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Controlled chaos for secure communications

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We explore synergetics approach to communication system synthesis based on phenomena of chaotic synchronization. There are many opportunities for mixing informational signal into chaotic carrier. But reconstruction of informational signal after passing thru effective communication channel becomes difficult by various distortions and by adding of noise component to chaotic carrier. In order to solve the problem on information reconstruction at receiver side we propose method of synchronization for receiver and transmitter generators based on superposition of its image points in pseudo phase space. And we observe informational signal at the output of receiver generator control system. Proposed approach is an robust one to some kinds of distortions and additive noise acting to chaotic carrier.