Periodic solutions for systems of delay differential equations modeling leukemia under treatment
A. Halanay

One type of results on the existence of periodic solutions concerns periodic non autonomous models coupling the Mackey type model of leukopoiesis to a periodic treatment. It is proved that there exists a guiding function so, under a specific condition, a theorem of Krasnoselskii can be applied.

When a constant dose treatment is considered, periodic solutions can also appear due to the existence of a Hopf bifurcation of equilibria. In this case the stability of the limit cycles is studied using the Lyapunov coefficient. Numerical simulations will be given, too. These last results are joint work with D. Candea and R. Radulescu.