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Stability threshold for linear periodic delay differential equations

We consider a single species population growth model with periodically varying recruitment and mortality rates with fixed length of developmental period. The linear stability of the trivial solution is determined by the variational equation,

$$x'(t) = -a(t)x(t) + b(t)x(t-1).$$

We investigate the stability threshold and demonstrate the theoretical results with numerics motivated by tick population dynamics.