term	subterm	class	area of origion
			dynamical systems theory
		types of systems	
Heterogeneous systems			
Multi-modal systems			
Multi-controller systems			
Logic-based switching systems			
Discrete-event systems			
Transition systems			
Variable structure systems			
Discontinuous/switched/non-smooth systems			
Complementarity systems			
Reset systems			
Jump systems			
Piecewise-affine systems			
Mixed logical dynamical systems			
Impulsive systems			
Cyber-physical systems of systems			
Cyber-physical networked embedded systems			
Large-scale smart systems			
		modelling	
Hybrid automata			
Bond graphs			
Petri nets			
Complementarity models			
Event-flow formulae			
Bisimulations			
Symbolic dynamics			
		analysis	
Sliding motions			
abstraction of energy in the system:			
	passivity		
	dissipativity		
Stability			
State space			
State partition			
			Verification
		verification properties	
Safety properties			
Liveness properties			
Deadnesss properties			
Reachability			
Correctness/consistency			
		verification techniques	
Model checking			
Theorem proving (deductive approach)			
Falsification			
Constraint satisfaction			
Boolean satisfiability			
Satisfiability modulo theories			
Symbolic methods			
Dynamically-aware verification			
automated reasoning			
		Validation	
Testing			
Debugging			
			Control
		control properties	
Controllability			
Observability			
Robustness			
Practical stability			
		control strategies	
Operation modes			
Adaptive control			
Decentralized/hierarchical control			
Optimal control			
		control concepts	
Feedback/feedforward			
Closed loops			
Environment			
Sensors/actuators			
Set points/control goals			
Disturbances/perturbations			
Parameter identification			
Signal processing			
Contingency/risk analysis			