# PART III. MACHINES AND AUTOMATION

## THE ROBUST SERVO OF THE ELECTRIC INDUSTRIAL ROBOT I.

**Milan Balara, Alexander Balara**
*Department of Mathematics, Informatics and Cybernetics, University of Technology in Košice, Faculty of Manufacturing Technologies with seat in Prešov, Slovak Republic http://www.tuke.sk*

**This paper deals with the problems of acceleration loop speed servos with a subordinate acceleration controller. The acceleration signal is generated by the analog speed sensor (using the averager and differentiator). By using an acceleration loop in speed control circuit we are able to achieve better qualities of such circuit. This solution has properties of a robust system. The solution is suitable to meet the requirements of a wide range of rpm regulation, run uniformity as well as the devices featuring either non-stationary or extremely high load of inertia moment. This paper also deals with the results of application of acceleration loop in the speed servosystem of electrical servomotor HSM 60. Experimental results correspond to previous theoretical assumptions.**

**Key words:** speed servo, robust servo, parametric invariant system, speed control, industrial robot

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