PREFACE TO THE EDITION

The forthcoming issue of the **International Journal of Pure Science Research Studies (IJPSRS)** presents a rich and intellectually rigorous collection of articles that span fundamental scientific inquiry across environmental science, physics, mathematics, and cryptography. The contributions in this volume reflect the journal's commitment to advancing theoretical depth, quantitative precision, and experimental insight in the pure sciences.

Environmental and Earth system sciences feature prominently in this issue. The analysis of ocean deoxygenation synthesizes current understanding of anthropogenic impacts on marine oxygen cycles, highlighting the expansion of hypoxic zones and the urgent need for integrated climate and nutrient management strategies. Complementing this, the comprehensive study of carbon cycle dynamics provides a quantitative assessment of global carbon fluxes, sink efficiencies, and feedback mechanisms, offering critical insights into climate stabilization pathways under ongoing anthropogenic perturbations.

In the realm of physics and cosmology, this issue explores both the quantum and cosmic frontiers. A theoretical investigation into quantum Higgs echoes in superconductors proposes a novel mechanism for quantum memory storage, advancing the application of collective quantum modes in emerging technologies. At cosmological scales, the examination of gravitational lensing presents compelling experimental evidence for dark matter, reinforcing its foundational role in contemporary astrophysics through observational and theoretical synthesis.

Mathematical and computational rigor is further demonstrated in the convergence analysis of the Newton-Raphson method for nonlinear integral equations, extending classical finite-dimensional theory into Banach spaces and establishing robust analytical error bounds. Meanwhile, the algebraic study of elliptic curve cryptography deepens understanding of the discrete logarithm problem, reaffirming the mathematical foundations that secure modern communication systems.

Collectively, the articles in this issue exemplify the breadth and depth of pure science research from subatomic phenomena to cosmic structures, from abstract mathematical theory to environmental system dynamics. The editorial board expresses sincere appreciation to the authors and reviewers whose scholarship and dedication have shaped this volume. We trust that this issue will contribute meaningfully to ongoing scientific discourse and inspire further exploration across the foundational sciences.

Dr. Sandhya E
Chief Editor

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