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**KATIA VOGT GEISSE**, Universidad Adolfo Ibáñez, Chile

*Structured models and their reproduction numbers: Effect of the way of transmission, control measures and social conditions*

In this talk we will discuss three deterministic models of coupled differential equations, which are differently structured depending on the way of transmission of the infectious disease that each aims to study. We will pay special attention to the important disease parameter “Reproduction number” for each model, and analyze how it affects its dynamics depending on: specific control measures of the disease studied, intrinsic characteristics of the disease and/or social conditions of the population affected by the pathogen.