

First Joint Meeting Brazil Italy of Mathematics
Special Session: Name of the session

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Title: Vaccination of rubella infection using a series of pulses – Periodic orbits and chaos

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Abstract: When a SIR model with a constant contact rate is used to describe the dynamics of directly transmitted infections, oscillations decaying exponentially as time goes on are obtained. Due to damped oscillations, intermittent vaccination schemes can be designed in order to reduce or even eliminate the infection. By numerical simulations, the appearance of period orbits and chaos was determined.