

# Complex compound-combination multi switching anti-synchronization of fractional-order complex chaotic systems and integer-order complex chaotic systems

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August 25, 2020

## Abstract

Based on three fractional-order complex chaotic systems and two integer-order complex chaotic systems, we propose a novel synchronization scenario of complex compound-combination multi switching anti-synchronization (CCCMSAS), which is first of this kind. The CCCMSAS states are completed between three leader and two follower systems by adopting the nonlinear control method and choosing suitable Lyapunov function on the basis of the complex space. Eventually, two typical examples have served as illustrations to show the validity and maneuverability of the proposed scheme.

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