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## **OPTIMAL CONTROL OF AN ACTIVATED SLUDGE PROCESS**

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In this work, a model of a wastewater treatment plant is created and investigated. The model is described by a nonlinear system of two differential equations with one bounded control. An optimal control problem of minimizing concentration of the polluted water at the terminal time  $T$  is stated and solved analytically with the use of Pontryagin Maximum Principle. Computer simulations of a model of an industrial wastewater treatment plant show the advantage of using our optimal strategy.

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