Record Nr. UNINA9910845479903321
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Titolo Recent Advances in Civil Engineering for Sustainable Communities

[[electronic resource]]: Select Proceeding of IACESD 2023 / / edited by N. Vinod Chandra Menon, Sreevalsa Kolathayar, Hugo Rodrigues, K. S.

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Pubbl/distr/stampa Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024

ISBN 981-9700-72-8

Edizione [1st ed. 2024.]

Descrizione fisica 1 online resource (530 pages)

Collana Lecture Notes in Civil Engineering, , 2366-2565 ; ; 459

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Disciplina 690

Soggetti Buildings - Design and construction

Environmental engineering

Civil engineering

Construction industry - Management Building Construction and Design Environmental Civil Engineering Construction Management

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Nota di contenuto Recent Advances in Civil Engineering for Sustainable Communities - An

Introduction -- Investigation on Compressive Strength of Fibre Reinforced Concrete Using Artificial Neural Network -- Conventional

and Ensemble Machine Learning Techniques to Predict the Compressive Strength of Sustainable Concrete -- Experimental Study on Strength Properties of Concrete Incorporated with Bacteria -- Predicting the Porosity of SCM-blended Concrete Composites Using Ensemble Machine Learning Models -- Ensemble Machine Learning Models to Predict the Compressive Strength and Ultrasonic Pulse Velocity of Sustainable Concrete -- Prognosis of Concrete Strength: The State of Art in Using Different Machine Learning Algorithms -- Experimental Study on Strength and Durability Characteristics of Mortars with TiO2 Nanoparticles -- Optimizing Sustainable Construction Materials with

Machine Learning Algorithms: Predicting Compressive Strength of Concrete Composites -- Group Indexing of Fly Ashes using Unsupervised -- Learning and Fuzzy Clustering Techniques -- Study on Self-Healing Properties of Bacteria based Cement Mortar with Eggshell Powder and Jute fibre -- A Study on Repair Effectiveness of Damaged RC Beams with Circular Openings Using CFRP Sheet -- ELA and AAR Dynamics of Glaciers in Chandra Basin, Western Himalayas -- GIS Applications and Machine Learning Approaches in Civil Engineering -- Structural Health Monitoring by Simultaneous Measurement of Strain and Temperature Using Different Materials.

## Sommario/riassunto

This book presents select proceedings of the International Conference on Interdisciplinary Approaches in Civil Engineering for Sustainable Development (IACESD 2023). The topics covered include geographic information systems (GIS) and building information modeling (BIM), integration of numerical methods for fluid flow modeling, and the revolutionary potential of 3D printing within the construction industry. This book serves as a resource material for researchers and industry professionals interested in developing solutions for sustainable and resilient infrastructure that aims for communities with Net Zero Targets.