

# APLICAREA INTELIGENȚEI ARTIFICIALE ÎN PROGRAMAREA SISTEMELOR FLEXIBILE DE FABRICAȚIE

## APPLICATIONS OF THE ARTIFICIAL INTELLIGENCE ON SCHEDULING THE FLEXIBLE MANUFACTURING SYSTEMS

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**Abstract:** The flexible manufacturing systems are modern production entities which offer producers the ability to adapt to market demand, in the shortest time. The costs of implementing such a system is very high and therefore the function of the system must be optimal. In the purchase of a flexible manufacturing system, 60% of investment is directed to the hardware of the system, while 40% is allocated to the software part. The second percentage proves that the software part of a flexible manufacturing system gives coherence and its optimization can determine the manufacturer's competitive advantage. Artificial neural networks have a strong predictive character, and will be used as a method of forecasting the transition costs in the scheduling of the flexible manufacturing system.

**Keywords:** scheduling flexible manufacturing systems, game theory, neural network