

Dear Readers,

We are pleased to share with you an edition covering varied topics. This edition has been guest-edited by Prof. Romanbabu Oinam Meetei.

Prof. Romanbabu Oinam Meetei is an Assistant Professor at the civil and environmental engineering department, Indian Institute of Technology (IIT) Guwahati. He is an active researcher in the area of seismic rehabilitation and retrofitting. Romanbabu Oinam has significant contribution in developing the resilient civil infrastructure of this nation. As part of his research, he developed low-cost, high efficient energy dissipation devices applicable to both concrete and steel structures. He is well-known in both academia and industry.

We hope you enjoy reading these papers, and we look forward to your valuable feedback on this edition.

Best Regards,
The Production Editor
Indian Concrete Journal

Dear Readers,



This edition of the Indian Concrete Journal features five insightful articles covering a range of topics, including lightweight concrete utilizing recycled fine aggregates, ductility in columns, the strengthening of concrete under elevated temperatures, the application of multi-walled carbon nanotubes (MWCNT) in concrete, and the development of design philosophy for glass fiber reinforced polymer (GFRP) as a replacement for steel reinforcement.

The first article by Kumar, S. and co-authors ^[1] explores the use of recycled fine aggregates (RFA) from construction and demolition (C&D) waste as an alternative to natural sand in producing lightweight cellular concrete (RLWCC). The authors investigate the effects of different foam and water dosages on the properties of RLWCC, finding that both significantly influence flowability, density, and strength characteristics.

The second article by Chowdhury, J. N. and co-authors ^[2] focuses on under-reinforced column sections, examining failure modes through a parametric study with varying reinforcement percentages and concrete grades. The findings indicate that failure modes in highly under-reinforced, balanced, and over-reinforced columns are not significantly different.

The third article by Swati and Verma, V. K. ^[3] employs non-linear finite element analysis on concrete specimens subjected to elevated temperatures using ANSYS 2022 software. The study shows that the model effectively predicts the compressive strength of concrete at various elevated temperatures.

The fourth article by Jejurkar, C. L. and co-authors ^[4] investigates the incorporation of multi-walled carbon nanotubes (MWCNT) into concrete. The authors find that adding small amounts of MWCNT enhances compressive, split tensile, and flexural strength while improving durability, as evidenced by reduced water absorption and sorptivity.

The final article by Darji, S. and Panchal, D. R. ^[5] evaluates GFRP rebars as a replacement for steel reinforcement in concrete beams. Sixteen beams are tested, revealing that over-reinforced GFRP beams achieve better strength and serviceability compared to under-reinforced and balanced designs.

We hope this edition provides a comprehensive overview of these innovative approaches to concrete technology.

With Best Regards,
Prof. Romanbabu Oinam

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