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

Volume 103 · Issue 2 · June 2022

ORIGINAL CONTRIBUTIONS

A Sustainable Method to Grind Plastic Scraps for more Efficient End Use as Additives A. Marquez · C. Persad · C. Maharaj 341

An Investigation of Mechanical and Durability Properties of Carbonated Recycled Aggregate Concrete S.A. Waseem 349

Carbon Sequestration Potential of Urban Trees: A Case of Kolar Area in Bhopal City, India S. Chaurasia · N. Munoth 359

Competition in Infrastructure Procurement: Analysis of Waste Management Sector of India T. Dolla · B. Laishram 375

Comparative Study of different Seat Cushion Materials to improve the Comfort of Tractor Seat A. Bhatia · S. Kalsi · A.K. Sehgal · I. Singh 387

Correlation-Aided 3D Vector Distance Estimation-Based Quality Assessment of Indian Gooseberry T. Sarkar · A. Mukherjee · K. Chatterjee 397

Development of Dynamic Traffic Assignment Framework for Heterogeneous Traffic Lacking Lane Discipline R. Mohan 409

Effects of Compressive Strength of Concrete on RC Columns Subjected to Elevated Temperatures D.A. Krishna · R.S. Priyadarsini · S. Narayanan 423

Engineering Properties of Chilli Fruit Relevant to the Design and Evaluation of Chilli Seed Extractor for Hilly Region of Kashmir Valley M.M. din · Mohd. Muzamil · J. Dixit · S. Faisal · I. Khan 433

Experimental Investigation on Feasibility of utilizing Phosphogypsum in E-Glass Fiber-incorporated Non-fired Ceramic Wall Tile G.K. Arunvivek · D. Rameshkumar 445

Evaluation of Emission Characteristics and Performance of Pomegranate Ethanol Blended S. I. Engine using Artificial Neural Network and Rule Learner Classifier D.Y. Dhande · D.P. Gaikwad · C.S. Choudhari 453 Evaluation of Perception and Nonperception based Approaches for Modeling Urban Road Level of Service J. Raj · P. Vedagiri 467

Ground Granulated Blast Furnace Slag as a Cement Replacement in Concrete: An Analysis of Dissolution R. Malipeddi · S. Adiseshu 481

"Heritage Village" Designation Impact on the Village: A Case Study on the Perception of the Residents of Kalpathy Village (Kerala)
P. Nair · D.P. Singh · N. Munoth 493

Leaf Disease Detection in Banana Plant using Gabor Extraction and Region-Based Convolution Neural Network (RCNN) K. Seetharaman · T. Mahendran 501

Measurements and Comparison of Saturated Hydraulic Conductivity under different Landuses A. Kumar · S. Shekhar · A. Paul · D.R. Mailapalli 509

Mechanical and Post-Cracking Performance of Recycled High Density Polyethylene Fiber Reinforced Concrete M.M. Rao · S.K. Patro · S.S. Basarkar 519

Natural Carbonation Resistance of RCA-SCC Blended with Mineral Admixtures N. Singh · S.P. Singh 531

Numerical Analysis of Eccentric Compression Performance of CFRP-Confined Concrete-Filled Steel Tube (CFST) Columns Z. Yunfeng · G. Daolin · M. Baorui 543

Optimization of Antenna Lattice Towers using Genetic Algorithm

V. Arjun · B.K. Anjan · S.S. Kanmani · P.K. Umesha 557

Performance of High-Strength Concrete using Alccofine and GGBFS S. Lakshmikanth · M.C. Nataraja · Supreeth 567

Prediction of Wind-Induced Pressure on Pentagon
Plan Shape Building using Artificial Neural Network
R. Vigneshwaran · S. Prabavathy ·
J. Sivasubramanian 581

Scaling Effect on the Behaviour and Design of Prestressed Stayed Steel Columns P. Hyman · A.I. Osofero · S. Sriramula 601

Stress Concentration in Composite Cantilever Plates—Effect of Stiffeners and Remedy K. Kumar · G.J. Singh 627

Studying Aggressive Clearing Behavior of Drivers at Uncontrolled Intersections under Mixed Traffic Conditions M. Dutta · K. Maddu · S. Jena 639

CASE STUDIES

Application of Axiomatic Design and Design Structure Matrix for Early Identification of Changes in Construction Projects S.P.S. Padala 647

Temperature Gradient across Masonry Walls under Transient Conditions: Case Studies from a Warm Humid Climate V.M. Joshima · M.A. Naseer 663 **XFEM Method for Crack Propagation in Concrete Gravity Dams** I.S. Parvathi · M. Mahesh · D.V.V.R. Kamal 677

REVIEW PAPERS

Benefits of Glulam Timber Roof Structure for Airport Passenger Terminal Building R. Lakshmanan **689**

Identification of Tomato Leaf Diseases based on a Deep Neuro-fuzzy Network X. Tian · X. Meng · Q. Wu · Y. Chen · J. Pan 695

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