Einladung zum Oberseminar Dynamische Systeme und Kontrolltheorie

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Stability of incommensurate fractional differential systems

We investigate the stability properties of 3D systems of incommensurate fractional order differential equations with Caputo derivatives. The study establishes necessary and sufficient conditions for the asymptotic stability of these systems by analyzing the zeros of their characteristic function. We extend known results from 2D cases to the 3D setting. Moreover, we present a constructive approach for analyzing the stability of incommensurate fractional order systems with rational orders in arbitrary dimensions. It introduces a criterion to determine the asymptotic stability of the system.

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Zu diesem Vortrag laden wir Sie herzlich ein.

gez. Sergey Dashkovskiy