MIT Art, Design & Technology University, Pune
Department of Applied Sciences and Humanities

MIT-ADT UNIVERSITY
PUNE, INDIA
A Leap Towards World Class Education

MIT SCHOOL OF COMPUTING

FIRST YEAR ENGINEERING ANNUAL NEWSLETTER (Academic Year 2023-2024)

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MIT UNIVERSITY
ART, DESIGN & TECHNOLOGY
॥ अथतोः ज्ञान जिज्ञासा ॥
Estd. 2015

Prof. Dr. Vishvanath D. Karad
Founder, MAEER's MIT Group of Instiitutions, Pune
President, MIT Art, Design & Technology University, Pune

Dr. V. D. Karad Sir is a renowned educationist recognized for his contributions to human rights, spiritual guidance, and democracy. A dedicated follower of Swami Vivekananda, he participated in the Parliament of the World's Religions at Salt Palace Convention Center, Salt Lake City, Utah, in 2015. The event emphasized compassion, peace, justice, and compatibility, attracting over 10,000 participants from more than 80 nations and 50 faiths. This significant gathering underscored Dr. Karad's commitment to promoting global harmony and understanding among diverse religious communities.

Dr. Karad has pledged to restore symbols of national integrity, including Shriram Mandir (2011), Jama Masjid, and Khawaja Zen Uddin Chisti Dargah (2009). These efforts reflect his dedication to preserving India's rich cultural and religious heritage. He initiated the first International Robocon and the World Peace Eco Park in 2009, aiming to transform pilgrimage into centers of divine knowledge. As the founder of MAEER's MIT Group of Institutions, he has expanded the organization to 64 institutions with over 50,000 students annually. His vision for a transformative pilgrimage and his commitment to education are evident in these initiatives, which strive to combine traditional values with modern educational practices.

His Vishwashanti Gurukul schools, launched in 2007, now span more than seven locations. These schools embody his vision of holistic education, integrating academic excellence with cultural and spiritual growth. The rapid expansion of these institutions within a short period highlights the effectiveness of his educational model and his dedication to providing quality education across different regions. Dr. Karad's institutions have established the Bharat Asmita Award in his honor since 2003, recognizing top teachers, politicians, and media professionals. This award reflects his commitment to acknowledging and promoting excellence in various fields, encouraging individuals to contribute positively to society. The recognition of best teachers in management, best politicians for their contributions, and best newsmakers in India underscores the broad impact of his initiatives on different sectors.

Dr. Karad's admiration for the philosopher Sant Dnyaneshwara led to the creation of the Sant Dnyaneshwara World Peace Library and the world's largest Prayer Hall. His efforts in transforming sites like Alandi Ghat and Garuda Sthambha and promoting Wari culture underscore his dedication to peace and devotion. The World Peace Library and Prayer Hall stand as epitomes of architectural brilliance and contributions to divine knowledge, reflecting his vision of creating spaces that inspire spiritual growth and learning.

Transforming pilgrimage sites into centers of divine knowledge, he has undertaken the transformation of Alandi Ghat and Garuda Sthambha. He promotes Wari culture and is a true follower of Panduranga and in devotion to warkari sampradaya, coming up with temples at more than four locations. His efforts in promoting Wari culture and transforming these sites underscore his dedication to preserving and promoting India's spiritual heritage.

Dr. Karad's value-based education system has earned him a UNESCO chair in 1996 for his significant contributions to human rights and democracy. His recognition by UNESCO Paris is a testament to his extraordinary contributions towards human rights and democracy. This honor reflects his commitment to creating educational systems that not only impart knowledge but also instill values of compassion, justice, and equality.

In conclusion, Dr. V. D. Karad's extensive work in education, spiritual guidance, and human rights has left an indelible mark on society. His initiatives, from participating in global religious forums to transforming pilgrimage sites and founding educational institutions, highlight his dedication to promoting peace, cultural integrity, and holistic education. His numerous accolades and recognitions are a testament to his relentless efforts to create a better world through education and spiritual upliftment. Dr. Karad's legacy continues to inspire and guide future generations towards a path of knowledge, compassion, and harmony.

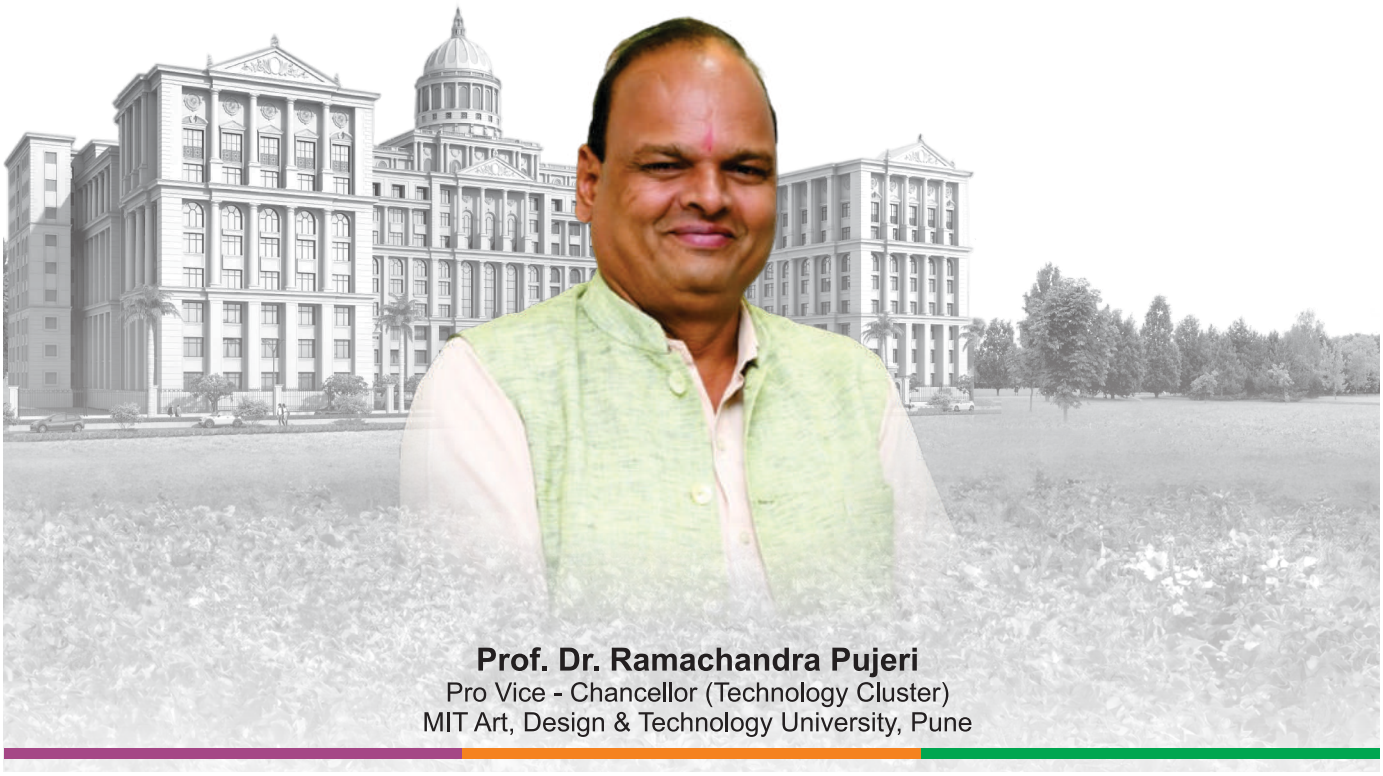
Prof. Dr. Mangesh T. Karad
Hon. Executive President & Vice - Chancellor
MIT Art, Design & Technology University, Pune

Dear Students,

Today's global economy is driven by innovation-led entrepreneurship. The Indian youth who aspire to embrace this challenge significantly contribute to India's GDP. MIT Art, Design & Technology University in Pune is an ideal institution for such aspiring innovators and entrepreneurs. MIT-ADT University, a leading futuristic multi-disciplinary university, offers a unique blend of Art, Design, and Technology programs that prepare students for the future with cutting-edge curricula. These programs groom students for their future workplaces through holistic education, enhancing their learning agility and resilience, thus empowering them to meet the ever-evolving global demands. In a short span, the University has earned recognition as a distinctive institution delivering unparalleled academic excellence under the visionary leadership of Prof. Dr. Vishwanath Karad, Founder of the MIT Group of Institutions. With an influential corporate network, extensive research, and a thoughtful approach, the University has designed and customized new 'out-of-the-box' specialized undergraduate programs and super-specialized postgraduate programs, aligning with current employment trends and industry demands.

Engineering education at MIT-ADT University includes traditional branches and offers various specializations like AI, Blockchain, Cybersecurity & Forensics, Cloud Computing, Aerospace, Robotics, Bioengineering, Food Technology, Marine Engineering, and Nautical Science, to name a few. To produce globally competent technocrats and innovators who can lead and impact society, MIT-ADT has established the School of Holistic Development to transform students into well-rounded personalities, the School of Corporate Innovation & Leadership to develop future global leaders, the Centre for Research & Innovation for Young Aspirants (CRIYA) for innovation and new product development, the Centre for Future Skills Excellence for emerging technology courses, and the School of Indian Civil Services, offering B.A. Administration to prepare students for administrative services.

MIT-ADT University is committed to empowering its students to lead meaningful and fulfilling lives with a strong inclination for innovation, a compassionate temperament towards the world, and a passion for becoming risk-takers (entrepreneurs) while remaining deeply rooted in human values. I warmly welcome you to this new-generation university where all your dreams and aspirations will be realized and where the pursuit of excellence begins.



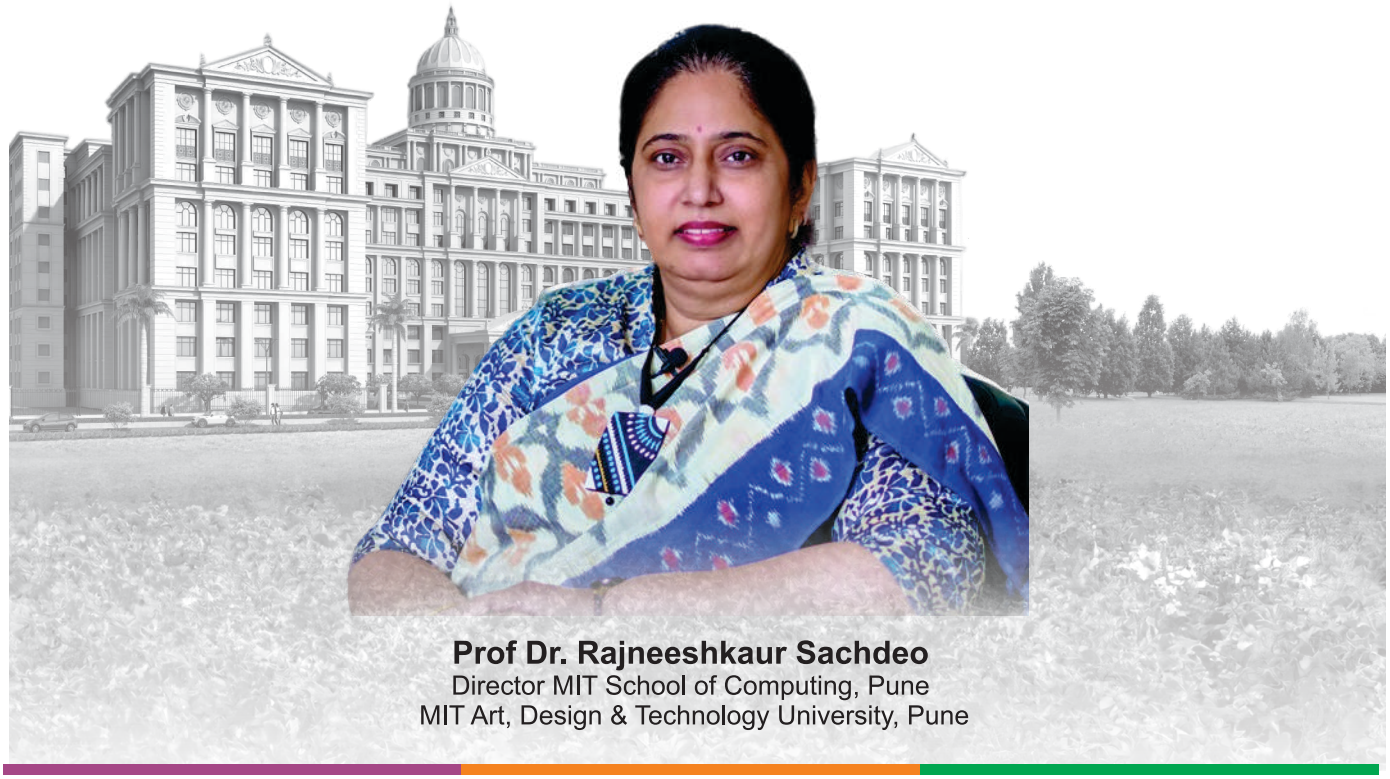
Prof. Dr. Ramachandra Pujeri
Pro Vice - Chancellor (Technology Cluster)
MIT Art, Design & Technology University, Pune

The School of Computing offers cutting-edge undergraduate and postgraduate programs in areas such as artificial intelligence, machine learning, data analytics, and cybersecurity. As it evolves, the school focuses on specialized, multidisciplinary, and application-oriented learning. Our programs are designed to promote collaborative learning, team spirit, and hands-on project-based experiences, preparing students to excel as professionals in the field.

Our academic curriculum is enhanced through partnerships with esteemed industry leaders and research institutions, aligning with global standards. The school's vision is to provide progressive education through a state-of-the-art curriculum, cultivating socially aware engineers, innovators, and entrepreneurs dedicated to sustainable development. As a Center of Excellence, the School of Computing significantly contributes to multidisciplinary research, innovation, and entrepreneurship, fostering collaborations between academia and industry. We aim to inspire both students and faculty to engage in interdisciplinary problem-solving and develop sustainable solutions for societal well-being.

Our programs emphasize holistic education, instilling ethics and values to nurture responsible leadership. The faculty comprises skilled and certified experts in cutting-edge computing fields, committed to creating a supportive and stimulating learning environment. With state-of-the-art computing facilities, we ensure the delivery of industry-relevant programs and research consultancy projects.

We are confident that our students will be empowered to adapt, innovate, and excel in new environments and technologies, applying their knowledge to solve real-world problems.



Prof Dr. Rajneeshkaur Sachdeo
Director MIT School of Computing, Pune
MIT Art, Design & Technology University, Pune

Engineering has consistently been at the forefront of human progress, revolutionizing our way of life. Today, the urgent need to address sustainability, health, and social vulnerabilities demands forward-thinking engineering solutions. Modern engineering must blend with other disciplines, combining technical expertise with artistic creativity and innovative thinking to create a sustainable and prosperous future. As we face these contemporary challenges, it is crucial that engineering transcends traditional methods, incorporating a diverse range of perspectives and skills to craft holistic solutions that will lead us into a brighter tomorrow.

At MIT ADT University, we pride ourselves on being a distinguished hub of learning and excellence. The MIT School of Computing is dedicated to cultivating students into well-rounded, accomplished individuals. We emphasize cutting-edge technology education, entrepreneurial leadership, and ethical engineering practices. Our renowned faculty members are not just educators but mentors who guide students through a transformative educational journey, encouraging them to push the boundaries of conventional knowledge.

Our academic programs are designed to foster interdisciplinary collaboration, encouraging students to engage in projects that require them to think creatively and work across various fields. This approach ensures that our graduates are not only proficient in their technical skills but also capable of innovative problem-solving in a global context. With our hands-on, Project-Based Learning (PBL) methodology, students gain practical experience and apply their knowledge to solve pressing global issues. This real-world application of classroom learning helps students understand the impact of their work and prepares them to tackle complex challenges with confidence and competence.

Furthermore, MIT ADT University provides a nurturing environment that promotes intellectual growth, critical thinking, and a passion for discovery. We are committed to inspiring and empowering the next generation of innovators and leaders. Our students are encouraged to engage with the community, participate in research initiatives, and contribute to meaningful projects that have a lasting impact. By fostering a culture of continuous learning and improvement, we prepare our students to make significant contributions to society and drive positive change in the world.

MIT ADT University is more than an educational institution; it is a place where future leaders are shaped, and dreams are realized. We are dedicated to creating a learning experience that is both enriching and inspiring, equipping our students with the skills and mindset needed to excel in their careers and make a meaningful impact on the world. Through our comprehensive educational approach, we are committed to building a better future, one innovative solution at a time.

Prof. Dr. Shalini Garg
Professor & Head of Department (Applied Sciences & Humanities)
MIT Art, Design & Technology University, Pune

Aligned with the mission of the MIT School of Computing, our department encourages students to fully utilize available resources and develop into highly skilled professionals with strong ethical values. The Department of Applied Sciences and Humanities administers the first-year engineering courses, establishing a solid foundation in core engineering principles and sciences. By the end of the first year, students will be able to understand, formulate, conduct, and interpret experiments to analyze engineering problems. They will gain knowledge of fundamental and contemporary scientific topics, enabling them to apply these concepts across various engineering disciplines. Additionally, students will enhance their critical thinking, problem-solving, listening, speaking, reading, and writing skills, equipping them to communicate effectively with the broader community.

Furthermore, the department's commitment to holistic education ensures that students are well-prepared to face real-world challenges. Through a blend of theoretical and practical learning experiences, we aim to nurture well-rounded individuals who can contribute innovatively and responsibly to the engineering field.

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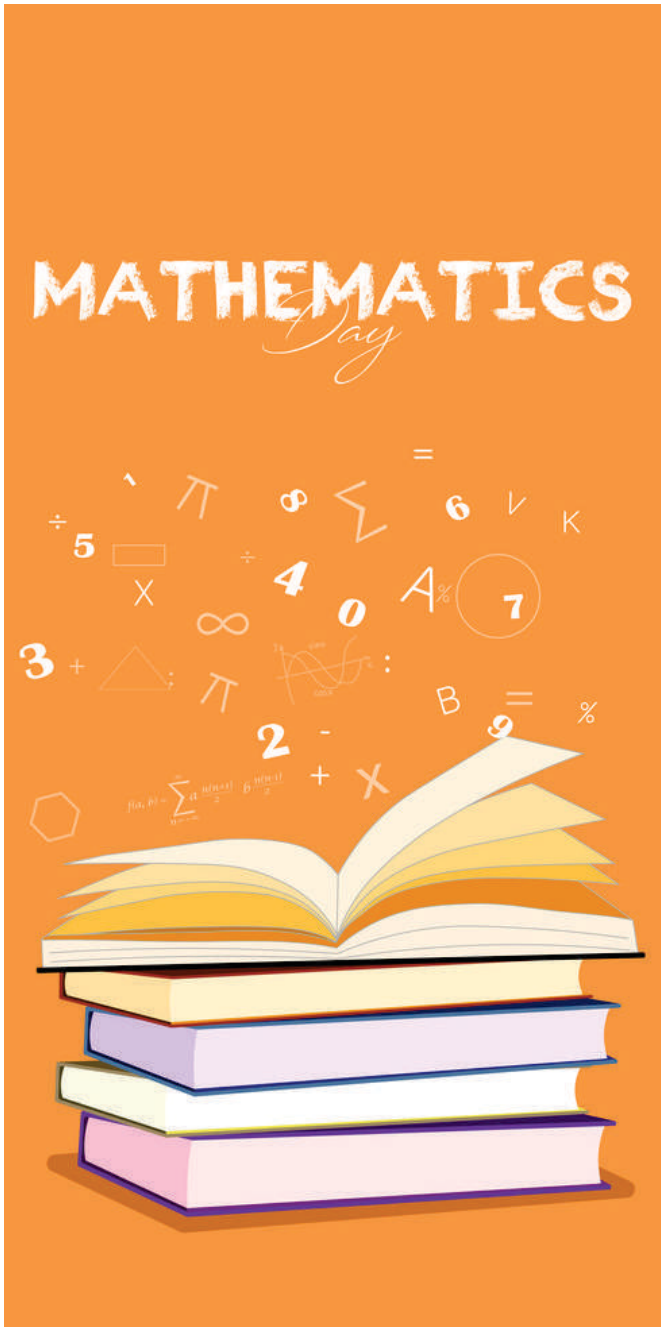
I N D E X

MATHEMATICS DAY

The Department of Applied Sciences and Humanities, School of Computing, organized an online quiz competition on December 22, 2023, to celebrate National Mathematics Day in honor of the great Indian mathematician Srinivasa Ramanujan. The event, titled "Online Quiz with the Theme of Ancient Indian Mathematics," was conducted via Google Forms over two days, from December 21 to December 22, with each participant allotted one hour to complete the quiz. The coordinators, Prof. Pramod V Ghatage and Prof. Umesh Gatkal, aimed to encourage students to learn and appreciate Ancient Indian Mathematics. National Mathematics Day, declared by the Government of India in 2012, commemorates Ramanujan's birth on December 22, 1887. This year's quiz focused on the theme of Ancient Indian Mathematics and was designed specifically for students of the School of Computing. The quiz consisted of 10 multiple-choice questions, and the winners, Mr. Animish Kulkarni and Mr. Yogesh Thakur, were selected based on their high scores and, in the event of a tie, through a lucky draw.



Pi DAY

The Department of Applied Sciences and Humanities, School of Computing, organized an online quiz competition on July 22, 2023, to celebrate Pi Approximation Day, chosen for the similarity of the date 22/7 to the famous approximation of the number pi. The event, titled "Online Quiz - Maths Marathon 2023," was conducted via Google Forms over a week, with six groups participating. There were 1,200 participants, and the top two scorers from each group were declared winners, determined by a lucky draw in case of a tie. Each quiz link had 25 questions, each worth 4 marks with a penalty of -1 mark for wrong answers. The winners received prizes worth Rs. 26,000 through online bank transfers, and certificates were awarded to all participants. The quiz aimed to develop a keen interest in mathematics among students, enhancing their knowledge and bringing out their best abilities. The event was successfully conducted with a satisfactory response, fulfilling its objectives. Prof. Pramod V Ghatage served as the event coordinator.

WORDSWORTH CLUB

The Wordsworth Club proudly hosted the "Wise Words Win" Debate Competition on March 4th and 5th, showcasing the eloquence and critical thinking skills of its members. With over 100 participants, the event aimed to foster intellectual discourse and promote effective communication within the club. Dr. Jayashri Nalkar and Dr. Swapnil Shirsath, esteemed experts in communication and public speaking, served as resource persons, enriching the event with their guidance and expertise. The competition followed a structured format, featuring multiple rounds where participants debated thought-provoking topics, demonstrating their debating prowess and critical thinking abilities. Judged on criteria such as clarity of expression, logical reasoning, persuasiveness, and rebuttal skills, winners were recognized for their exceptional debating skills and effective communication. The competition was a resounding success, fostering camaraderie and mutual respect among participants, and reaffirming the Wordsworth Club's commitment to nurturing talents and promoting a culture of dialogue and inquiry. Special thanks go to Dr. Jayashri Nalkar, Dr. Swapnil Shirsath, Dr. Prathiba Jagtap, Prof. Rahul Kale, participants, judges, and organizers for their contributions to this memorable event.

NATIONAL SCIENCE DAY CELEBRATION

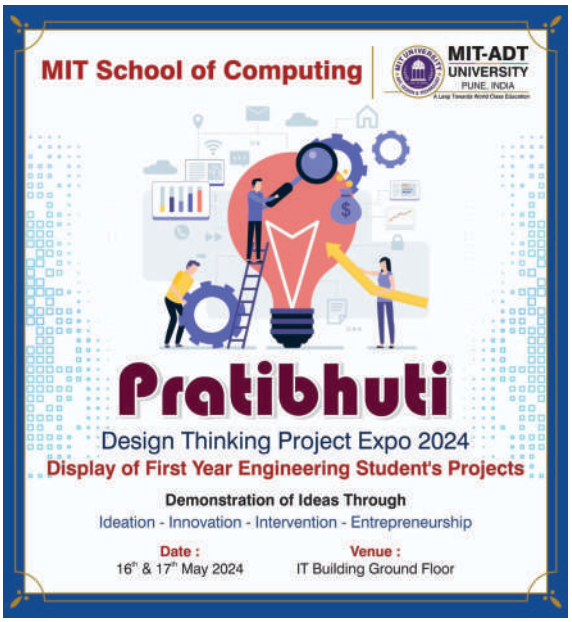
National Science Day, celebrated with the theme of "Indigenous Technologies for Viksit Bharat," was conducted on 29th February 2024 by the ASH department. The event featured a talk by Dr. Kanaka Raju Pandiri from the Defence Institute of Advanced Technology, who emphasized the importance of science and provided valuable insights on how students can effectively approach scientific studies and research.

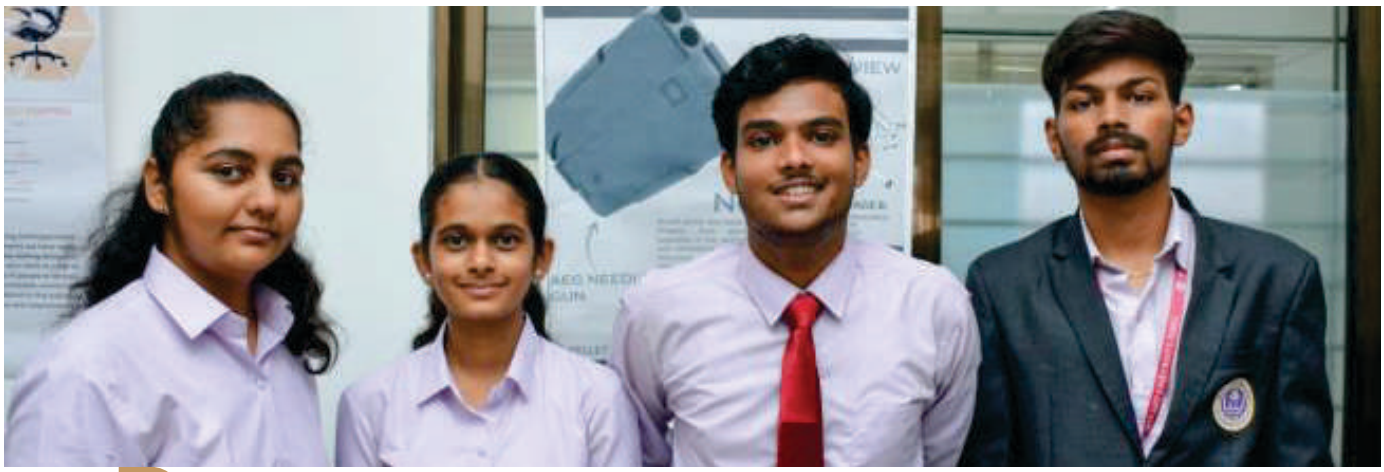
Additionally, the event included a prize distribution ceremony for the winners of the ASTECH fest competitions. This celebration not only highlighted the significance of indigenous technologies in the development of the nation but also recognized and rewarded the hard work and achievements of students who excelled in various scientific competitions. The day was a blend of inspiration and celebration, fostering a deeper appreciation for science and innovation among students.

DESIGN THINKING PROJECT EXPO

PRATIBHUTI: Design Thinking Project Expo 2023-24, held on May 16th and 17th, 2024, at the IT Building Ground Floor of MIT-ADT University, Pune, was an annual showcase of the semester projects developed by first-year B.Tech (CS & IT) students.

This expo highlighted the creativity and innovation of students through their work in the Design Thinking and Computer Engineering Workshop courses. PRATIBHUTI brought together a curated collection of designs, from product ideas and interface designs to working models, representing the pinnacle of creativity across various fields. This collaborative event demonstrated the ideation, innovation, intervention, and entrepreneurship skills of the students, marking a significant milestone in their academic journey





PATENT REGISTRATION BY FIRST-YEAR STUDENTS

We are thrilled to announce the remarkable achievements of our first-year students who have successfully filed patents for their innovative projects. This milestone reflects the dedication, creativity, and technical prowess of our students, as well as the invaluable guidance provided by our esteemed faculty. The selected projects showcase a diverse range of technological advancements aimed at enhancing everyday life and addressing real-world challenges.

Firstly, we have the project titled "A Comfortable Pen Grip," developed by Atharv Shaligram Maind, Kashmira Nilesh Deokar, Shantanu Dewanand Kirpane, and Harshala Ganesh Kulkarni, under the mentorship of Prof. Deepak Shah. This innovation addresses the common discomfort experienced during prolonged writing sessions. The ergonomic design of the pen grip reduces hand fatigue and improves the writing experience, making it invaluable for students, professionals, and anyone who relies on writing for extended periods.

Next, we celebrate the ingenuity behind the "Arm and Thigh Protector" project, created by Sonam Santlal Vishwakarma, Priyanka Yeshwant Kadam, and Samita Sanjay Kudale, with Prof. Deepak Shah as the project guide. This technology focuses on providing enhanced protection for individuals engaged in physically demanding activities, such as sports and manual labor. The innovative design offers superior impact resistance and comfort, ensuring wearers can perform their tasks with a reduced risk of injury. This project not only highlights the students' commitment to safety and well-being but also their ability to apply engineering principles to create practical solutions.

The third project, "Breeze: A Cooling Solution for Backpacks with Commercial and Consumer Applications," showcases the forward-thinking approach of Prisha Singh and Shireesh Kumar Vajahhala, guided by Prof. Deepak Shah. Recognizing the discomfort caused by carrying heavy backpacks, especially in warm climates, the team designed an integrated cooling system. This technology enhances user comfort and has potential applications in various sectors, including travel, education, and outdoor activities. The innovative solution demonstrates the students' ability to address everyday challenges through technological advancements.

In the realm of human-computer interaction, the "Finger Gesture Mouse" project stands out. Developed by Aaryan Sandeep Malusare, Sameep Prashant Raut, Mohammad Kaif Abubakar Momin, and Mohammed Ashaz Abdul Azim Arkati, under the mentorship of Prof. Deepak Shah and Dr. Rajneesh Kaur Bedi, this technology offers a novel way to interact with computers. By utilizing finger gestures, users can control their devices more intuitively and efficiently. This project underscores the team's understanding of the evolving needs of technology users and their ability to create solutions that enhance user experience.

Our next highlight is the "Regenerating Electric Auto-Rickshaw," an innovative project by Atharv Bagul, Siddhant Prakash, Srushti Gaikwad, and Varunraj Desai, guided by Prof. Deepak Shah. This project addresses the growing need for sustainable transportation solutions. By incorporating regenerative braking technology, the electric auto-rickshaw reduces energy consumption and enhances urban transportation efficiency. This project exemplifies the students' commitment to environmental sustainability and their ability to engineer solutions that contribute to a greener future.

Lastly, we proudly present the "Ultrasonic Vision Assistive Glasses" project, developed by Tejas Dhawale, Vedant Sinare, Aditya Ingale, and Rohan Patil, under the guidance of Prof. Deepak Shah and Dr. Shalini Garg. This innovative technology assists visually impaired individuals by providing auditory feedback based on ultrasonic sensing of the surroundings. The project highlights the team's dedication to inclusivity and their ability to harness technology to improve the quality of life for individuals with disabilities.

These patents represent the culmination of hard work, collaboration, and the relentless pursuit of innovation by our first-year students. Each project addresses specific challenges and demonstrates the students' ability to apply their knowledge creatively and practically. The involvement of Prof. Deepak Shah in guiding multiple projects underscores the critical role of faculty mentorship in nurturing young talent and fostering an environment conducive to innovation.
The patenting of these projects is not merely an academic achievement but also a testament to the students' potential to make significant contributions to society. The diversity of the projects, ranging from ergonomic solutions and safety devices to sustainable transportation and assistive technologies, reflects the broad spectrum of interests and expertise among our students. It is inspiring to see such a wide array of innovative ideas coming from our first-year students, indicating a bright future for our institution and the broader field of technology.

Furthermore, these achievements serve as a source of motivation for other students, encouraging them to pursue their ideas and explore the possibilities of patenting their innovations. The process of patenting not only provides legal protection for their inventions but also opens up opportunities for commercialization and further development. It is a crucial step in translating academic research and innovation into real-world applications that can benefit society at large.

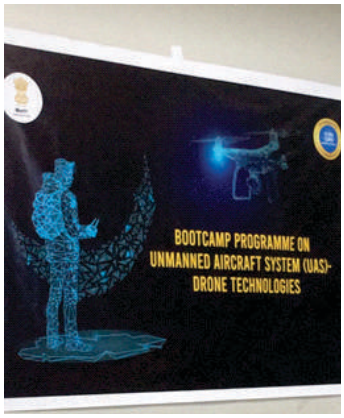
The successful patenting of these projects is a proud moment for our institution. It showcases the exceptional talent, creativity, and dedication of our first-year students and the vital support of our faculty. These innovations address practical challenges and have the potential to make a meaningful impact on society. These achievements will inspire future cohorts of students to pursue their ideas with the same enthusiasm and commitment, furthering our mission to foster innovation and excellence in education. We are confident that the foundation laid by these pioneering projects will lead to even greater advancements and contributions in the years to come.

INTERCOLLEGIATE MATH'S COMPETITION

The Intercollegiate Mathematics Competition was held on March 14, 2024, organized by Poona College of Arts, Science, and Commerce. This event brought together students from various institutions to participate in challenging mathematical problems, promoting both intellectual growth and friendly competition. The competition aimed to foster a deeper appreciation for mathematics among students and to encourage them to hone their analytical and problem-solving skills.

Sakshi Gangopadhyay and Shivansh Mathur for 1st year won the 1st prize in this competition, showcasing their exceptional mathematical abilities and dedication. Their victory highlights the high level of talent and commitment present among the participants.

CDAC WORKSHOP



CDAC Pune recently conducted a comprehensive workshop on Unmanned Aircraft System (UAS) and drone technologies. The bootcamp program was designed to provide participants with foundational knowledge and practical skills in drone technology. Among the attendees were first-year students who eagerly engaged in learning about the applications of drones in enhancing modern scientific knowledge.

The workshop highlighted the significance of drone technology in various fields, including agriculture, disaster management, and environmental monitoring. Through hands-on sessions, students and participants gained valuable insights and experience, which not only improved their technical capabilities but also inspired innovative thinking for future applications of drone technology.

HACKATHONS

The 1st year students have plenty of chances to dive into various computational competitions and hackathons. These events challenge their problem-solving abilities, spark creativity, and boost their technical skills. Participating in these competitions gives students hands-on experience and exposure to real-world situations, which are crucial for their professional growth.

Through hackathons and computational contests, students get to work with peers, brainstorm innovative solutions, and apply what they've learned in practical ways. These experiences build their confidence and prepare them for future challenges in their academic and professional paths. Our department is dedicated to offering these opportunities, ensuring that students can develop their talents and potential from the very start of their academic journey.

GDSC ANDROID DEVELOPMENT

The GDSC Android Development Workshop was a one-week event that saw enthusiastic participation from first-year, second-year, and third-year students. Throughout the workshop, students gained new skills in Android app development, learning the fundamentals as well as advanced techniques in a hands-on environment.

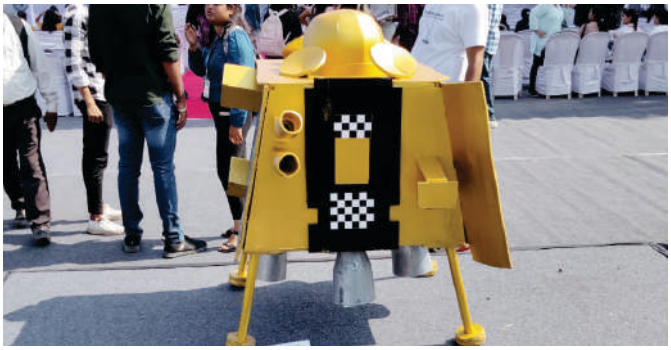
Participants were introduced to various tools and technologies essential for creating robust and user-friendly Android applications. The workshop provided an excellent opportunity for students to enhance their programming skills, work on real projects, and collaborate with peers from different academic years. This experience not only broadened their technical knowledge but also prepared them for future endeavors in the field of mobile application development.

PERSONA FEST 2024

MIT ADT University hosted the renowned Persona Fest, an event that attracted students from numerous colleges and universities across Pune. This vibrant festival showcased a wide array of activities and competitions, fostering creativity and collaboration among participants.

In this edition, first-year students from the School of Computing participated enthusiastically, making significant contributions to the festival. They organized two highly popular events, Laser Tag and YOLO, both of which garnered immense attention and praise. These activities not only provided entertainment but also demonstrated the innovative spirit and organizational prowess of the students.

The success of these events highlighted the remarkable technical and management skills of the first-year students. Their efforts were widely appreciated by peers and faculty alike, underscoring their potential and dedication. Persona Fest continued to be a platform where students could showcase their talents, learn new skills, and build lasting connections within the academic community.

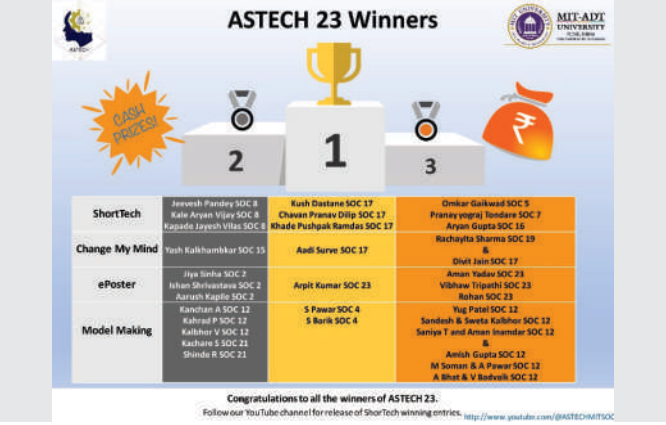


INDIAN SCIENCE FESTIVAL

A visit to the India Science Festival was organized by MIT-ADT School of Computing (ASH), which took place on January 20, 2024, at the Indian Institute of Science Education and Research (IISER), Pune. The event saw participation from 66 students across various divisions, coordinated by Prof. Shatakshi Maithani and Prof. Prakhar Saraswat. The visit aimed to provide students with exposure to the latest advancements in science, hands-on learning experiences, and opportunities to connect with professionals in the field. The objectives included learning about the latest developments in scientific fields, gaining practical insights into scientific concepts and experiments, and experiencing real-world applications of science, complementing their theoretical knowledge.

Key highlights of the visit included workshops where students participated in interactive sessions on genetics, robotics, neuroscience, and artificial intelligence. They also attended talks by professors from renowned institutions such as Harvard, NASA, Stanford, ISRO, AIIMS, IISC, and IITs. Additionally, the festival featured numerous exhibitions showcasing DIY robotics, autonomous vehicles, drone catchers, and prosthetics. Students also engaged in various games, winning prizes in quizzes, Science Pictionary, and Science JAM, making the visit both educational and enjoyable.

ASTECH23 Fest



Change My Mind Debate

The Department of Applied Sciences and Humanities at MIT School of Computing, MIT ADT University, Pune, hosted a live debate competition titled "Change My Mind" on October 17, 2023. Open to all first-year students, the event saw 55 participants. Coordinated by Prof. Dr. Harshawardhan Bhatkar and Prof. Rahul Sheoran, and judged by a panel of professors, the debate focused on Sustainable Energy Resources and Environmental Sustainability. Participants defended controversial quotes while the audience attempted to change their minds. The debate aimed to boost students' confidence, enhance persuasive communication skills, and connect classroom topics to real-world issues.

E Poster

The Department of Applied Science and Humanities at MIT School of Computing, MIT ADT University, Pune, hosted an ePoster competition on October 16, 2023. With the theme "Role of Science & Technology in Sustainable Development," the event saw over 400 first-year B.Tech. students participate. Coordinated by Prof. Dr. Poonam Shewale and judged by an esteemed panel of professors, the competition aimed to develop students' research abilities, foster teamwork, and raise awareness of global sustainability challenges. Participants created ePosters connecting classroom topics to real-world environmental issues, effectively discussing sustainable solutions.

SHORTECH:

The Department of Applied Sciences and Humanities at MIT School of Computing, MIT ADT University, Pune, Maharashtra, hosted "SHORTECH," an online shorts/reels making competition from October 8th to 16th, 2023. Coordinated by Prof. Rahul Sheoran and Prof. Dr. Harshawardhan Bhatkar, the event saw enthusiastic participation from 86 students."SHORTECH" encouraged students to create YouTube Shorts focused on sustainable energy sources and energy conservation. The aim was to ignite a passion for environmental stewardship, enhance communication skills, and make sustainable energy topics accessible and engaging. The 45-second videos were judged on storytelling, humor, and impactful messaging.The competition wasn't just about selecting winners; it was about students discovering their voices and learning that environmental conservation could be both entertaining and significant. The event fostered collaboration and environmental awareness, turning students' ideas into captivating narratives beyond the classroom.

Model Making

The Department of Applied Science and Humanities at MIT School of Computing, MIT ADT University, Pune, hosted the 'Scientific Model Making Competition' on October 20, 2023. Open to all first-year students, the event, nicknamed 'Eureka,' saw 35 participants and was judged by a panel of professors. Students formed teams to showcase innovative working models under the theme 'vocal for local sciences and technologies,' focusing on sustainable energy and other topics from the Engineering Physics syllabus. Judging criteria included creativity, enthusiasm, workability, message delivery, and societal contributions. The competition aimed to practically engage students with syllabus topics, connect classroom learning to real-world issues, and promote local sciences and technologies.

INDEPENDENCE DAY CELEBRATION

BLOOD DONATION CAMP

TREE PLANTATION ACTIVITY

SHIVJAYANTI FESTIVAL

VISHWARAJ SPORTS MEET 2023

CULTURAL DAY

8th Induction Program in Main Pandal

Holistic Development

MEDITATION

GYMNASIUM

GUEST LECTURES FOR 1ST YEAR STUDENTS

PARENTS TEACHER MEETING

ABOUT DEPARTMENT

Intake of students

1	CSE	1334
2	IT	122

The Department of Applied Sciences and Humanities executes the First Year Engineering course to lay a strong foundation in Core Engineering and Engineering Sciences. A transition from typical school environment to professional engineering environment takes place in the first year.

An excellent infrastructure in terms of well-equipped laboratories supported by highly qualified staff provides students with an environment conducive for studying. The department has modern classrooms and is supported with staff from other departments of Mechanical Engineering, Electronics & Communication Engineering, Computer Science and Engineering and Information Technology.

We firmly believe that given the right direction and support, every individual has the ability to excel. With this line of thought, we as faculty members take up the responsibility of being a friend, philosopher and guide to students. Each student is assigned a mentor teacher. Hence the faculty becomes an integral part of the student's overall development and performance. Most of the faculty members have completed their Ph.D. and are actively involved in research work.

Apart from academics, students are provided with the opportunities to participate in various co- curricular and extracurricular activities. To inculcate social values in students, national level events are organized with their active participation in Samarth Bharat Abhiyan, tree plantation, medical check-up, blood donation camps, visits to orphanages, old age homes and rehabilitation centers, etc. In addition, Applied Science and Technology Club (ASTECH) club provides a platform for continuous nurture of potential young talents and unlock their passion in engineering sciences. Here the students get the best platform to explore them to excel in all domains of life. In line with the mission of MIT School of Computing the department propels the students to exploit these resources to the maximum and evolve as strong professionals with the valued principles.

LABORATORIES

Language Laboratory:

Apart from regular classroom teaching providing supplementary materials and resources to students helps them to develop linguistics skills more effectively. Language skills such as listening, speaking, reading, writing, grammar and vocabulary can be enhanced through our computer-assisted language leaning laboratory. Our language lab is one such attraction that not only fulfills the norms of NBA, NAAC, etc., but also allows a higher level of teacher management and control over the student desktop. There is a teacher-controlled system connected to 200 student consoles, with headsets and microphones. This motivates students to talk freely and lose shyness.

Software's: Orell Dell, Latex, MATLAB

Physics Laboratory:

Equipped with modern and innovative experimental set ups to analyze and apply the concepts of polarization, interference and diffraction, advances in lasers, photonics and fiber optic communication systems. This gives the students the opportunity to gain insight into the basic principles of Applied Physics, develop scientific thinking and problem-solving skills.

Chemistry Laboratory:

Offers students with hands-on training for qualitative and quantitative analysis of water and fuel samples and trains them for preparation and characterization of diverse polymers and corrosion control. Our lab is equipped with Digital Balance, Digital Photoelectric Colorimeter, pH meter with electrode, COD Digester System, Eliminator Batteries, Hot Air Oven, Muffle Furnace, Distilled Water plant.

Design Thinking Laboratory :

MIT ADT has designed Critical Thinking value added course “Design Thinking” for Engineers. This course aims to present an overview of the design thinking involved at each stage of the design process: the methods used by designers to generate and refine creative ideas, the key considerations that help shape them and the feedback and review elements that allow design teams to learn from each job and contribute to future commissions. help developers learn how to thoroughly understand user needs so they can build the right products. Design Thinking exposes learners to uncovering unmet needs, building prototypes, and running experiments to test hypotheses.

Computer Science

Sr. No.	Enrollment Number	Full Name	SGPA
1	ADT23SOCB0163	CHAUDHARI ANUSHKA CHHAGAN	9.64
	ADT23SOCB0326	DADASAHEB BHANUDAS BHOSURE	9.64
	ADT23SOCB0556	KUSHAL VIJAY PATIL	9.64
2	ADT23SOCB0969	PATIL SANIKA RATAN	9.55
3	ADT23SOCB0379	DIVYANSH CHANDWANI	9.48
	ADT23SOCB0444	HONEY KAMLESH SONI	9.48

Information Technology

Sr. No.	Enrollment Number	Full Name	CGPA
1	ADT23SOCB1532	MEGHRAJ NAIR	9.34
2	ADT23SOCB1567	SWAGATA ROUTH	9.11
	ADT23SOCB1612	SUNNY KUMAR	9.11
3	ADT23SOCB1563	PATHARE SMRUTI SANJAY	9

Faculty Research Activities

List of Books/Chapters in academic year 2023-2024

Title of Chapter: New NEP 2020: An Inovatove Approach to Education

Title of the Book: Present Scenario of Indian Education

Authors: Pranav Sudhir Mulaokar

Publisher: Blue Duck Publications

ISBN : 978-81-19463-61-9Z

Papers presented at conferences in academic year 2023-2024

1. Title of paper presented: *Potential of Acoustic Emission Monitoring for Prediction of Snowpack Fracture on Inclined Natural Slopes*

Name of the conference : National Conference on Himalayan Cryosphere (NCHC-2023) from November 22-23, 2023Organized by Divecha Centre for Climate Change, Indian Institute of Science, Bengaluru. Presented by Prof. Rahul Sheoran

ISBN : 978-81-19463-61-9

2. Title of paper presented: *A Proposed Architecture for Quality based Decision Making Approach for Software Re-engineering*

Name of the conference : 4th International conference on Electronics and Sustainable Communication Systems (ICESC-2023) from 6-8, July 2023

Organized by : Hindustant Institute of Technology, Coimbatore, India

Presented by : Dr. Shalini Garg

3. Title of paper presented: *Teaching English Language in Current Scenario*

Name of the conference : One day International Conference on "Enriching Minds: Latest Trends in English Language Teaching in the Digital Era on 21st March, 2024.

Organized by Department of the English , CSTS Government Kalasala, Jangareddiguem, Eluru District , Andhra Pradesh.

Presented by Dr. Pranav Mulaokar

4. Title of paper presented: *Pseudocontractive Mapping*

Name of the conference: Conference on Functional Analysis and Fractals

Organized by Department of Applied Sciences, IIIT Allahabad during

February 16-18, 2024.

Presented by Mr. Sagar Yashwant Godse

5. Title of paper presented: *Exploring the use of acoustic emission monitoring to predict snowpack fracture on inclined natural slopes*

Name of the conference: International Congress and Expo on Infrastructure and Construction (INFRACON2024) held during March 18, 2024

Organized by

Presented by Dr. Rahul Sheoran

List of Papers published in peer reviewed journals in academic year 2023-2024

1. Title: *Polyvinyl alcohol/Montmorillonite/Zirconium Phosphate Nanocomposite Film as potent matrix in Scaffold-guided TissueEngineering Application*

Authors: Manoj Patowary, Himani Kalita

Journal : Journal of Emerging Technologies and Innovative Research (JETIR)

2. Title: *Intelligent data classification using optimized fuzzy neural network and improved cuckoo search optimization*

Authors: P. Patro , K. Kumar , G. S. Kumar and A. K. Sahu

Journal : Iranian Journal of Fuzzy Systems

DOI: https://doi.org/10.22111/IJFS.2023.44767.7887

3. Title: *Design synthesis on PSA base oxygen & Nitrogencycle*
Authors: Rajesh B. Jadhav , Akshay S.Wadekar , Shruti R. Jadhav , Sachin S. Musale
Journal : Journal of Emerging Technologies and Innovative Research (JETIR)

4. Title: *Elemental Analysis of Seeds of Drum Stick (Moringa Oleifera) by Using Different Techniques*
Authors: Rajesh B. Jadhav, Sachin S. Musale
Journal : Journal of Emerging Technologies and Innovative Research (JETIR)

5. Title: *Exploring the Impact of Al2O3 Additives in Gasoline on HCCI-DI Engine Performance: An Experimental, Neural Network, and Regression Analysis Approach*
Authors: Lionus Leo George Mary, Subramanian Manivel,* Shalini Garg, Vinoth Babu Nagam, Komal Garse, Ranjit Mali, T. M. Yunus Khan, and Rahmath Ulla Baig
Journal : ACS OMEGA
DOI: https://pubs.acs.org/action/showCitFormats?doi=10.1021/acsomega.3c05959&ref=pdf

6. Title: *Teaching vocabulary to undergraduate students through activities using online newspapers*
Authors: Swapnil Shirsath
Journal : Research Journal Of English

7. Title: *Negotiating Digital Literacy in New Education Policy 2020*
Authors: Girish D. Pawar, Swapnil Shirsath
Journal : Education and Society

8. Title: *Need for Neo-humanisum in Leadership Qualities and Attitudes*
Authors: Pranav Sudhir Mulaokar
Journal : Journal of Xidian University

9. Title: *Inequalities Involving Generalized Trigonometric And Hyperbolic*
Authors: Nitin Darkunde, Sanjay Ghodechor
Journal : Jñ□n□bha, Vol. 53(2) (2023), 301-306
DOI: https://doi.org/10.58250/jnanabha.2023.53236

10. Title: *On Wilker's and Huygen's Type Inequalities for Generalized Trigonometric and Hyperbolic Functions*
Authors: Nitin Darkunde, Sanjay Ghodechor
Journal : Indian Journal Of Science And Technology, 17(9):787–793
DOI: https://doi.org/10.58250/jnanabha.2023.53236

11. Title: Revisit Of An Improved Wilker Type Inequality
Authors: Rupali Shinde, Christophe Chesneau, Nitin Darkunde, Sanjay Ghodechor, Aditya Lagad
Journal : Pan-American Journal of Mathematics 2 (2023), 13
DOI: https://doi.org/10.28919/cpr-pajm/2-13

12. Title: 2D cadmium sulphoselenide nano-heterostructure: unique synthesis and superior field emission properties
Authors: Deepashri Prakash Ahirrao, Amol Deore, Mahendra More, and Padmakar G. Chavan
Journal : Journal of Materials Science: Materials in Electronics
DOI: https://doi.org/10.1007/s10854-024-12712-3

13. Title: Field emission from two-dimensional (2D) CdSSe flake flowers structure grown on gold coated silicon substrate: An efficient cold cathode
Authors: Sachin D. Nerkar, Shakeelur Raheman AR, Mohammed K. Al Mesfer, Khursheed B. Ansari, Mohd Shariq Khan, Amol B. Deore, R. R. Attarde
Journal : Microscopy Research and Technique
DOI: 10.1002/jemt.24621

1	Number of Faculty members with Ph.D.	16
2	Number of Faculty members pursuing Ph.D.	7
3	**Paper Published :** (Dr. Amol Deore- 2, Dr. Manoj Patowary-1, Dr. Krishna Kumar – 1, Dr. Pranav Mulaokar 1, Dr. Rajesh Jadhav, Dr. Sachin Musale – 2, Sanjay Ghodechor 3, Dr. Shalini Garg -1, Dr. Swapnil Sirsath - 2)	13
4	Patents Filed :	9
5	Copyrights :	2
6	**Papers presented at Conference** (Dr. Pranav Mulaokar -1, Sagar Godse-1, Dr. Rahul Sheoran-3, Dr. Shalini Garg – 2)	6
7	Number of Research Scholars	8

FACULTY DEVELOPMENT PROGRAM

The Department of Applied Sciences and Humanities, School of Computing, organized a Two Week Faculty Development Programme (FDP) from 11th December 2023 to 22nd December 2023. The objective of the FDP was to discuss recent trends and developments in applied sciences, explore the scope of design thinking in engineering, and equip engineers with professional skills while fostering a culture of ethics and good practices. Various sessions were meticulously planned, featuring esteemed guest speakers from industry and academia across India. The event was inaugurated on 11th December by Hon. Mr. Anand Kamalakar Vashta, CEO of Acesperalt Pvt. Ltd., who also conducted an expert session.

The programme covered a wide range of topics, from ethics to the applications of sciences in industry and daily life, with each session lasting around two hours followed by a Q&A segment. Conducted online, all sessions were recorded with the invitees' permission for future reference. The valedictory function on 22nd December featured Chief Guest Dr. Bhujangrao Baobade, Director of IKS, Nagpur, who delivered an expert talk on Indian Knowledge Systems, concluding the FDP on a high note.

Thank You...

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