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Modeling the spread of Covid-19 with social distancing

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Abstract. The effectiveness of social distancing currently prescribed in several countries to flatten the curve of the spread of corona virus 2019 is investigated. A system of nonlinear differential equation governing the spread of the disease is analyzed and exploited to understand the features of the disease. The transmission due to the asymptomatic individuals in the population is incorporated into the model. In particular, numerical simulations are performed in order to investigate the effect of social distancing on the propagation of the disease.

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