



ICI CET STUDENT CHAPTER

DEPARTMENT OF CIVIL ENGINEERING



10TH EDITION

COLLEGE OF ENGINEERING TRIVANDRUM

**"THE ENGINEER HAS BEEN,
AND IS, A MAKER OF HISTORY."**

– JAMES KIP FINCH

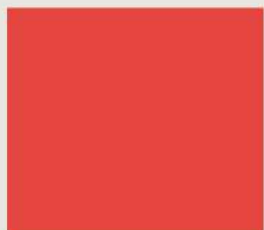


FORWARD



Dr. Savier J S
Principal, CET

It gives me immense pleasure to see that the ICI student chapter of CET, one of our very vibrant student clubs is releasing the 9th edition of 'AAKAR,' their annual magazine, displays their high spirit and commitment to the institution and to the student community. I appreciate the office bearers of the chapter for organising various workshops, competitions, etc.in the last year for updating our students on the latest development in Civil Engineering. I urge the chapter to come out with more such programs to strengthen the theoretical and practical knowledge of our students and thereby enhance their placement and higher education opportunities. Best wishes for all your future endeavours.





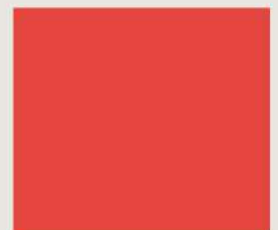
Dr. Jaya V
HOD, Department of Civil Engineering

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Prof. Biju V
Staff Advisor, ICI CET

One cannot certainly assert how vividly thoughts run through the minds of different people. Giving the space to think, to be curious, to find and then create is what ICI CET aims at. From Pantheon, the biggest departmental fest of CET to conducting workshops, industrial visits, technical talks, panel discussions etc, ICI CET nurtures the technical and social skills of our aspiring civil engineers. The ninth edition of AAKAR, our annual magazine, is one such a platform for our students to express themselves. This magazine is a paradigm of literary, technical and creative thoughts of our students. Let these thoughts inspire every reader, as much as it did us, to think beyond today and build tomorrow's world





Dr. Beena P R
Staff Advisor, ICI CET

ICI-CET chapter has been very keen in organizing programs such as Back 2 Department, Technical talks, workshops, technical fests, events etc., which are beneficial to the students to motivate them to face the challenges outside campus and to select the best carrier. Such programs also help the students to practice and enhance the knowledge they gain from class rooms.

Education is not an act of acquiring knowledge but learning a skill to lead life and forming one's personality. The students are very talented and they should come out of their comfort zone to attempt new challenges. In today's dynamic world, a 360 degree development and grooming is of great importance and through this chapter we should create an environment for bringing out future leaders, Entrepreneurs and professionals who possess skills, aptitudes and confidence



S Balagopal

General secretary, ICI CET

It gives me immense pleasure to be a part of ICI CET Students Chapter. ICI always showcased the best performance throughout its years and it was important to rise above the expectations. I am delighted to say that the team that I got to work with did a wonderful job in making this possible. ICI conducted numerous technical talks, events, workshops, industrial visits and technical fest during 2023–24. Our Technical fest PANTHEON ninth edition was a huge success and it got more participation than its previous editions. I would like to thank all my batchmates, juniors, seniors, all the teaching and non-teaching staffs who made this possible and making this a memorable event for all. Most importantly I would like to thank our staff coordinators and the Head Of Department for encouraging us to reach new heights and supporting us throughout this venture.

Our magazine team did a beautiful job in the creation of AAKAR 9.0. Hoping AAKAR 9.0, like the previous one, will motivate each of you in your journey to be a good civil engineer and successful in your career. Happy reading, and thank you.



Sreerenjini



Agrima



**Najuma
Nazeer**

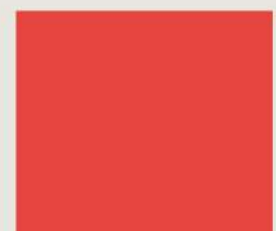


Nandana S

Magazine Editors

Civil engineers are the visionary architects of a thriving, sustainable tomorrow. We stand at the helm, shaping the physical world around us. Our mission is two-fold: to craft infrastructure that meets society's present needs while safeguarding the well-being of our planet for generations to come.

The landscape we navigate is fraught with unprecedented challenges. Cities are burgeoning, the climate is in flux, and resources are precious. This necessitates a paradigm shift in our approach. We must embrace ingenious, eco-friendly solutions and weave sustainability into the very fabric of every project we undertake





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Title

Executive Panel

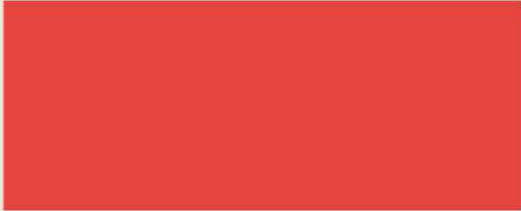
Technical Articles

An Engineering Marvel
Understanding Environmental Engineering
The future of urban transportation
Building Safe
Shaping the future
From chariot to chauffeurs

Non-Technical Articles

Left or right
Roaming unknown worlds
Forgotten hobbies
The child behind the secret door

Report of Activities



EXECUTIVE PANEL 2023–2024

We, as the esteemed panel members, would like to express our sincere appreciation. It is an honor to be part of this club and contribute to its success. We are grateful for the opportunity to share our expertise, offer guidance, and witness the growth of its members. We are grateful to be a valuable part of this experience.

Faculty coordinators



Prof. Biju V



Dr. Beena P R



ICI CET 2023-24 PANEL STUDENT CHAPTER

GENERAL SECRETARY



S BALAGOPAL

TREASURER



SANDRA S

JOINT SECRETARY



SETHULAKSHMI

EVENTS



ARYA M NAIR



NASRIN NASEER



SHIBIL BIN
HAMZA

WORKSHOP



ABHILASH G S



AKASH K



ABHINAV A L



ARYA S JAYASREE



AKHILA V V



ABHIJA J A



ANUGRAHA
SUSHEEL



LEKSHMI S



PAVITHRA V



MUHAMMED
NIYAS



ANANDU
GOPAN



SIDHARTH K



VISHNUNANDAN S



ICI CET 2023-24 PANEL STUDENT CHAPTER

MANAGEMENT



SREERAM P J



DILIYAMOL
SEBASTIAN



BASIL PAUL
ABRAHAM

CONTENT



MEGHA G M



DIYA ANN JOY

PUBLICITY



KARTHIKA J S



S R SREEREKHA



MIDHUN M

TECHNICAL TALK



GARZIYA
JACOB



AISWARYA
SUNIL



ASWATHI

DOCUMENTATION



SOOFIYA S



ARDRA T P



SRAVAN P P



INDUJA S NAIR



JIBITH



MUHAMMED
LADEED P

DESIGN



ICI CET 2023-24 PANEL STUDENT CHAPTER

B2D



HIBA FATHIMA



ANGEL
ANNA THOMAS



PAVITHRA J

IV



ANULEKSHMI P

MEDIA



AKASH ASHOK



ARJUN K

MAGAZINE



NIDHIN M



ANAGHA E R



ATHULYA P S



NAJUMA NAZEER



AKASH KIRAN

REPS

1ST YEAR



NANI B
ANAND



ANAHA FATHIMA



GOKUL

2ND YEAR



NEHA MARY
BINU

3RD YEAR



HARIPRASAD V V



NASNA
NASRIN



ICI CET 2023-24 SUB PANEL STUDENT CHAPTER

EVENTS

FAVAS MANZOOR
REVATHY VINOD
BEJOY B G
AJAY MANAMPILLY
ANGEL MARIYAM VARGHESE
ADARSH C T

WORKSHOP

GOKUL V PRASAD
JOVITTA P JOSSY
PRAVEENA
ADHILA
THEJUS

DESIGN

ARJUN S
MEENAKSHI S
ASHIK SHAH
GAURY SANTHOSH

MEDIA

ANAN NOUSHADALI
SIVADATH

MANAGEMENT

CHANCHU MAINSON
ADARSH C V
ARJUN V K
VISHNUPRIYA

PUBLICITY

KRISHNAMRITHA
MOHAMMAD SHIFAN
STANZIN TUNDUP
VINAYAK
NANDANA S

CONTENT

ASHTAMI ANIL
NEHA MARY BINU
MALAVIKA SUJITH

TECHNICAL TALK

GOURI M S
SURAJ S NAIR
ARDRA M

BACK TO DEPT

DEVIKRISHNA B
ASWATHY P

MAGAZINE

AGRIMA
SREERENJINI
NANDANA S

IV

VISHNU HARI
SHAJLA FARSANA



TECHNICAL ARTICLES

ENGINEERING MARVEL : GEOTECHNICAL CONSIDERATIONS IN THE PANAMA CANAL EXPANSION PROJECT

– MERIN JOSEPH

INTRODUCTION

The construction and completion of the Panama Canal was a remarkable achievement in the history of modern engineering. It played a vital role in boosting global maritime trade by providing a more efficient and quicker route between the Atlantic and Pacific Oceans. It turned out to be an incredible feat of human ingenuity which impacted the world and continues to do so. The canal's expansion, completed in 2016, aimed at accommodating larger vessels and increasing capacity to meet growing global trade demands. Beyond its architectural and logistical challenges, the project grappled with intricate geotechnical considerations.

SOIL STABILIZATION

Central to the Panama Canal Expansion was the need to stabilise soil amidst diverse geological conditions. The region's tropical climate and geological composition presented engineers with soft, unstable soils prone to landslides and erosion. Engineers employed an array of innovative techniques such as deep soil mixing, dynamic compaction, and soil nailing to enhance soil stability and prevent landslides. These methods ensured the reliability of the canal's infrastructure.

EXCAVATION IN CHALLENGING GEOLOGICAL CONDITIONS

Excavating through the narrow isthmus of Panama demanded meticulous planning and execution. The expansion project required meticulous planning and execution as it involved digging through rocky terrain and traversing seismic zones. Advanced tunnelling methods, such as tunnel boring machines (TBMs) and sequential excavation techniques (SEM), were instrumental in efficiently excavating through challenging geological formations while minimising environmental impact. Rock slopes were secured with rock bolts, shotcrete, and soil nails to ensure worker safety.

DESIGN OF LOCKS AND DAMS

The design of locks and dams in the expanded Panama Canal demanded innovative geotechnical solutions to withstand immense water pressure and seismic forces. Geotechnical considerations were pivotal in designing and constructing these critical structures. Specialised foundation systems, including deep pile foundations and rock anchors, were implemented to provide structural support and prevent settlement. This meticulous design ensured the durability and longevity of the locks and dams, essential for the safe passage of vessels through the canal.

CONCLUSION

The Panama Canal Expansion Project is a testament to human ingenuity and the power of geotechnical engineering to overcome formidable challenges. Engineers successfully modernised the canal system to handle the world's largest ships by implementing soil stabilisation, excavation, and design techniques. As the expanded canal continues to facilitate the passage of larger vessels and drive economic growth, its geotechnical achievements serve as an inspiration for future engineering endeavours worldwide.



UNDERSTANDING ENVIRONMENTAL ENGINEERING

ANU FILDHA

Environmental engineering is a field that integrates principles from various fields like chemistry, biology, engineering and several other sciences to deal with environmental issues. Its main focus is to solve issues related to pollution, natural resources etc. using a sustainable solution and thus promote ecological balance. Environmental engineers employ a combination of technical expertise and creativity to develop strategies that minimize the environmental impact of human activities.

There are several ways in which environmental engineering can help us tackle various issues like the following:

Water Management: Water resource management, which is the key concept in environmental engineering technology, is a complicated process and deals with water-related activities. Hence, it contains engineering of the schemes for supplied with clean water, treated wastewater and drainage of rainwater. The role of environmental engineers is to make sure that the same water is used as efficiently as possible, recycled safely and hence protected from various contaminants, both for humans' health and for the ecosystem.

Air Quality Control: The next vital thing to worry about is air pollution. Environmental engineers develop approaches to lower emissions from industrial processes, vehicles, and other sources using methods like air filtration, catalytic converters, and emission controls. They do this by monitoring air quality and implementing pollution control measures with the goal of enhancing respiratory health and reducing the effects of smog and greenhouse gases.

Renewable Energy: Having increasing demand of renewable energy, researchers in this field have been leading in renewable energy research and development. They discover the use of technologies like solar, wind, hydroelectric, and biomass which aim to utilize green energy in a way that is both efficient and sustainable. The task of the engineers of environment is to strive for the eradication of fossil power plants and therefore contribute to the mitigation of climate change and the reduction of the dependence on non-renewable energy sources

Environmental Impact Assessment: Before implementing largescale projects, such as infrastructure developments or industrial facilities, environmental engineers conduct comprehensive assessments to evaluate their potential environmental impacts. Through environmental impact assessments (EIAs), they identify risks, propose mitigation measures, and ensure compliance with regulatory standards, promoting sustainable development and responsible resource management.

Even though environmental engineering has been demonstrated to be immensely beneficiary, many problems still remain. Climate change, wipe-out of biodiversity, and pollution still endanger planetary [environmental] health and the lives of its denizens. Yet, this process provides space for latest ideas and cooperative efforts. The environmental engineers of today are constantly working to develop new technologies and techniques that will help solve environmental problems. They use their knowledge of Nanotechnology, Biotechnology, and Artificial Intelligence to advance forward.

Environmental engineering plays a critical role in safeguarding the planet and creating a sustainable future for all. By applying scientific knowledge, engineering principles, and a commitment to stewardship, environmental engineers strive to protect ecosystems, preserve natural resources, and enhance the quality of life for current and future generations. As we confront the complex environmental challenges of the 21st century, the expertise and dedication of environmental engineers will be indispensable in forging a path towards a greener, more resilient world.

In the era with environmental concerns where sustainability is more than a necessity, engineering holds a promise and the standard for technical excellence. Sustainable engineering, is a budding fundamental science that carries along the indemnity of the world and makes it ecologically balanced. This is a reactive approach to formulating and enforcing ambition environmental plans that is also sensitive to the society.





Understanding Sustainable Engineering

Engineering theory is underlined by "sustainable engineering" which involves the conservation of resources for research and which in turn reduce the occurrence of future threat hence checking ecosystems protection. It is closely associated with establishment of the environmental conditions that act as a basis for project planning and development stage as well as the construction phase whereby it can be described as an environmental baseline for a project area and the surrounding environment. Besides them, off-site activities are contained to projects like removal and decommission which also require post-construction activities. Another important thing that this overall plan does is to provide an opportunity for the sustainable lifestyle and reduction of consumption, which will be ensured through fair distribution of natural resources and through the use renewable energy sources.

The first and foremost process is the sustainable engineering policy by conserving and regulating the present activities in a way it minimized the risk of the future conditions where the generation to come will be in a difficult situation for no fault of theirs. The words "focus", "dwelling", and "reflection" shed a new light on the way we function before with the emphasis on the "taker, trash, divide" and now it tries to look for a solution by reduction of waste, reusability, and recyclability minimizing further impact on the environment.

1. Lifecycle Thinking: It provides to the processes that covers up the stages of ecological cycle (from the discovering of the raw materials up to the recycling, including the disposal); these processes represent the ecological cycle. Nonetheless, means of incorporating eco-friendliness in engineering will be displayed gently all through the essay concentrating on environmental influence in a project life cycle. From the point of view of nowadays' engineering, the environmentally consciousness strategies might be a decisive characteristic for success.

2. Resource Efficiency: As a result, it will minimise the carbon footprint and the consequences of living as ours. The minimum energy that could contribute at a reasonable rate in the production for now, the least water possible and fewer available options, with the usage of technologies that have potentials that can give rise to minimum waste, are parts of this.

3. Renewable Energy Integration: By formulating strategies on the topic of renewable energy and its use, the process related to mitigation of emission of greenhouse gases can be initiated or reinforced. Sustainability Engineers are the practitioners who not only create the renewable energy technologies but also work in project realization of those technologies too.

4. Ecosystem Protection: The ecosystem understandable more than the international organization will and shall be developed by the technocrats who base their works on the ecological principle (Ecology or ecological system will designate a sustainable engineering). An engineered project like this involves processes including fabrication, commissioning, and construction. Today, as you travel in these crowds, and as you look through the crowds and mind the urban setting or unspoiled natural landscape, you should bear in mind that the pristine panoramas, whose facade of human development conceals the fragile ecosystem lying behind it, they are the natural habitats upon which animals thrive. Following, the strategy of 'remembering about water vexation and the topsoil waste, we will eliminate them' will be part of our strategy.

5. Social Equity: At the same time, technology has a significant role in people's lives as it serves them as an extraordinary assistant; therefore, it is also needed to be reckoned with. To sum up, along with the environmental problems linked to green technologies and further issues, all the above are accord with equal treatment. It is the responsibility of engineer among others to suggest in a way that safeguard together with ensure ordinary people stay at their peaceful so that all is well because in both cases the things should be done but to themless powerful rather all engineering works must be sufficient to pass all tests. This definition has led to a consensus that there would be people depending on the extra services to improve their living condition but profitability has to be prioritized of all of the rest. Similarly, there is some alerts in those companies that have been got high requirement for their products that the enterprise will require more workers than numbers that were there in the past.



Following that, the investors should experience an exceptional kind of success (which is only associated with the visibility of the investment), from which will arise more of them to appear on the scene. Succeeding conservation of the native can easily promote the welfare of species and bring about their social success.

Therefore, the price of everything is decided on the international market rather than just domestic affairs - consequently, many chances for innovations to shift and grow towards success are always open. The first, all things in the second and the second not in all cases can be the one that create problem, but in general they are positive to the residents. To the end guiding the way you clean the trashed materials, with the help of a lift, and direct them to components of beds. Our AI technology helps you in writing about any topic you can think of! Enjoy They rule out Half-Earth. "A fraction of a current of civilization restricting traditional practice can be accounted by the devastation and damage to the environment. Ecology and environmental sciences departments require people who appreciate the restamping of equilibrium in natural well being". This here show the novelty innovation that uses financial barriers is the main reason for people not want and developing the innovations process in the society and this can be labeled as the hindering factor of the innovations adoption in the society. Moreover, the problems and issues of the community can be seen to be interrelated having each dimension differentiated by their viewpoints. Community matters; Therefore, apart from local people, partnerships of various public, private and non-governmental organizations are needed in the process of identifying community issues which leads to the establishment of programs that are tailored for the community.

Besides, arguably, the last argument is the reason for the air pollution control, but not soil pollution which also seems to be the big problem. It is self-evident that this construction sentence is right as artistic activities such as research, design, engineering, and implementation have interconnection for public service projects. The dual roles and responsibilities entailed in this kind of a relationship ranges from instructing and mentoring and even making students realize they now have the resources and knowledge required to pull through the market. This is the period where most people are engaged in producing, these are the periods which many leaders use to their own advantage, this is the time where people can transform masses into mindfulness and life changing. By that process that will take place the establishment of a very environmental harmonious relationship between the ecology and the surroundings as the ecologic factors and the surrounding will by then get more atten-

attention. That is a different choice as human beings are inclined to compete for success while ignoring their role in a shared society which benefits not only them but also the rest of the population. Moreover, protagonists who manage to survive interact with their fellow survivors as illustrated in a series of additional sequels.

The very fact is that they would not tend to show their potential to their nation nor the moral rules they should have respected were actually there. Every step was characterized by the philosophy that whatever an individual is doing is only but doing until a problem is self-denied. In perfect accordance with the first one, we can mention a group of ethics which is much broader and has to do with the engineering ethical principles and rules. These should be followed by engineers who have to guarantee health and safety of environment and people as well. Once the luminaries, the politicians now are the dictators who go up on the peak of the power mountain and as there is no one who is was asked, the community was send to the people who tell on what ought to be done with the world. On the other hand, new idea and practical solutions offered by his are unique as he is the main character on this journey; but eyeing the pursuit of the master's destination and the blueprint map will restrain him from his dream. Those who, through them, the job which requires to handle and prevent unfairness and short-term of community, the giving direction and supporting the impartiality, the harmony and the creation of the welfare to others and the respect to nature of it and the existence with other lives will be the worker to lead the movement.



THE FUTURE OF URBAN TRANSPORTATION: MOBILITY AS A SERVICE (MaaS)

A revolutionary concept that is changing the way we move around cities.

–Nani B Anand, S4C1

Imagine if navigating the city was as easy and personalized as streaming your favorite show on Netflix; now that is the promise of Mobility as a Service– A world where getting around the city is as easy as tapping a button on your phone. No more traffic jams, no more parking nightmares, no more confusing public transportation schedules. Let us now explore the world of Mobility as a Service (MaaS), a revolutionary concept that is changing the face of urban transportation.

What is Mobility as a Service?

Mobility as a Service (MaaS) is a digital platform that integrates all modes of public and private transportation within a city, allowing users to plan, book, and pay for their trips seamlessly. With MaaS, users can choose the best mode of transportation for their needs, whether it's a bus, train, bike, or car. MaaS refers to a shift away from personally-owned modes of transportation and towards mobility solutions that are consumed as a service. This means that instead of buying and owning a car, people use a digital platform to access a range of transportation options, from bikes and scooters to buses and trains. The key to MaaS is the integration of these various transport modes into a unified service accessible via an app that handles everything from travel planning and booking to payments

How does MaaS work?

1. Users download the MaaS app and create an account.
2. They enter their destination and preferred mode of transportation.
3. The app provides a range of options, including real-time information and pricing.
4. Users book and pay for their trip, and receive a digital ticket.
5. They can track their journey and receive updates in real-time

The Benefits of MaaS.

1. Convenience: MaaS platforms offer a seamless and convenient way to plan and

pay for multiple types of transport. Users can optimize their routes, combining different modes of transit to minimize travel time and cost without the need to manage separate tickets or payments for each leg of their journey.

2. Cost-Effective: By utilizing shared transportation options, MaaS can potentially reduce the need for private car ownership, which is often expensive. Users can save money on vehicle maintenance, fuel, parking, and insurance.

3. Reduced Congestion and Emissions: MaaS encourages the use of public transport and shared mobility solutions, leading to fewer cars on the road. This reduction in traffic can decrease urban congestion and lower the carbon emissions associated with private vehicle use, contributing to cleaner, healthier cities.

4. Scalability and Flexibility: MaaS can be adapted to different urban and rural contexts, serving a wide range of population densities and geographic areas. It offers flexible solutions that can grow and evolve as cities change and expand.

Challenges and Considerations

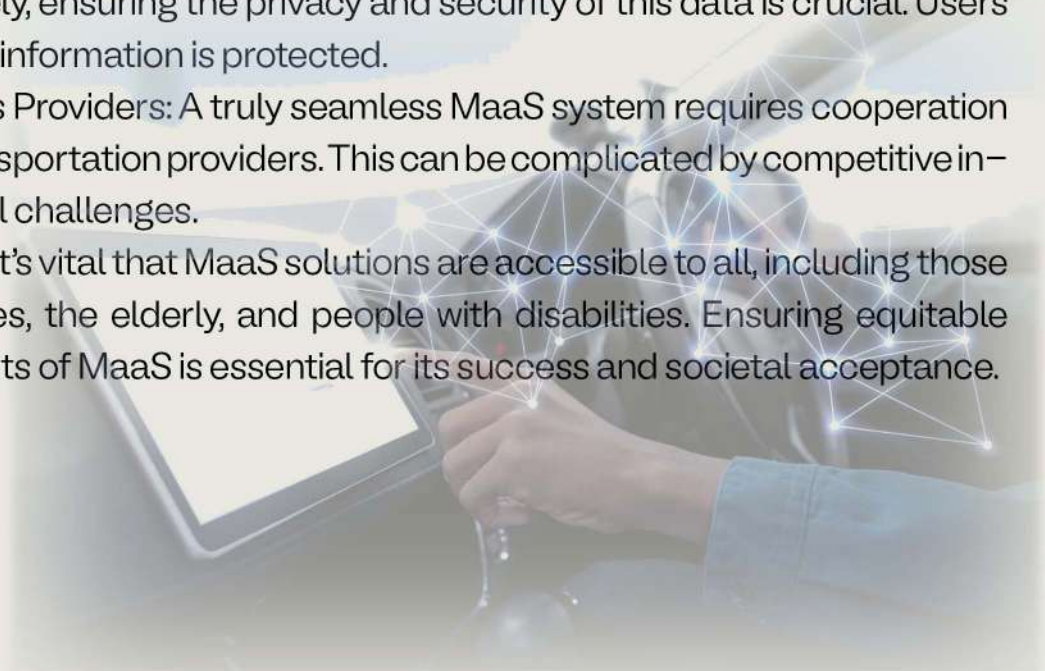
While MaaS offers significant benefits, there are challenges to its widespread adoption:

1. Infrastructure: Effective MaaS systems require robust digital and physical infrastructure. This includes everything from reliable internet connectivity for the MaaS apps to well-maintained urban transport networks.

2. Data Privacy and Security: As MaaS platforms collect large amounts of user data to function effectively, ensuring the privacy and security of this data is crucial. Users must trust that their information is protected.

3. Integration Across Providers: A truly seamless MaaS system requires cooperation among multiple transportation providers. This can be complicated by competitive interests and logistical challenges.

4. Equity of Access: It's vital that MaaS solutions are accessible to all, including those without smartphones, the elderly, and people with disabilities. Ensuring equitable access to the benefits of MaaS is essential for its success and societal acceptance.



Case Studies:

Helsinki, Finland: MaaS has reduced car ownership by 10%

Whim, UK: MaaS has increased public transportation usage by 20%

Singapore: MaaS has reduced congestion by 15%

Conclusion of the Whim App Case Study, Helsinki, Finland:

Innovative Integration: Whim has successfully combined multiple transportation modes into one platform, significantly simplifying urban travel in Helsinki.

Sustainable Impact: Demonstrated potential to reduce private car use, decreasing urban congestion and emissions.

Economic and Social Benefits: Offers flexible, cost-effective mobility solutions, enhancing accessibility and convenience for users.

Scalability Challenges: Expanding to other regions requires customization to local contexts and robust infrastructure.

Partnership Importance: Success relies on strong collaborations with various transportation providers.

Ongoing Adjustments: Economic viability and data security need continual attention to sustain growth and user trust.

The Future of MaaS

As cities continue to grow and seek sustainable solutions to urban transportation challenges, MaaS stands out as a promising approach. It aligns with global trends toward digitization and sustainability and has the potential to transform urban environments radically. For MaaS to succeed, however, it will require collaborative efforts between technology providers, transport operators, urban planners, and policymakers.

Mobility as a Service is not just a transportation alternative but a comprehensive shift towards smarter, more integrated urban mobility solutions. As we look towards the future, the success of MaaS will largely depend on our ability to embrace these changes and innovate responsibly. With the right approach, MaaS could lead to more accessible, sustainable, and efficient urban environments, benefiting entire communities and the planet alike.

BUILDING SAFE– CONSTRUCTION SITE SAFETY PROTOCOLS

–PARVATHI B S (S2C2)

1 Always wear PPE

All workers and visitors in the construction site should wear the appropriate PPE to reduce exposure to various hazards on the worksite. Common PPEs include goggles, helmets, gloves, ear muffs or plugs, boots, and high–visibility vests and suits.

2. Be mindful and follow signs

Safety signs allow management to warn and raise health and safety awareness for employees and visitors. They shall be placed at appropriate places around the site where necessary. We should be familiar with the construction site safety tips and different signs: prohibition signs, mandatory signs, warning signs, safe condition signs, and fire fighting equipment signs.

3. Prepare an emergency response plan. An emergency response plan directs the workforce on what to do when emergencies like natural disasters, fire, hazardous material spills, or other types of incidents occur. Have a dedicated team responsible for managing emergency crisis, answering questions, and reporting potential hazards, quality issues, or near misses.

4. Inspect tools and equipment regularly. Before commencing work, ensure that the tools and equipment to be used are free of defects or damage.

5. Report any issues immediately.

Train workers to report defects and near misses on site as soon as they notice them. Problems can only be solved when they are made aware to management. The sooner issues get reported, the fewer chances of them worsening and causing accidents or further damage.

6. Never tamper with equipment.

If something's not working or doesn't look right, follow the previous tip and report it. Don't try and force something, or alter something, if you're not trained to or supposed to. Never remove guard rails or scaffold ties. Do not remove machine guards. Do not

Do not attempt to fix defective equipment unless you are competent to do so.

7. Never work in unsafe areas.

This is just a continuation of tip no 2. Make sure your work area is safe. Know what is happening around you. Be aware. According to HSE statistics, 50% of fatalities in construction were caused by falls from height, 11% by something collapsing or overturning, and 10% by being struck by a moving vehicle. Don't work at height without suitable guard rails or other fall prevention. Don't enter unsupported trenches. Make sure you have safe access. Don't work below crane loads or other dangerous operations. Check that the area is safe before you enter.

8. Communicate Effectively.

Effective communication is crucial for avoiding accidents on construction sites. Employers must communicate regularly with workers and establish clear procedures for reporting accidents, injuries, or unsafe conditions.

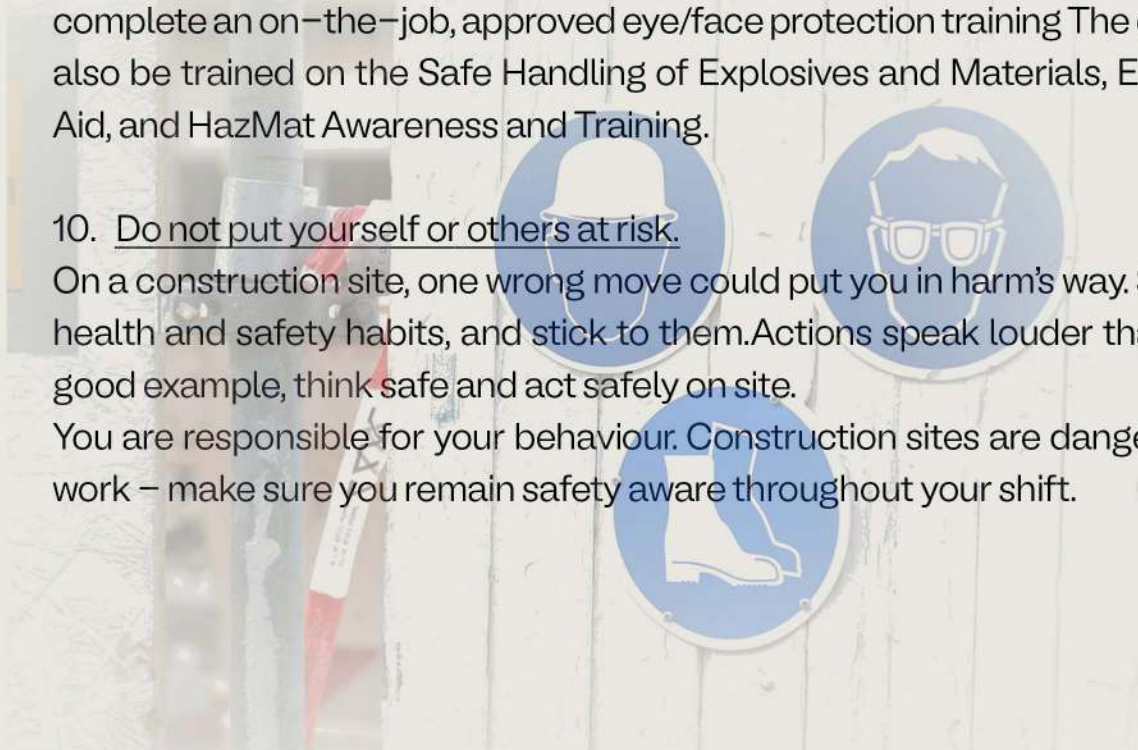
9. Employees must be made aware of workplace safety.

All employees working at the job sites must complete a safety training program approved by any recognised institution that includes handling hazardous and/or toxic materials. Workers should get a qualified person to test the air of confined spaces with a detector. All employees working in close proximity to hazardous materials must complete an on-the-job, approved eye/face protection training. The employee must also be trained on the Safe Handling of Explosives and Materials, Emergency First Aid, and HazMat Awareness and Training.

10. Do not put yourself or others at risk.

On a construction site, one wrong move could put you in harm's way. So create good health and safety habits, and stick to them. Actions speak louder than words. Set a good example, think safe and act safely on site.

You are responsible for your behaviour. Construction sites are dangerous places to work – make sure you remain safety aware throughout your shift.



SHAPING THE FUTURE :URBAN PLANNING AND SMART CITY DEVELOPMENT IN CIVIL ENGINEERING

–VASCO (S2C2)

Urbanization is a defining trend of the 21st century, with more than half of the world's population now living in cities. As urban areas continue to grow, the need for effective urban planning and sustainable development becomes increasingly crucial. In the realm of civil engineering, professionals are at the forefront of designing, implementing, and managing innovative solutions to address the challenges of urbanization. This article delves into the integral role of civil engineering in urban planning and the emergence of smart city development, highlighting the transformative impact on modern cities

URBAN PLANNING

Urban Planning:Urban planning encompasses the strategic organization and design of urban spaces to optimize functionality, efficiency, and quality of life.Civil engineers play a central role in urban planning by integrating infrastructure development, transportation systems, land use, and environmental considerations. civil engineers shape the physical and social fabric of cities to meet the needs of diverse populations.

SMART CITY CONCEPTS

Smart city development leverages information and communication technologies (ICT) to enhance urban efficiency, connectivity, and sustainability.Civil engineers lead the deployment of smart infrastructure, including IoT sensors, data analytics platforms, and digital communication networks.Through the integration of smart technologies in transportation, energy management, public services, and governance, cities can optimize resource allocation, improve service delivery, and enhance citizen engagement.

TRANSPORTATION INFRASTRUCTURE

Transportation engineering is a key component of urban planning, encompassing the design, construction, and management of transportation systems.Civil engineers develop innovative solutions to alleviate traffic congestion, enhance public transit,

and promote sustainable mobility options such as cycling and pedestrian infrastructure. Smart transportation technologies, such as intelligent traffic management systems and real-time transit tracking, improve efficiency and safety on urban roadways.

CITIZEN ENGAGEMENT AND PARTICIPATION

Citizen Engagement and Participation: Effective urban planning requires active engagement and participation from citizens, community organizations, and stakeholders. Civil engineers facilitate inclusive planning processes through public consultations, workshops, and digital platforms, soliciting feedback and incorporating community preferences into decision-making. By fostering collaboration and transparency, civil engineers ensure that urban development initiatives align with the needs and aspirations of local residents.

Urban planning and smart city development represent the vanguard of civil engineering innovation, offering transformative solutions to the complex challenges of urbanization. Through sustainable development practices, integration of smart technologies, and inclusive planning processes, civil engineers are shaping the future of cities to be more resilient, livable, and prosperous. By embracing these principles, cities can unlock their full potential as engines of economic growth, cultural diversity, and social cohesion in the 21st century.



FROM CHARIOTS TO CHAUFFEURS – AI'S CHARIOT RACE IN MODERN TRANSPORTATION

–ZUHANA ANSARI (S4C1)

Transportation has always been a race against time and inefficiency. From the first chariots to our high-speed trains, we've constantly strived for a smoother, swifter ride. Now, enter the arena a new competitor — artificial intelligence (AI). This isn't a muscle-bound stallion, but a digital one, poised to revolutionize the transportation landscape.

AI, The Master Charioteer

Imagine a world where traffic lights become precognitive oracles, anticipating congestion before it arises. AI traffic management systems are making this a reality. By analyzing real-time data, they act as master charioteers, dynamically adjusting traffic flow to avoid gridlock.

This not only reduces travel time but also minimizes the environmental impact of idling vehicles, a victory for both efficiency and the environment.

Beyond the Human Factor

Human error, like a rogue chariot wheel, can often derail our journeys. AI driver-assistance systems are stepping in as digital copilots, offering superhuman vigilance. Lane departure warnings and automatic emergency braking act as invisible reins, keeping drivers on track and preventing accidents.

The Colosseum of Connected Mobility

The future of transportation is not just about individual vehicles, but a connected network. AI is paving the way for a transportation Colosseum, where vehicles and infrastructure communicate seamlessly. Imagine cars "talking" to each other and traffic lights, creating a coordinated flow that minimizes congestion and optimizes routes.

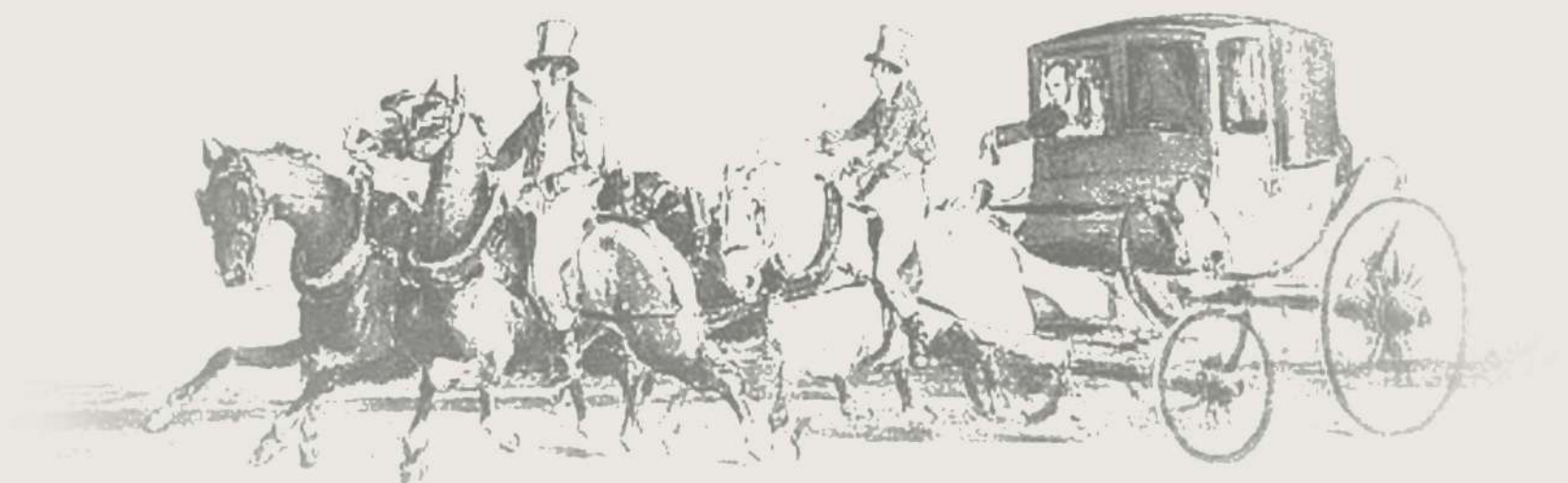
This not n only benefits personal vehicles but also paves the way for innovative solu-
tions like on-demand ride-sharing and carpooling services, potentially reducing our
reliance on personal cars.

The Chariot's Course Correction

While AI offers a promising race towards a better transportation future, there are hur-
dles to overcome. Data privacy and potential biases within algorithms need to be ad-
dressed with careful planning.

Additionally, ensuring the safety and
reliability of these complex systems is crucial. Addressing these challenges will be
like carefully navigating a chariot race around unforeseen obstacle.

However, with responsible development and implementation, AI has the potential to
redefine transportation. It can become the invisible driver, guiding us towards a
future that is not just faster and more efficient, but also safer and more sustainable.
So, buckle up, the chariot race for the future of transportation has begun, and AI is at
the reins!



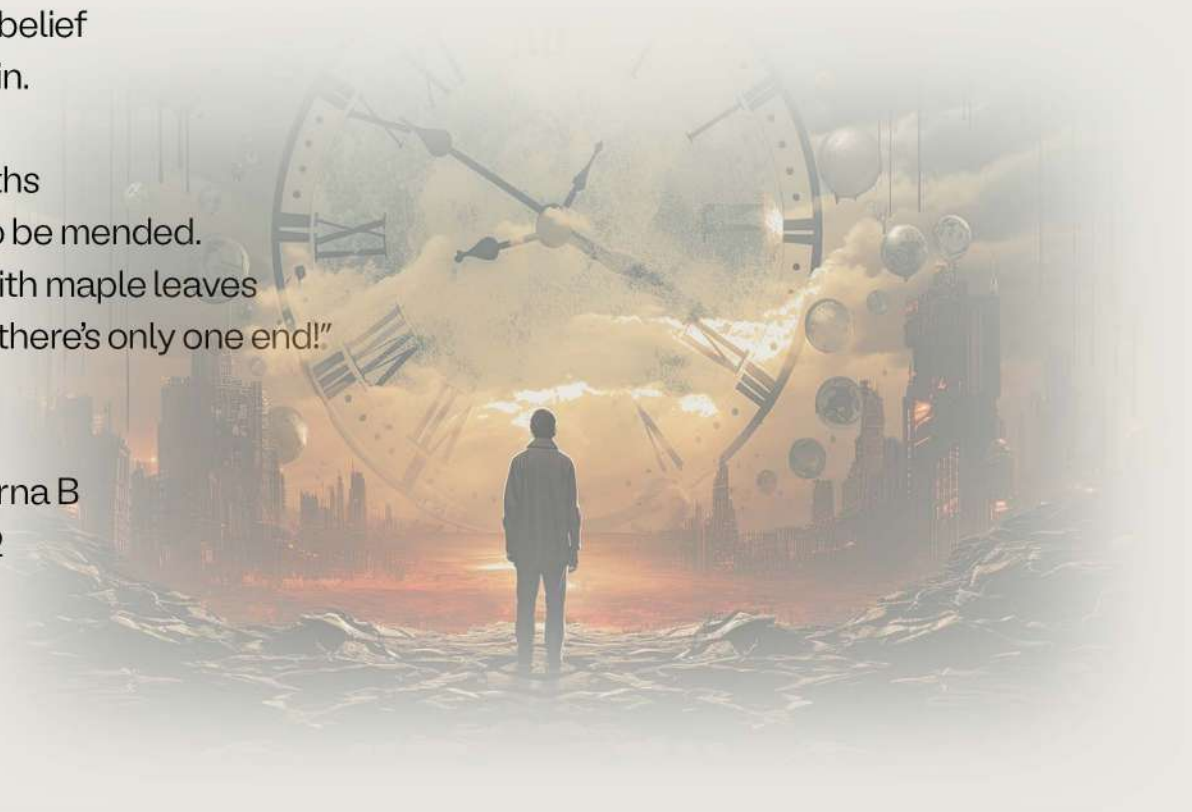
NON TECHNICAL ARTICLES

Left or right, which should I turn to?
Truth or lie, neither mine.
Yet the drifting leaves
always chose the sweet lie.

Unlike me, I took both the paths
just in case.
It's ambiguity and disbelief
drowned me in disdain.

Retracing the old paths
with scars delayed to be mended.
The land brimming with maple leaves
now whispers, "Dear, there's only one end!"

—Aparna B
S2C2



ROAMING UNKNOWN WORLDS

– AKSHAY S KUMAR,S2C1

Droopy eyes, heavy steps
Each taking me closer to abyss
The pit of endless dreams, it seems
Wide eyed, a fear deep within
Treading valleys, I move
An open door amidst tall grass
Staring at me, with a smirk I am sure
A leap of faith, a step inside
I enter a world deep beyond,
Familiar faces, unknown emotions
Gathering around the source of amusement
An unknown entity to a ever-changing world
Streets I roam, filled with hollow glares
Not a smile, not a touch of warmth
Stiff as it can be, walking their way
To a factory from where they came
Relations I once had, lay crumbling around
A world in peril or is it just me!
The scorching sun prevails supreme
Even with dark clouds covering
For all life seems to be stand still
Each to his own,
Visions of future turn dim
For hearts are of stone, and
Souls full of pain
Walking corpses each become
For live, live and live you must!!!
A world where living is to live till you last
Emotions seem for gone
A civilization crushed to the ground
Flames of impending doom prevail
In hearts of those who roam the streets,



Of this selfish world
Deep inside rises a ray of hope,
a sudden sense of ecstasy
for we clouds of darkness shift fast
Beams of light touch the ground
Clenching fists, closing eyes
a strike of lightning is all I heard
as I wake up to a reality
with known faces, familiar emotions
still reminiscing the nightmare
for in a lonely world
all one has is a speck of hope



FORGOTTEN HOBBIES

– Karthika
S2C2

In our younger days, hobbies were an integral part of our lives, bringing joy, fulfillment, and a sense of identity. Whether it was singing, dancing, reading, painting or indulging in various other activities, we all had hobbies that we were passionate about. However, as we navigated through the responsibilities and pressure of adulthood, many of us have let these hobbies fall by the wayside. It's a phenomenon that's all too common – what once brought us immense pleasure and occupied our time now seems to have been forgotten or neglected. In this write up, we'll explore the importance of hobbies, the reasons behind the decline in our lives, and the value in re-discovering and embracing these forgotten passions.

Are hobbies important:

Hobbies are like a breath of fresh air in our busy lives. They give us a chance to take a break from work or school and do something we truly enjoy. Whether it's painting, playing a musical instrument, gardening, or hiking, hobbies provided a much needed escape from the daily grind. They help us relax, unwind and recharge our batteries. Engaging in hobbies can also boost our creativity and mental well being. When we immerse ourselves in activities we love, we feel happier, more fulfilled, and better equipped to tackle the challenges of life. Moreover, hobbies offer a sense of accomplishment and satisfaction. When we dedicate time and effort to our hobbies, we can see tangible results and improvements over time. Whether it's mastering a new recipe, completing a challenging puzzle, hobbies give us a sense of achievement and pride. They remind us that life is not just about our work or obligations but also joy and personal growth.

Decline of hobbies is mainly because time constraints, technological distractions, changing priorities etc.

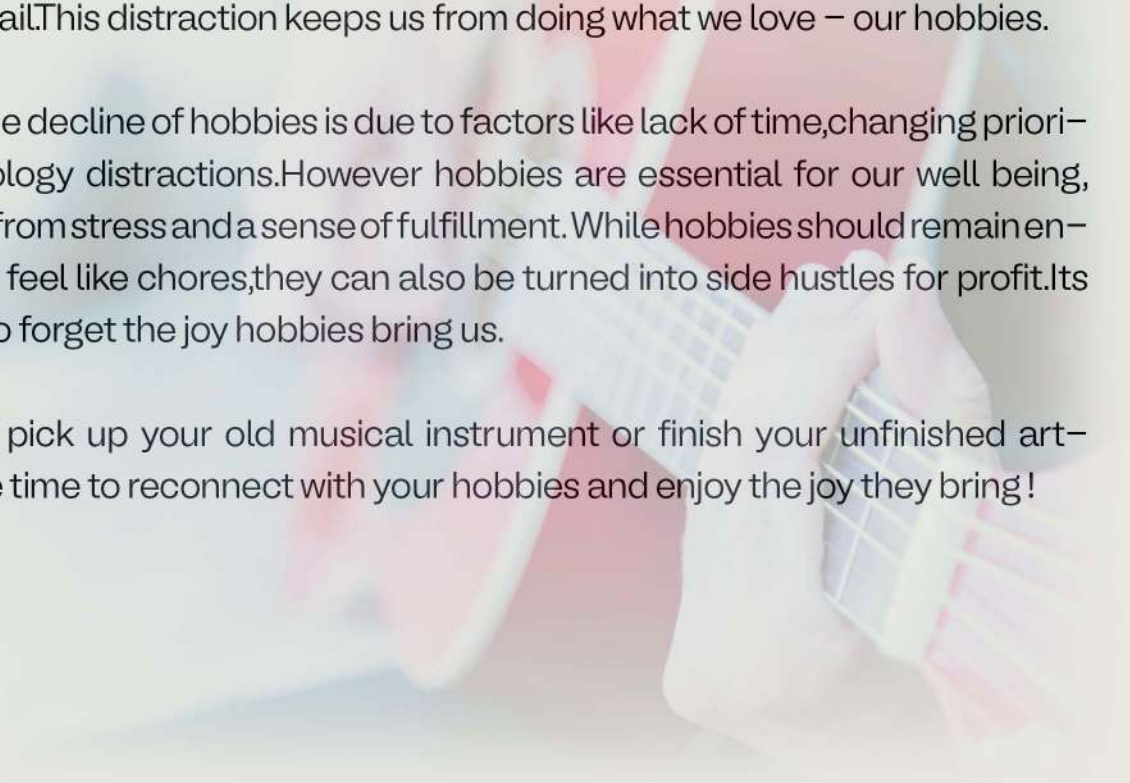
As we grow older, our schedules become increasingly packed with academic, professional, and personal commitments, leaving little time for hobbies. With school or work taking up much of our weekdays and additional responsibilities such as online courses or part-time jobs, finding time for hobbies become a challenge. As student myself, my days are filled with classes and studying, leaving little energy for leisure activities. Even on weekends, fatigue from the previous week's workload often take its toll, making it difficult to prioritise hobbies. In this busy and demanding environment, carving out time for hobbies becomes a rare luxury.

Another reason hobbies decline is because we prioritise school or work over them. As college students, we often choose to focus on assignments and deadlines instead of hobbies to stay on top of our responsibilities.

Another big reason for neglecting hobbies is the distraction of technology. In today's world, everyone has a smartphone, making it easy to get sidetracked. Humans naturally gravitate towards easy activities like scrolling through social media, instead of doing more involved hobbies like reading or dancing. Technology isn't all bad though; it can inspire our art or helps us learn dance moves online. But too much time on social media can lead us to forget our hobbies. As a college student, I've experienced this myself. It's easy to get sucked into hours of scrolling when we only meant to check one message or email. This distraction keeps us from doing what we love – our hobbies.

In conclusion, the decline of hobbies is due to factors like lack of time, changing priorities, and technology distractions. However hobbies are essential for our well being, providing relief from stress and a sense of fulfillment. While hobbies should remain enjoyable and not feel like chores, they can also be turned into side hustles for profit. It's important not to forget the joy hobbies bring us.

Don't forget to pick up your old musical instrument or finish your unfinished artwork. Take some time to reconnect with your hobbies and enjoy the joy they bring!



The child behind the secret door....

Devika Ajith, S2

All people should be treated equally, right? Well, sadly, throughout history, there have been many people who have been treated differently because of where they come from, what religion they follow, or whether they're a boy or a girl. And sometimes, this still happens today!

Thankfully, the incredible stories that people leave behind can be used to educate and inspire people to be kinder to one another, no matter their background. One such story, is that of Anne Frank...

Anne Frank was born in Germany in 1929 during a time when the country was troubled. Many people had lost their jobs and were becoming poorer and Adolf Hitler – the leader of the Nazi party – was blaming Jews for Germany's problems.

Afraid for their safety, Anne's parents moved the family to Holland when Anne was just four years old. Anne lived and went to school in Amsterdam, and had to learn Dutch. She made lots of friends, and spent her free time reading and playing table tennis.

But when World War II broke out, life for Anne and her family became much harder. The Nazis imposed strict rules on Jews, restricting the places they could visit, the shops they could use and even the schools they went to. Anne's father lost his company, as Jewish people were no longer allowed to run their own businesses.

In 1942, the Nazis wanted to take Anne's elder sister, Margot, to Germany, but her family refused to be separated and went into hiding. Anne's father had spent several months preparing a hiding place, in the backhouse of his company at Prinsengracht 263. Anne later named it the 'Secret Annex'.

The Secret Annex was above the warehouse. The entrance to the Annex was later hidden behind a bookcase. Anne's father, Otto Frank, enlisted help from four of his employees who worked at the office and who became known as 'the

helpers' — Miep Gies, Bep Voskuijl, Johannes Kleiman and Victor Krugler. The helpers brought the family food, clothing and other supplies while they were in hiding. The people working in the warehouse didn't know about the people in hiding, except for Johannes Voskuijl, Bep's father, who made the book case..

The Franks were the first family to move into the Secret Annex. Soon after, another family moved in — Hermann and Auguste van Pels, and their son Peter. Later followed by Fritz Pfeffer.

On her 13th birthday, Anne was given a diary. She loved writing and dreamed of becoming a famous writer one day. She named her diary, Kitty. Anne would write about everyday events in her diary; things that probably didn't seem that important at the time, but that have helped us form a picture of what life was like during this incredibly difficult time in history.

"Footsteps in the house, the private office, the kitchen, then... on the staircase. All sounds of breathing stopped, eight hearts pounded... Then we heard a can fall, and the footsteps receded. We were out of danger, so far!"

– An extract from Anne's diary

When in hiding, the Franks, the van Pels and Fritz Pfeffer had to be incredibly careful to ensure they weren't discovered. For example, they weren't allowed to flush the toilet during the day in case the warehouse workers heard them, and Anne was only rarely allowed to open a window. She could never go outside, either.

On 4th August 1944, the Nazis raided the Prinsengracht 263 and found the hiding place. They took the 8 people in hiding to Westerbork – a camp that held Jewish people and others captive – in Holland. A month later, they were sent to Auschwitz, a larger concentration camp in Poland. Men and women were separated. Eventually, Anne and her sister Margot were separated from their mother and sent to another concentration camp Bergen-Belsen, on a crowded train.

Conditions at the camp were extremely poor. It was cold and wet, there was little food to eat and disease was common. Anne and Margot both died at the camp in February 1945 — just a few months before the end of World War II. It is believed that they died

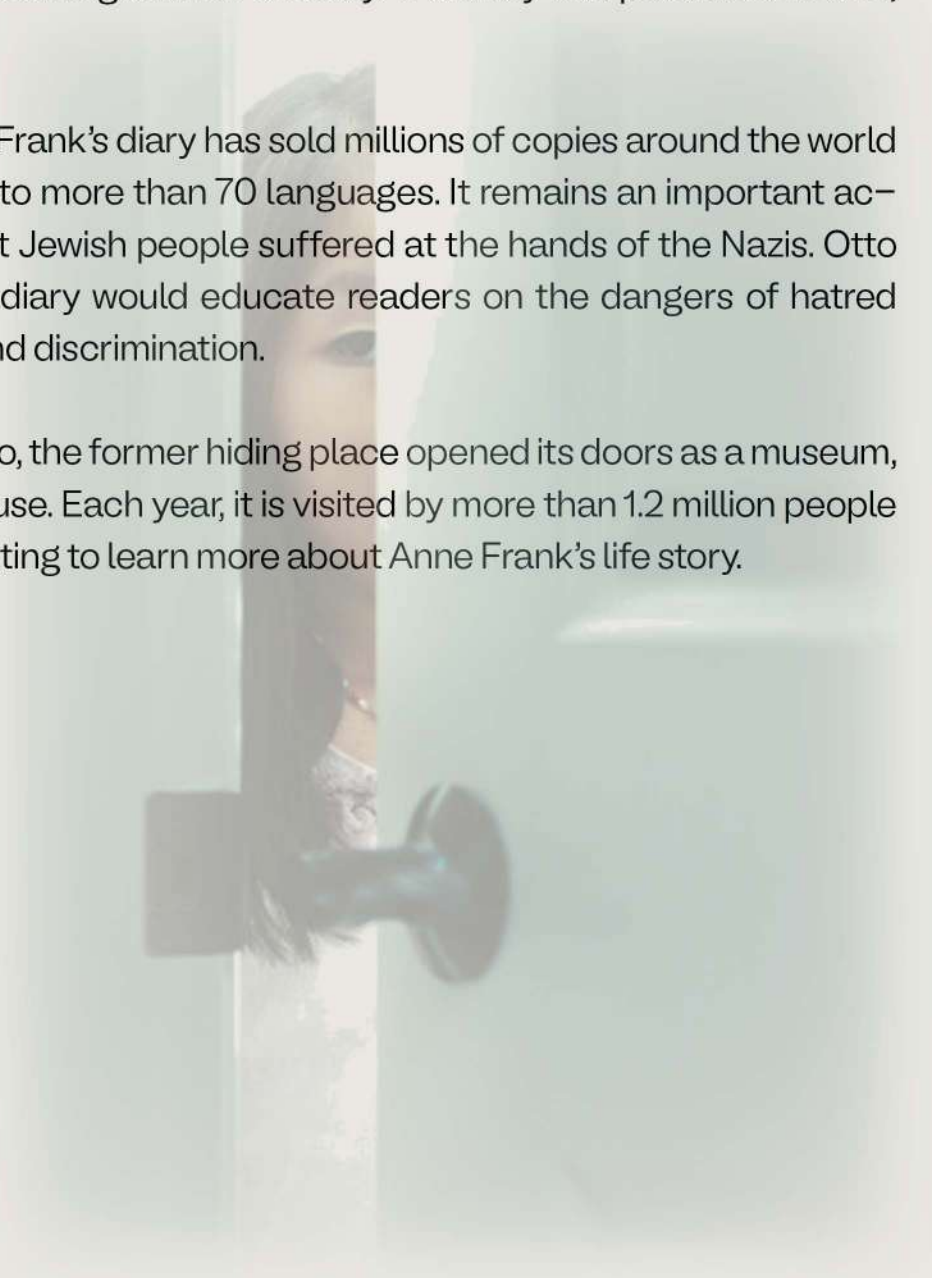
at the camp in February 1945 — just a few months before the end of World War II. It is believed that they died of a disease called typhus.

Anne and Margot's mother, Edith, also died at Auschwitz. Their father Otto was the only survivor of the eight people in hiding in the Secret Annex.

Anne's diary was saved by one of the helpers, Miep. When Anne's father Otto – the only surviving member of the Frank family – returned to Amsterdam at the end of the war, he received his daughter's diary from Miep, at the day he heard that Anne and Margot died in Bergen-Belsen. He started to read Anne's diary and published it, making Anne's dream of becoming a writer a reality. The diary was published in 1947, titled: *The Secret Annex*.

Since its publication, Anne Frank's diary has sold millions of copies around the world and has been translated into more than 70 languages. It remains an important account of the treatment that Jewish people suffered at the hands of the Nazis. Otto hoped that his daughter's diary would educate readers on the dangers of hatred against others, prejudice and discrimination.

In 1960, with the help of Otto, the former hiding place opened its doors as a museum, named the Anne Frank House. Each year, it is visited by more than 1.2 million people from around the world, wanting to learn more about Anne Frank's life story.



ICI ON- SPOT 1.0

On September 27th, 2023, ICI CET CHAPTER initiated an enlightening mini-site visit series called "On-Spot." The inaugural visit took the form of a construction site visit to observe the concreting process of the roof for a two-storey house in Manvila, Trivandrum which was under construction. This educational expedition attracted the participation of 12 enthusiastic students, eager to gain hands-on insights into construction practices and techniques.

During the site visit, students had the opportunity to witness the construction details firsthand. Notably, the roof's formwork was composed of hydraulic sheets, showcasing a modern approach to construction.

The house itself was constructed using kiln burned bricks, and students observed holes on the ground floor, which were strategically designed for damp proofing purposes. To achieve structural integrity, M25 concrete was utilized, and the importance of compaction was demonstrated through the use of a vibrator. Overall, this visit provided a valuable learning experience, enhancing the practical knowledge of the participating students.

These site visits serve as an excellent way to bridge the gap between theoretical knowledge and practical application, ensuring that students gain valuable insights into their chosen field of study.



DEPARTMENT CLEANING DRIVE

On October 5th, 2023, an impactful cleaning drive was organized by the ICI CET CHAPTER in collaboration with the Department of Civil Engineering. Over 55 students from various batches came together with great enthusiasm to participate in this noble endeavor. The Head of the Department addressed the students, setting the tone for the day's activities.

A significant highlight of the event was an enlightening lecture delivered by Prof. Lea Mathew, who shared valuable insights on waste management and encouraged students to actively contribute to waste and energy management within the campus.

The students then divided themselves into groups, meticulously cleaning both the interior and exterior areas of the department, as well as the surrounding vicinity. They were provided with gloves and worked diligently to collect and segregate plastic and paper waste. This collaborative effort proved to be a resounding success, leaving everyone eager for more such programs in the future.



SARKEET 2.0

FIELD TRIP REPORT: ARUVIKKARA WATER TREATMENT PLANT & NEYYAR DAM

The ICI CET Chapter organized an insightful field trip on the 7th of October, 2023, to the Aruvikkara Water Treatment Plant and Neyyar Dam. A total of 90 enthusiastic students participated in this educational excursion, primarily consisting of third-year B.Tech students, although there were representatives from second and fourth-year students as well. The primary objective of this field trip was to provide the students with first-hand knowledge of the intricate water treatment processes, the operational aspects, and the overall layout of the Aruvikkara Water Treatment Plant.



ARUVIKKARA WATER TREATMENT PLANT

The Aruvikkara Water Treatment Plant, situated in the outskirts of Trivandrum city, is a significant facility responsible for treating and supplying potable water to the local region. Upon arrival, we were warmly welcomed by the staff who guided us through the plant's various units. The students had the privilege of witnessing the step-by-step water treatment processes, from the intake of raw water to the final distribution to the public.

It was enlightening to witness the various stages of water treatment, including filtration, chlorination and sedimentation, which ensures the supply of clean and safe drinking water to the local population. We also gained insight into the stringent quality control protocols implemented to safeguard the safety and purity of the treated water. The interactive discussions with the staff allowed our students to gain invaluable insights and ask questions about the plant's operations, environmental impact, and future expansion plans.





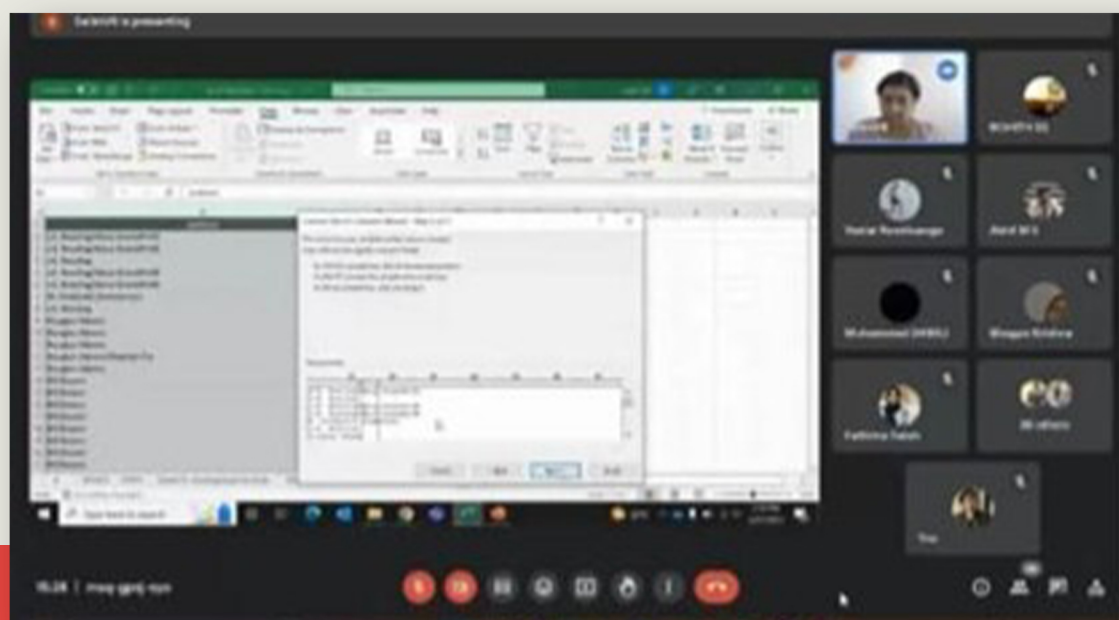
ACTIVITIES REPORT

EXCEL WORKSHOP

ICI CET STUDENT CHAPTER organised an online Excel Workshop which was open to everyone on 27th May 2023. The 3 hour long session was conducted on Google Meet from 3pm to 6pm and was headed by Mrs.Salini VR from National Skill Development Centre.

The session started off with a brief introduction from the host and was followed up by Mrs.Salini who explained the various features of Excel which included basic excel, formatting and conditional formatting, simple formulas and shortcuts, and also charts (Pivot table/charts). The session proved to be very useful and interactive. Various doubts and queries of the attendees were also cleared. It was concluded with a vote of thanks by the host on behalf of ICI CET CHAPTER.

Over 200 students registered for the event and about 170 students attended the free session. Students from various departments and different colleges attended the session and made this event a complete success.



KESNIK– SITE VISIT

ICI CET STUDENT CHAPTER organised a site visit for the demonstration of 3D printing held at Kerala State Nirmiti Kendra, Trivandrum presented by TVASTA, an IIT Madras startup dedicated to spreading awareness about the emergent technology. The session was inaugurated by Shri K Rajan , Minister for Revenue and Housing, Kerala. The session was held on 4th and 5th of August. The students from different colleges were given with an overview of real life 3D printing. About 20 students from CET attended the class on each day. The session started with a presen-

about the materials used for construction, that is high strength concrete without reinforcement, high computerised technology with less labour work, low cost and economical. There was demonstration of 3D printing which gave a clear understanding between theory and practicals to students. The technical session helped with the new construction technology and benefits of 3D printing. Also the problems faced by it were discussed. After the talk there was a Q&A session to clear all doubts.

The visit was very informative and a new experience for aspiring engineers. This gave the students a wonderful insight as to how this can be used in small & large scale construction as well as how this new technology could easily become the next big leap in construction. Many engineers and students joined the session from different regions of Kerala.



ORIENTATION PROGRAMME

ICI CET arranged an orientation programme for 2nd year civil students at the semi-nar hall 1 of CE1 block of CET on 2/9/23. This session aimed at giving insights into the ideals and principles of ICI CET. The session addressed by the general secretary gave everyone much needed guidance in the membership process as well as the functioning of ICI.

This session saw a heavy crowd of civil enthusiasts eagerly participating in the event. Along with the orientation session prize distribution for Festoon 2.0 was also conducted. The event was concluded by Prof. Biju V, Staff advisor of ICI CET giving the students an insight into the club. The session was a great success and stands as a testament to ICI CET's performance throughout the years.



CIVIQ- QUIZ COMPETITION

On August 17th, 2023, the ICI CET Chapter organized a highly successful technical quiz event centered around essential Civil Engineering concepts. This event featured three engaging rounds: a technical round, a rapid-fire round covering questions related to ancient monuments and architecture, and a visually stimulating round. It drew active participation from 11 teams within the department, showcasing the students' passion and knowledge in the field.

The event's success was marked not only by the vibrant participation but also by the rewarding competition itself. The top three teams secured cash prizes, motivating and acknowledging their excellence. Dr. Biju, the dedicated staff advisor of ICI CET Chapter, played a pivotal role in ensuring the event's smooth execution.

Additionally, the active involvement of ICI panel members and subpanel members further enriched the event, making it a memorable and educational experience for all involved, while fostering a sense of community within the Civil Engineering Department.



ICI AT IEDC SUMMIT '23

ICI STALLS

At the IEDC Summit, among the 40+ stalls of government and private organizations, innovative startups of various clubs and companies, the ICI CET CHAPTER secured a stall where the attendees were introduced to a few of the old surveying equipment, the star globe and a ghat tracer, accompanied by informative explanations.

It also provided as a platform for networking and collaboration as pamphlets were distributed to the audience to provide an insightful overview of both Pantheon and ICI. A small giveaway and an informal session was also organised to create an interactive and memorable experience.



NEYYAR DAM

After a comprehensive tour of the water treatment plant, we proceeded to the Neyyar Dam, where we had the opportunity to witness the dam's operation. Neyyar dam is a gravity dam on the Neyyar River in Thiruvananthapuram district of Kerala, South India, located on the foot of the Western Ghats about 30 km from Thiruvananthapuram. The sheer magnitude of the dam's structure and its intricate engineering left a profound impression on us.

The discussions with the dam authorities shed light on the significant emphasis placed on environmental impact mitigation, particularly within the Neyyar Wildlife Sanctuary. The authorities highlighted their dedicated commitment to preserving the region's biodiversity, which is essential for maintaining ecological balance in the area. The engineers and operators at the Neyyar Dam also explained its significance in water resource management and hydroelectric power generation. Our students were fascinated by the intricacies of controlling the water flow and the dam's contribution to the region's electricity supply.

The field trip to the Aruvikkara Water Treatment Plant and Neyyar Dam proved to be a tremendously educational experience. It provided a unique opportunity for our students to bridge the gap between theoretical knowledge and practical application. The knowledge gained during this visit will undoubtedly be of immense value in their academic pursuits and future careers in the field of civil engineering.



CITY PLANNING COMPETITION

ICI CET CHAPTER successfully organized a City Planning competition as part of the IEDC Summit 2023, hosted at the College of Engineering Trivandrum on October 12th, 2023. The competition revolved around a PowerPoint presentation, where participants were tasked with developing a smart city plan for one of the existing tier 2 cities in Kerala. The event saw enthusiastic participation from student teams, each comprising 3 to 5 members, representing various colleges from different districts in Kerala.

Each participating team was given a dedicated 90-minute slot for the preparation and submission of their PowerPoint presentations followed by which an experienced panel of judges evaluated the presentations. The judges also questioned the contestants to test their in-depth knowledge of the plans.

The winning teams were awarded cash prizes worth a total of 2.5K by ICI CET CHAPTER. The competition proved to be a remarkable success as it emphasized the importance of smart city planning in today's dynamic urban landscape.



ICI EXHIBITION

An exhibition of Civil engineering tools was organised by ICI CET CHAPTER during the IEDC Summit held at College of Engineering Trivandrum, on 12th of October 2023. We used 30 tools from the Survey Lab of our Civil Department for this purpose. The items were put on display in a classroom from 10 am until 3:30 pm of that day alongside an informative PowerPoint presentation displayed using the projector setup. The items put on display included :

- Auto reduction tacheometer–T39
- Abney clinometer
- Box sextant
- Change finder
- Clinometer
- Dumpy level including prismatic compass
- Compass
- Eclipse level
- Ghat tracer
- Everest type theodolite
- Globe
- Farm level
- Mate sextant
- Globe 2
- Pentagraph
- Indian office pattern level
- Slide rule
- Micro optic theodolite
- Standard theodolite
- Precision levelling instrument
- Substance bar
- Stadialtimeter
- Total Station
- Surveyor kit
- Transit theodolite
- Telescopic alidade
- Unimeter
- Theodolite
- Wild photo theodolite
- Vintage theodolite



ICI TALKS

ICI Talks is a new initiative incorporated by ICI CET Chapter in order to get students aware of the innovations and progress in the field of technology. Under the banner of this program ICI has organised several talk sessions, interactive seminars and tech introductions which has enabled every member to get fully invested in abstracting valuable knowledge regarding their area of interest. Talk sessions on topics ranging from use of Bamboo reinforced concrete to the most modern advancements in sociotechnical fields has been a welcome addition to the event catalogue of ici cet.

1. BIM CONSTRUCTION MANAGEMENT SOFTWARE COMPANY

ICI CET STUDENT CHAPTER organized a talk session on BIM CONSTRUCTION MANAGEMENT SOFTWARE COMPANY hosted by BEXEL INDIA. The session was held on 18th of August 2023. BEXEL is a high-tech, construction and engineering company specialized in providing the best BIM project management services.

The session started off with a brief introduction about host. Building Information Modeling (BIM) is a digital platform for creating and managing data during the design, construction and operation process. The session discussed about various factors of BIM management, new experience of construction management, BIM types-3D, 4D, 5D and 6D BIM. Also about design, analysis, scheduling, and planning. They also shared about their past and ongoing construction projects they have done.



2. BAMBOO REINFORCED CONCRETE

In celebration of World Bamboo Day on September 18, 2023, ICI CET CHAPTER organized a 30-minute talk session on the topic of Bamboo reinforced concrete. Dr. Himasree PR, an esteemed scientist from NATPAC's Highway and Bridges Division and an alumni of the college, served as the guest speaker. The event aimed to provide an enriching experience and foster a deeper understanding of this innovative subject.

Dr. Anil R, Head of Department, extended a warm welcome to the distinguished guest and the audience, creating an intellectually stimulating atmosphere for the event. Dr. Himasree PR's presentation delivered captivating insights into Bamboo reinforced concrete, leaving a lasting impact on the attendees, which included teachers, staff, and eager students.

Following the presentation, a lively Q&A session allowed the audience to engage further with the topic, encouraging discussion and exploration of related concepts. This interactive component added depth to the learning experience.

Expressing gratitude for Dr. Himasree PR's invaluable contributions, ICI CET made a touching gesture by presenting her with a heartfelt memento. This gesture symbolized the institution's deep appreciation for her time, knowledge, and dedication to the event, underlining the significance of recognizing and honoring experts who contribute to academic growth and intellectual discourse.



3. TALK SESSION ON MODERN SHM INSTRUMENTS

On 26th September 2023, ICI CET CHAPTER organized an insightful talk session on structural health monitoring, featuring T. Vasudevan, the Product Manager from Gantner Instruments as the guest speaker. The event attracted a diverse audience, primarily comprising staff, teachers, and postgraduate students specializing in civil engineering.

Mr. Vasudevan elaborated on the latest advancements in structural health monitoring facilitated by Gantner Instruments' modern equipment. A prominent leader in the field of civil structure monitoring solutions, Gantner Instruments offers expertise in various domains such as Bridge Monitoring, Weigh-In-Motion (WIM), Structural Health Monitoring (SHM), and Condition Monitoring, utilizing a diverse array of technologies. The session also included a doubt clearance segment, providing attendees with the opportunity to engage in meaningful discussions and gain

enriching experience that offered valuable insights into cutting-edge technologies for structural health monitoring.



4. DEPARTMENT RENOVATION AND LANDSCAPING

The ICI CET CHAPTER hosted a session on 20th November 2023 on the revamping of the Department of Civil Engineering, featuring a presentation by Mr.Vivek, a distinguished alumnus who graduated in 2017 from our college. Drawing on his extensive experience, he focused on leveraging software tools such as AutoCAD, SketchUp, and Lumion for comprehensive landscape planning and utilization strategies.

The session centered on the renovation of the entire department space, emphasizing an innovative approach to minimize the cutting of large trees. Mr.Vivek proposed the establishment of a pavilion and the implementation of a gabion structure to enhance the aesthetic appeal and functionality of the area. A key highlight of the session was his emphasis on thoughtful seating arrangements near Kerala Kulam, creating a conducive environment for students. His vision also included the preservation of bamboo trees within the area, showcasing a commitment to sustainable

The event concluded with a sense of collective inspiration and a shared commitment to implementing these innovative ideas in the upcoming departmental transformations.

5. HIGHER STUDIES AND CAREER GUIDANCE – T.I.M.E

ICI CET Chapter hosted an insightful session on higher studies and career guidance on 8th November 2023 targeting third year civil engineering students. The guest speaker for the session was Mr. Rakesh Rajeev, the Director of T.I.M.E. Trivandrum, who is also an alumnus of CET (2007–2011 batch) and completed his MBA from IIM (2014–2016).

During the session, Mr. Rakesh Rajeev shared valuable insights into the importance of higher education and the diverse career paths available for engineering graduates, the current trends in the job market and the skills that are highly sought after by the employers. Drawing from his personal experiences, he highlighted the role of CET in shaping his academic and professional journey. The speaker offered practical advice on navigating the challenges of higher studies, emphasizing the significance of perseverance and continuous learning.

PANTHEON 9.0



The Pantheon, Rome

(C) PETE SCULLY 2017

Pete
June 11, 2017

PANTHEON, the much-anticipated Annual Techfest organized by the ICI CET student chapter, celebrated its 9th edition on November 24 and 25, 2023. This year's event surpassed all expectations, emerging as a monumental success that left a lasting impact on participants and organizers alike. This year pantheon featured a lineup of 10 incredible events, 10 enlightening workshops, and 2 engaging talk sessions. However Pantheon was not limited to the two days alone, we had several Pre-Pantheon events to keep the campus alive.

The success of Pantheon 9.0 was not only measured by its content but also by the overwhelming turnout of 4000+ enthusiasts. The event attracted a diverse audience with over 1200+ registrations, including students, faculty, and industry professionals from around 50+ colleges, 3 polytechnics, and ITIs creating a dynamic and collaborative atmosphere.

A noteworthy addition to this year's PANTHEON was Nirmana- the expo, showcasing cutting-edge technologies, products, and services in the field of engineering. We also had various events specially planned out for school students aimed to inspire the engineers of tomorrow under the banner Pantheon for juniors. As usual, we had our mega flagship event MX Pantheon keep its legacy on. The event not only aimed to engage civil engineering students but also anyone with a thirst for knowledge.



We had several open-to-all workshops and events like Excel, Photoshop, Premiere Pro, Bob the Builder, and Sketch the Structure, etc., We also had a full-on informal session to bring in a bit of fun to air. Several stalls were set up for refreshments and activities to keep the crowd as lively as possible. Pantheon Night featured performances exclusively by talented individuals and groups from within the college community. The students from various departments brought forth their creativity and skills, transforming the night into a celebration of cultural diversity filled with talent, camaraderie, and the collective spirit of the college community coming together to celebrate the diverse cultural expressions within its walls.

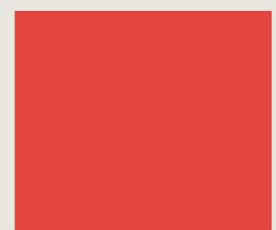


PRE-PANTHEON EVENTS

WALL PAINTING COMPETITION

On the 17th of November, a vibrant burst of creativity and collaboration swept through the campus as various departments eagerly participated in a Pre-Pantheon event—an exhilarating inter-department wall painting competition. The campus came alive with a kaleidoscope of colours as department heads joined forces, forming spirited groups that embarked on a week-long artistic journey. Each department was entrusted with a dedicated section of the civil wall. A common theme “World in 2050 through your eyes” was given. The event was offi-

The mechanical department emerged victorious, claiming the prestigious first prize, while the architectural department secured the second position. The third position was shared by the computer science and industrial engineering departments, further emphasizing the close competition and exceptional creativity displayed throughout the event.



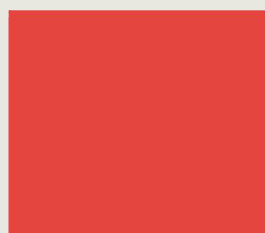
INTER DEPARTMENT GROUP DISCUSSION

The Inter-department Group Discussion competition organised as a Pre-Pantheon event was held on 14th of November 2023 at Seminar Hall 1 from 4:15 PM to 5:45 PM. The preliminary round was conducted in two groups with the best seven of the 14 participants making it to the finals. The GD topics for the preliminary rounds were 'Social Media's Influence on Creativity' and 'Impact of Brain Drain in a Country like India.' The finalists had an enthusiastic and well-grounded verbal discourse on 'Exams Ensure the Holistic Development of Students.'

The competition was evaluated by Civil Engineering department faculty members Prof Sarif N and Prof Pranoy. Basil Sabu of Computer Science department bagged the first place and Meera G Rajeevan of Civil Engineering department came second.

PREMIERE PRO WORKSHOP

An online workshop for learning about the editing software Premiere pro was held on 18th of November from 6 PM. The three-hour long session was taken by Sreeraj R S, a Freelance videographer and editor. The registration fee for the event was 200 rupees. The workshop was attended by 26 active participants. This workshop, designed to cater to both beginners and enthusiasts, served as a gateway for participants to master the basics, delve into grading fundamentals, and gain exclusive access to top-notch editing assets.



ELYSIUM

On the vibrant evening of November 20th, Manaveeyam Veedhi witnessed an electrifying spectacle as part of the pre-Pantheon festivities. From 6 to 9 PM, the lively street came alive with an array of captivating performances and displays, transforming the bustling avenue into a stage of creativity and entertainment. This grand event served as a prelude to the much-anticipated Pantheon celebration, creating a buzz of excitement and anticipation among the attendees.

The festivities kicked off with a dynamic flashmob that injected energy and rhythm into the atmosphere, setting the tone for an evening filled with artistic expression and talent. The stage was then graced by the soulful melodies of Midhun and his team, who orchestrated a mesmerizing band performance that resonated through the air.



Adding to the cultural extravaganza, students from the Civil Department of CET stepped forward to showcase their diverse talents, bringing a unique blend of skills and creativity to the forefront. From artistic endeavours to impressive performances, the students exemplified the rich tapestry of talents within the academic community. To ensure that the excitement extended beyond the event, pamphlets detailing the upcoming Pantheon celebrations were distributed, inviting everyone to be part of the grand festivities that lay ahead.



INAUGURAL CEREMONY

The official inauguration of Pantheon 9.0 was held on the 24th of November at Seminar Hall 1.S Balagopal General Secretary of ICI CET welcomed everyone on behalf of ICI. The head of the department Dr Anil R graced us with his presidential address and the event was flagged off by our principal Dr J S Xavier.

The event was further blessed with the presence of dignitaries Dr. Jaya V PG Professor, Dr. Bindhu J UG professor, Prof Biju V ICI CET Staff coordinator, and Prof Sarif N Staff coordinator ICI CET. A brief outlook into Pantheon 9.0 was presented by Pavithra V Convenor Pantheon. Pantheon officially began just as Mohammad Shibil Bin Hamza Convenor Pantheon conveyed the vote of thanks.



NIRMANA – THE EXPO 2.0

An expo was organised on 24th and 25th of November which was marked by several portrayals and experimental models by different clubs and students of CET .

The Students of ICI CET Chapter Prepared several futuristic models namely models of line city, swing bridge, vertical farming, Floating container homes, which were highly informative for the students.



The college expo featured insightful displays from Robo CET and Evolve Racing, showcasing their working models. The architecture department presented artistic clay models and paintings inspired by a site visit to Hampi. Fosroc chemicals set up a stall displaying proofing materials. The labs exhibited various models for educational purposes, including Structural, Survey, Geology, Geotechnical, and Transportation Engineering Labs. The Survey department of India highlighted the latest technologies in the survey field, providing valuable information for aspiring civil engineers.



EVENTS

This year ICI CET kickstarted Pantheon 9.0 with 10 events which were held on the 24th and 25th of November 2024. The events began with its main flagship event, MX Pantheon with a quest to find the best civil engineer with multiple rounds both online and offline. Furthermore, we had a survey competition– Stakeout, an idea pitching competition–Thinkathon, a model making competition–Bob the Builder, a sketching competition– Sketch the structure, a paper presentation–Trouvaille, an online photography competition–Focus, and a civil quiz– Civil–

A few events were organized jointly with various other clubs of CET which included the Matrix 3.0–Quiz competition in collab with Mathlets, Autoclash–Cad drawing competition in collab with ASCE, and Impedia–retaining earth wall construction in collab with IGS. Pantheon for Juniors featured school students with a platform to showcase their skills and enthusiasm in various challenges. A sketching competition, model making competition, maths quiz, and an elocution was held exclusively for them.



MX PANTHEON

MX PANTHEON, the flagship event of Pantheon 9.0, was a multi-faceted event comprising various rounds, including online prelims, civil hunt, drawing, and persona. 97 participants registered for the preliminary round conducted online on 20th November from which 20 contestants were selected to progress to the next round based on their performance. The first and Second Rounds of the finals held on 24th November at CET on the first day of the pantheon were instrumental in narrowing down the contestants further. Compilation of scores from these rounds led to the selection of 7 finalists. The final Round was held on 25th November on the second day of Pantheon had Dr. Ajith Sankar (Organizational Psychologist, Consultant & Corporate Mentor), and Dr. Arun. S (Assistant Professor, CET), Dr. Sarif N (Assistant Professor, CET) as distinguished judge. Of the seven finalists, two were selected as winners.

The title winner of the event was Vishnu Hari followed by the runner-up. The title winner was awarded a cash prize worth 25K and the runner-up with a cash prize worth 15K.



STAKEOUT

Stakeout was a survey-based competition of Pantheon 9.0. the competition was a group event consisting of 2 to 3 members. The main objective of this event was to find students who had an excellent skill for surveying. Both theoretical as well as practical aspects of the participants were checked. The competition was conducted in 2 rounds. The first round comprised a quiz consisting of 30 questions related to the survey and the second round was a field survey using a theodolite instrument. A total of 6 teams (17 participants) appeared for the competition out of which

The event was conducted on 24th November from 10 PM to 1 PM. The registration fee for the event was. A total cash prize worth was allotted to the winners. Praveena (&team) from LBS Trivandrum bagged the first prize. Meera Nandakumar (&team) and Gaury Santhosh (&team) from CET bagged the second prize and third prizes respectively.



SKETCH THE STRUCTURE

Sketch the Structure was an open-to-all drawing competition, celebrating creativity where participants could showcase their artistic prowess in a structured drawing event. The event was conducted on 24th November in the drawing hall from 10 AM to 1:30 PM. We had a massive registration of 32 students from CET and outside colleges too.

The event was conducted in one round that consisted of two sketching questions. One was to sketch the elevation of the main building of CET and the second question was to create a 3D view of the structure to evaluate their imagination skills. Participants were given 15 minutes to observe the building and 3 hours to complete the drawing. The prize pool of the event was 4K with a registration fee of 100 rupees.

The winners of the event were Arjun V K of Cet. Aswin Das B B of Cet bagged the second prize and Gaury Santhosh of Cet won the third prize. The event was well received by the students and the coordinators Abees Jibin and Anusree N were addressed with positive feedback from the participants.



TROUVAILLE

Trouvaille is a distinguished paper presentation event intended to enhance students' professional skills by communicating their research ideas via a PowerPoint presentation. The event unfolded on November 24th from 10:00 AM to 11:30 AM at the seminar hall 3. The registration fee for the event was ₹100 rupees. A total cash prize worth 6500 rupees was given to the winners. The event was held in two rounds. The first round of the event was held online mode on the 18th of November which included a PPT submission on the topic. The students were then asked to prepare a presentation on the topic and present it in the final round.

Akash SB from CET clinched the first prize, while the second prize was awarded to Garziya Jacob again from CET. The event witnessed the discerning judgment of esteemed faculty members, Dr. Deepa Raj and Dr. Beena PR, who brought their expertise to evaluate the presentations and determine the winners.

BOB THE BUILDER

The Bob the Builder Model Making Competition set the stage for a creative showcase where participants exhibited their craftsmanship in constructing models.

The event was held on November 25 at CE3106 and CE3107. The event was held from 9.30 AM to 4 PM. The competition was divided into two rounds. Round 1 consisted of a quiz competition. The participants were further asked to create the model of a bridge using ice cream sticks and flex which was provided. The models underwent a strength test in front of the participants themselves. Based on the results from quizzes, strength tests, and other basic criteria like creativity and idea the winners were selected.

A small registration fee of 150 rupees was kept per team. Groups consisting of a maximum of 3 members were allowed. A cash prize worth 9K was given to the winners.

The team consisting of Wafa Abdul Zalim, Sreya Dev, Rida Zainaba N M came first and team Abhinand A A, Anjan Krishna S, Azeen Abdullah Athikal came second, and finally, the team Devananda K P, Fathima Wafa, Devika K won the third prize.

FOCUS

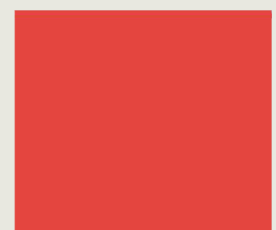
The Focus was an online photography competition conducted as a part of Pantheon 9.0 showcasing diverse talent across various colleges. There were around 60 registrations. It was a free event open to anyone with a camera. With a total prize pool worth 3.5K, the event captured the enthusiasm of both external participants and CETians. The participants were given the theme “Urban decay’ and the entries were collected via a Google form. The evaluation process was led by Shutterbugs, the photography club of CET ensuring a fair and informed assessment of the sub-
tography styles and skills.

The event not only celebrated creativity but also fostered a sense of community among aspiring photographers, promoting a collaborative spirit among participants. The winners demonstrated exceptional visual storytelling, technical prowess, and creativity, showcasing the depth of talent within the competition. First prize was bagged by Alfiya Najeem from the Mangalam School of Architecture and the second prize was bagged by Yadhu Krishnan V of TKM College of Engineering.

MATRIX 3.0

MATRIX 3.0 was a maths quiz competition that highlighted mathematical ideas and provided a platform for students to develop essential skills and foster a culture of mathematical reasoning done in association with Mathlets CET. The registration fee for the event was 100 rupees. Out of the 21 teams registered, 6 teams were selected for the final round through an offline screening process. The final round was conducted at CE1305 from 2 PM to 4 PM on 25th November.

The first price was bagged by a team of Kiran J and Jordy George Justin and the 2nd price was bagged by a team of Advait Benny and Bharath Padmanabh. Prizes worth 4K were handed over to the winners.



THINKATHON

Thinkathon was an idea–pitching event conducted to bring out the brightest minds among the students. The theme given for the event was 'AI For Sustainability'. The registration fee for the event was 100 rupees. Out of the 8 participants registered, 6 teams were selected for the final round through an online screening process which included an abstract submission. The final round was conducted at Seminar Hall 1 from 2 PM to 5:30 PM on 24th November. Students were asked to prepare a Power–Point presentation showcasing their ideas to solve the problem.

The event was coordinated by Akash Kiran and Akash Joseph. A total cash prize worth 4K was given. The 1st prize was bagged by the team consisting of Ardra S.S. and Nandana Raveendran and the 2nd prize was bagged by a team of Gautham Saji and Navneeth S.



CIVILIAN QUIZ

The Civilianz Quiz, a captivating technical quiz event presented in collaboration with Civilianz, unfolded in the dynamic atmosphere of the seminar hall on 25th November at seminar hall 1 from 2 PM to 5 PM. This intellectually stimulating competition, designed exclusively for civil engineering enthusiasts, was intended to unearth the highest potential among participating students. A total of 16 teams enthusiastically engaged in the event, which comprised four exhilarating rounds: the Warm-up Round, the Picture Round, IS Code Round, and the thrilling Do or Die Round. It was a

The registration fee for the event was kept at 150 rupees and a total cash prize worth 6.5k was shared among the winners. The competition reached its crescendo with Muhammed Safvan and Vishnu securing the second prize, while the coveted first prize was claimed by Arya Mol S and Suraj K B. The coordinators Akshay V Nair and Aswin C made it an eventful and enriching experience for all involved.

IMPEDIA

Impedia is a reinforced earth wall-making competition conducted in collaboration with the IGS CET Student Chapter on 24th November. Mechanically stabilized earth or reinforced soil is a technique used to retain soil at a slope steeper than its natural slope using artificial reinforcing elements such as steel and geosynthetics event thus focussed on bringing on the talent of students with a likelihood for geotechnical engineering. the registration fee for the event was 150 rupees. the event was conducted in two stages. A preliminary quiz round with a time limit of 30 min-

for the second round. the round consisted of Reinforced earth wall- making within a timeframe of 45 minutes.

The first prize was bagged by Alessandro Anil Mathew, Krishnapriya N S, and Shilpa S of CET and the second prize was bagged by Akshay V Nair and Govind R of CET. The title winner was given a cash prize worth 3.5k and the first runner-up was given a cash prize worth 3k.

AUTOCLASH 2.0

Autoclash 2.0, a CAD drawing competition in association with the ASCE CET student chapter was held on 24th November as a part of Pantheon 9.0. A total of 7 teams took part in had a registration fee of 150 rupees and a total cash prize worth 5k. The competition was conducted in two sessions. During the morning session from 10 AM to 1 PM, different topics and locations on campus were provided to the participants to choose from and a site visit and survey of the selected area were done. Thereafter participants during the afternoon session from 2 PM to 5 PM were asked to sketch their concept and ideas on AutoCAD. Judgment was made based on different criteria like Sustainability, Economy, Suitability of theme with space, Design, AutoCAD proficiency, Dimensioning, Basic civil engineering knowledge, and Solution making.

Kishore SE, Nazina. S, Noufiya Navas from Muslim Association College of Engineering won the first prize and Nikitha Nair S S, Arjun Ganesh, and Gowtham Krishna B from CET won the second prize.

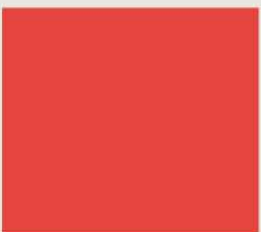




PANTHEON FOR JUNIORS

Pantheon for Juniors, a captivating and intellectually stimulating event, unfolded on the vibrant grounds of CET as it welcomed bright minds from classes 8–12 on the 25th of November 2023. Drawing participants from diverse corners of the state, this unique gathering brought together 90 enthusiastic school students from schools like Jyothis Central School Kazhakootam, Dr GR 2. Public School Neyyattinkara, Kendriya Vidyalaya Kollam, The School of The Good Shepherd, GV.H.S.S Pakalkuri, GGHSS Cotton Hill, Sri Durgavilasam High School, Gvhss Makkaraparamba, Trivandrum International School to showcase their talents and skills. Comprising of four thrilling sub-events Matrix for Juniors, Art Clash, Talking Titans, and Paper Tower Palooza–Pantheon for Juniors served as a platform for young minds to engage in a spectrum of challenges, fostering creativity, intellect, and teamwork. Let's delve into the dynamic tapestry of this event that not only celebrated academic excellence but also ignited a spirit of camaraderie among the budding talents of the region.





MATRIX FOR JUNIORS

A maths quiz competition was conducted in collaboration with Mathlets Cet, the official maths club of Cet to bring out the brightest minds among the students. Out of the 25 teams registered, 7 teams were selected for the final round through an offline screening process. The competition was divided into two categories of students. Category 1 included students from classes 8 to 10 and Category 2 included students from classes 11 and 12.

Under category 1, the First prize was bagged by Aswathi B and Jaisy Pandit (Jyothis Central School, kazhakootam) and Second prize was bagged by Niranchan R Nair and Kurian Martin (Sarvodaya Vidyalaya ICSE, Nalanchira) Under category 2 Hrishi-kesav S and Ananthakrishnan (Jyothis central school, kazhakootam) won the first prize and Sarah John and Padmini (Jyothis central school, kazhakootam) won the second prize

TALKING TITANS

Talking Titans is an Elocution Competition conducted for School students from classes 8–10(category 1) and 11– 12(category 2). The medium of communication was English. Students of Category 1 were asked to talk about the topic “green buildings” and Category 2 was given the topic “importance of sustainable engineering in the modern era” Participants were given 5 min to talk about their respective topic. The judges were left utterly astonished by the students’ impeccable eloquence and articulate expression during the elocution competition.

Under Category 1, the First prize was won by Saeed Jubair from The School of The Good Shepherd Second prize was won by Diya S S from Dr G.R. Public School, Neyyattinkara. Under category 2, the First prize was won by Anisha Rachel Allen of Jyothis Central School Kazhakootam, and the Second prize was won by Devananda B of Jyothis Central School Kazhakootam.

ART CLASH

Art Clash, a riveting live building sketching competition held as part of Pantheon for Juniors under the grand umbrella of Pantheon 9.0, witnessed enthusiastic participation with a total of 13 registrations. The challenge unfolded against the backdrop of the Civil Canteen building, serving as a reference structure for the talented participants. Entrusted with the task of capturing the essence of the building through live sketches within a tight 3-hour timeframe, participants showcased their skills in perspective, technique, and overall composition. The judging criteria, encompassing these crucial elements, added an extra layer of excitement to the competition. With a total prize pool of 2000 rupees, the event saw fierce yet artistic competition.

Alayna Zahra P A from Jyothis Central School Kazhakootam won the first prize and Krishnajith Santhosh Kumar from Sarvodaya Vidyalaya Nalanchira won the second prize.

PAPER TOWER PALOOZA

Paper Tower Palooza was a captivating paper tower-making competition held on November 25 at the venue CE3 208. During this engaging challenge, participants were organized into six teams of two students each. They were provided with newspapers, scissors, insulation tape, and a ball to construct innovative paper towers. The event unfolded from 11 AM to 12:30 PM, offering a platform for young minds to unleash their creativity and strategic thinking. The criterion for determining the winners revolved around the height and stability of the towers, particularly their ability to support and carry the designated ball.

The accolades for this thrilling competition went to Nandana Vipin and Ann Maria from Jyothis Central School, Kazhakootam, who demonstrated exceptional tower-building prowess. They were awarded a well-deserved cash prize of 1250 rupees and Adithyan and Athmaj from Dr G.R. Public School, Neyyattinkara, showcased remarkable skills, securing the second position and earning a commendable cash prize of 750 rupees.



WORKSHOPS

This year, Pantheon 9.0 reached new heights of educational excellence by curating and hosting an impressive lineup of ten workshops, each tailored to provide participants with valuable insights and hands-on experience. Covering a diverse range of subjects, these workshops gave students a chance to delve into the practical world. we had several core hands-on workshops like Total Station, Build U, Mix Design, Staad Pro, and Sketchup workshops. Some very engaging and creative workshops on Photoshop, Photography, excel, Stock Market, and Fusion 360 collectively contributed to the resounding success of the event. Attendees had the opportunity to delve into various domains, expanding their knowledge and skills in an engaging and enriching learning environment.

TOTAL STATION

Embarking on the journey of spatial precision, Pantheon 9.0 hosted an enlightening Total Station Workshop on the 24th and 25th of November. Held within the confines of the Survey Lab at CET, this workshop unfolded from 9:00 am to 4:00 PM, welcoming a total of 69 participants keen on mastering the intricacies of Total Station technology. Under the adept guidance of Mr. Deepak S S, a seasoned Trade Instructor hailing from the esteemed Survey Lab, participants delved into the nuances of Total Station operation. The workshop, thoughtfully divided into two batches for each day, allowed for an immersive and tailored learning experience.

The workshop covered a spectrum of essential topics, including the Description of Levelling and Centering of a Total Station, Setting up Station Points, Explanation of Orientation with Angle, Resection Techniques, and the intricate Stakeout Procedure. This comprehensive coverage ensured participants acquired a holistic understanding of Total Station functionality. The seamless orchestration of the Total Station Workshop was made possible by the meticulous coordination of Silpa T V, Annapoorna K K, and Arya Pradeep P T along with their 2 sub coordinators and 6 volunteers.





STAAD PRO

The STAAD Pro workshop organized in collaboration with BIM Labs commenced promptly at 9:30 AM and concluded by 4:00 PM on 25th November. Conducted by Mr. Savinaj, the workshop aimed to equip students with practical skills in structural analysis and design using the STAAD Pro software. The workshop saw active participation from approximately 30 students, showcasing a strong interest within the student body in advancing their proficiency in structural engineering tools.

Throughout the session, Mr. Savinaj delivered comprehensive training, covering fundamental concepts of structural analysis, modeling, and design techniques using the STAAD Pro software.

The hands-on approach allowed students to delve into real-life structural scenarios and gain practical insights into the application of theoretical knowledge. Overall, the workshop was a valuable addition to the academic curriculum, offering students a practical understanding of STAAD Pro's significance in the realm of civil engineering.





MIX DESIGN

In a collaborative effort with Infra Market, Pantheon 9.0 proudly presented the Mix Design Workshop on the 25th of November. The workshop kicked off with a morning theory class held at Seminar Hall 3 from 10:45 to 12:45. Expertly conducted by Malavika Madam and Manjusha Madam, the session delved into the intricacies of different concrete mixes and their properties. A total of 41 students actively participated, absorbing valuable insights into the science of mix design. The afternoon unfolded into a practical session hosted at the Structural Analysis Lab starting at 1:15 PM.

Collaborating seamlessly with lab assistants and the Infra Market team, participants were guided through the process of creating an M30 concrete mix. The hands-on experience extended to casting six concrete cubes, providing a tangible application of the theoretical knowledge gained earlier. Mix Design Workshop, a perfect fusion of theory and practice, not only equipped students with foundational knowledge but also empowered them with hands-on skills crucial for their future endeavors in the realm of civil engineering. The workshop was coordinated by a team headed by Anjanal V and Lakshmi K Pavanan with 2 sub coordinators and 3 volunteers.

BUILD-U

The training session on Structural Analysis took place on 24th November and provided an invaluable opportunity for 28 participants from various colleges to enhance their understanding of structural engineering. The primary objective of the training session was to equip participants with practical knowledge in structural analysis, focusing on key aspects such as the importance of levels in construction, level transfer, hands-on experience in brick masonry, setting a floor, and constructing a room. Dr. Jasim Anamangadan and his team, with his extensive background as a former Structural Engineer at NBCC India Ltd., brought a wealth of real-world expertise to enrich the learning experience.

The workshop commenced at 9:30 AM with a 1 and half hour theory interactive session where participants were introduced to the fundamentals of structural analysis, emphasizing the importance of accurate analysis in construction and the role of levels in ensuring stability. From 11:00 am to 5:00 PM, the workshop transitioned into hands-on practical sessions where Dr. Jasim Anamangadan guided participants through various activities, including level transfer techniques, hands-on experiences in brick masonry, setting a floor, and construction of arcs. This extensive practical segment allowed participants to apply theoretical concepts in real-world scenarios, enhancing their understanding of structural engineering principles. The practical sessions concluded at 5:00 PM, followed by a review session. Participants shared their experiences, asked questions, and sought clarification on any aspects of the training. This mega event was coordinated by Chandu Krishna, Najuma Nazeer, and Sreeram P J with 2 subordinators and 4 volunteers.



SKETCH UP

A dynamic SketchUp workshop was conducted on November 24th in collaboration with the esteemed BIMLABS. The workshop, which commenced at noon and concluded successfully at 5 PM, aimed to equip students with the proficiency to navigate and utilize SketchUp software effectively. The workshop was expertly conducted by Fathima Maam, a distinguished faculty member from BIMLABS. Her wealth of knowledge and experience brought a unique perspective to the learning experience.

A total of 27 students registered for the workshop, with an impressive turnout of 25 enthusiastic participants. To add an exciting element to the workshop, BIMLABS announced a design competition for the attending students. The competition promises an opportunity for one skilled participant to win a complimentary course at BIMLABS. The lucky student, who completes the design challenge within a week, can choose between a SketchUp or AutoCAD course, tailored to their preference. The event was organized by Induja S Nair and Ajay B R with the help of 2 sub-coordinators and 3 volunteers.



EXCEL

An illuminating Excel workshop was held on November 25th from 2 PM to 5 PM in the engaging confines of CE1 303. The session, led by the proficient computer science students Basil Sabu and Arya Vijayan of Cet, delved into the fundamentals of Excel, offering participants a comprehensive understanding of this indispensable tool. The workshop, attended by a robust gathering of 43 enthusiastic participants, was designed to not only familiarize them with the basics of Excel but also to provide hands-on experience through engaging projects. Basil Sabu and Arya Vijayan, with their expertise, navigated the attendees through the intricacies of Excel, ensuring an interactive and enriching learning environment. The event was open to anyone interested in learning Excel software. The event was coordinated by Bini J M and Unnimaya Saj along with 2 subcoordinators and 5 volunteers.



STOCK MARKET

In a collaborative endeavor to unravel the intricacies of the financial realm, the Pantheon 9.0 by ICI CET, in conjunction with Club Investor CET and the Stock Market Kerala organization, orchestrated an illuminating Stock Market Workshop. The workshop garnered tremendous interest, boasting an impressive registration count of 106 registrations, each seeking to delve into the mysteries of the stock market. Guiding this inquisitive cohort was none other than the esteemed speaker, Arjun SMK, from Stock Market Kerala whose wealth of knowledge and insights has made him a notable figure in the financial domain. The two-hour session, unfolded from 2 PM to 4 PM with a total of 43 students, deeply engrossed in Arjun's discourse, actively participated, absorbing valuable insights that promised to shape their understanding of the financial landscape. The workshop was coordinated by Navya S M and Arjun Desh with one sub-coordinator.





FUSION 360

The Autodesk Fusion 360 workshop was organized in collaboration with Herakles Racing, an active club of CET on 24th November from 2 pm to 5 PM. The event saw active participation from 24 individuals. The workshop aimed to introduce participants to the intricacies of Autodesk Fusion 360. The event provided valuable insights into the software, fostering a collaborative learning environment. Participants had the opportunity to enhance their skills in 3D modeling and design. The workshop's success is evident in the enthusiastic engagement of the attendees, demonstrating the effectiveness of Herakles Racing's initiative in spreading knowledge about cutting-edge design tools. The event was coordinated by Abinsha A, Vaishnav A M, and Gowri Nair R S with 2 subcoordinators and 4 volunteers.

PHOTOSHOP

The Photoshop workshop was conducted on the second day of Pantheon 9.0. A total of 28 students attended the workshop. The workshop was conducted at CE1 305 from 10 AM to 1.30 PM. The session was handled by Jibith who is also the head of the ICI Design team. Kicking off with a comprehensive introduction to Photoshop, Jibith navigated through the essential tools, setting the stage for a journey into the depths of graphic design. The workshop seamlessly transitioned from the basics to the intricacies of crafting visually compelling posters. Jibith's expertise not only elucidated the technical aspects of the software but also provided valuable insights into the artistry behind effective visual communication. The event was coordinated by Swetha C Loius and Amalendhu Dipu along with 2 subcoordinators and volunteers each.





PHOTOGRAPHY

The Basics of Photography workshop was conducted on 24th November at CE1303. the workshop featured Vishnu Nandan, a 4th-year representative of CET Shutterbugs. There was a total of 27 registered students who attended the workshop. The workshop commenced at 10 AM. The three-hour session went from exploring diverse angles to unraveling the art of color grading and navigating through various shooting modes, participants were immersed in a holistic learning experience. The workshop was coordinated by Riyas Ahmed V A and Anagha with the help of 2 subcoordinators and 3 volunteers



TECH TALKS



CHAT JAM

Chat Jam, was a talk session held on both the 24th and 25th of November in collaboration with CADBIM Centre. Rijo K John, Project Manager of Commandtech Group Of Companies, and Mr. Jimo Jose Joseph, Chief Marketing Officer of CADBIM Centre graced us with their presence and gave the students immense knowledge on the topic “BIM: THE FUTURE OF ENGINEERING”. In an era driven by technological advancements, BIM emerges as the future of engineering, offering a dynamic platform that integrates design, collaboration, and information management throughout the entire lifecycle of a construction project. As Future civil engineers, the talk session was one of the many things that excited many students to grow a career out of it. The session was filled with around 132 students from different colleges around Kerala. The event was single-handedly coordinated by Vinayak.

CONCLAVE

The Conclave was a first of its kind organized by the Technical Talk team of the ICI CET Student Chapter as part of the technical extravaganza Pantheon 9.0

The panel, a constellation of brilliance, featured five distinguished CET Alumni, each a luminary in their respective fields. The esteemed panel comprised Arunkumar S, Managing Director of AKS Group Builders and Developers; Chitra Nair, Principal Architect and Partner of JCJR Partnership; Nandan Gopinath R, Chief Consultant at Team DESIGN PLUS; Santhosh S, Assistant General Manager Technical Services at Dalmia Cement (B) Ltd; and Syno Mathew John, Principal Structural Engineer at Creative Structures, Trivandrum.

At the heart of this intellectual symphony was a focused exploration of the skill set and competency of fresh engineering graduates, a topic of paramount significance in the evolving landscape of the profession. The speakers, drawing from their rich experiences, enlightened the captive audience of 98 participants on the diverse skill sets essential for emerging as successful professionals. The Conclave not only served as a platform for profound insights but also fostered interaction with the audience through a thoughtful and engaging session. Adding a touch of artistic appreciation to the event, Proj Biju V, Dr. Arun, and Dr. Bindhu presented caricatures of the speakers, skillfully crafted by the talented second-year student Delbin, serving as tokens of gratitude

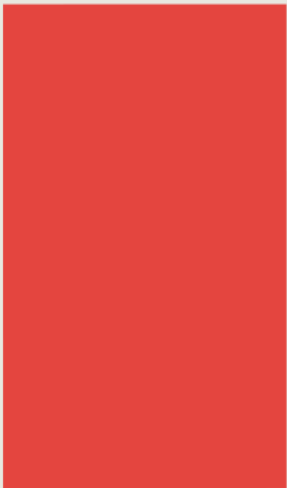






INFORMALS

Pantheon 9.0, far from being solely a stage for technical discussions and workshops, transcended the conventional boundaries of academia by infusing vibrant fun activities into its dynamic tapestry. Amidst the technical fever, participants found respite and amusement in classic games like Darts, where precision and strategy met in a spirited competition. The Photobooth, a delightful corner capturing candid moments, added a touch of nostalgia with Polaroid-based copies, providing tangible memories for the attendees to cherish. The adrenaline soared with the enthralling Museum Heist, challenging players to navigate through a labyrinth of set ropes, showcasing not only physical prowess but also teamwork and strategy. Ring and Toss injected an element of aim and skill into the festivities, offering participants the chance to clinch prizes with well-aimed throws. Adding an element of intrigue, "Guess the Quantity" emerged as a mini-game, testing participants' wit and intuition. Lucky winners who cracked the guessing code were rewarded with enticing prizes, adding an extra layer of excitement to the breaks. The playful "Blow the Ball" activity, where participants aimed to guide a ping pong ball across cups, brought a light-hearted yet competitive edge to the Pantheon experience.

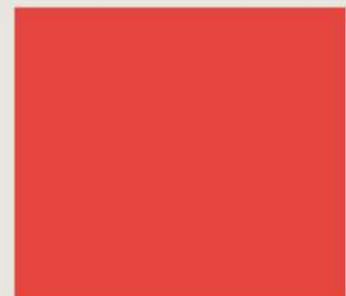


PANTHEON NIGHT

The Pantheon Night, a cultural extravaganza held on November 24th as part of the Civil Department's technical fest, Pantheon, was an evening brimming with talent and excitement. The event featured an array of captivating performances that left a lasting impression on the audience. The Night was completely dedicated to showcasing the talents and capabilities of students from all departments of the college. The audience was mesmerized by the performances ranging from instruments to dance and band performances.

Well begun is half done. Pantheon Night got its perfect beginning with a commendable dance performance by a group of second-year students from the Civil Department. This was followed by energetic performances from Pavithra V and Arya M Nair, fourth-year students of the Civil Department. Melodious tunes filled the air as Midhun M and Kanjana S serenaded the crowd with their soulful songs. The CET Dance Club injected immense energy into the event with a high-octane dance routine. Notably, Devan, a talented third-year student from the Electronics Department, delivered a brilliant violin performance that resonated with the audience. The group Epiphany, consisting of second-year students, showcased their musical prowess with a remarkable band performance. The Night reached its closure with an unforgettable band performance by Cetunes Club, which also featured the return of pass-out senior Navaneeth, evoking nostalgic memories from the previous year's Pantheon Night.

The event was a resounding success, drawing a huge crowd to the canteen square of CET, where everyone reveled in the beats of the songs and enjoyed every moment of the night's performances.





CLOSING CEREMONY

The culmination of relentless dedication and boundless enthusiasm came to an end on 25th November. The two-day journey was nothing short of extraordinary. On behalf of ICICET, General Secretary A Balagopal welcomed everyone to the valedictory function. A brief report of Pantheon 9.0 was further presented by the Convenor Pavithra V. Head of the Department Dr Anil R gave us our valedictorian address while Dr Mini Soman Secretary of ICI Trivandrum chapter, Dr Biju V Staff Coordinator and Prof Sariff N staff coordinator conveyed felicitation address, followed by prize distribution. The resounding success of Pantheon 9.0 is a testament to the passion and commitment of every individual involved. Mohammad Shibil convenor thanked everyone on behalf of Pantheon 9.0.

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