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| **Thesis Title** | Dynamics of a Model for the Activated Sludge Process |
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## ABSTRACT

In our model, we consider a model for the activated sludge process in which two microbial species compete for a single rate limiting nutrient, while one of the species feeds on the other. Under a certain simplifying hypothesis, such an activated sludge process can be described by a system of three non-linear ordinary differential equations. A theoretical study is conducted to characterize the possible types of solutions. A limit cycle solution was obtained for some parametric values of the system indicating that coexistence of the two species is possible over a significant range of the operating parameters.