

Industry 4.0 Technologies in Civil and Mechanical Engineering (ICI4TCME 2020)

IOP Conference Series: Materials Science and Engineering
Volume 1112

Namburu, India
4 - 5 November 2020

Editors:

N. Kumara Swamy
M.K.M. Farooqui

ISBN: 978-1-7138-3401-4
ISSN: 1757-8981

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 3.0 International Licence.
Licence details: <http://creativecommons.org/licenses/by/3.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2021)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

MECHANICAL ENGINEERING

ANALYSIS OF COMPOSITE RAFT MOUNT FOR VIBRATION REDUCTION OF A CENTRIFUGAL PUMP	1
<i>G.Vijay Kumar, P.Phani Prasanthi</i>	
INVESTIGATION OF ELECTRO-CHEMICAL PERFORMANCE OF AZ31 MAGNESIUM ALLOY – CASIO ₃ METAL MATRIX COMPOSITES IN DIFFERENT ENVIRONMENTS.....	8
<i>Penugonda Suresh Babu, Y. Pratapa Reddy, K. L Narayana, M. Kedar Mallik</i>	
OPTIMIZATION OF DRY SLIDING WEAR PARAMETERS OF AL4MG SYSTEM REINFORCED WITH HIGH STRENGTH ALLOY PARTICULATE (HSAP).....	19
<i>Ch. Kishore Reddy, M. Gopi Krishna, Rahul, V.S.N. Venkata Ramana, K. Sri Ram Vikas</i>	
STUDIES ON MACHINING CHARACTERISTICS AND MICROBIOLOGICAL GROWTH OVER STIR CASTED A356-GRAPHITE METAL MATRIX COMPOSITES (A COMPARISON BETWEEN PURE METALS AND COMPOSITE)	28
<i>Suneel Donthamsetty, Penugonda Suresh Babu</i>	
AN EXPERIMENTAL EVALUATION ON REVAMPING THE PRODUCTIVITY OF SOLAR PV PANEL USING WIND TUNNEL AS AN OPTIMIZER	40
<i>R Rajasekar, R Ramkumar, P Prasanna</i>	
MULTI-RESPONSE OPTIMIZATION OF MACHINING FACTORS IN POCKET MILLING OF AISI304 USING GREY RELATIONAL ANALYSIS	51
<i>M Rajyalakshmi, M Venkateswara Rao</i>	
SIX SIGMA APPROACH FOR MATERIAL HANDLING SYSTEM FOR A TOBACCO THRESHING PLANT.....	60
<i>MD.Khaja Moinuddin Farokhi, P V Chalapathi, K.V.L. Somasekhar, M. Vinitha, P Naga Srinivas</i>	
HYDRODYNAMIC PERFORMANCE OF POSITIVE SURFACE TEXTURED PATTERNS UNDER MIXED LUBRICATION	67
<i>Venkateswara Babu Peddakondigalla, Kiran Kumar Veeranapu, Ismail Syed, Vasavi Boggarapu</i>	
OPTIMIZATION OF PROCESS PARAMETERS IN 3D PRINTING-FUSED DEPOSITION MODELING USING TAGUCHI METHOD.....	74
<i>M Sumalatha, J N Malleswara Rao, B Supraja Reddy</i>	
MULTI-OBJECTIVE OPTIMIZATION USING TOPSIS IN TURNING OF AL 6351 ALLOY	88
<i>S R Rao, S A K Jeelani, V Swamulu</i>	
EFFECT OF NUMBER OF PASSES ON SURFACE PROPERTIES OF BURNISHED ALUMINIUM ALLOY.....	98
<i>Koona Bhavani, V.S.N. VenkataRamana, Rahul, K. Sri Ram Vikas, Ch. Kishore Reddy</i>	
EFFECT OF CERIUM OXIDE NANOPARTICLES ADDITIVE BLENDED IN PALM OIL BIODIESEL AS ALTERNATIVE FUEL USED IN DIESEL ENGINE.....	105
<i>T Srinivasa Rao, H Suresh Babu Rao, S A K Jilani, Avinash Mutluri</i>	

MODAL ANALYSIS OF ELECTRICAL MOTOR CASING	119
<i>T Srinivasan., S Sharavanan., E Naveen., Sethuvelappan, P Ramanan.</i>	
COMPARISON OF EFFECT OF ORIENTATION ON SS304 AND SS316 MATERIAL SAMPLES FABRICATED WITH DMLS TECHNOLOGY.....	129
<i>M. Kedar Mallik, D. V. Seshagirirao, K. J. Padmaja, B. Aditya Mani, Sai Pavan, P. Bhagyasri</i>	
INFLUENCE OF HEAT TREATMENT ON MECHANICAL CHARACTERISTICS OF AL7075/AL2O3/TIC HYBRID METAL MATRIX COMPOSITE	133
<i>E Sai Baba, M Vinitha, Dr D V V Krishna Prasad</i>	
MULTI RESPONSE OPTIMIZATION OF DRILLING PARAMETERS IN GLASS FIBER REINFORCED THERMOPLASTIC COMPOSITES	143
<i>T Srinivasan, R Arunkumar, S Meghanathan, P Ramu</i>	
OPTIMIZATION OF EDM PROCESS PARAMETERS ON MACHINING CHARACTERISTICS OF SIC AND GRAPHENE REINFORCED AL 6061-T6NANO-COMPOSITES	153
<i>Saikiran Ammisetty, Dhanunjaykumar Ammisetti, K. Satyanarayana, Suresh Chitturi, N.Sunil Naik</i>	
MECHANICAL PROPERTIES OF PARTIAL REPLACEMENT OF CEMENT WITH SUGARCANE BAGGASE ASH.....	163
<i>Ch Ravi Teja, G Nipun, A Monica</i>	
COMPARATIVE STUDY ON ASPHALT MIXTURE WITH NANO MATERIALS AND POLYMER.....	172
<i>Akhila Bobbili, Sai Krishna Kollipara, V. Mallikarjuna, Malathi Narra</i>	
<u>CIVIL ENGINEERING</u>	
EFFECT OF EPOXY RESIN ON CBR IMPROVEMENT OF SOFT CLAYEY SUBGRADE MIXED WITH COCONUT COIR FIBRES	187
<i>Raja Veerendra Yenigalla, G.V. Slaney</i>	
STRENGTHENING OF FLEXIBLE PAVEMENT BY ADDING RECRON FIBRE.....	196
<i>Smt MalathiNarra, V. Mallikarjuna, Ch. Revathi, U. Srikanth</i>	
CASE STUDIES ON CONDITION ASSESSMENT AND REPAIRS FOR FIRE DAMAGED REINFORCED CEMENT CONCRETE STRUCTURES	205
<i>Raja Veerendra Yenigalla, Satish Sajja</i>	
STABILIZATION OF EXPANSIVE SOIL BY USING LIME AND REINFORCEMENT WITH GEO-TEXTILE	215
<i>N Malathi, D.N Komala, Sk Shabeena, V. C Jaya Saahithya</i>	
FLOOD PLAIN MODELLING OF KRISHNA LOWER BASIN USING ARCGIS, HEC- GEORAS AND HEC-RAS	228
<i>B Jagadeesh, K Krishna Veni</i>	
A CASE STUDY ON EVALUATION AND DESIGN OF ON-STREET PARKING IN NARASARAOPET TOWN IN ANDHRA PRADESH.....	238
<i>G Leela Suresh, R Ratna Prasad, T Venkateswara Rao</i>	

A COMPARATIVE STUDY ON SEISMIC ANALYSIS OF G+6 BUILDING WITH RIBBED SLAB & CONVENTIONAL SLAB USING SAP2000 SOFTWARE	247
<i>Mirza Mahaboob Baig, Abdul Rashid, Y Pavan Sai Durga Reddy, T.G.N.C Vamsi Krishna</i>	
BLAST RESISTANCE OF G+10 COMMERCIAL BUILDING WITH AND WITHOUT SHEAR WALL SHAPE COMPARISON.....	254
<i>Harish Pendem, Sukesh Chandana</i>	
EFFECT OF NANO SILICA & OTHER INDUSTRIAL WASTES ON STRENGTH AND ECONOMY OF CONCRETE.....	263
<i>D. Aditya Sai Ram, K Sai Ramya, D. Kamalakar</i>	
PERFORMANCE OF FINE AGGREGATE REPLACED POND ASH ON STRENGTH OF CONCRETE.....	274
<i>A Srikanth, K Adithya Nandini, Y Anand Babu</i>	
A STUDY ON PHYSICO-CHEMICAL ANALYSIS OF GROUND WATER AND HEAVY METAL ANALYSIS OF LEACHATE IN KODUNGAIYUR LANDFILL SITE, CHENNAI.....	280
<i>A. Harinadha Babu, N.Kumara Swamy, S. Krishnaiah, M.S. Senthil</i>	

Author Index