

Adaptive Predictive Control Based on Neural Networks

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Abstract: Predictive techniques based on neural networks are investigated in an adaptive structure for on-line control of a process exhibiting nonlinearities and typical disturbances. The method proposal consists of a novel identification technique based on extended memory adaptation (EMA) and an efficient implementation of the predictive control based on a nonlinear programming method. A forced circulation evaporator was chosen as realistic nonlinear case study for the techniques discussed in the paper.

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