

Contents

International Journal of Applied Science and Engineering

Vol. 13, No. 02, December 2025

RESEARCH PAPERS

Development and Performance Evaluation of Bamboo Reinforced Geopolymer Concrete 165
Komarina Dileep Chowdary

Molecular Interactions in Tetrachloroethylene-Cyclohexanone Binary Mixtures: Acoustical and FTIR Investigations at Different Temperatures 181
Musiri Bonjubabu, Kota Ravi, P.V.S. Lakshmi Aparna, Jaya Rangarao Prathipati and Yaddanapudi Venkata Bhaskara Lakshmi

Social-Emotional Learning (SEL) for Academically Backward and SEN Students: A Practical Model for Inclusive Schools - Enhancing Socio-Emotional Wellbeing 197
Vandana Sawant

System-Level Energy Distribution Study of a Renewable Agricultural Microclimate System 219
Srinivasa Rao, S., Siva Ram Prasad, V., Bhasakara Babu, S., Venkata Rao Ch and Tatayya, B.

Analysis of Ring-LWE and LWR Cryptographic Schemes: Foundations, Implementation, and Performance 233
Sandip Kanoo and Prodipto Das

REVIEW PAPERS

A Systematic Review of Ensemble Approaches for Diverse Kidney-Related Diseases 245
Angom Linthoingmabi and Rakesh Kumar

Behavioral Economics and Artificial Intelligence with Sustainable Development with Perspective of Agentic AI for Banking in Ethical Practices 261
P.K. Paul, Ananta Kumar Gupta, Tatayya Bommali, Rohit Kumar Pal, Gangotri Ganguly, Sanjukta Chakraborty, Biswajit Satpathy and S.K. Sharma

Applications of Artificial Intelligence in Bioprocess Optimization: A Comprehensive Review 281
Subhasish Dey and Rahul Kumar Chawda

Agentic AI and the Future of Cloud Computing Architecture 297
Sumitra Das and Rahul Kumar Chawda

CASE STUDY

Explainable Generative AI: Concepts, Challenges and Future Directions 309
Saurav Paul and Saptarshi Paul

Climate Change and National Security: Geopolitical Implications of Environmental Degradation on Bangladesh 321
Anima Barma, Mousumi Khandoker, Prosannajid Sarkar and Md Mohidul Islam

Digital Education Initiatives on Higher Education Systems in India: With a Case Study on SWAYAM 337
Ritam Chatterjee, Gangotri Ganguly, Abhijit Bandyopadhyay, Mahabubul Hoque and Sarmistha Chowdhury