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Special Issue Reprint

Engineering Applications of Hybrid Artificial Intelligence Tools

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This Reprint presents recent advances in hybrid artificial intelligence and their applications to complex engineering and decision-support problems. The collected contributions illustrate how contemporary AI increasingly moves beyond isolated models toward integrated approaches combining machine learning, deep learning, optimization, explainability, domain knowledge, and data-driven modelling. The presented studies address a broad range of applications, including industrial process monitoring, predictive modelling, computer vision, medical and biomedical analysis, behavioral modelling, and intelligent decision support. Together, they demonstrate the growing role of hybrid and complementary AI methodologies in developing accurate, interpretable, and practically applicable solutions for real-world engineering systems. The Reprint provides researchers and practitioners with a cross-disciplinary perspective on emerging AI approaches and their transition from individual computational models toward more integrated forms of hybrid intelligence.

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