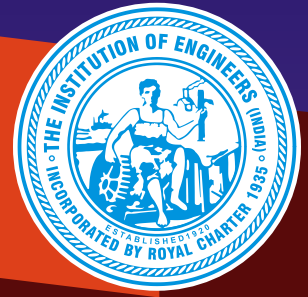


IEI EPITOME



Volume 9 | Issue 10 | October 2024

A Century of Service to the Nation

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The information contained in IEI Epitome has been prepared solely for the purpose of providing information about the members of IEI to interested parties, and is not in any way binding on IEI.

IEI Epitome has been e-compiled in good faith by IEI, but no representation is made or warranty given (either expressed or implied) as to the completeness or accuracy of the information of the contents. You are therefore requested to verify this information with the concerned person/organization before you act upon it.

Editor

Maj Gen (Dr) MJS Syali, VSM (Retd)
Secretary & Director General

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Mr P Barik, Ms P Nath, Ms T Kumar, Mr S K Mishra

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Notification for IEI R&D Grant-in-Aid

Volume 9 | Issue 10 | October 2024

To promote appropriate technology, assist in building up design & research talents and, most importantly, to help in nurturing potential R&D venture amongst engineering students pursuing Diploma/UG/PG/PhD courses. The Institution of Engineers (India) had instituted the R&D Grant-in-Aid program way back in 2001.

Every year, the Institution invites applications for funding industry-oriented R&D projects and research initiatives aimed at improving the life-style of common people from engineering students pursuing full time Diploma/UG/PG/PhD engineering program in AICTE/UGC/NAAC approved Institutions / Colleges / Universities. The application form and guidelines are available in our website <https://www.ieindia.org>. The projects should be carried out under the guidance of faculty members who are Corporate Members of IEI. Membership criteria for student(s), guide(s) and institution(s) are as follows:

Project Category	Student/Applicant Membership	Guide(s) Membership	Institutional Membership
1. Diploma	Exempted [Membership of Student Chapter is desirable]	AMIE/MIE/FIE	Not Mandatory
2. UG (BE/BTech/ Equivalent)	'Student Member' (SMIE)	AMIE/MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA/NAAC Accreditation or valid NIRF Rank
3. PG (ME/MTech/ Equivalent)	AMIE/MIE/FIE	MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA/NAAC Accreditation or valid NIRF Rank
4. PhD	AMIE/MIE/FIE	MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA/NAAC Accreditation or valid NIRF Rank

The soft copy of the duly filled-up applications (in editable format), as per the proforma available on our website www.ieindia.org, should be sent through email to research@ieindia.org and one printed copy of the same should reach the following address:

The Deputy Director (Technical)

The Institution of Engineers (India)
8 Gokhale Road, Kolkata 700 020

Kindly go through the guidelines (visit link: <https://www.ieindia.org/webui/IEI-Activities.aspx#RnD-Initiative>) before filling up the application.

Members in the News

Volume 9 | Issue 10 | October 2024



Er Manoj Namdevrao Chavan, AMIE

Lecturer

Padmabhooshan Vasantraodada Patil Institute of Technology, Budhgaon, Maharashtra

✉ gmanojchavan@gmail.com

Er Manoj Namdevrao Chavan is the one of the Applicant for a Design to “**Smart Medi Box**”.

Design Number : 415786-001

CBR Number : 207506

CBR Date : 03/05/2024

Issue Date : 14/06/2024

Design Name : Smart Medi Box

Class: 24-01

Other Applicants : Mr. Aniket Vilas Patil

Mr. Salmankhan Jamsher Khan Pathan

Mr. Darshan Sunit Holkar

Mr. Ishan Fajal Nadaf

Miss. Sanabi Mahammad Nadaf

Mr. Om Vinayak Bhokare

Miss. Zehra Shabbar Bhojani

Miss. Anam Babasaheb Vijapure

Design Office : Controller General of Patents, Designs and Trademarks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India

Corporate Air Ticketing for IEI Members

Corporate Members may book Corporate Air Ticket through M/s EBIX Travels Private Ltd. For details please visit

<https://www.ieindia.org/webui/IEI-AirTickets.html>

Members in the News

Volume 9 | Issue 10 | October 2024

The following esteemed corporate members were conferred with the prestigious **Professional Engineers (PE) Certificate** from IEI after successful completion of the assessment process and they have been authorised to use the style and title of **PEng (I)** by virtue of expertise in their field:



Er Rajneesh Jindal, MIE & PE7007278 (Certified Professional Engineer, IEI)
Engineer (Infrastructure), Lea Associates South, Birati, North Dumdum, West Bengal
Field : Civil Engineering
✉ errjindal@gmail.com
Valid from: 03 October 2024
Valid up to: 31 October 2029



Er Ankurkumar Kirankumar Upadhyay, MIE & PE7007294 (Certified Professional Engineer, IEI)
Assistant Vice President, Infrastructure Maintenance, Lighthouse Learning Pvt. Ltd.,
Mumbai, Maharashtra
Field : Civil Engineering
✉ ankur.upadhyay.ct@gmail.com
Valid from: 03 October 2024
Valid up to: 31 October 2029



Er Munish Dhawan, FIE & PE7007308 (Certified Professional Engineer, IEI)
Lead Civil Structural Engineer, Fluor Daniel India Pvt Ltd Gurugram, Haryana
Field : Civil Engineering
✉ munish.dhawan@fluor.com
Valid from: 03 October 2024
Valid up to: 31 October 2029



Er Pradeep Kumar Sharma, MIE & PE7007316 (Certified Professional Engineer, IEI)
Section Engineer, Shree Cement Ltd, Nawalgarh
Field : Civil Engineering
✉ pkumar2211@gmail.com
Valid from: 03 October 2024
Valid up to: 31 October 2029

contd.....

Discount at the Samsung e-store for IEI Corporate Members

Exclusive access to the Samsung e-store for IEI Corporate Members. This shall enable the Corporate Members to procure the Samsung Products in a discounted rate. The Samsung e-store can be accessed at www.samsung.com/in/multistore/iei using your Membership No. and email id/Mobile.

Members in the News

Volume 9 | Issue 10 | October 2024



Er Vilas U Lathkar, MIE & PE7007324 (Certified Professional Engineer, IEI)
Former Executive Engineer, CIDCO, Navi Mumbai
Field : Civil Engineering
✉ vilaslatkar@gmail.com
Valid from: 03 October 2024
Valid up to: 31 October 2029



Er Dhananjay Kumar Pandey, FIE & PE7007332 (Certified Professional Engineer, IEI)
Maintenance Manager and Site Project Manager, Africa Improved Foods, Rwanda
Field : Electrical Engineering
✉ dhananjay4u2005@gmail.com
Valid from: 05 October 2024
Valid up to: 31 October 2029



Er Archana B Yadav, FIE & PE7007359 (Certified Professional Engineer, IEI)
Associate Professor, Government Engineering College, Modasa
Field : Electronics & Telecommunication Engineering
✉ archu.payal@gmail.com
Valid from: 05 October 2024
Valid up to: 31 October 2029

ANNOUNCEMENT

Elevate your status as a Certified Professional Engineers (PE) and International Professional Engineers (IntPE)

Professional Engineers (PE) Certification by IEI

Eligibility Requirement

To attain the Professional Engineers (PE) certification through The Institution of Engineers (IEI), you must meet the following eligibility criteria:

1. Hold a BE/BTech or equivalent degree recognized by a Statutory Authority or the Government of India.
2. Have accumulated five years or more of professional experience.
3. Be a member of a recognized professional engineering institution or association.
4. Maintain a satisfactory level of Continued Professional Development (CPD).

Please visit the following link :

https://www.ieindia.org/webui/IEI_PE_Certification.aspx

International Professional Engineers (IntPE) Certification by IEI

Eligibility Requirement

To be eligible for IntPE Certification by IEI, candidates must meet the following criteria:

1. Hold a BE/BTech or equivalent degree recognized by the Statutory Authority or the Government of India.
2. Possess seven years or more of professional experience.
3. Have a minimum of two years of professional experience in a significant engineering activity.
4. Be a member of a recognized professional engineering institution or association.
5. Maintain a satisfactory level of Continued Professional Development (CPD).

Please visit the following link:

https://www.ieindia.org/webui/IEI_IntPE_Certification.aspx

The eligible candidate can submit application in the prescribed format to: The Deputy Director (Technical), The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020;
For any query and assistance, please send email to: pe@ieindia.org

Publication by Members

Volume 9 | Issue 10 | October 2024



Dr Visvanathan Rangaraju, FIE

Formerly Professor and Head,

Department of Food and Agricultural Process Engineering, Agricultural Engineering College and Research Institute, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu

✉ drrviswanathan@gmail.com

Title of Paper: Evaluation of Commercially Available Plant-based Food Serving Disposable Crockery for Quality Standards

Journal of Agricultural Engineering (India), Indian Society of Agricultural Engineers (ISAE), 61(4), July-September 2024, pp 493-508, ISSN (Print): 0256-6524; ISSN (Online): 0976-2418

DOI: <https://doi.org/10.52151/jae2024614.1866>

Co-authors : Thingujam Bidyalakshmi & Nachiket Kotwaliwale

Abstract: Biomass-based disposable crockery products are in high demand as an alternative to the plastic-based products considering negative effects of plastic-based products on environment. Biomass-based cutleries are being made from locally available different sources such as leaves, sheaths, straws and other plant fibres. A study was conducted to assess the quality of the biomass-based utensil product and provide the standard technical requirements of selected biomass-based disposable products. The plant-based utensils made from corn starch, sugarcane bagasse, areca, paper and Sal (*Shorea robusta*) leaves were selected for this study. The available standard methods such as International Organization for Standardization (ISO), Technical Association of the Pulp and Paper Industry (TAPPI), National Standard of the People's Republic of China, and Bureau of Indian Standards (BIS) were adapted, with suitable modifications wherever required, for conducting the experiment. The test included measurement of dimensional specifications, grammage, moisture content, temperature resistance test, load bearing test, high heat performance test, drop test, tensile test and three point bending rig test. The plant-based utensils were classified as very strong, strong and weak based on the strength characteristics test. The utensils made from sugarcane bagasse fall in all three categories (very strong, strong and weak), whereas areca-based lies between very strong and strong while corn starch-based fall between strong and weak category. Overall, the results showed a lot of variation in strength characteristics of biomass-based disposable crockery products. The data of this study can serve as a valuable information for manufacturers and suppliers of plant-based utensils to ensure and improve product quality while maintaining the technical standards.

Keywords: Areca; Grammage; Load Bearing Test; Sal Leaf; Sugarcane Bagasse; Tensile Test

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Is your mobile number & e-mail are updated with us ? If not, then please forward your Know-Your-Member (KYM) form immediately for participating in IEI Election process.

You are requested to forward your KYM along with the self-attested copy of photo ID proof to the address given below:-

Deputy Director (Membership)

The Institution of Engineers (India)

8 Gokhale Road, Kolkata 700020

Email: datamemb@ieindia.org

The form is available on IEI Website or scan the code:

https://www.ieindia.org/WebUI/ajax/Downloads/WebUI_PDF/HIGHLIGHTS_DOCUMENT-3332.pdf



Publication by Members

Volume 9 | Issue 10 | October 2024



Er Chirag Prakashchandra Mistry, MIE

Senior Scientist

CSIR-Central Electronics Engineering Research Institute (CEERI), Pilani, Rajasthan

✉ mistrychirag_me@yahoo.com; cpmistry@ceeri.res.in

Title of Paper: Design of the Radiation Cooled Packaging of the Helix TWT

2024 IEEE Space, Aerospace and Defence Conference (SPACE), IEEE Conference Proceedings, 22-23 July 2024, pp 1184-1187, Electronic ISBN:979-8-3503-6738-6, Print on Demand (PoD) ISBN: 979-8-3503-6739-3, Funding Agency: 10.13039/501100007852-Central Electronics Engineering Research Institute

DOI: <http://doi.org/10.1109/SPACE63117.2024.10668191>

Co-authors : Amitavo Roy Choudhury, Subhradeep Chakraborty & Sanjay Kumar Ghosh

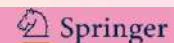
Abstract: Helix travelling wave tubes are most commonly used as power amplifier for satellite communication. The main objective of packaging of the helix TWT is to protect the integrated TWT from environmental loads. These environment loads are either mechanical vibrations or thermal loads. In this paper author has presented the design of the radiation-cooled packaging of the helix TWT for its space application. The key challenging aspects in the design of the base plate for packaging are axial & radial alignment of the tube, different size of the TWT sub components, high voltage potting at gun and collector side etc.

Keywords: Helix TWT, Radiation Cooled Packaging, MDC, Thermal Simulation, Random Vibration, ANSYS

ANNOUNCEMENT



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ISSN Electronic 2250-2157

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ISSN Electronic 2250-2114

Series B

CiteScore 2023
3.1

Google Scholar: h5 Index 2022
24



ISSN Print 2250-0545
ISSN Electronic 2250-0553

Series C

CiteScore 2023
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11

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Call for Papers: Annual Technical Volume of Mechanical Engineering Division

Volume 9 | Issue 10 | October 2024



The Institution of Engineers (India)

Call for Papers



Seventh Issue of Annual Technical Volume in Mechanical Engineering Division Reverse Engineering in Product Design and Manufacturing: The Way Forward

Reverse Engineering is the process to deconstruct a product to understand the design of the product and reconstruct the same. In mechanical design and manufacturing system, Reverse Engineering is widely recognised and plays a significant role in product design strategy.

In a conventional manufacturing system, the operational sequence usually starts from the product design and passes through different manufacturing processes to convert raw material into the finished product. It is often essential to reproduce a CAD model of existing part and subsequent analysis and modifications are required to construct an improved product design. In Reverse Engineering approach, the important steps involves characterizations of geometric models and related surface representations, segmentation and surface fitting of simple and free-form shapes, and creating accurate CAD models.

In a Reverse Engineering methodology, the engineer needs to understand the functionality of the original part and the associated skills to replicate its characteristic details. In the fields of mechanical engineering and industrial manufacturing, reverse engineering refers to the method of creating engineering design and documentation data from existing parts and their assemblies. While conventional engineering process transforms engineering concepts and models into real parts, in the Reverse Engineering approach, real parts are transformed into engineering models and concepts.

Reverse engineering has been used to produce different mechanical components and spares, which include seals, O-rings, bolts and nuts, gaskets, various engine parts, and is widely used in many industries. The advanced technologies, such as three-dimensional (3D) Laser Scanning and High Resolution Microscopy, streamlined the Reverse Engineering process.

The purpose of this Annual Technical Volume is to publish the research outcomes and application descriptions in the advancement of Reverse Engineering methods and technologies and its impact on the engineering design including manufacturing for the 21st century's customer focused product.

Papers are invited on the following areas, but not limited to:

- ★ CAD/CAM/CAE/ Reverse Engineering
- ★ Methodologies and Techniques for Reverse Engineering
- ★ Reverse Engineering Life Cycle
- ★ Geometric Modelling and GD&T Considerations
- ★ Input Methods and Analysis: Contact and Non-contact
- ★ Design Optimisation and CAD/CAM/CAE
- ★ Application of Available Technologies
- ★ New Technologies
- ★ Additive Manufacturing and Reverse Engineering
- ★ Mass Customisation and Reverse Engineering
- ★ Medical Applications and Reverse Engineering
- ★ Case Studies and Other Related Topics

Instruction for Authors

All papers will undergo review process. The author's guidelines and other relevant information for submitting papers are available with following code and link:



https://www.ieindia.org/webui/IEI-Activities.aspx#Call_Papers

Last Date of Submission of full Paper: **20 November 2024**

Please forward your complete manuscript in MS word to mcdb@ieindia.org

The Volume will be published during the **39th Indian Engineering Congress** on **22 December 2024** at Novotel Kolkata Hotel and Residencies.

Call for Papers: International Conference on Gears 2025

Volume 9 | Issue 10 | October 2024



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Hand in your abstract covering related topics such as:

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Unlock the Future of Gear Innovation! Join global experts at the VDI International Conference on Gears 2025 to explore sustainable, smart, and high-performance gear technologies. Submit your abstract by Nov 22, 2024. For details visit www.vdi-gears.eu

Published Articles in IEI Journals

Volume 9 | Issue 10 | October 2024



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

[Agriculture, Architecture, Civil & Environmental Engineering]

(Electronic ISSN: 2250-2157; Print ISSN: 2250-2149)

[CiteScore: 2.2; h5 Index: 22]

[SCOPUS Indexed & UGC-CARE (India) listed]

For download, use Membership ID through: www.ieindia.org

Volume 105, Issue 3, September 2024

- Title: **A Comparative Analysis of Plant Canopy Detection Performance in a Variable-Rate Spraying System using Deep Learning Models**
- Authors: **Seema Suhas Patil, Yuvaraj Mahadev Patil, Suhas Bapuso Patil & Ranjit Vasant Powar**
Electronics and Telecommunication Engineering, Ashokrao Mane Group of Institutions, Vathar, Maharashtra, India
Electronics and Telecommunication Engineering, KIT College of Engineering, Kolhapur, Maharashtra, India
Farm Machinery and Power Engineering, D.Y. Patil, CAET, Talsande, Maharashtra, India
- DOI: <https://doi.org/10.1007/s40030-024-00829-x>
- Online publication date: 02 August 2024
- Pages: 487–497
- Title: **Development and Assessment of a Hand-Held Dust Measuring Device**
- Authors: **Kalay Khan, Zubida Bano, Jagvir Dixit, Hilaas Ahmad Peerzada & Mudasir Ali**
Division of Farm Machinery and Power Engineering, College of Agricultural Engineering and Technology, SKUAST-K, Srinagar, India
- DOI: <https://doi.org/10.1007/s40030-024-00817-1>
- Online publication date: 27 June 2024
- Page: 499–505
- Title: **Choice of Sampling Strategy for Flexible Pavement Distress Survey**
- Authors: **C Ramamurthy & M. R. Nivitha**
Department of Civil Engineering, PSG College of Technology, Coimbatore, 641004, India
- DOI: <https://doi.org/10.1007/s40030-024-00821-5>
- Online publication date: 28 June 2024
- Page: 507–519
- Title: **Investigating the Behavior of Reinforced Concrete Frame with Steel Shear Wall Having Partial Connection to Boundary Elements**
- Author: **Zhili Sun**
Architectural Engineering Institute, Puyang Vocational and Technical College, Puyang, 457000, Henan, China
- DOI: <https://doi.org/10.1007/s40030-024-00813-5>
- Online publication date: 28 June 2024
- Pages: 521–531
- Title: **Development of Benchmarks for First and Last Mile Connectivity of a Metro Rail System through Performance Evaluation: A Case Study of Mumbai Metro Line 1**
- Authors: **Pradeep Chaitanya Jasti & V. Vinayaka Ram**
Mumbai Metro Rail Corporation Limited, BKC, Bandra East, Mumbai, 400 051, India

- Department of Civil Engineering, BITS Pilani, Hyderabad Campus, Shameerpet, Hyderabad, 500 078, India
DOI: <https://doi.org/10.1007/s40030-024-00823-3>
Online publication date: 07 July 2024
Pages: 533–546
Title: **Spatial and Temporal Variations in Peak Flood Events over the Markanda River Basin of North Western India**
Authors: **Dinesh Kumar, Divya Saini & Omvir Singh**
Department of Geography, Government College for Girls, Mohana, Sonipat, 131025, India
Department of Geography, Kurukshetra University, Kurukshetra, 136119, India
- DOI: <https://doi.org/10.1007/s40030-024-00811-7>
Online publication date: 08 July 2024
Pages: 547–562
Title: **Enhancing Rolled Steel I Beam Performance through FRP Strengthening: Analytical and Numerical Modelling for Behavior Prediction**
Authors: **Vidya M. Patil, Mahesh M. Awati, Sandeep S. Ahankari & Abhijeet C. Lande**
Department of Civil Engineering, Visvesvaraya Technological University, Belagavi, Karnataka, 590018, India
Department of Civil Engineering, Tontadarya College of Engineering and Technology Gadag, Gadag-Betigeri, Karanataka, 582101, India
School of Mechanical Engineering, VIT University, Vellore, Tamil Nadu, 632014, India
- DOI: <https://doi.org/10.1007/s40030-024-00804-6>
Online publication date: 07 June 2024
Pages: 563–580
Title: **Assessment of Groundwater Quality of Hubballi City, Karnataka, India by using Canadian Council of Ministers of the Environment Water Quality Index, Weighted Arithmetic Water Quality Index and Geospatial Techniques**
Authors: **Madhumati S. Dhaduti, A. M. Hunashyal, Sandeep C. Dhaduti, Sandhya R. Jalagar & S. N. Mathad**
Department of Civil Engineering, K. L. E. Institute of Technology, Hubballi, Karnataka, India
School of Civil Engineering, K. L. E. Technological University, Hubballi, Karnataka, India
Department of Mechanical Engineering, K. L. E. Institute of Technology, Hubballi, Karnataka, India
Department of Physics, K. L. E. Institute of Technology, Hubballi, Karnataka, India
- DOI: <https://doi.org/10.1007/s40030-024-00828-y>
Online publication date: 03 August 2024
Pages: 581–587
Title: **Environmental Impact Assessment of the Solid Waste Landfill in Ahmedabad**
Authors: **John D’Costa, Djibril Sekou Keita, Vincent J. Braganza & Harshad Patel**
School of Engineering and Technology/Nanotechnology, National Forensic Science University (NFSU), Sector-9, Gandhinagar, Gujarat, 382007, India
Administered by Xavier Research Foundation, Loyola Centre for Research and Development, Ahmedabad, Gujarat, India
- DOI: <https://doi.org/10.1007/s40030-024-00814-4>
Online publication date: 27 June 2024
Pages: 589–601
Title: **Modal Identification of a Bridge using the Vibration Response of a Passing Vehicle**

Published Articles in IET Journals

Volume 9 | Issue 10 | October 2024

- Combining VMD and TKEO**
Authors: **A. Srinivas & K. Lakshmi**
CSIR-Structural Engineering Research Centre, CSIR Campus, Taramani, Chennai, 600113, India
DOI: <https://doi.org/10.1007/s40030-024-00818-0>
Online publication date: 17 June 2024
Pages: 603–618
Title: **Simplified Method to Predict Residual Strength of Reinforced Concrete Columns under Natural Fire Conditions**
- Authors: **Chaitanya Akkanavar, M. H. Prashanth & Chiranjeevi Joshi**
School of Civil Engineering, KLE Technological University, Hubballi, 580031, India
Department of Civil Engineering, National Institute of Technology Karnataka, Surathkal, 575025, India
DOI: <https://doi.org/10.1007/s40030-024-00812-6>
Online publication date: 07 June 2024
Pages: 619–628
Title: **Optimization-Based Design of Reinforced Concrete Cantilever Retaining Walls Considering Embodied Energy, Carbon Emissions, and Cost**
- Authors: **Mansoor Shakeel, Rizwan Azam, Muhammad Rizwan Riaz & Ayman Shihata**
Department of Civil Engineering, University of Engineering and Technology, Lahore, 54890, Pakistan
Civil and Environmental Engineering, King Abdulaziz University, 21589, Jeddah, Saudi Arabia
DOI: <https://doi.org/10.1007/s40030-024-00809-1>
Online publication date: 19 May 2024
Pages: 629–639
Title: **A Comparative Study Between Conventional Outrigger System and Hybrid Outrigger System Considering Performance Index Criterion**
- Authors: **Neethu Elizabeth John & Kiran Kamath**
Department of Civil Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, India
DOI: <https://doi.org/10.1007/s40030-024-00822-4>
Online publication date: 26 July 2024
Pages: 641–659
Title: **Study of Leaf Straightening Parameters in the Hot Compression Rolling Process**
- Authors: **Shikha Singh, Anish Pandey, Ruby Mishra & Rajiva Lochan Mohanty**
Mechatronics Lab, School of Mechanical Engineering, KIIT Deemed to be University, Patia, Bhubaneswar, 751024, India
DOI: <https://doi.org/10.1007/s40030-024-00826-0>
Online publication date: 22 July 2024
Pages: 661–673
Title: **Experimental Investigation and Classification of Wastewater Treatment Sludge as Pozzolan for Cement**
- Authors: **S. O. Ekolu, P. Mudzanani, M. T. M. Mofokeng, M. C. Maiyana & A. Naghizadeh**
Department of Civil Engineering, Nelson Mandela University, Gqeberha, South Africa
Department of Civil Engineering Science, University of Johannesburg, Johannesburg, South Africa
Department of Engineering Sciences, University of the Free State, Bloemfontein, South Africa

- DOI: <https://doi.org/10.1007/s40030-024-00806-4>
Online publication date: 07 May 2024
Pages: 675–685
Title: **Inter-Storey Drift for Base Isolated R.C. Frame Buildings**
Authors: **Rajkumar Manisana & Sunil Singh Mayengbam**
Department of Civil Engineering, National Institute of Technology Manipur, Imphal, Manipur, India
- DOI: <https://doi.org/10.1007/s40030-024-00819-z>
Online publication date: 17 June 2024
Pages: 687–702
Title: **Enhancing Monsoon Predictions for the Upper Chambal Catchment through Temporal and Spatial Downscaling of Predicted Future Precipitation**
Authors: **Poonam Bagora & Sandeep Narulkar**
Department of Civil Engineering and Applied Mechanics, S.G.S.I.T.S, Indore, MP, 452003, India
- DOI: <https://doi.org/10.1007/s40030-024-00824-2>
Online publication date: 06 July 2024
Pages: 703–717
Title: **Assessment of Mechanization Indices: Insights from Rice-Growing Region of the Southern Asia–Pacific Region**
Authors: **Ipsita Rath, Padma Lochan Pradhan, Rama Chandra Dash, Markandeya Mahapatra, Pradeepta Kumar Sahoo, Anup Behera & Kumudini Verma**
Department of Farm Machinery and Power Engineering (FMPE), College of Agricultural Engineering and Technology (CAET), Odisha University of Agriculture and Technology (OUAT), Bhubaneswar, Odisha, 751003, India
- DOI: <https://doi.org/10.1007/s40030-024-00815-3>
Online publication date: 05 July 2024
Pages: 719–732
Title: **Model for Quantifying the Various Levels of Construction Productivity**
Authors: **R. V. K. Vigneshwar & S. Shanmugapriya**
Department of Civil Engineering, SRM Institute of Science and Technology, Ramapuram, Chennai, Tamilnadu, India
Department of Civil Engineering, Coimbatore Institute of Technology, Coimbatore, Tamilnadu, India
- DOI: <https://doi.org/10.1007/s40030-024-00820-6>
Online publication date: 19 June 2024
Pages: 733–740
Title: **Fire Hazard in Urban Areas: A Scoping Review to Understand Issues and Opportunities**
Authors: **Shipra Goswami, Rushikesh Kolte, Ashwani Kumar & Satish Pipralia**
Malaviya National Institute of Technology, Jaipur, 302017, India
National Institute of Technology, Hamirpur, 177005, India
- DOI: <https://doi.org/10.1007/s40030-024-00808-2>
Online publication date: 09 May 2024
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Title: **Study on Life Cycle Assessment and Life Cycle Sustainability Assessment of Buildings: A Review**
Authors: **Manali Basu, Nagaraju Kaja & Prashanti Rao**

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Pages: 749–766
Title: **Navigating the Future of Agriculture: A Comprehensive Review of Automatic All-Terrain Vehicles in Precision Farming**
Authors: **Mrutyunjay Padhiary, Raushan Kumar & Laxmi Narayan Sethi**
Department of Agricultural Engineering, Triguna Sen School of Technology, Assam University, Silchar, Assam, 788011, India
- DOI: <https://doi.org/10.1007/s40030-024-00816-2>
Online publication date: 18 June 2024
Pages: 767–782
Title: **An Overview of Key Indicators and Evaluation Tools for Assessing Economic Value of Heritage Towns: A Literature Review**
Authors: **Varsha Vinod, Satyaki Sarkar & Supriyo Roy**
Department of Architecture and Planning, Birla Institute of Technology, Mesra, Jharkhand, India
Department of Management, Birla Institute of Technology, Mesra, Jharkhand, India
DOI: <https://doi.org/10.1007/s40030-024-00807-3>
Online publication date: 10 May 2024
Pages: 783–791
Title: **Digital Twins for Construction Project Management (DT-CPM): Applications and Future Research Directions**
Authors: **Varun Kumar Reja, Megha Sindhu Pradeep & Koshy Varghese**
Building Technology and Construction Management Division, Department of Civil Engineering, Indian Institute of Technology Madras, Sardar Patel Road, Adyar, Chennai, Tamil Nadu, 600036, India
Faculty of Engineering and Information Technology, University of Technology Sydney, 15 Broadway, Ultimo, NSW, 2007, Australia
DOI: <https://doi.org/10.1007/s40030-024-00810-8>
Online publication date: 03 June 2024
Pages: 793–807
Title: **Studies on Alternate Material for Parabolic Roofing Panel**
Authors: **H. Anil, R. Ravindra & S. M. Basutkar**
Department of Civil Engineering, RV College of Engineering, Bengaluru, Karnataka, India
DOI: <https://doi.org/10.1007/s40030-024-00790-9>
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Volume 105, Issue 4, December 2024

Title: **Enhancing Weak Soil Strength in an Eco-friendly and Sustainable Manner: Reusing Waste from Indigenous Bamboo Dwellings in Arunachal Pradesh**

Authors: **Jeelek Rigia & Ajanta Kalita**

Department of Civil Engineering, North Eastern Regional Institute of Science and Technology, Nirjuli, Arunachal Pradesh, 791109, India

DOI: <https://doi.org/10.1007/s40030-024-00825-1>

Online publication date: 18 August 2024

Pages: 819–834

Title: **Bridging the Gap: Assessing Performance and Planned Importance in Watershed Projects Using Participatory Methods**

Authors: **Bhabesh Mahanta, Arup Kumar Sarma & Sashindra Kumar Kakoty**

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Pages: 835–850

Title: **Reliability Analysis of Durability of RC Structural Element Coupled with COMSOL Multiphysics Modelling Under Marine Exposure Condition**

Authors: **Lakkur Gurunarayan Santhosh, S. A. Santhosh Kumar, Lakshmikanth Srinivasamurthy & M. C. Nataraja**

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Pages: 851–863

Title: **Suitability of Satellite Data for Urbanization Study: A Comparative Analysis**

Authors: **Nishant Mehra & Janaki Ballav Swain**

School of Civil Engineering, Lovely Professional University, Punjab, 144001, India

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- Pages: 865–874
Title: **Torsion Analysis of Functionally Graded Iso/Orthotropic Sections Using Differential Quadrature and pb2-Rayleigh Ritz Methods**
Author: **Sundaramoorthy Rajasekaran**
Visiting Professor of Civil Engineering, PSG College of Technology, Coimbatore, Tamilnadu, 641004, India
DOI: <https://doi.org/10.1007/s40030-024-00833-1>
Online publication date: 19 September 2024
Pages: 875–912
Title: **Approximate Solutions for Bending of Beams and Buckling of Columns Made of Functionally Graded Materials**
Authors: **Karim S. Numayr, Madhar A. Haddad & Mosab H. Al-Taani**
Department of Civil Engineering, Isra University, P.O. Box 33, Amman, Jordan
Department of Architectural Engineering, United Arab Emirates University, P.O. Box 15551, Al Ain, UAE
DOI: <https://doi.org/10.1007/s40030-024-00834-0>
Online publication date: 16 August 2024
Pages: 913–937
Title: **Assessment of Noise Pollution Levels in a Fully Residential Academic Institute in India**
Authors: **Sahlathasneem Kallankandy & Surinder Deswal**
Department of Civil Engineering, National Institute of Technology Kurukshetra, Kurukshetra, Haryana, 136119, India
DOI: <https://doi.org/10.1007/s40030-024-00835-z>
Online publication date: 31 August 2024
Pages: 939–953
Title: **Sub-Surface Characterisation and Site-Specific Response Spectra Studies for RRCAT Indore**
Authors: **Nikunj Binnani, R. K. Khare & Govind Parchani**
Department of Civil Engineering & Applied Mechanics, Shri G. S. Institute of Technology & Science, Indore 23, Park Road, Indore, M.P., 452003, India
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DOI: <https://doi.org/10.1007/s40030-024-00836-y>
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Title: **Impact of Urbanization on Runoff and Its Potential Solution Through the Viability Study of RWH Systems for Households**
Authors: **R. S. Mohril, A. D. Vasudeo & A. D. Ghare**
Department of Civil Engineering, VNIT Nagpur, Nagpur, 440010, India
DOI: <https://doi.org/10.1007/s40030-024-00837-x>
Online publication date: 15 September 2024
Pages: 977–985
Title: **An Experimental Study of Manning's Roughness Coefficient with an Acoustic Doppler Current Profiler (ADCP) Method of the River Ganga at Gandhi-Ghat Site, Patna, India**
Authors: **Malti Mardi & Sunil Kumar Murmu**
Department of Civil Engineering, National Institute of Technology, Ashok Rajpath Patna, Bihar, 800005, India
DOI: <https://doi.org/10.1007/s40030-024-00838-w>
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- Pages: 987–1001
Title: **AHP-Based Impact Assessment Methodology for Selecting Land Application Strategies for Biochar Amended Sewage-Based Compost**
Authors: **Vasudevan Mangottiri, Pandiyan Balaganesh, Sanchu Sukumaran, Ariyagoundar Jayaraman, Ramaswamy Geethamani, Mariappan Ranjitham & Narayanan Natarajan**
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Online publication date: 20 September 2024
Pages: 1003–1015
Title: **UV-Based Degradation of Fluoroquinolone Antibiotic in Wastewater: Effects of Process Parameters, Identification of Degradation Products and Evaluation of Residual Toxicity**
Authors: **Bijoli Mondal, Shib Sankar Basak, Arnab Das, Sananda Sarkar & Asok Adak**
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DOI: <https://doi.org/10.1007/s40030-024-00840-2>
Online publication date: 21 September 2024
Pages: 1017–1028
Title: **Optimization Design and Experimental Analysis of Spraying Device for High Ground Clearance Plant Protection Machine**
Authors: **Changkun Zhang, Jinliang Gong & Yanfei Zhang**
School of Agricultural Engineering and Food Science, Shandong University of Technology, Zibo, 255000, China
School of Mechanical Engineering, Shandong University of Technology, Zibo, 255000, China
DOI: <https://doi.org/10.1007/s40030-024-00841-1>
Online publication date: 30 September 2024
Pages: 1029–1039
Title: **Assessment of Heavy Metals in the Sediments of Delhi Stretch of River Yamuna, India: Impact of Wastewater Discharge**
Authors: **Raman Sharma, Priyanka Saxena, Mamta Prakash & S. K. Goyal**
Delhi Zonal Centre, CSIR-National Environmental Engineering Research Institute, A-93-94, Naraina Industrial Area Phase-I, Delhi, 110028, India
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Volume 105, Issue 5, October 2024

- Title:** **3D Human Pose Estimation using Improved Semantic Graph Convolutional based on Fusing Non-local Neural Network and Multi-Head Attention**
- Authors:** **Wentao Gui & Yong Luo**
School of Electrical and Information Engineering, Zhengzhou University, 100 Avenue of Science, Zhengzhou, 450001, People's Republic of China
- DOI:** <https://doi.org/10.1007/s40031-024-01050-x>
- Online publication date:** 13 April 2024
- Pages:** 1109–1119
- Title:** **A Deep Learning-based Object Representation Algorithm for Smart Retail Management**
- Author:** **Bin Liu**
Haojing College of Shaanxi University of Science and Technology, Xi'an, 710000, Shaanxi, China
- DOI:** <https://doi.org/10.1007/s40031-024-01051-w>
- Online publication date:** 06 April 2024
- Page:** 1121–1128
- Title:** **A Novel Assessment of Lung Cancer Classification System using Binary Grasshopper with Artificial Bee Optimisation Algorithm with Double Deep Neural Network Classifier**
- Authors:** **Srinivas Kolli & Balakesava Reddy Parvathala**
Department of Information Technology, Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, Hyderabad, 500090, India
- DOI:** <https://doi.org/10.1007/s40031-024-01027-w>
- Online publication date:** 17 March 2024
- Page:** 1129–1143
- Title:** **A Predictive Model of the Stock Market Using the LSTM Algorithm with a Combination of Exponential Moving Average (EMA) and Relative Strength Index (RSI) Indicators**
- Authors:** **Rahul Maruti Dhokane & Sohiti Agarwal**
Computer Science and Engineering Department, Suresh Gyan Vihar University, Jaipur, Rajasthan, India
- DOI:** <https://doi.org/10.1007/s40031-024-01037-8>
- Online publication date:** 28 March 2024
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- Title:** **An Efficient Rainfall Prediction Using Improved Multilayer Perceptron**
- Authors:** **Ruth Ramya Kalangi, Suman Maloji, Shaik Hasane Ahammad, V. Rajesh, Md. Amzad Hossain & Ahmed Nabih Zaki Rashed**
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- DOI:
Online publication date: 04 April 2024
Pages: 1159–1167
Title: **Analysis of the Performances of Dissimilar PV Array Topologies under Realistic Partial Shading Condition**
Author: **Vandana Jha**
Department of Electrical and Electronics Engineering, RV College of Engineering, Bangalore, India
<https://doi.org/10.1007/s40031-024-01045-8>
- DOI:
Online publication date: 14 April 2024
Pages: 1169–1181
Title: **Arrhythmia Identification and Classification using Runge Kutta Optimizer-Based Hyperparameter Optimization for Long Short Term Memory**
Authors: **Mala Sinnor & Shanthi Kaliyil Janardhan**
Department of Electronics and Communication, Dr. Ambedkar Institute of Technology, Bengaluru, India
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<https://doi.org/10.1007/s40031-024-01038-7>
- DOI:
Online publication date: 10 April 2024
Pages: 1183–1195
Title: **Design Analysis of Stroke Risk Prediction Model Employing the Hybrid Structure Implementation of Deep Transfer Learning System**
Authors: **Shaik Hasane Ahammad, Sandeep Dwarkanath Pande, V. Rajesh, Syed Inthiyaz, P. Poorna Priya, M. Rama Krishna, Md. Amzad Hossain & Ahmed Nabih Zaki Rashed**
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- DOI:
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- Title: **Design and Analysis of Multicore Fiber with High Bend Tolerance and Uniform Effective Area**
Authors: **R. Mercy Kingsta, R. Shantha Selvakumari & R. R. Sorna Kumar**
Department of Electronics and Communication Engineering, Mepco Schlenk Engineering College, Sivakasi, Tamil Nadu, India
DOI: <https://doi.org/10.1007/s40031-024-01033-y>
Online publication date: 16 March 2024
Pages: 1207–1212
- Title: **Design of Low Power and Robust Asynchronous SRAM Generated using AMC Involving SAHB Circuit with QDI Logic**
Authors: **B. K. Vinay, S. Pushpa Mala & S. V. Panchami**
Department of Electronics and Communication, Vidyavardhaka College of Engineering, Mysuru, India
Department of Electronics and Communication, Dayananda Sagar University, Bengaluru, India
DOI: <https://doi.org/10.1007/s40031-024-01010-5>
Online publication date: 26 March 2024
Pages: 1213–1221
- Title: **Domain Adaptation in Reinforcement Learning: Approaches, Limitations, and Future Directions**
Author: **Bin Wang**
School Enterprise Cooperation and Employment Guidance Center, Zibo Vocational Institute, Zibo, 255000, Shandong, China
DOI: <https://doi.org/10.1007/s40031-024-01049-4>
Online publication date: 06 April 2024
Pages: 1223–1240
- Title: **DSVPWM-Based SSO-PIDR Control Scheme for Indirect Matrix Converter with Unity Power Factor under Unbalanced Grid Voltage Condition**
Authors: **Sarat Kumar Das, Jayakrushna Moharana & Prasad Syam**
Department of Electrical Engineering, Indian Institute of Engineering Science and Technology, Shibpur, 711103, India
Department of Electrical Engineering, Hi-Tech Institute of Technology, Odisha, 752057, India
DOI: <https://doi.org/10.1007/s40031-024-01047-6>
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- Title: **Effects of Partial Shading using Second-Order Lever Single Axis Solar Tracking System**
Authors: **Krishna Kumba, Sishaj P. Simon, K. Sundareswaran & P. Srinivasa Rao Nayak**
School of Electrical Engineering, Vellore Institute of Technology, Chennai, Vandalur, Chennai, Tamil Nadu, India
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DOI: <https://doi.org/10.1007/s40031-024-01054-7>
Online publication date: 16 April 2024
Pages: 1259–1274
- Title: **Insight into the Investigation of Thermo-Electrical Performance of Hybrid Photovoltaic-Thermal Air-Collector**
Authors: **Sourav Diwania, Maneesh Kumar, Varun Gupta, Sanjay Agrawal, Pavan Khetrpal &**

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Pages: 1275–1283

Title: **Novel Optimizer MAdam for Efficient Fruit Grading and Quality Assessment Using CNN-LSTM**

Authors: **Rupali Santosh Kale & Sanjay Shitole**

Department of Computer Science and Technology, UMIT, SNDT Women's University, Mumbai, Maharashtra, 400049, India

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DOI: <https://doi.org/10.1007/s40031-024-01048-5>

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Pages: 1285–1298

Title: **Parameter Determination of a Multi-layered Induction Heating Coil: Analytical, Simulation and Experimental Studies**

Authors: **Bhaskaran Barman & Mainak Sengupta**

Department of Electrical Engineering, Indian Institute of Engineering Science and Technology, Shibpur, Botanic Garden, Howrah, West Bengal, 711103, India

<https://doi.org/10.1007/s40031-024-01000-7>

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Pages: 1299–1317

Title: **Performance Signature and Analysis of Patterned Surfaces Trapezoidal Patch Antenna Array with Defected Ground Structure**

Authors: **Suganthi Santhanam, Manjunathan Alagarsamy, Palavesam Thiruvalar Selvan, Ahmed Nabih Zaki Rashed, Shaik Hasane Ahammad & Md. Amzad Hossain**

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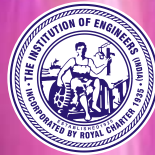
- Title:** **Power Efficiency Improvement in Elastic Optical Networks Using Ring Structure with Optimized Power Routing**
- Authors:** **Deo Chandra Jaiswal, S. K. Sriwas & Rachna Asthana**
Department of Electronics Engineering HBTU, Kanpur, Uttar Pradesh, India
Department of Electronics & Communication Engineering, BIET, Jhansi, Uttar Pradesh, India
- DOI:** <https://doi.org/10.1007/s40031-024-01057-4>
- Online publication date:** 16 April 2024
- Pages:** 1331–1337
- Title:** **Riesz Fractional Derivative-based Approach for Texture Enhancement**
- Authors:** **Kanwarpreet Kaur, Meet Kumari & Shikha Tuteja**
ECED, Chandigarh University, Gharuan, India
CSE AI, Chitkara University, Rajpura, India
- DOI:** <https://doi.org/10.1007/s40031-024-01042-x>
- Online publication date:** 03 April 2024
- Pages:** 1339–1345
- Title:** **Sign Language Classification using Deep Learning Convolution Neural Networks Algorithm**
- Authors:** **V. Rama Lahari, B. Anusha, Shaik Hasane Ahammad, A. Immanuvel, S. Kumarganesh, B. Thiyaneswaran, R. Thandaiah Prabu, Md. Amzad Hossain & Ahmed Nabih Zaki Rashed**
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- DOI:** <https://doi.org/10.1007/s40031-024-01035-w>
- Online publication date:** 28 March 2024
- Pages:** 1347–1355
- Title:** **Wavelet Analysis and Machine Learning Approach for Improved Protection of PV-Wind-SVC Integrated Smart Power System**
- Authors:** **Gantaiah Swamy Garika & Padma Kottala**
Department of Electrical and Electronics Engineering, Andhra Loyola Institute of Engineering and Technology, Vijayawada, 520013, India
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- DOI:** <https://doi.org/10.1007/s40031-024-01056-5>
- Online publication date:** 22 April 2024
- Pages:** 1357–1372
- Title:** **A Critical Review of Distributed Generations Planning in Distribution Networks for Improved System Performances**
- Authors:** **Ravindra Kumar, B. K. Singh & Bindeshwar Singh**
Veer Madhon Singh Bhandari UTU, Dehradun, India

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KNIT, Sultanpur, India
DOI: <https://doi.org/10.1007/s40031-024-01097-w>
Online publication date: 14 July 2024
Pages: 1373–1427
Title: **A Manifesto for Healthcare based Blockchain: Research Directions for the Future Generation**
Authors: **Deepa Kumari, Swati Sharma, Manan Chawla & Subhrakanta Panda**
CSIS, BITS-Pilani, Hyderabad Campus, Shameerpet, Hyderabad, 500072, Telangana, India
DOI: <https://doi.org/10.1007/s40031-024-01074-3>
Online publication date: 24 May 2024
Pages: 1429–1450
Title: **Enhancing Fingerprint Authentication: A Systematic Review of Liveness Detection Methods against Presentation Attacks**
Authors: **Divine Senanu Ametefe, Suzi Seroja Sarnin, Darmawaty Mohd Ali, Wan Norsyafizan W. Muhamad, George Dzorgbenya Ametefe, Dah John & Abdulmalik Adozuka Aliu**
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Authors: **Seema Kumari & Rekha Yadav**

Department of ECE, DCRUST, Murthal, India

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Pages: 1469–1496

ANNOUNCEMENT



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Volume 105, Issue 4, August 2024

Special Issue on Wind Tunnel Techniques from Hypersonic to Hypersonic Flows

Issue Editors: N Sitaram, G M Carlomagno

Title: **Investigation of the Aerodynamic Characteristics of a 10° Cone in a T-128 Transonic Wind Tunnel**

Authors: **S. A. Glazkov, A. R. Gorbushin & A. V. Semenov**
Central Aerohydrodynamic Institute, Zhukovsky, 140180, Moscow region, Russia
Moscow Institute of Physics and Technology, Dolgoprudny, 141700, Moscow Region, Russia

DOI: <https://doi.org/10.1007/s40032-021-00749-w>

Online publication date: 14 September 2021

Pages: 803–811

Title: **Measurement of Turbulent Characteristics at Low Reynolds Number and Comparison with CFD for Eppler 387**

Authors: **Ashish Kumar Gupta, D. Ravi, Parag Deshpande, P. A. Aswatha Narayana & G. Ramesh**
Department of Aerospace Engineering, Jain University - International Institute for Aerospace Engineering & Management (IIAEM), Bangalore, India
CSIR-National Aerospace Laboratories, Bangalore, India
IIAEM, Bangalore, India
Gopalan College of Engineering, Bangalore, India

DOI: <https://doi.org/10.1007/s40032-021-00698-4>

Online publication date: 26 April 2021

Page: 813–823

Title: **High-temperature Calibration Facility for Calibrating Multihole Pressure Probes**

Authors: **N. Sitaram, R. Sreekanth, Manoj K. Kalwan & C. Gajanan Tatpatti**
Department of Mechanical Engineering, Indian Institute of Technology Madras, Chennai, 600 036, India

Department of Mechanical Engineering, Vignan Institute of Technology and Science, Bhuvanagiri, 508284, Telangana, India

Chiripal Industries Ltd., Ahmedabad, 382405, India

Department of Mechanical Engineering, R. V. College of Engineering, Bengaluru, 560059, India

DOI: <https://doi.org/10.1007/s40032-021-00699-3>

Online publication date: 30 May 2021

Page: 825–837

Title: **Numerical Modelling of Wind Tunnel Internal Flow for CFD Assisted Design**

Authors: **Shubham Kesharwani, Chetan S. Mistry, Subhransu Roy, Arnab Roy & Kalyan P. Sinhamahapatra**

Published Articles in IET Journals

Volume 9 | Issue 10 | October 2024

- Department of Mechanical Engineering, Indian Institute of Technology, Kharagpur, India
Department of Aerospace Engineering, Indian Institute of Technology, Kharagpur, India
DOI: <https://doi.org/10.1007/s40032-021-00794-5>
Online publication date: 12 January 2022
Pages: 839–859
Title: **Innovative Approach for Design and Development of Annular Sector Cascade Tunnel using Numerical Analysis**
Authors: **Hardikkumar Bhavsar & Chetan S. Mistry**
Department of Aerospace Engineering, Indian Institute of Technology, Kharagpur, India
DOI: <https://doi.org/10.1007/s40032-021-00770-z>
Online publication date: 11 October 2021
Pages: 861–876
Title: **Investigation of Water Rivulets Formation on the Pressure Side of a Linear Compressor Cascade Under Wet Compression**
Authors: **Deepak Narayanan, S. Anand & S. Anish**
Turbomachinery Laboratory, Department of Mechanical Engineering, National Institute of Technology Karnataka, Mangalore, 575025, India
DOI: <https://doi.org/10.1007/s40032-022-00832-w>
Online publication date: 04 May 2022
Pages: 877–890
Title: **Characterization of Leading-edge Laminar Separation Bubble for various Angles of Incidence and Reynolds Numbers**
Authors: **Tuhin Bandopadhyay & Chetan S. Mistry**
Department of Aerospace Engineering, Indian Institute of Technology, Kharagpur, 721302, India
DOI: <https://doi.org/10.1007/s40032-022-00831-x>
Online publication date: 29 April 2022
Pages: 891–910
Title: **Numerical Simulation of Shock Wave Turbulent Boundary Layer Interaction over Flat Plate at Mach 6**
Author: **R. C. Mehta**
Department of Aeronautical Engineering, Noorul Islam Centre for Higher Education
Kumaracoil, Kumaracoil, 629180, India
DOI: <https://doi.org/10.1007/s40032-021-00732-5>
Online publication date: 29 June 2021
Pages: 911–920
Title: **Utilization of Wind Tunnels for Subsonic and Transonic Flow for Aeronautical and Non-aeronautical Applications: A Review**
Authors: **Yarlagadda Sai Sravan, Siddharth Sriram Sikha, Gaurav Kumar Pandey, Pedi Reddi Varshith & Edison Gundabattini**
School of Mechanical Engineering, Vellore Institute of Technology, Vellore, 632014, India
Department of Thermal and Energy Engineering, School of Mechanical Engineering, Vellore Institute of Technology, Vellore, 632014, India
DOI: <https://doi.org/10.1007/s40032-021-00758-9>
Online publication date: 22 September 2021
Pages: 921–931

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(xi) Book Chapter Number	
(xii) Publisher Details	
(xiii) ISBN	
(xiv) Date of Publication (Date-Month-Year)	
(xv) Co-authors (if any)	
(xvi) About the book (100-150 words)	
(xvii) Supporting Documents (complimentary copies for IEI Headquarters)/links [which are clearly indicative of the incumbent's achievement(s)]	

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Sl. No.	Name of the Course	Scheduled Dates
1.	Enhancing structural durability with advanced waterproofing solutions	04 - 08 Nov 24
2.	Geometric dimensioning and tolerancing	04 - 06 Nov 24
3.	Stochastic Optimization Techniques for Real-World Engineering Problems	04 - 06 Nov 24
4.	MS SQL Server 2019 Database Administration	04 - 07 Nov 24
5.	Mobile Application Development using REACT NATIVE	04 - 08 Nov 24
6.	Design and Optimization of IoT-Based Smart Irrigation System	04 - 08 Nov 24
7.	Hands-on training on GIS Applications- Arc GIS	05 - 07 Nov 24
8.	Hydro Turbines, Governing & its Protection Systems	05 - 08 Nov 24
9.	Comprehensive Course for Workmen's Inspectors, Pit-Safety Committee Members & Electrical Supervisors	06 - 08 Nov 24
10.	Process Excellence & People Excellence	06 - 07 Nov 24
11.	Energy Conservation/Energy Saving in Process Industries & Manufacturing Units	11 - 14 Nov 24
12.	Challenges & Opportunities in EVs, Charging Stations and Grid Infrastructure - Latest EV Govt. Policies	12 - 15 Nov 24
13.	Sustainability Auditing of Urban Lakes Restoration and Management Practices	13 - 15 Nov 24
14.	Introduction to Radar & EW Systems	13 - 15 Nov 24
15.	Hands-on training in ANSYS for simulating Structural, fluid, and FSI problems	18 - 21 Nov 24
16.	SAP S4 HANA Administration	18 - 21 Nov 24
17.	Cyber Security Policies & Crisis Management Plan	18 - 22 Nov 24
18.	Instrumentation and Seismic Analysis of Gravity Dams with Software Applications	18 - 20 Nov 24
19.	Rejuvenation of Water bodies and Rainwater harvesting	19 - 22 Nov 24
20.	Mindful Living, Productive Working: A Training Program for Stress Management and Work-Life Integration	19 - 21 Nov 24
21.	Stress Management and Work-Life Integration for Engineers and Scientists	19 - 22 Nov 24
22.	Transmission Line Construction (Survey, Design of lines and construction practices)	19 - 22 Nov 24
23.	Conservation of Depleting Mineral Resources	20 - 22 Nov 24
24.	Good Manufacture Practices (GMP)	20 - 22 Nov 24
25.	Exploring AVEVA E3D Design: Revolutionizing Engineering and Design	25 - 29 Nov 24
26.	Modernization of Irrigation Systems Using Latest Technologies	25 - 29 Nov 24
27.	Effective Business Communication (Mastering the Art of Clear and Impactful Messaging)	26 - 28 Nov 24
28.	CERC Regulations Including Tariff Regulations	26 - 29 Nov 24
29.	Recycle and Reuse Options of Waste Water	27 - 29 Nov 24