

Journal of The Institution of Engineers (India): Series A

Volume 104 · Issue 1 · March 2023

ORIGINAL CONTRIBUTIONS

Assessment of Surface Water Quality Index of Gwalior-Chambal Region Using Fuzzy-Based Approach

S.S. Chauhan · M.K. Trivedi 1

Bearing Capacity of Well Foundation Using Finite Element Lower Bound Limit Analysis

S. Mandal · K. Krishnan · D. Chakraborty 19

Comparative Analysis of Risk Based on Inversion of Earthquake Source Parameters

Q. Liu · X. Shuai · M. Zhen · W. Feng 29

Comparative Study of Energy Efficiency Criteria for IGBC and GRIHA Systems Using Simulation

P. Rakesh · R. Harisankar · B.B. Das 39

Computations of Characteristic Compressive Strength and Design Vertical Load Resistance of Brick Masonry

M.M. Nalina · M. Keshava · S. Raghunath ·

K.S. Jagadish 51

Development of Crash Prediction Model using Artificial Neural Network (ANN): A Case Study of Hyderabad, India

S. Koramati · A. Mukherjee · B.B. Majumdar · A. Kar 63

Identification of Potential Sites for Small-Scale Hydropower Plants Using a Geographical Information System: A Case Study on Fetam River Basin

H. Desalegn · B. Damtew · A. Mulu · A. Tadele 81

Impact of Physical Density on Nature and Use of Open Spaces: A Pilot Study of Two Residential Areas from Jaipur, India

S. Dutta · S. Koduru · M. Juganaru 95

Implementation of Computer Vision Technique for Crack Monitoring in Concrete Structure

H. Kapadia · P.V. Patel · J.B. Patel · N. Kanani 111

Improving the Progressive Collapse Resistance of Steel Moment Frames Using Different Beam Strengthening Methods

M. Musavi-Z · M.R. Sheidaei 125

Introduction of a Simple Estimation Method for Lane-Based Queue Lengths with Lane-changing Movements

S. Jayatilleke · V. Wickramasinghe · N. Amarasingha 143

Lockdown Effects on Air Quality in Megacities During the First and Second Waves of COVID-19 Pandemic

J. Aswin Giri · B. Schäfer · R. Verma · H. He · S.M. Shiva Nagendra · M. Khare · C. Beck 155

Micro-Computed Tomography (µCT) Study of Clogging in Long-Used Strip and Cylindrical Drip Emitters

V.R. Ramachandrula · R.R. Kasa · A. Torris 167

Montana Flume Aeration Performance Evaluation with Machine Learning Models

A. Tiwari · C.S.P. Ojha · N.K. Tiwari · S. Ranjan 175

Numerical Evaluation of Settlement and Stresses of Annular Raft

A.P.S. Rathor · J.K. Sharma 187

Optimization Study of the Effect of Rice and Wheat Flour Blend Ratio and Water Content on Bread Texture and Sensory Quality

S. Rathore · A.K. Pandey 195

Particle Packing Approach for Proportioning Recycled Aggregate from Building Demolition Waste (BDW)—A Sustainable Solution

M.L. Kasulanati · R.K. Pancharathi 207

Towards Sustainability: Analysis of Energy Efficiency Factors in Buildings of Smart Cities Using an Integrated Framework

J. Tippu · S. Saravanasankar · B. Sankaranarayanan · S.M. Ali · S.S. Qarnain · K. Karuppiah 223

CASE STUDY

Optimum Site Suitability Analysis for Urban Open Space Facilities using Geospatial Techniques

R. Shanmathi Rekha · N. Radhakrishnan · S. Mathew 237

REVIEW PAPER

The Intensity Measures Parameters of Horizontal and Vertical Ground Motions

E.A. Elbout 251

Further articles can be found at link.springer.com

Instructions for Authors for *J. Inst. Eng. India Ser. A* are available at <http://www.springer.com/40030>