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Improving the use of feedforward in Predictive Functional Control to improve the impact of tuning

(Article in press ?)

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Abstract

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The classic PFC design is simple and intuitive and yet this paper shows that, counter to expectations, the long standing use of the target information is flawed. Some simple illustrations will demonstrate that what appears sensible can in fact lead to inconsistent decision-making with many common process dynamics. Having explored the source of this inconsistency, the paper shows how it can be ameliorated in a systematic fashion and also investigates the impact of the change on loop sensitivity to disturbances. Several numerical examples demonstrate the efficacy of the proposal in the paper. © 2020 Informa UK Limited, trading as Taylor & Francis Group.

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