

# Eigenvalue Problems In Periodic Population Dynamics

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The growth rate of time-periodic population models is related to an eigenvalue problem for an integral operator. For the special case where periodicity is sinusoidal, an algorithm using continuous fractions is used to compute the growth rate. For specific models coming from epidemiology and for a certain range of parameter values, resonance of the growth rate can occur.

## Reference

- [1] Growth rate and basic reproduction number for population models with a simple periodic factor, Mathematical Biosciences (2007).