

A One Day Workshop Report

Membrane Structures: From Concept to Form

Organised by: Prof.(Dr) Poorva Kulkarni and Prof. Smita Ogale

(Archineering Cell, Dr. Bhanuben Nanavati College of Architecture for Women (BNCA), Pune)

Date: 23 September 2026

Venue: ISDS Hall, BNCA, Pune

Participants: Fourth-Year B.Arch. Students who were eligible for Performance Enhancement Programme (PEP)

Resource Person: Prof. Sarah Von Der Weth, Vice Director, IMS Bauhaus Archineer Institute, Dessau, Germany

1. Introduction

The Archineering Cell of Dr. Bhanuben Nanavati College of Architecture for Women (BNCA), Pune, organised a special hands-on workshop titled “*Membrane Structures: From Concept to Form*” on 23 September 2026 at the ISDS Hall. The workshop was conducted by Prof. Sarah Von Der Weth, Vice Director, IMS Bauhaus Archineer Institute, Dessau, Germany.

The workshop aimed to introduce fourth-year B.Arch. students to the principles, design possibilities and structural characteristics of membrane structures through an experiential learning approach. It provided a platform to explore the integration of architectural design, engineering principles and lightweight structural systems, highlighting the importance of interdisciplinary understanding in contemporary architectural practice.

2. Objectives of the Workshop

The primary objectives of the workshop were:

- To introduce students to the fundamentals and applications of membrane structures in architecture.
- To develop an understanding of the relationship between form, material behaviour and structural performance.
- To explore lightweight structural systems and their potential in contemporary architectural design.
- To encourage experimentation through hands-on activities and model-making.
- To bridge the gap between theoretical knowledge and practical application through an interdisciplinary learning experience.

3. Workshop Proceedings

The workshop commenced with an introduction to the concept and significance of membrane structures in contemporary architecture. Prof. Sarah Von Der Weth shared her expertise in the field, introducing students to the architectural and engineering considerations involved in designing lightweight structural systems.

The session explored the relationship between material properties, geometry, tension and structural stability in the formation of membrane structures. Through a combination of conceptual explanation and practical engagement, students were encouraged to understand how structural principles influence architectural form and design possibilities.

The hands-on component formed an integral part of the workshop, enabling students to engage directly with the process of translating conceptual ideas into physical forms. This experiential approach encouraged active participation, observation and experimentation, allowing students to develop a better understanding of the interaction between material behaviour and structural configuration.

The workshop also emphasised the importance of collaboration between architects and engineers in developing innovative structural solutions. The interaction with an international academic expert offered students valuable exposure to perspectives and approaches beyond conventional classroom learning.

4. Learning Outcomes

The workshop contributed to the students' understanding of membrane structures as an important component of lightweight construction and contemporary architectural expression. The key learning outcomes included:

- Enhanced awareness of the principles and applications of membrane structures.
- Improved understanding of the relationship between architectural form, material properties and structural behaviour.
- Exposure to experiential methods of exploring structural concepts through hands-on experimentation.
- Greater appreciation of interdisciplinary collaboration between architecture and engineering.
- Encouragement to integrate innovative and lightweight structural systems into architectural design explorations.

5. Significance of the Workshop

The workshop reflected the Archineering Cell's commitment to strengthening the connection between architectural education and professional practice. By combining conceptual understanding with practical exploration, the programme provided students with an opportunity to engage with emerging construction technologies and innovative structural systems.

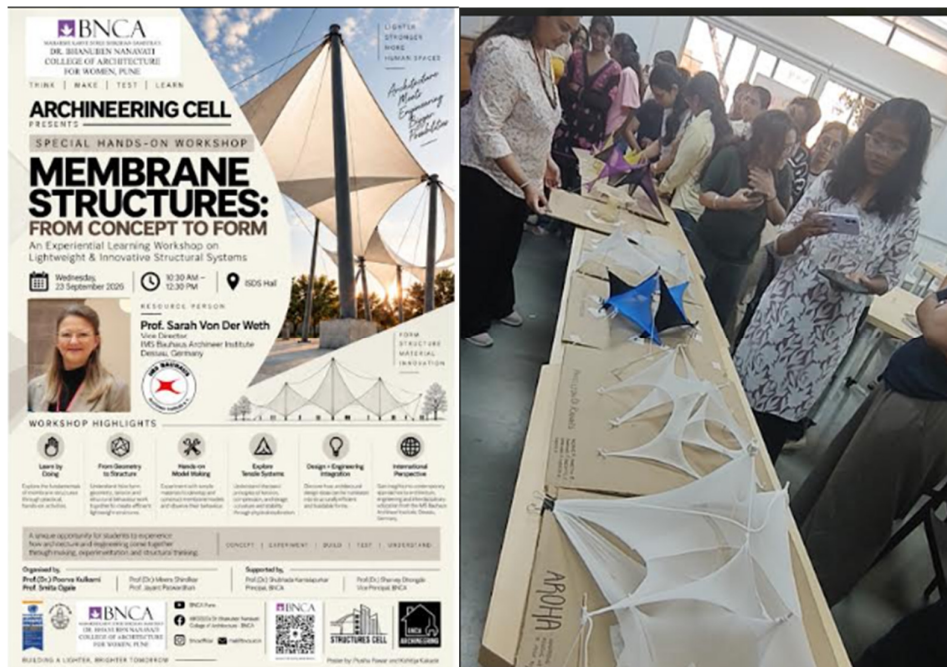
The participation of Prof. Sarah Von Der Weth from the IMS Bauhaus Archineer Institute, Dessau, Germany, further enriched the academic experience by fostering international knowledge exchange and promoting an interdisciplinary approach to architectural education.

6. Conclusion

The workshop “*Membrane Structures: From Concept to Form*” was a valuable academic initiative by the Archineering Cell, BNCA, Pune. It offered fourth-year architecture students an opportunity to explore the design potential of membrane structures through a combination of theoretical inputs and hands-on learning.

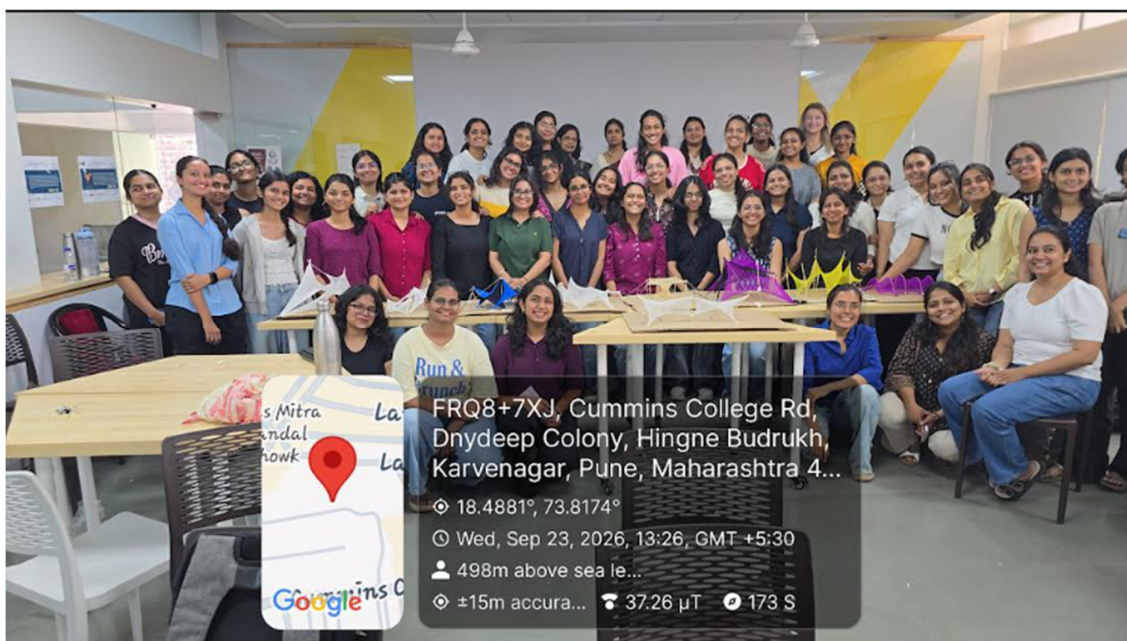
The programme reinforced the importance of integrating architectural creativity with structural understanding and material exploration. Such initiatives contribute to developing technically informed, innovative and industry-oriented architectural graduates.

Workshop poster and event announcement



2. Photographs of the workshop





Students and faculty participated in the workshop.

Session summary

The workshop introduced students to membrane structures and their relevance in contemporary architecture, with emphasis on lightweight structural systems and the integration of architectural design with engineering principles. The session combined conceptual inputs with hands-on exploration, encouraging students to examine the relationship between form, materials and structural behaviour.

Organised by:

Archineering Cell

Dr. Bhanuben Nanavati College of Architecture for Women (BNCA), Pune

Documentation: Prof. (Dr) Poorva Kulkarni and Prof. Smita Ogale