



QUASI-VARIATIONAL APPROACH TO PERIODIC PROBLEMS FOR SIRS MODELS WITH THE SEASONALLY-DEPENDENT TRANSMISSION RATE

*Dedicated to Professor Nobuyuki Kenmochi on the Occasion of His Seventy Seventh
Birthday*

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Abstract. We consider periodic problems for SIRS models with the seasonally-dependent transmission rate. For this problem we prove the existence of time-periodic solutions. In addition, we give some remarks on the uniqueness of time-periodic solutions and the asymptotic periodic stability for our problems. Furthermore, we perform numerical experiments for SIRS models with the time-periodic transmission rate. From the observation for these results, we give a conjecture on the uniqueness of time-periodic solutions and the asymptotic periodic stability for our system.

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