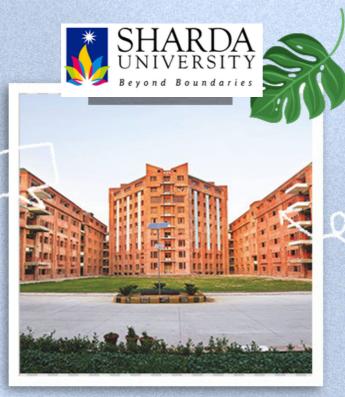
# MONTHLY NEWSLETTER



### DEPARTMENT OF CIVIL ENGINEERING



"Transforming
Engineering
Students into
Industry-Ready
Professionals"







# DEPARTMENT OF CIVIL ENGINEERING

### PROGRAMME SPECIFIC OUTCOMES



**PSO1:** Plan, Analyse and Design sustainable infrastructure.

PSO2: Build, manage and maintain construction projects adhering to the highest quality and safety standards.

PSO3: Apply innovative and emerging technologies and tools to solve real world civil engineering problems for society.





# SUCCESSFUL WORKSHOP ON FLOOD DISASTER RESILIENT HYDRAULIC DESIGN FOR BRIDGES EXPOSED TO CLIMATE CHANGE

A momentous event unfolded at the 114-B Board Room in Block 4 of the Department of Civil Engineering Sharda University on the 16th of June 2023. The workshop titled "Flood Disaster Resilient Hydraulic Design for Bridges Exposed to Climate Change" proved to be an enlightening and impactful experience for all attendees.



# Keynote Speaker's Expertise: Prof. (Dr) Rakesh Kumar

The distinguished keynote speaker, Prof. (Dr) Rakesh Kumar, a luminary in the field of hydraulic engineering and climate resilience, captivated the audience with his profound insights.



#### **Acknowledging Contributions:**

The success of the workshop would not have been possible without the collective efforts of the Department of Civil Engineering, the organizing team, and the dedicated participants. **Prof. (Dr) Rakesh Kumar's** expertise lent a unique dimension to the event, enriching the discourse and leaving a lasting impact.







# Empowering Ideas: Unveiling the Impact of Sanctioned Seed Fund Schemes"



Dr. Sufyan Ghani

TITLE: REMOTE SENSING-BASED PREDICTION OF SOIL MOISTURE AND ITS IMPACT ON THE ENGINEERING PROPERTIES OF SOIL FOR WESTERN UTTAR PRADESH.

TITLE: "DURABILITY ASSESSMENT OF DIFFERENT BLENDED CONCRETE SUBJECTED TO COMBINED ENVIRONMENTAL AND MECHANICAL LOADING USING NDT TECHNIQUES."



Dr. Tushar Bansal



Dr. Dayanand Sharma

TITLE: "CONVERSION OF DRY LEAVES INTO BIODEGRADABLE PLATES AND ASSESSMENT OF THEIR DEGRADATION RATE IN A CONTROLLED IN-VESSEL COMPOSTER."





# Innovative Contribution to Geotechnical Engineering: New Book Chapter Explores Plasticity-Based Liquefaction Prediction

Title: Plasticity-Based Liquefaction Prediction Using Support Vector Machine and

Adaptive Neuro-Fuzzy Inference System. **Authors:** Sufyan Ghani and Sunita Kumari

Publisher: Springer, Singapore

Published in: Lecture Notes in Civil Engineering

**Brief Description:** The book chapter takes on the formidable challenge of predicting liquefaction susceptibility in soil layers – a crucial aspect of geotechnical engineering that impacts the stability of structures in earthquake-prone regions. Sufyan Ghani and Sunita Kumari's research introduces a novel approach that leverages Support Vector Machine (SVM) and Adaptive Neuro-Fuzzy Inference System (ANFIS) techniques to enhance the accuracy of plasticity-based liquefaction assessment.

# Celebrating the Publication of a New Patent"

#### **Patent Published for Innovative Composter Invention**

**Invention Title:** "A Composter for Organic Waste."

**Application No.** 202311021936

Inventors: Dayanand Sharma, Kunwar Durg Vijay Singh Yadav, and Rajnikant Prasad.

# Patent Published for "A System for Treatment of Greywater and a Method Thereof"

Invention Title: A System for Treatment of Greywater and a Method Thereof.

**Application No.** 02311036041

Inventors: Rajnikant Prasad and Dayanand Sharma.





# Celebrating Research Excellence with New Published Paper

**1.Title of Paper-** Recommendation of RILEM TC 281-CCC: Test method to determine the effect of uniaxial compression load and uniaxial tension load on concrete carbonation depth.

Author- Dr. Tushar Bansal

Journal- Materials and Structures (2023) 56:121

**DOI-** https://doi.org/10.1617/s11527-023-02203-y

**2.Title of Paper-** Comparative Study of machine learning methods to predict compressive strength of high-performance Concrete and model validation on experimental data.

Author- Dr. Tushar Bansal

Journal- Asian Journal of Civil Engineering

**DOI-** https://doi.org/10.1007/s42107-023-00836-6

**3.Title of Paper-** Report of RILEM TC 281-CCC: effect of loading on the carbonation performance of concrete with supplementary cementitious materials — an interlaboratory comparison of different test methods and related observations.

**Author-** Dr. Tushar Bansal

**Journal-** Materials and Structures (2023) 56:110

**DOI-** https://doi.org/10.1617/s11527-023-02190-0

**4.Title of Paper-** Modelling Soil Compaction Parameters Using an Enhanced Hybrid Intelligence Paradigm of ANFIS and Improved Grey Wolf Optimiser.

Author- Dr. Sufyan Ghani

Journal-Mathematics 2023, 11, 3064

**DOI-** https://doi.org/10.3390/math11143064

**5.Title of Paper-** Effect of plant density and hydraulic retention time on phytoremediation of greywater using water hyacinth and validation of its optimized result using artificial neural network.

Author- Dr. Dayanand Sharma

Journal- The Canadian Journal of Chemical Engineering

DOI- <a href="https://doi.org/10.1002/cjce.25027">https://doi.org/10.1002/cjce.25027</a>





# Patent Granted for Groundbreaking Invention

Patent Granted for Environmentally Friendly Barbecue Grill

**Invention Title:** Environmentally Friendly Barbecue Grill

**Application No.** 202111018465

Inventors: Dr. Gaurav Saini, Nishant Kumar, Abhishek Kumar

## Student Membership at RICS

#### Taking a Systematic Approach towards Bridging the Skill-Gap in the Industry

- **1-** Creating Awareness: Students to be provided with relevant workshops, enabling them to identify areas and jobs of their interest.
- **2-** Industry interface: Regular interactions and guest lectures by leading Industry professionals to make the students aware about career and growth opportunities in specific pathways.
- **3-** Assistance will be provided to Students to identify key areas, in which they can gain more knowledge and develop expertise.

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The best part is that the Student Membership comes to the students ABSOLUTELY FREE OF COST!!

Join here: RICS Students; url: (https://www.rics.org/uk/surveying-profession/join-rics/rics-student/)

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