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# Preface

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We are pleased to present the second volume of Communications & Networks Connect, a multidisciplinary journal dedicated to advancing research in communication and networking technologies across the electromagnetic spectrum. This volume aligns with the journal's mission to provide a platform for innovative research focusing on the challenges posed by heterogeneous networks, energy efficiency, and robust security measures.

The research articles featured in this volume underscore the importance of connecting theoretical advancements with practical applications, with a particular emphasis on secure architectures and AI-driven optimization strategies. The four articles included in this volume highlight the diversity and depth of research within the field:

- **Dynamic Information Security through Adaptive Architecture:** In this study, Rachel John Robinson examines the digital transformation within the manufacturing sector, evaluating the effectiveness of Zero-Trust Architecture (ZTA). The findings highlight ZTA's potential to mitigate cybersecurity risks, including phishing and financial threats, establishing it as a robust solution for safeguarding sensitive industrial data.
- **Secure and Robust Underwater Optical Wireless Communication:** Kalyani Pawar and colleagues present a comprehensive framework for secure communication in underwater environments. By integrating RSA encryption with Forward Error Correction (FEC) codes and advanced modulation formats, their research demonstrates a significant enhancement in stability and data security under challenging underwater conditions.
- **Optimizing Cluster Head Selection and Routing in 5G Wireless Sensor Networks:** Authors Vijayakumar Kadumbadi et al. propose a hybrid framework that employs Reinforcement Learning (RL), Deep Belief Networks (DBN), and Manta Ray Foraging Optimization (MRFO). This approach addresses critical trade-offs concerning energy consumption, latency, and reliability in 5G-enabled Internet-of-Things (IoT) applications.
- **Unified Hybrid Intrusion Detection for Cloud Security:** In their study, Idris Olanrewaju Ibraheem and Abdulrauf Uthman Tosho propose a framework that integrates Snort and OSSEC to enable cross-layer alert correlation. Their hybrid intrusion detection system (IDS) achieves high accuracy and maintains a low false-alarm rate, providing an effective, open-source solution suitable for modern cloud infrastructures.

The continued success of Communications & Networks Connect is made possible by the dedication of our editorial board, the expert contributions of our reviewers, and the diligent efforts of the staff at Scifiniti. We invite researchers worldwide to work with us as we continue driving innovation and defining the technologies that will connect the future.