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Algorithm -- Multi-policy Optimization in Self-organizing Systems -- A Bio-inspired Algorithm for Energy Optimization in a Self-organizing Data Center -- Towards a Pervasive Infrastructure for Chemical-Inspired Self-organising Services -- Hybrid Approaches -- Self-adaptive Architectures for Autonomic Computational Science -- Modelling the Asynchronous Dynamic Evolution of Architectural Types -- A Self-organizing Architecture for Traffic Management -- On the Modeling, Refinement and Integration of Decentralized Agent Coordination -- A Self-organizing Architecture for Pervasive Ecosystems.

Sommario/riassunto	Self-adaptability has been proposed as an e'ective approach to automate the complexity associated with the management of modern-day software systems. Self-adaptability endows a software system with the capability to adapt itself at runtime to deal with changing operating conditions or user requirements. Researchersinself-adaptivesystemsmostlytakeanarchitecture-centricfocus on developing top-down solutions. In this approach, the system is monitored to maintain an explicit (architectural) representation of the system and based on a set of (possibly dynamic) goals, the system's structure or behavior is adapted. Researchersofself-organizingsystemsmostlytakeanalgorithmic/organizational focus on developing bottom-up solutions. In this approach, the system com-nentsadapttheir localbehaviororpatternsofinteractiontochangingconditions and cooperatively realize system adaptation. Self-organizing approaches are - ten inspired by biological or natural phenomena. With the term "self-organizing architectures" (SOAR) we refer to an engineering approachfor self-adaptive s- tems that combinesarchitecturalapproachesforself-adaptability withprinciples and techniques from self-organization. Whereas both lines of research have been successful at alleviating some of the associated challenges of constructing self-adaptive systems, persistent ch- lenges remain, in particular for building complex distributed self-adaptive s- tems. Among the hard challenges in the architectural-centric approach are h-dling uncertainty and providing decentralized scalable solutions. Some of the hard challenges in the self-organizing approach are connecting local interactions with global system behavior, and accommodating a disciplined engineering - proach. The awarenessgrows that for building complex distributed self-adaptive systems, principles from both self-adaptive systems and self-organizing systems have to be combined.