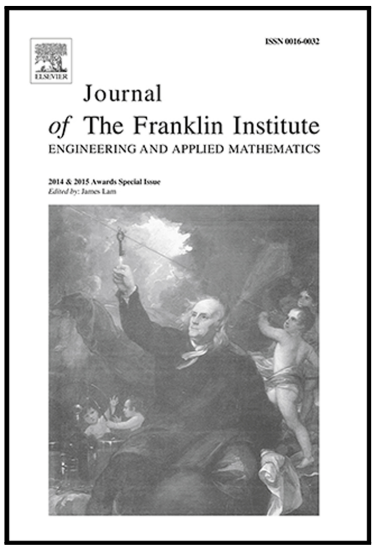

Optimal-tuning of proportional-integral-derivative-like controller for constrained nonlinear systems and application to ship steering control

Xiang Wu, Qiaodan Liu, Kanjian Zhang, Xin Xin

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Highlights

- Optimal-tuning of PID-like controller is formulated as an optimal control problem.
- A smooth function is introduced for the continuous-time inequality constraints.
- An algorithm is proposed to solve the optimal-tuning problem of PID-like controller.
- The convergence analysis of our numerical computation method is given.
- A ship steering control problem is solved by using the proposed algorithm