I-FE07 Control Application 3

17:20-17:40 **Chair : Kyoung Chul Koh (Sunmoon Univ.)**
Room : C207 **Co-Chair : Miyauchi Hidekazu (NIAIST)**

17:20 – 17:40 **I-FE07-7**

Input-Output Feedback Linearizing Control with Parameter Estimation Based On A Reduced Design Model

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By the state transformation including independent outputs functions, a nonlinear process model can be decomposed into two subsustems; the one(design model) is described in output variables as new states and used for control system synthesis and the other(disturbance model) is described in the original unavailable states and its couplings with the design model are treated as uncertain time-varying parameters in the design model. Its existence with respect to the design model is ignored. So, the design model is and uncertain time-variant system. Control synthesis based on a reduced design model is a combined form of a time-variant input-output linearization with parameter estimation. The parameter estimation is also based on the design model and it gives the parameter estimates such that theestimated outputs follow the actual outputs in a specified way.
The disturbances form disturbance model and as well all the other uncertainties affecting the outputs will be reflected into the estimated parameters used in the linearizing control law.