Special Issue Reprint

Process Systems Engineering-Incubating Sustainability for Industrial Revolution 4.0

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This reprint is about the latest research on Process Systems Engineering (PSE) at the 2024 PSE Asia International Symposium held in Penang, Malaysia, on 5–8 August 2024. The PSE Asia series is a biennial international symposium in Asia, bringing together researchers and practitioners to discuss recent developments in Process Systems Engineering. Process Systems Engineering (PSE) plays a crucial role in enhancing the efficiency and sustainability of industrial systems by employing advanced methodologies to optimize processes. PSE allows for the meticulous design, modelling, and control of complex industrial systems, ensuring that every component operates at peak efficiency. With the advent of artificial intelligence (AI), these capabilities have been significantly augmented. AI-driven modelling and analysis tools enable more accurate predictions, better decision-making, and seamless integration of various subsystems, leading to improved overall performance. By leveraging AI, PSE can now tackle increasingly complex challenges, making it possible to manage and optimize large-scale industrial operations with unprecedented precision and efficiency.