



# DEPARTMENT OF CIVIL ENGINEERING

IN ASSOCIATION WITH



## IGBC WEEK CELEBRATION 2023

**Organized by:**

IGBC Student Chapter  
Department of Civil Engineering

**Dates:** 14<sup>th</sup> , 20<sup>th</sup> & 21<sup>st</sup> September, 2023

**Convener**

Dr. Khadeeja Priyan

**Co-Convener**

Prof. Krunali Patel

**Student Coordinator:**

IGBC CORE TEAM

**Venue:**

Smt. Kamlaben Shankarbhai Patel GCET Seminar Hall,

G H Patel College of Engineering & Technology,

Bakrol Road, Vallabh Vidyanagar – 388 120



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## IGBC WEEK CELEBRATION, THEMED “BUILDING THE TRANSITION”

**“Building the transition”** was the theme of the event that was celebrated on the 9<sup>th</sup> year celebration of the Indian Green Building Council. This event was organized by **G H Patel College of Engineering & Technology (A Constituent College of CVM University)** under the **Civil Engineering Department by the IGBC Core team**, lead by faculty coordinator **Prof. Krunali Patel**. It was held in the **GCET, Seminar Hall**.

### **Introduction of IGBC & its involvement in GCET.**

Established in 2001, the Indian Green Building Council (IGBC), an integral part of the Confederation of Indian Industry (CII), has a visionary mission: "To foster a sustainable built environment accessible to all, and position India as a global leader in sustainable construction by 2025."

The council provides a comprehensive range of services, encompassing the development of innovative green building rating systems, certification services, and educational programs focused on green building practices. Additionally, IGBC hosts its annual flagship event, the Green Building Congress, dedicated to the promotion and advancement of green building concepts.

On October 15, 2015, the Indian Green Building Council (IGBC), under the management of the Confederation of Indian Industry (CII), established a student's chapter at G H Patel College of Engineering & Technology. Each year, during the third week of September, IGBC Week is commemorated. To align with this occasion, the department has coordinated various activities, including technical and non-technical events, expert lectures, and educational field trips, all centered around the theme. #BuildingtheTransition.



## **EVENTS HELD DURING THE IGBC WEEK CELEBRATION**

### **2.1 Expert Talks:**

During the IGBC week celebration with the theme "Building the Transition," two expert lectures took place on September 14, 2023. These lectures were conducted by Aarti Sapariya, founder/designer Rachiyata Architects & Interior Designer, and Nitish Jain. They provided valuable insights to both students and faculty members, shedding light on the latest technologies and innovations in the field of civil engineering. These advancements aim to enhance the durability of buildings and offer sustainable solutions for future challenges.

#### **Expert Lecture 1: "Green Building, Indoor environment quality."**

On 14<sup>th</sup> sept, 2023, Aarti Sapariya, the esteemed Director and Founder of Rachiyata Architects and Interior Designers, delivered an insightful expert talk on the vital topics of green building and indoor air quality. The talk aimed to shed light on the crucial intersection between sustainable architecture and the health and well-being of occupants, focusing on indoor environment quality and indoor air quality.

#### *Key Points Discussed:*

##### **1. Health and Well-being:**

Ms. Sapariya initiated the discussion by emphasizing the significance of designing spaces that prioritize the health and well-being of their inhabitants. She stressed that buildings are not just structures but play a pivotal role in shaping the quality of life for those who dwell within.

##### **2. Indoor Environment Quality:**

The talk delved into the concept of Indoor Environment Quality (IEQ) as a comprehensive measure of the conditions inside a building, encompassing air quality, thermal comfort, lighting, and acoustics. Ms. Sapariya explained how IEQ



directly impacts occupants' comfort, productivity, and overall satisfaction with their surroundings.

### 3. Indoor Air Quality (IAQ):

Aarti Sapariya provided a detailed overview of Indoor Air Quality, highlighting the various pollutants that can be found in indoor environments, such as VOCs (Volatile Organic Compounds), dust, allergens, and mold. She discussed how poor IAQ can lead to health issues, including respiratory problems, allergies, and reduced cognitive function.

### 4. Causes of IAQ Problems:

The talk identified common causes of poor IAQ, including inadequate ventilation, the use of low-quality building materials, and improper maintenance of HVAC systems. Ms. Sapariya emphasized the need for identifying and addressing these issues in green building design.

### 5. Solutions for Improving IAQ:

In the final part of her talk, Ms. Sapariya provided valuable insights into practical solutions for improving IAQ in buildings. These included the use of natural ventilation, high-efficiency air filtration systems, low-VOC materials, and regular maintenance and cleaning of ventilation systems.

Aarti Sapariya's expert talk on green building and indoor air quality was both informative and enlightening. Her in-depth knowledge and expertise in architecture and interior design, coupled with her passion for sustainability and well-being, made this session a valuable resource for professionals in the field. The audience left with a heightened understanding of the critical role that green building principles play in enhancing indoor air quality, contributing to healthier and more comfortable living and working environments. Ms. Sapariya's insights will undoubtedly inspire positive changes in future architectural and interior design practices.



## **Expert Lecture 2: “Passive Cooling Techniques.”**

On 14<sup>th</sup> sept, 2023, Nitish Jain, a distinguished green building entrepreneur, delivered a compelling expert talk on the subject of passive cooling techniques. His talk centered around the pressing issues of rising temperatures and heat islands in urban environments, the impacts of Urban Heat Islands (UHIs), innovative cooling solutions such as cool roofs and IR reflective technologies, and two noteworthy case studies.

### *Key Points Discussed:*

#### **1. Temperature Rise and Heat Islands:**

Nitish Jain commenced the talk by addressing the escalating global temperatures and the phenomenon of urban heat islands. He elucidated how built-up areas absorb and trap heat, causing local temperature disparities and posing a substantial challenge for urban planners and architects.

#### **2. UHI Impacts:**

The presentation delved into the detrimental impacts of Urban Heat Islands on public health, energy consumption, and the overall urban environment. Mr. Jain emphasized the urgency of adopting sustainable cooling solutions to counteract these effects.

#### **3. Cool Roofs and IR Reflective Technologies:**

Nitish Jain introduced the audience to innovative passive cooling techniques, including cool roofs and infrared (IR) reflective technologies. He elucidated how these approaches can significantly reduce heat absorption by buildings and, consequently, lower indoor temperatures.

#### **4. Case Studies: Vimal Agro and IGBC Headquarters Hyderabad:**

The talk featured two notable case studies. First, the Vimal Agro case study highlighted the successful implementation of passive cooling techniques in an industrial setting, demonstrating substantial energy savings and improved working conditions. The second case study showcased the IGBC (Indian Green



Building Council) Headquarters in Hyderabad, where sustainable design principles were integrated to create a comfortable and energy-efficient office environment.

### **5. Benefits of Cool Walls and Other Solutions:**

Nitish Jain also discussed the advantages of cool walls, another passive cooling solution gaining prominence. Cool walls, when applied with reflective coatings, can contribute to significant reductions in cooling energy consumption. He further explored various other passive cooling techniques and their potential applications in diverse building types.

Nitish Jain's expert talk on passive cooling techniques was both enlightening and inspiring. His extensive knowledge and entrepreneurial experience in green building solutions made this session an invaluable resource for architects, urban planners, and sustainability enthusiasts alike. Attendees left with a deeper understanding of the critical role passive cooling techniques play in mitigating urban heat islands, enhancing energy efficiency, and creating more sustainable, comfortable, and healthier living and working environments. Mr. Jain's insights are poised to drive positive change in the field of sustainable architecture and urban planning.



## **2.2 Technical Events: Civil case Quest.**

It was a technical event where participants were presented with specific challenges, and the following day, they were tasked with presenting their proposed solutions. The most effective solution was to be recognized as the winner.

### **The winners of the events were:**

- Amrit J Rajai
- Aditya Samal

## **2.3 Non- Technical Events: Riddle Routes**

Riddle Routes was a non-technical, entertaining event that featured quizzes as well as a blindfolded maze challenge with assistance from team members. The event culminated in an exciting treasure hunt, where participants had to follow clues to locate the ultimate prize.

### **The winners of the events were:**

- Aditya Samal- 1st Year EC
- Dhiraj - 1st Year CSD
- Arunendra Singh- 2nd Year IoT
- Shardul Nande - 2nd Year IoT





## **CONCLUSION:**

The student turnout for the IGBC Student Chapter's events at GCET was impressive and diverse, with enthusiastic participation from students across various departments. These events provided an invaluable platform for students to gain insights into the multifaceted technologies and innovations within the civil engineering field, offering practical knowledge that they could potentially apply in their respective domains.

The overall event can be deemed a resounding success, not only for the quality and variety of activities but also for the remarkable efforts put forth by the students in decorating the college premises. The appreciation received for both the events and the aesthetically pleasing college decoration reflects the collective dedication and commitment of the student community, further enhancing the reputation and spirit of GCET.

# PICTURE GALLERY:





#### PREAMBLE:

We are determined to protect the planet from degradation, including sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations.

Leave no one behind (LNOB) is the central, transformative promise of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) in order to ensure that environmental considerations are part of any developing nation. It also seeks to strengthen universal peace in larger freedom. We are determined to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path.

#### ABOUT IGBC:

The Indian Green Building Council (IGBC), part of the Confederation of Indian Industry (CII) was formed in the year 2001. The vision of the council is, "To enable a sustainable built environment for all and facilitate India to be one of the global leaders in the sustainable built environment by 2025".

The council offers a wide array of services which include developing new green building rating programmes, certification services and green building training programmes. The council also organizes Green Building Congress, its annual flagship event on green buildings.

G H Patel College of Engineering & Technology (GCET) was established in 1996, one of the premier self-finance Institute of Gujarat State as per the norms of AICTE by Charutar Vidya Mandal trust. Now, the college is one of the constituent colleges of Charutar VidyaMandal University (CVMU). Currently the institute is running with ten disciplines at under-graduate level and nine at post graduate level. The institute has excellent infrastructural facilities with ultra-modern laboratories. The institute owns highly competent and dedicated faculty members. GCET is one of the two institutes of Gujarat to receive a grant of about Rs. 1.10 crore for AICTE IDEA Lab. GCET ranked 49th in the country among 100 private engineering institutes according to the Times Engineering survey.

Department of Civil Engineering has been started in the college from the academic year 2014 with an intake of 60. A separate building is constructed for this programme and all the required laboratories have been developed. A separate computer lab has been developed with 40 computers with advanced software installations such as Arc GIS, STAAD Pro, and AutoCAD. The Civil Engineering U.G. Department is accredited by NBA from 1st July 2022 to 30th June 2025. Department has received Rs 10 Lakhs financial grant from Department of Science & Technology (NGP Division earlier NRDMS), Ministry of Science & Technology, Government of India (DST Scheme: 1819- Innovation, Technology Development & Deployment), for capacity building initiative of the National Geospatial Program (NGP). Department of Civil Engineering has also received Rs. 93,000/- from AICTE/ISTE for conducting induction/Refresher Program titled "Energy Efficient Buildings".

#### Organising Committee:

##### PATRONS:

Er. Bhikhubhai B. Patel, Chairman, CVM  
Shri. Manishbhai S. Patel, VP, CVM  
Dr.S.G.Patel, Hon. Secretary, CVM  
Shri. Mehul D. Patel, Hon. Jt. Secretary, CVM  
Shri.R.C. Talati, Hon. Jt. Secretary, CVM  
Shri.V. H. Patel, Hon. Jt. Secretary, CVM

#### ADVISORY TEAM:

DR. KAUSHIK NATH, PRINCIPAL, GCET  
DR. KHADEEJA PRIYAN, PROF. & HEAD, CIVIL ENGINEERING  
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## EVENT SCHEDULE

### Expert talk:

Date: 14th Sept 2023

Time: 2:00 pm

venue : GCET seminar hall

### CivilCase Challenges:

Date: 20th Sept 2023

Time: 3:00pm - 5:00pm

venue : G203, Civil building

### Riddle Routes:

Date: 21st Sept 2023

Time: 2:00pm - 5:00pm

venue : GCET Auditorium



Dr. C. C. Patel & Mrs. Sushilaben Patel  
DEPARTMENT OF CIVIL ENGINEERING  
G H Patel College of Engineering & Technology  
(A Constituent College Of CVM University)

In Association With:



IGBC Week Celebration  
Theme:

"#BUILDINGTHETRANSITION"

IGBC 2023

SEPTEMBER 2023

#### Student Co-ordinators

- Laykumar Patel
- Neel Mistry
- Om Rajyaguru
- Raj Tank
- Namrata Solanki
- Aditya Lodhari
- Preet Desai
- Tirth Patel
- Mann Jain
- Krutarth Patel
- Kushal Shah

#### Venue

Smt. Kamlaben Shankarbai Patel GCET Auditorium,

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# IGBC WEEK CELEBRATION 2023

14<sup>th</sup>  
Sept

TECHNICAL SESSION:  
**INVITED TALKS**

20<sup>th</sup>  
Sept

TECHNICAL EVENT:  
**CASE QUEST**

21<sup>st</sup>  
Sept

NON-TECHNICAL EVENT:  
**RIDDLE ROUTES**



 **SEMINAR HALL,  
GCET**

Dr.C.C.Patel & Mrs.Sushilaben Patel  
Department of Civil Engineering  
G H Patel College of Engineering & Technology  
(A Constituent College of CVM University)