discussed bridging the industry-academia gap and IP's role in innovation. Dr. Rajeev Kumar (DTU) explained patentability criteria and global filing practices, while Mr. Gaurav Tripathi (Founder, Vayam) shared practical insights on IP creation and collaboration. Day 2 included sessions by Mr. Shyam Sundar Policetti (Kreativ Enerzie) on patent prosecution costs and requirements, and Mr. Santosh Gupta (Indian Patent Office) on non-patentable inventions under Indian law. Day 3 featured Ms. Chhavi Garg (Patent Examiner) on IPR in emerging technologies (AI, Big Data) and Prof. Mansaf Alam (JMI University) on copyright laws and fair use. Day 4 revisited patent prosecution in India, with Mr. Santosh Gupta detailing examination steps and expedited processes.

The course provided a comprehensive understanding of IPR, empowering participants to protect innovations ethically and leverage IP for economic growth. The sessions were highly interactive, combining theoretical knowledge with real-world applications, making it a valuable learning experience for all attendees.



Accelerators/Incubation-Opportunities for Students and Faculties

Type of Event:

Webinar/Workshop

Date of Event:

20/08/2022

Organisers:

Prof. Vinod Kumar(HoD), Dr. Pawan Singh Mehra, Dr. Ashish Girdhar

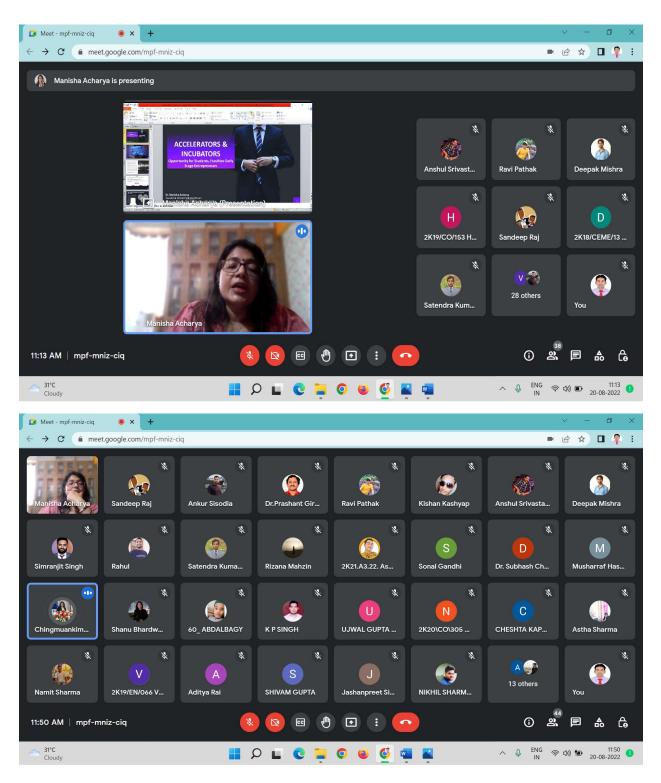
Brief Summary:

The Department of Computer Science and Engineering at Delhi Technological University (DTU) successfully organized a webinar on "Accelerators/Incubation Opportunities for Students and Faculties" on August 20, 2022, as part of the Institution's Innovation Council (IIC) initiative. The event was coordinated by Prof. Vinod Kumar (Head of Department), Dr. Pawan Singh Mehra, and Dr. Ashish Girdhar, and aimed to bridge the gap between academic research and entrepreneurial execution.

The webinar featured Dr. Manisha Acharya, a distinguished Startup Advisor and British Chevening CRISP Fellow from the University of Oxford, as the keynote speaker. With her extensive expertise in innovation ecosystems, Dr. Acharya delivered an insightful session on navigating startup accelerators and incubation programs. She elaborated on key strategies to access these platforms, emphasizing the importance of mentorship networks, funding opportunities, and government-supported initiatives like Startup India. Her presentation also highlighted success stories of academic projects transformed into viable startups, inspiring participants to explore commercialization pathways.

The interactive Q&A session enabled students and faculty to engage directly with Dr. Acharya, addressing queries on intellectual property rights, pitch deck preparation, and securing seed funding. Participants particularly appreciated the practical insights on aligning academic research with market needs, fostering a deeper understanding of technology transfer and industry collaboration.

The event received overwhelmingly positive feedback, with attendees praising its structured content and real-world applicability. As part of DTU's broader mission to cultivate innovation, this webinar reinforced the university's commitment to entrepreneurial education and industry-academia partnerships. Future initiatives will include hands-on workshops and mentorship programs to further support aspiring innovators.



NSAMARTH (Next generation Security and Analytics for Mobile Assisted RemoTe Healthcare)

Type of Event:

Webinar

Date of Event:

12-14, January, 2021

Organisers:

Dr. Aruna Bhat, Dr. Divyashikha Sethia, Ms. Minni Jain

Brief Summary:

The Department of Computer Science and Engineering, DTU, hosted NSAMARTH (Next generation Security and Analytics for Mobile Assisted RemoTe Healthcare) Virtual Webinar during January 12-14 2021. It consisted of technical sessions from eminent speakers from academia and industry to enlighten the students and faculty of DTU. The sessions highlighted the research and development related to high speed 5g communication, health management, health analytics, mobile healthcare and health security that are important to reimage future healthcare specially in India.

