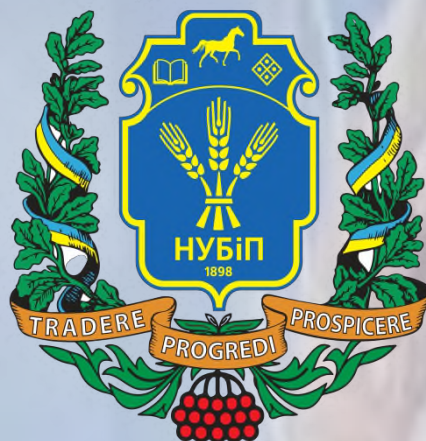


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**DEVELOPMENT OF RECOMMENDATIONS FOR IMPLEMENTATION
OF EFFECTIVE CONTROLLERS FOR DIFFERENT TECHNOLOGICAL
PROCESSES**

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In many areas of production automatic controllers are used. They form a basis for increasing the efficiency of technological processes. That is why they should be properly tuned. The mentioned goal must be solved by engineers for a specific automated process. It must be noted that for a wide range of controllers'

tuning problems there is a lack of proper experience of engineers. It causes a bad quality of tuning and, in turn, production losses grow.

A reasonable approach to overcoming such drawbacks is an exploitation of applications for PC. However, engineers should be familiarized with the theoretical basis of automated controllers as well as the practical implementation of tuned controllers. Here we must present a list of recommendations for the effective implementation of controllers for different technological processes:

- 1) sensors should be properly selected for feeding a controller with specific parameters with previously set accuracy;
- 2) in order to avoid noise, different digital filters should be applied;
- 3) it is desirable to use well-known tuning techniques for controllers for low-order plants;
- 4) for high-order and/or nonlinear plants, as well as plants with quite big lags, optimization approaches it is desirable to exploit;
- 5) the meeting of constraints of plant phase coordinates as well as constraints of controller, drives, and other elements of the system is mandatory.

Following all of these recommendations may help engineers to solve difficult problems of controllers' tuning, synthesis of control systems for nonlinear plants, etc.