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Sommario/riassunto	This monograph presents rigorous analysis and design process of the fixed-time/prescribed-time FTC strategy for quadrotor UAVs, fixed-wing UAVs, unmanned helicopter,and UAVs-UGVs system. The design methods can adjust the structure and parameters of the system controller in a timely manner, ensuring the safety of the unmanned systems and restoring critical control performance as soon as possible. Therefore, these research results will enrich the development of FTC for multiple unmanned systems, and have important theoretical significance and practical application value for ensuring the safety and control of complex control systems.