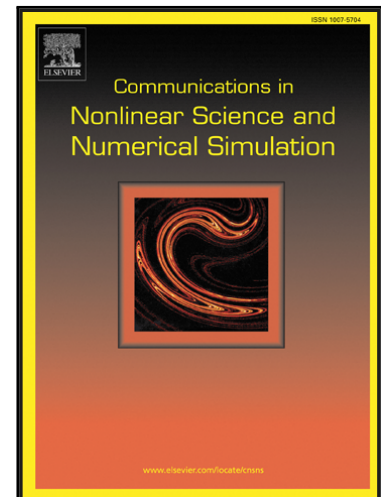


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Synchronization criteria for delayed Lur'e systems and randomly occurring sampled-data controller gain

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## Highlights

- A concept of stochastic parameter uncertainties is applied to a sampled-data control method to present a realistic system.
- A novel  $t_k$ -dependent double integral term of LKFs,  $(t_{k+1} - t) \int_{t_k}^t \int_s^t \omega_3^T(u) R \omega_3(u) du ds$ , is proposed and a bound of its time derivative is estimated by utilizing Wirtinger-based double inequality and a maximum value of a function.
- Two novel LKFs,  $2(t_{k+1} - t) \sum_{i=1}^l \int_0^{d_i^T x(t)} [k_{1,i}(\psi_i(s) - \gamma_i^- s) + k_{2,i}(\gamma_i^+ s - \psi_i(s))] ds$ , and  $2(t - t_k) \sum_{i=1}^l \int_0^{d_i^T x(t)} [k_{3,i}(\psi_i(s) - \gamma_i^- s) + k_{4,i}(\gamma_i^+ s - \psi_i(s))] ds$ , are proposed for the first time through a condition of a nonlinear function to enhance the feasible region of synchronization criteria.
- The effectiveness and less conservatism of our results are illustrated via three numerical examples.

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