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SIU SOUTHERN ILLINOIS UNIVERSITY
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LYAPUNOV FUNCTIONAL TECHNIQUE AND GLOBAL ASYMPTOTIC STABILITY OF DELAYED EPIDEMIC MODELS

ABSTRACT:

In this talk, we start with a simple and fundamental epidemic model to illustrate the technique of Lyapunov functional in global stability analysis of equilibria for differential systems. Next, we introduce time delays to the model and state a notorious open problem related to the resulting delay differential system. We will discuss on the main difficulties and present some partial answers to this open problem.