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Synergetics control of multilinked robotics systems (plenary report)

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We propose new approach to hierarchical systems synthesis for manipulating robots based on methods of synergetics control theory and synergetics approach to hierarchy control. The key concept is that we build the controls for high level control without solving inverse kinematic problem. And all levels control laws synthesis we obtain from full nonlinear models of manipulating robots subsystems motion. The synthesized set of controls provides asymptotic stability of closed loop system at all admissible field of phase coordinate variation.