A non-autonomous model for a chemostat with periodic nutrient supply

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A model of a one-species chemostat with a periodic input is described by a system of differential equations, whose dynamics vary according to the function that models the consumption of the nutrient. This dynamics is not fully understood when a delay is considered, representing the time required by the species to metabolize the nutrient. In this talk, we shall present some results concerning the existence of nontrivial solutions by means of topological methods.

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