MSIT CSE
NEWSLETTER

Aug-Dec 2022

TechnoPulse

This Newsletter showcases the achievements of the Computer Science Department of Maharaja Surajmal Institute of Technology.

The CSE Department has published numerous journal entries, patents, articles, books, and research on various topics from all walks of life. It also includes all the fun and educational events that were organized by the department faculty, students, and societies.

INSIDE THIS ISSUE

- **Student Achievements**
- **Publications by department faculty**
- **PHD Completions**
- **Event Gallery**

OUR VISION

To maintain academic excellence aiming to produce competent technocrats imbibed with ethical values to serve the national emerging technological needs.

OUR MISSION

To impart quality education to the students by providing effective teaching, learning, research, and application based innovative environment.

To include creativity, team-spirit, leadership, and ethical competence through continuous collective curricular, co-curricular and extracurricular activities.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- To aquire a deep insight in mathematical, scientific & analytical skills and adopt self-motivating lifelong learning to explore cutting edge technologies.
- To evolve as responsible citizen having sense of ethics and environment aware attitude.
- To acquire necessary technical knowledge to pursue successful professional career posing leadership and team spirit.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- Ability to demonstrate the comprehended fundamentals of computer engineering to resolve mathematical and computation problems.
- Ability to explore evolutionary changes in computing by skills acquired through computer engineering principles and provide solution through innovative ideas.
- Ability to imbibe knowledge in modern computer environment and languages to gain additional skills for successful career and higher studies.

Student Achievements

- **Ayushi Gahlot,** student of CSE department has secured 3rd position in the Double Dutch speed in 15th Delhi State Rope Skipping Championship, 2022.

- **Ayushi Gahlot** of CSE department secured 3rd position in the All India Inter-University Rope Skipping (Speed Endurance) Tournament, 2022.

- **Manav Ajai Sonkar** of CSE department 5th sem won best startup of the year -2022 award.

- **Kunal Bisht** of CSE department scored 269 global rank out of 20,000+ participants in weekly contest 319 in 2022

- **Kunal Bisht** of CSE department, Qualified for HackWithInfy Grand Finale by ranking in Top 100 out of 3,00,000 participants in 2022

- **Kunal Bisht** of CSE department, secured a rank of 65 in Codegoda 2022.

- **Komal** of CSE department, is recipient of PhonePe Tech Scholar'22 (Only Top 465 Girls from all over India got this Scholarship) held from 5th November to 2nd December' 2020.

- **Nihal Gupta** of CSE department secured the 1st position in Smart India Hackathon 2022.

- **Nihal Gupta** of CSE department secured a place in the Top 6 in Hacka Noodle Hackathon organized by Zomato & Blinkit held in Zomato Office 2022.

- **Nihal Gupta** of CSE department secured a place in the Top 300 in Data-o-thon organized by Celebal Technologies in 2022

- **Vaibhav Krishan Yadav** of CSE department is a 5-star coder on CodeChef Platform since June 2022.

- **Tushar Ojha** of CSE department won $2000 at ETH India hackathon held in Bengaluru . Became Finalist out of 2000 participants from 7 countries like Japan, South Korea, Latin America, etc.

- **Tushar Ojha** of CSE-2, 7th sem won $1000 prize at Unfold 2022 Hackathon organised by CoinDCX in Bengaluru (got sponsored to travel and build at hackathon).

- **Tushar Ojha** of CSE department won $1000 grant from Polygon DAO in June 2022 for building a donation app using their technology.

- **Tushar Ojha** of CSE department was invited as guest speaker in September 2022 at React India Conference 2022 in Goa to talk about web3 and blockchain technology.

- **Tushar Ojha** of CSE department was invited to present at Polygon x BuidlersTribe Demo Day to present in front of VCs & Investors.

- **Tushar Ojha** of CSE department launched Educate app on Google Playstore that helps students study with focus from YouTube Playlists in August 2022.

Ms. Ayushi Gahlot was presented a certificate for bagging Third Position in recognition in All India University Tournament and 15th Delhi State Rope Skipping Championship 2022 by the President of Association.

Journals

- **Dr. Geetika Dhand, Associate Professor, Vidwan ID – 240999,**
  "Drug review sentimental analysis based on modular lexicon generation and a fusion of bidirectional threshold weighted mapping CNN-RNN, published by Concurrency Computat Pract Exper" (2022;e7512. doi: 10.1002/cpe.7512)

- **Dr. Pooja Kherwa, Assistant Professor, Vidwan ID- 243726,**
  "A Survey on Semantic Annotation Tools for Knowledge Management," published by the International Journal of Engineering Applied Sciences and Technology. (Vol. 6, Issue 12, ISSN No. 2455-2143, Pages 217-219.2022.)

- **Dr. Koyel Datta Gupta, Associate Professor, Vidwan ID – 240950,**
  "A novel Hypertuned Prophet based power saving approach for IoT enabled smart homes" published in Transactions on Emerging Telecommunications Technologies. (10.1002/ett.4597.)

- **Dr. Rinky Dwivedi, Associate Professor, Vidwan ID – 241399,**
  "Automatic illness prediction system through speech, Computers and Electrical Engineering." (Volume 102, 2022, 108224, ISSN 0045-7906, https://doi.org/10.1016/j.compeleceng.2022.108224.)

- **Dr. Geetika Dhand, Associate Professor, Vidwan ID – 240999,**
  Dr. Kavita Sheoran , Associate Professor, Vidwan ID – 241003,
  "Deep enriched salp swarm optimization based bidirectional-long short term memory model for healthcare monitoring system in big data." Published in Informatics in Medicine. (Unlocked 32 (2022): 101010,ISSN 2352- 9148, https://doi.org/10.1016/j.imu.2022.101010)

- **Dr. Koyel Datta Gupta, Associate Professor, Vidwan ID- 240950**

  Dr. Rinky Dwivedi, Associate Professor, Vidwan ID – 241399,

  "AHDNN: Attention-Enabled Hierarchical Deep Neural Network Framework for Enhancing Security of Connected and Autonomous Vehicles" published by the Journal of Circuits, Systems and Computers. (10.1142/S0218126623500585.)

- **Dr. Nishtha Jatana, Assistant Professor, Vidwan ID- 241879**

  "Fault coverage-based test case prioritization and selection using african buffalo optimization," (Computers, Materials & Continua, vol. 74, no.3, pp. 6755–6774, 2023.)

- **Ms. Gunjan Beniwal, Assistant Professor, Vidwan ID- 243313**

  "Liquescence - A Smart Water Management Model" published by International Journal of Scientific Development and Research. (vol.7, no.12, pp-621-625,2022)

- **Dr. Priyanka Nandal, Associate Professor, Vidwan ID- 241004**

  "Enhance Software-Defined Network Security with IoT for Strengthen the Encryption of Information Access Control, Computational Intelligence and Neuroscience." (vol. 2022, 4437507,, 2022. https://doi.org/10.1155/2022/4437507)

- **Ms. Vimal Gaur, Reader, Vidwan ID- 241010**

  "HPDDoS: A Hyperparameter Model for Detection of Multiclass DDoS Attacks" in Mathematical Statistician and Engineering Applications, ISSN: 2094-0343 and 2326-9865.Vol. 71 No.3s2 (2022).

- **Ms. Vimal Gaur, Reader, Vidwan ID- 241010**

  "M-LSTM: Multiclass Long Short-Term Memory based Approach for Detection of DDoS Attacks" in Mathematical Statistician and Engineering Applications, ISSN: 2094-0343 and 2326-9865.Vol. 71 No.3s2 (2022).

Patents

1. **Dr. Sangeeta, Assistant Professor, Vidwan ID- 241009**

   "Real Time Tracking Solution for the logistics in a hospital using IOT." (file no: 202211061240, filing date: 27/10/2022, Publishing date: 18/11/2022)

2. **Dr. Sangeeta, Assistant Professor, Vidwan ID- 241009**

   "Blueprint of Green Sustainable & Clean Renewable Energy." (file no: 202211030282, published on: 03/06/2022)

3. **Dr. Sangeeta, Assistant Professor, Vidwan ID- 241009**

   "Air Quality Index Prediction & Forecasting System based on IOT & Machine Learning." (file no: 202022104292.6, registered date: 04/11/2022, Germany)

Books/Book Chapters

- **Dr. V.Gaur, Associate Professor Vidwan ID- 241010,** "Making Great Strides Towards Road Detection" in Recent Advances in IoT and Blockchain Technology, Advances in Computing Communications and Informatics. (Vol. 4 (2022) 4: 158. https://doi.org/10.2174/9789815051605122040009.)

- **Dr. Nishtha Jatana, Assistant Professor, Vidwan ID- 241879,** "Application of Nature Inspired Algorithms to Test Data Generation/Selection/Minimization using Mutation Testing, Artificial Intelligence and Natural Algorithms." ((2022) 1: 213. https://doi.org/10.2174/9789815036091122010016")

Conferences

1. **Dr. Geetika Dhand, Associate Professor Vidwan ID- 240999**

   Dr. Kavita Sheoran, Associate Professor Vidwan ID – 241003

   Dr. Shaily Malik, Assistant Professor, Vidwan ID- 240998

   Dr. Nishtha Jatana, Assistant Professor, Vidwan ID- 241879,

   "Algorithm Visualizer   in Fourth International Conference on Emerging Research in Electronics, Computer Science and Technology" (ICERECT-2022) ,during 26-27 December 2022.

2. **Dr. Geetika Dhand, Associate Professor Vidwan ID – 240999**, "Securing Data Using Visual Cryptography in Fourth International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT-2022) ,during 26-27 December 2022.

3. **Dr. Koyel Datta Gupta, Associate Professor Vidwan ID – 240950**

   "Playing football game using AI agents," 2022 International Conference on Emerging Techniques in Computational Intelligence (ICETCI), 2022.

E-Yantra

Maharaja Surajmal Institute of Technology (MSIT) inaugurated its "Embedded Systems & Robotic Lab" on 9th January 2023.

This lab has been set up with support of e-Yantra Lab Setup Initiative (eLSI), one of the initiatives of e-Yantra Project of IIT-Bombay. The ceremony started with the ribbon cutting by Chairman, Surajmal Memorial Education Society, Sh. Kaptan Singh.

The virtual inauguration by e-Yantra, IIT Bombay started with an opening address by Professor (Dr.) Kavi Arya, the Principal Investigator, e-Yantra Project, IIT Bombay. Prof. Kavi Arya emphasized on the importance of robotic research for the welfare of society. He nicely explained the latest aspects for robotics and artificial intelligence based research.

Dr. Ranjit Singh, Director, MSIT introduced the institution by his wise comments on the role of robotics research to develop solutions for a number of real-world problems.

The director emphasised on the importance of robot-enhanced-education for a technical institute.

E Yantra lab under the four faculty coordinators- Dr. Priyanka Nandal, Dr. Sapna Malik, Dr. Sonia Rathee and Dr. Shalu assures for providing a platform to the interested researchers to design and develop robotics based innovations in future.

We are confident that this collaboration with e-Yantra will be of immense benefit to the institute and the students.

PHD Completions

Dr. Navdeep Bohra, Assistant Professor, Vidwan ID- 241019

Dr Navdeep Bohra has been awarded his PhD degree under the Supervision of Prof. Vishal Bhatnagar from Guru Gobind Singh Inderprastha University. The topic of his thesis is **"Popularly Prediction of Social Media content using Machine Learning."** Techniques.

Dr. Neeti Sangwan, Assistant Professor, Vidwan ID- 244219

Dr Neeti Sangwan has been awarded her PhD degree under the Supervision of Prof. Vishal Bhatnagar from Guru Gobind Singh Inderprastha University. The topic of her thesis is **"Design and Development of a Framework for Video Popularly Prediction using Machine Learning Techniques."**

Dr. Divya Jatain, Assistant Professor, Vidwan ID- 241008

Dr. Divya has been awarded her PhD degree under the Supervision of Prof. Vikram Singh from Chaudhary Devi Lal University, Sirsa. The topic of her thesis is **"An Artificial Intelligence based Approach to Efficient Data Retrieval in Big Data Analytics."**

Dr. Pooja Kherwa, Assistant Professor, Vidwan ID- 243726

Dr.Pooja Kherwa has been awarded Ph.D Degree under the supervision of Prof.Poonam Bansal from the University School of Information, Communication & Technology, Guru Gobind Singh Indraprastha University, Dwarka, Sector 16 C, New Delhi. The topic of her thesis is **"Development of Efficient Topic Modeling Techniques using Enhanced Semantic Patterns".**

Dr. Shaily Malik, Assistant Professor, Vidwan ID- 240998

Dr Shaily Malik has been awarded her PhD degree under the Supervision of Prof. Poonam Bansal from Guru Gobind Singh Inderprastha University. The topic of her thesis is **"Design and Implementation of efficient Cross Model Information Retrieval Systems Using Semantic Autoencoders."**

Dr. Parul Chaudhary, Assistant Professor, Vidwan ID- 243353

Dr Parul Chaudhary has been awarded her PhD degree under the supervision of Dr Puneet Azad from GGSIPU. The topic of her thesis is **"Design and Implementation of Energy Harvesting Systems using Piezoelectric and Triboelectric Materials for Low-Power Electronics."**

Placements

Yashi Shukla
Batch of 2019-23
CSE Morning

- Full time offer from Microsoft.
- Summer Internship in Microsoft.
- Microsoft Engage Mentorship.

Sudhanshu Nautiyal
Batch of 2019-23
CSE Morning

- Full time offer from CRED placed at 52LPA (CTC).
- 6-Month Backend Intern @CRED.

Ritik Ramuka
Batch of 2019-23
CSE Morning

- Full time offer from Microsoft.
- 2M SWE Internship at Microsoft.

- Product Manager at Accio Jobs.
- Product Engineer & Mentor at PepCoding.
  Mentored more than 5k students and working professionals

Manokamna Sharma
Batch of 2019-23
CSE Morning

- Product Intern'22 @ Adobe, 6-month Product Intern'23 @ Adobe, Google WE Scholar.
- Full time offer from Adobe placed at 47LPA (CTC).

Event Gallery

MSIT 2022
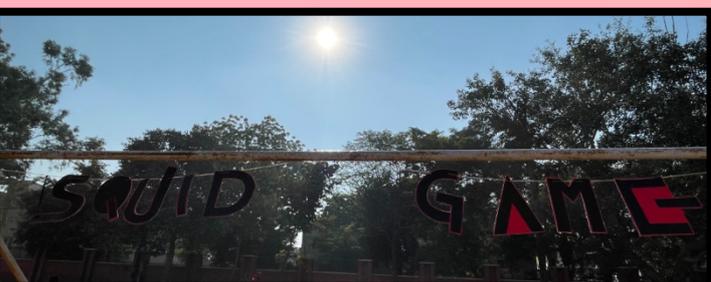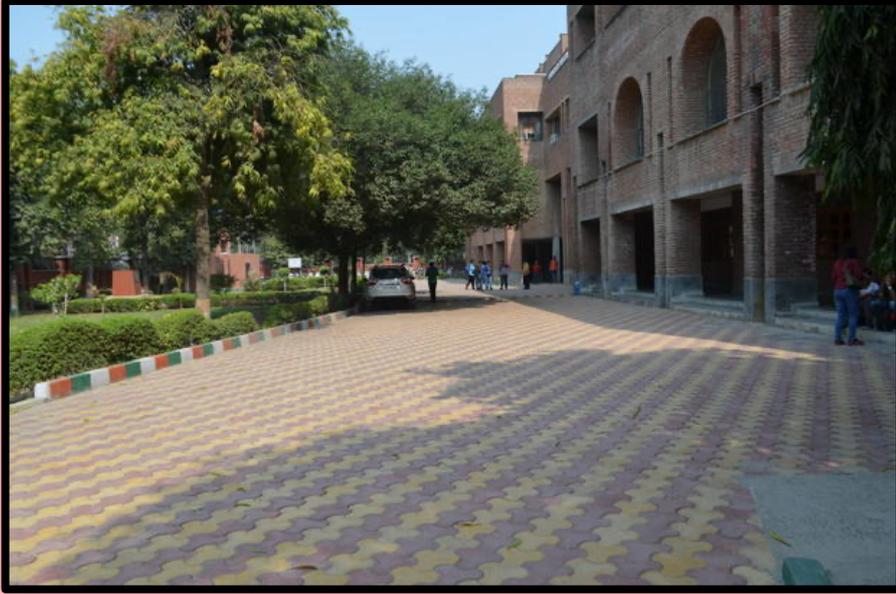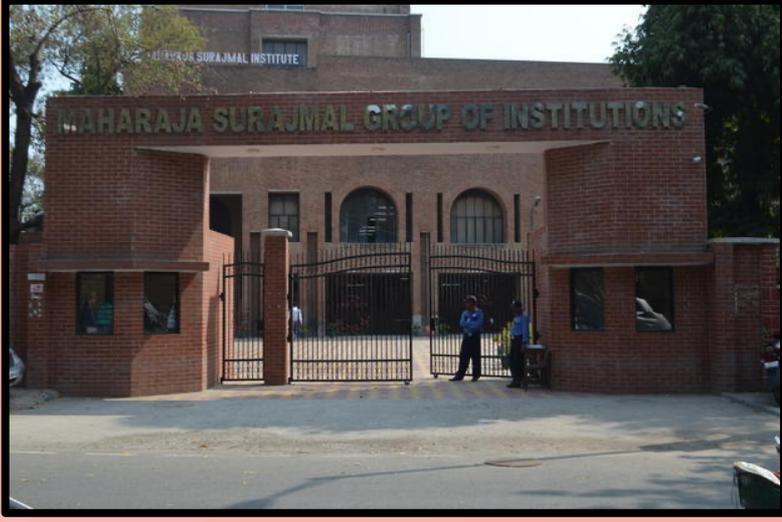
A glimpse into
Our Campus

Chief Editor-
Dr. Rinky Dwivedi
(HOD CSE, Morning)
Dr. Adeel Hashmi
(HOD CSE, Evening)

Editor-
Ms. Sonica Upadhyay
(Assistant Professor, CSE)

Designed by-
Rachit Yadav (1st year, CSE 3)
Shaurya Mishra (1st year, CSE 3)
Jayendra Vyas (1st year, CSE 2)