Abstract: In traditional formal synthesis, a finite, nondeterministic transition system is controlled from a temporal logic specification. The control strategy is generated as the solution of an automaton game, such as a Rabin or Buchi game. The existing algorithms are complete, but there is no notion of robustness: the specification is either satisfied or violated. Probabilistic formal synthesis provides a notion of robustness by giving a probability of satisfaction of a temporal logic formula by a Markov decision process. In this talk, I will give a short introduction to formal synthesis for finite nondeterministic and probabilistic systems. I will then focus on logics with quantitative semantics, in which resilience (robustness) is naturally defined as a distance to satisfaction. I will show that, for particular classes of dynamical systems and particular costs, resilient optimal controllers that satisfy temporal logic correctness constraints can be efficiently derived. Finally, I will show how contract-based synthesis can be used to extend these techniques to distributed multi-agent systems.