June 10, 2022

Editors
Journal of Control Engineering and Applied Informatics

Dear Editors,

Please find attached a PDF file of the manuscript entitled "*Reliable sampled-data fuzzy control for non-linear systems*" authored by Mourad Kchaou, Houssem Jerbi, Rabeh Abbassi, Sondes Ben Aoun, Jeyamani VijiPriya which we wish to submit for a possible publication to *Journal of Control Engineering and Applied Informatics*.

This study seeks to provide solutions to the main challenges that arise when dealing with non-linear systems, including uncertainty, external disturbances, and actuator failures. It focuses on solving the reliable sampled-data control problem by proposing a fuzzy output feedback control procedure for nonlinear systems prone to external disturbances and failures of actuators. In this study, the actuator fault model that involves linear and nonlinear terms is adopted, and a reliable sampled-data fuzzy static output feedback (SOF) controller is designed. Based on an appropriate Lyapunov–Krasovskii functional, delay-dependent sufficient conditions are established such that the closed-loop system is stable with a γ level of H_∞ performance against external disturbances. Furthermore, using the decoupling matrix procedure, a set of linear matrix inequalities (LMIs) is formulated to synthesize the controller gains. Finally, The theoretical developments are illustrated through numerical simulations cornering the stability of the vehicle lateral dynamics and the stabilization of Lorenz chaotic system.

A careful bibliographical review identified a good body of papers that shows the relevance and topicality of the thematic, including some works published in *Journal of Control Engineering and Applied Informatics*.

This manuscript is the authors' original work and has not been published nor has it been submitted simultaneously elsewhere. All authors have checked the manuscript and have agreed to the submission.

We hope Editors and Reviewers find this study to be of interest and worthy for publication in *Journal of Control Engineering and Applied Informatics*.

Yours sincerely,