

PREFACE TO THE EDITION

It is a pleasure to present this issue of the **International Journal of Arts Science Research Studies (IJASHRS)**, which brings together a diverse collection of scholarly contributions exploring contemporary questions across the arts, sciences, culture, heritage, environment, and society. Reflecting the interdisciplinary spirit of the journal, the articles in this issue demonstrate how knowledge develops not only within individual disciplines but also through meaningful connections between different fields of inquiry.

The issue opens with an important examination of microplastic pollution in Indian coastal ecosystems, addressing its sources, distribution, ecological consequences, and wider human and socioeconomic implications. Drawing upon research published between 2015 and 2025, the study highlights the complex relationship between land-based plastic mismanagement, riverine inputs, fishing activity, atmospheric deposition, and the health of marine ecosystems. Its discussion of biodiversity, fisheries, food security, and integrated coastal management underscores the need for sustained scientific investigation and effective environmental policy.

The issue then turns from the marine environment to the frontiers of modern physics and astronomy through a study of gravitational wave detection and Indian contributions to the LIGO-India initiative. The article traces India's engagement with gravitational-wave science through theoretical research, data analysis, instrumentation, engineering, and international scientific collaboration. By examining LIGO-India not merely as an infrastructure project but also as an opportunity for strengthening astrophysics, scientific education, and technological capabilities, the study highlights India's growing role in the global scientific enterprise.

The relationship between creative participation and human wellbeing is explored in the article on participatory arts and wellbeing. Rather than treating the positive claims surrounding the arts uncritically, the study carefully distinguishes between receptive and participatory engagement and evaluates the available observational and experimental evidence. Its consideration of psychological, social, behavioural, and physiological mechanisms, together with questions of social prescribing, equity, dosage, and the intrinsic value of the arts, offers a balanced perspective on a field of increasing importance to public policy and social wellbeing.

The intersection of science, technology, and cultural heritage is further explored through analytical science in art conservation. The article examines a range of non-invasive imaging and analytical techniques used to investigate paintings, including reflectance imaging spectroscopy, infrared reflectography, optical coherence tomography, X-radiography, scanning macro X-ray fluorescence, and X-ray powder diffraction tomography. Beyond describing technological capabilities, the study raises significant questions about interpretation, attribution, conservation ethics, and the limits of scientific evidence. It emphasizes that analytical technologies can strengthen material understanding without entirely replacing the interpretive dimensions of art scholarship and connoisseurship.

The final contribution examines oral history, memory, and the archive in postcolonial societies, bringing questions of testimony, collective memory, archival power, and community knowledge to the forefront. The article traces the transformation of oral history from a means of recovering undocumented testimony into a sophisticated field concerned with the construction and interpretation of memory. Its discussion of postcolonial and Partition histories, community archives, interview ethics, and the challenges posed by digital infrastructures highlights the importance of understanding not only what archives preserve, but also what they leave unheard or unseen.

Taken together, the contributions in this issue demonstrate the breadth of inquiry represented by IJASHRS. From the health of India's coastal ecosystems and the detection of gravitational waves to the therapeutic possibilities of artistic participation, the scientific examination of cultural objects, and the preservation of marginalized memories, these studies engage with questions that extend beyond conventional disciplinary boundaries. A common thread running through them is the pursuit of evidence-based understanding while remaining attentive to interpretation, ethics, context, and human consequences.

This issue therefore reflects the journal's commitment to encouraging dialogue between arts, sciences, humanities, and related fields of research. We hope that these contributions will stimulate further scholarly discussion, inspire interdisciplinary research, and encourage readers to consider how different forms of knowledge can complement one another in addressing the complex challenges of the contemporary world.

We extend our sincere appreciation to the authors, reviewers, editorial team, and all those who have contributed to bringing this issue of the *International Journal of Arts Science Research Studies* to publication. We trust that readers will find in these pages valuable perspectives and opportunities for further inquiry.

Rahul Thampi R
Chief editor

CONTENTS

SL. NO	TITLE	AUTHOR	PAGE NO
1	Microplastics in Indian Coastal Ecosystems: Sources, Distribution, and Ecological Impact	Kesavan K	1-7
2	Gravitational Wave Detection: Indian Contributions and the LIGO-India Initiative	Anu priya K M	8-14
3	Participatory Arts and Wellbeing: Evidence, Mechanisms and Limits	Nivya Manoj	15-19
4	Imaging the Painted Surface: Analytical Science in Art Conservation	Shripathi Kalluraya	20-25
5	Oral History, Memory and the Archive in Postcolonial Societies	V. Basil Hans	26-31