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The paper demonstrates the application of synergetic control theory integrated adaptation principle to robust control law design for the synchronization of two Sprott's chaotic systems as well as comparison of the designed law with the adaptive backstepping and the law of sliding mode control. A distinctive feature of the proposed robust control law is the use of the high order integral adaptation principle; here the action of parametric disturbances is compensated by the nonlinear control laws with specifically introduced integrators (at least three ones). This disturbances compensation approach does not require to design disturbance observers or real-time estimation of these disturbances.

Keywords: nonlinear control, robust control, synergetic control theory, integral adaptation, Sprott's chaotic system, adaptive backstepping, sliding mode control.

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