

# CALL FOR PAPERS

In feedback control systems, delay as a generic part of many processes, including industrial, communication, economical, and biological ones, is a phenomenon which unambiguously deteriorates the quality of a control performance. Delay has inter alia a decisive impact on control system stability, and the studying of this influence is not usually mathematically simple. Modern control theory has been dealing with this problem since its nascence in 1947; the well-known Smith predictor celebrates six decades of being known.

Modern and advanced control theory is confronted with higher and higher requirements on quality and performance of control systems in industry as well as in everyday reality. It is well known that control of such processes often represents a very complex problem and they are hardly controllable by conventional control methods. Many related problems are unsolved and many questions remain unanswered. The aim of this special issue is to highlight the most significant recent developments on the topics of time delay systems (TDS), their modelling and identification, stability analysis, various control strategies, and interesting academic and real-life applications.

Potential topics include but are not limited to the following:

- ▶ New delayed systems modelling approaches
- ▶ Delay-varying systems and models
- ▶ Networked systems with communication, mass, or energy distribution latencies
- ▶ Latest trends in TDS identification
- ▶ Delay-dependent and delay-independent stability
- ▶ Delay stochastic stability
- ▶ Markovian jump systems
- ▶ Analysis and synthesis of infinite-dimensional spectrum
- ▶ Finite dimension approximations
- ▶ New results in controllability and observability of TDS
- ▶ Robust, algebraic, and adaptive control methods
- ▶ Applications of artificial intelligence in TDS control

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