ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

Invitation to a Guest Lecture

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"About the dynamics of a SIS model without vertical transmission"

Z.0.01 | Monday, 20 June 2022 | 2:00 p.m.

Abstract

The purpose of this lecture is to propose a SIS model and to carry out qualitative investigations on it. It is shown that the proposed model is biologically well-posed and that the global dynamics are entirely determined by the basic reproduction number R_0. If $R_0 < 1$, then the disease-free equilibrium is globally asymptotically stable: the disease dies out. At $R_0 = 1$, a transcritical branching takes place: a new (endemic) equilibrium arises, whose global asymptotic stability is proved with the help of the Poincaré criterion.
This is a joint work with Szilvia György

Christian Pötzsche and the Department of Mathematics look forward to seeing you at the talk!