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Information Processing and Optimization in Control Solutions

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This monograph presents significant scientific advances across intelligent control, information processing, optimization, optimal set partitioning, and modern numerical methods. It explores both classical and emerging techniques, with emphasis on neural networks, machine learning, contextual data analysis, large-scale data processing, cloud computing, and computational methods.

The theoretical developments are complemented by a wide range of practical applications. These include modeling the dynamics of financial markets, solving complex logistics tasks, and addressing technical challenges in 3D printing. The work also highlights solutions of direct practical relevance, such as information system design for cybersecurity, digital platforms for optimizing military personnel training, and data-driven diagnostic methods for assessing the human body under high physical stress. Additionally, the monograph examines optimal scheduling techniques and software development for analyzing unstructured time series.

The content is organized into three integrated parts: Artificial Intelligence and Control Solutions, Advances in Optimization Theory, and Information Processing Techniques and Their Applications. Together, these sections offer a comprehensive perspective for researchers and professionals working with intelligent systems, computational technologies, and applied problem solving.

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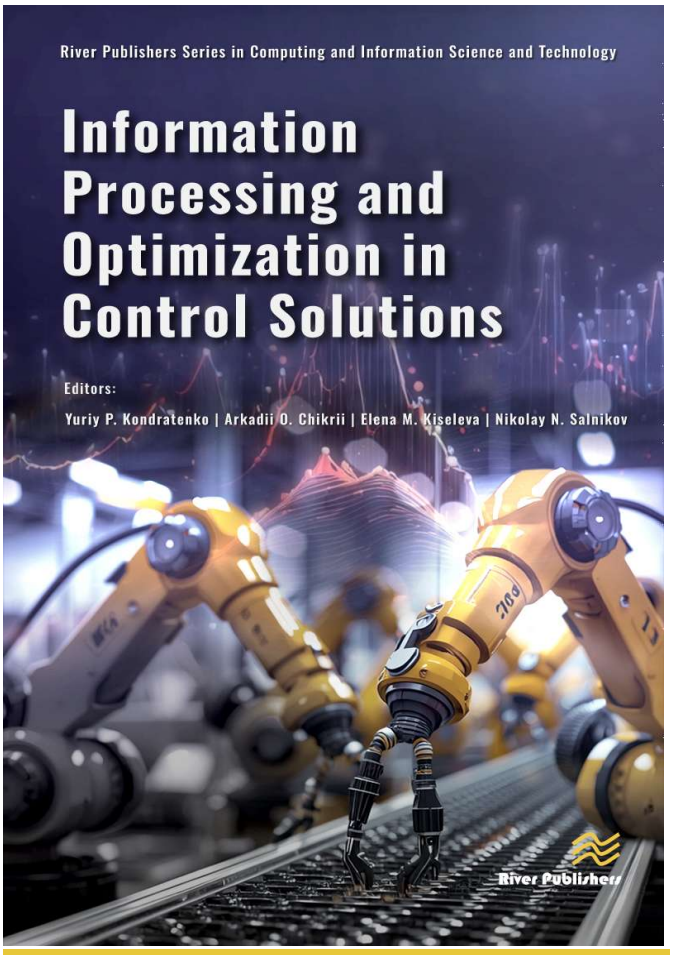

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