Conditions for the synchronization of band-limited discrete-time chaotic systems

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Abstract:

In this talk we present a discrete-time bandlimited chaos-based communication system. To maintain synchronization in bandlimited channels we employ identical digital finite impulse response filters on the transmitter and receiver subsystems. We numerically investigate for which filter's orders and cut-off frequencies it is possible to obtain chaotic signals.

Keywords: Communication with Chaos, synchronization, discrete-time dynamical systems, bandwidth limitation.