

Title: About "non-conventional" observers for bioprocesses

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Abstract: In bioprocesses modelling, it happens that some state variables of the model are not accessible by on-line measurements, and one may want to reconstruct them with the available outputs.

The theory of observability and observers is dedicated to this purpose but imposes some conditions to synthesis observers with a desired exponential convergence.

In this talk, we shall focus on two particular situations for which these conditions are not fulfilled and it is not possible to synthesis "conventional" observers, that is observers in Luenberger form (with constant or variable gains) of dimension less or equal to the state dimension of the model, and propose alternative schemes.