

# Chapter Reports

## ACI CUET Student Chapter Annual Highlights 24-Hour Concrete Cube Competition

The 24-Hour Concrete Cube Competition, organized by the ACI Chittagong University of Engineering and Technology (CUET) Student Chapter, brought together innovation, precision, and engineering skills. This event had 46 teams and over 180 students vying for top honors to create an outstanding concrete cube. The competition comprised two rounds. The first round consisted of teams submitting a detailed mixture design report for constructing their concrete cubes. Participants considered four critical parameters through their mixture designs:

- High compressive strength within 24 hours;
- Economy;
- (Re)use of green or waste materials; and
- Innovative approach in mixture composition.

From the initial pool of 46 teams, 28 teams advanced to the second round. In this stage, each team cast three concrete cubes following their proposed mixture design. The cubes were then covered with wet burlap for 24 hours in preparation for testing. The next day featured the compression test. The

champion was determined based on the four criteria mentioned previously. Additionally, 10 teams were awarded prizes across various categories, such as Best Report, Most Economic Design, and Most Environment-Friendly Design.

### Charity event

In August 2024, a devastating flash flood struck Fatikchari, Chittagong, leaving many residents in dire conditions. The people of Sundarpur village were particularly affected, with numerous homes made of mud washed away by the floodwaters. In response, the ACI CUET Student Chapter took the initiative to support a family in rebuilding their home. A team first assessed which towns and regions were most impacted by flooding. The team then gathered funds from various sources and designed a house that prioritized low cost and high sustainability. ACI CUET Student Chapter members closely monitored quality control and work progress throughout the construction. Step by step, they procured materials and carefully constructed the house, ensuring quality and durability. This initiative not only provided shelter but also highlighted the power of compassion in overcoming adversity.

### Creative Skills Enhancement Workshop

The ACI CUET Student Chapter also organized a Creative Skills Enhancement Workshop, focusing on the fields of graphic design, content writing, and video editing. The workshop aimed to equip participants with essential creative skills to thrive in today's digital landscape. The event saw enthusiastic participation, with nearly 100 attendees joining online.

### The First Outstanding ACI Student Chapter Award Winner in the UAE

by *Mohamed Abdel-Nasser Kawde*

The ACI University of Sharjah Student Chapter was awarded the first Outstanding ACI Student Chapter Award in the UAE. This award recognizes the dedication, innovation, and contributions of the Student Chapter's team members. The Student Chapter stood out for its commitment to excellence in both academic and extracurricular activities, bridging the gap between theory and practice. Through workshops, seminars, and hands-on activities, the Chapter has provided students with the opportunity to explore the latest trends in concrete technology and construction innovations. By organizing inclusive, hands-on workshops on topics like sustainable concrete design and three-dimensional (3-D) printing, the Chapter ensured that students at all levels could actively participate and gain valuable insights. These efforts enhanced students' academic and professional growth, creating lasting connections and making the Chapter a hub for learning and collaboration. With the continued support of faculty, industry



The winners of the 24-Hour Concrete Cube Competition pictured with guests of the event



The ACI CUET Student Chapter team visiting the home rebuilding site

professionals, and the ACI community, the ACI University of Sharjah Student Chapter is dedicated to shaping the future of concrete engineering in the UAE and beyond.



**Exciting News!**

Dr. Salah advised and guided the committed members of the student chapter, winning the **2023 Outstanding Student Chapter Award!** Thanks to his leadership and the dedication of our members, we achieved this success.

**Prof. Salah Al-Youbat**  
University of Sharjah  
ACI Student Chapter Advisor

 <b>Mohamed Kande</b> President	 <b>Ahmad Et Eddie</b> Vice President	 <b>Abdulrahman Saigy</b> Financial Officer	 <b>Maha Al-Mutawa</b> Social Media Officer
 <b>Shahad Hawarna</b> Event Organizer	 <b>Abdrahamn Shabih</b> Event Organizer	 <b>Yusef Mohamed</b> Event Organizer	 <b>Amira Fall</b> Secretary
 <b>Amra Alhamadi</b> Secretary			

Members of the ACI University of Sharjah Student Chapter pictured on the announcement of the award

## XVI International Convention ACI Peru – 2024 Tendencias, Innovación y Normativas en el Concreto: Una mirada hacia el 2030

In November 2024, the ACI Peru Chapter held its 16th international convention with the theme of “Tendencias, Innovación y Normativas en el Concreto: Una mirada hacia el 2030” (Trends, Innovation and Regulations in Concrete: A look ahead to 2030). This event included participation of professionals of the construction industry at a national level and students of various ACI chapters. Professionals interested in expanding their knowledge in the design, evaluation, and repair of concrete structures were part of this important event.

The main program of the convention took place on November 21-22, 2024, at the Hilton Lima Miraflores, Lima, Peru. During the mornings of the event, the 3rd ACI 318-25 Code Summit was held. This was the first Latin American meeting on structural concrete standards organized by ACI. The Chilean, Colombian, Bolivian, and Peruvian experiences in the adoption of the Code were presented. During the afternoons, the seminar program was developed with different conferences prepared by national and international professionals. In addition to the main activities, a day before the start of the event, on November 20, 2024, a roundtable of representatives from Latin American countries

was held under the organization of ACI International and chaired by ACI President Michael J. Paul. With more than 20 attendees, each participant discussed their chapter’s activities as well as challenges they faced and opportunities for improvement. The support of ACI International representatives was fundamental for the success of the entire event.



The 2024 ACI Peru Chapter International Convention



Representatives of ACI Latin American Chapters with ACI staff at the roundtable event

## 4th R.N. Raikar Memorial International Conference & ICACI Celebrations

The 4th R.N. Raikar Memorial International Conference and ACI India Chapter (ICACI) Annual Celebrations brought together industry experts, academics, and professionals from around the globe. This event served as a platform for knowledge sharing, technical advancement, and professional networking in the fields of concrete technology, structural engineering, and sustainable construction practices.

The conference began with an inaugural session featuring distinguished speakers and industry stalwarts. The program included the lighting of the ceremonial lamp and garlanding of the late Shri R.N. Raikar’s photograph. Sourabh Manjrekar, ICACI President, delivered the welcome address and outlined

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the role of ICACI in advancing concrete technology. The Plenary Session later in the evening featured keynote addresses by renowned speakers, presenting cutting-edge research and technological advancements in topics ranging from building codes to megatall structures.

Day two offered technical sessions and partner presentations. Parallel sessions covered diverse themes such as low-carbon cement and concrete, innovative materials, and emerging design practices. Notable talks included P.A.M. Basheer's address on immobilization and carbon dioxide (CO<sub>2</sub>) sequestration potentials of cementitious systems and ACI Honorary Member Surendra Manjrekar's insights on carbon footprint reduction in dams and stadiums. Panel discussions and partner presentations provided a platform for industry professionals to showcase innovative solutions.

The final day focused on specialized sessions and thematic discussions. Sessions on durability, fire-resistant concrete structures, glass fiber-reinforced polymer (GFRP), and tall buildings provided a deeper understanding of future trends in construction technology.

The ICACI Board of Directors extends heartfelt gratitude to all speakers, delegates, sponsors, and volunteers for their invaluable contributions to the event's success.

## ACI Singapore Chapter Activities An ACI-SC delegation visited representative enterprises, companies, and research institutes in the concrete construction industry

Led by Lu Jin Ping, President of the ACI Singapore Chapter (ACI-SC), a 25-person delegation consisting of five board members and 20 ACI-SC members visited enterprises, companies, and research institutes in the concrete construction industry in Jiangsu Province, China, on May 28-30, 2024. The visits were initiated and planned by ACI-SC and jointly organized by ACI-SC and the China Concrete and Cement-based Products Association (CCPA).

The delegates first visited Jiangsu China Construction Commercial Concrete Co., Ltd., located in Changzhou, Jiangsu, China, a part of China State Construction Engineering Corporation. They toured the commercial concrete factory of the company, which has smart features such as the application of artificial intelligence (AI) and internet of things (IoT). Afterward they participated in a discussion session on solutions of the commercial concrete smart factory, related research projects being carried out by both parties, and opportunities for possible future collaboration between ACI-SC and Jiangsu China Construction Commercial Concrete Co., Ltd.

Next, the delegates visited Sobute New Materials Co., Ltd., a supplier of novel construction materials with a focus on engaging in research and development, production and sales

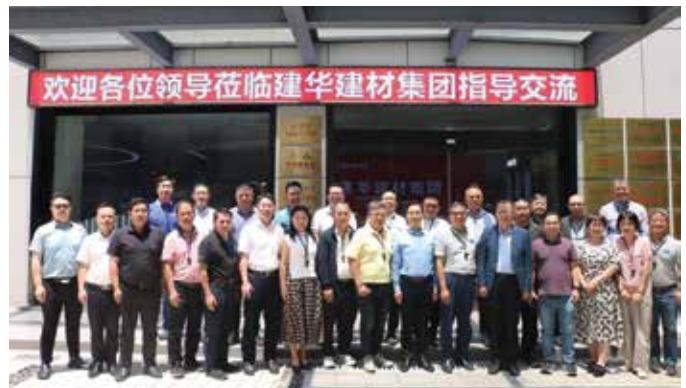
of concrete admixtures, and production of waterproof and repair materials. They received a tour of the exhibition gallery and State Key Laboratory. This was followed by discussions focused on technologies and applications of polycarboxylate high-range water-reducing admixtures; research, development, and application of technologies on control for shrinkage cracks in modern concrete; development and application of ultra-high-performance concrete (UHPC); and opportunities for future collaboration between ACI-SC and Sobute New Materials Co., Ltd.

On the second day, the delegates went to Jianhua Construction Materials (China) Co., Ltd., located in Zhenjiang, Jiangsu, China. They visited the exhibition hall, the Precast Concrete Theme Park, and one of the precast concrete fabrication yards in Jianhua. A session for sharing and discussion was conducted after the visits, focusing on the development of prefabricated products and technologies; research, development, and application of lightweight aggregates and low-carbon materials; and potential future cooperation and collaboration with partners from the precast concrete industry from Singapore, Malaysia, and other countries in Southeast Asia through ACI-SC.

On the final day, the delegates visited the Yangtze Delta



ACI-SC delegates with management and technical team members of Sobute New Materials Co., Ltd.



ACI-SC delegates with the top management of Jianhua Construction Materials

Region Academy of Advanced Materials, Jiangsu Industrial Technology Research Institute, Institute of Organic Functional Materials and Applied Technologies, and National Innovation Centre for Excellence in Suzhou, Jiangsu, China. The trip included a visit to the exhibition galleries and a session for discussion. During the session, Ren Tianbin, Director of the Institute of Organic Functional Materials and Applied Technologies, introduced the success achieved by the institute on the transformation of technological achievements, incubation of scientific and technological projects, and cultivation of dual-innovation talents. Jin Ping introduced the delegates and highlighted the participation of ACI-SC in the concrete industry in Singapore. Both sides exchanged opinions and ideas on the current challenges faced by the concrete industries in both Singapore and China and proposed opportunities for potential collaboration on joint projects and market exploration. Later that afternoon, a visit to a condominium project site was also arranged for the delegates by CCPA. All the delegates spoke very highly of the visits and expressed positive feedback for the experience and knowledge they gained.

## ACI-SC Annual Seminar 2024 – Concrete Evolution: Transforming Productivity Through Innovation

In November 2024, the ACI-SC hosted its annual seminar, Concrete Evolution: Transforming Productivity Through Innovation, at the Crowne Plaza Changi Airport, Singapore. This seminar, supported by 34 sponsors and co-organizers, drew 240 participants and featured 12 distinguished keynote speakers from around the globe. The seminar's theme, Boosting Productivity and Efficiency in Modern Construction with Advanced Materials, emphasized innovation, sustainability, and collaboration in the concrete and construction industries.

The seminar was chaired by Geng Guoqing, Assistant Professor, Department of Civil and Environmental Engineering, National University of Singapore, Singapore, and Board Director of ACI-SC. Kaliannan Thanabal, Commissioner of Building Control and Group Director (Building Resilience) at the Building and Construction Authority (BCA), was the guest of honor.

In his address, Thanabal highlighted the pivotal role of concrete technology in advancing sustainable construction practices. He shared valuable insights on the challenges and opportunities in balancing technological advancements with climate resilience and sustainability goals. Lu Jin Ping, ACI-SC President, also gave a welcome address.

The seminar featured four technical sessions, each focusing on transformative trends in construction productivity,

efficiency, and sustainability. The sessions included:

- Future Trends in Construction Productivity & Efficiency with Advanced Materials;
- Advancing Productivity in Contemporary Construction Practices;
- Cutting-Edge Techniques for Enhancing Construction Efficiency; and
- Digital Transformation in Construction: Tools & Strategies.

The event also included the Concrete Floater Competition 2024 that challenged participants to develop innovative and sustainable concrete solutions. Nine teams participated in the competition, including two teams from China, two from Malaysia, and five from Singapore. After 3 days of rigorous evaluation by a distinguished panel of experts, the top five teams were recognized with Gold, Silver, Bronze, Merits, and Commendations awards.

The ACI-SC Annual Seminar 2024 offered a platform for collaboration, innovation, and networking. The success of the event is attributed to the tireless efforts of the organizing committee and great help from the Board members of ACI-SC.



**Geng Guoqing, Assistant Professor, Department of Civil and Environmental Engineering, National University of Singapore, and Board Director of ACI-SC, chairing the seminar**



**The ACI-SC Annual Seminar 2024 organizing committee members (back row) and volunteers from the ACI-SC Student Chapter Board**