

# Self-adaptive Systems: Facilitating the Use of Combinatorial Problem Solvers

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New methods in Combinatorial Problem Solving can solve larger problems in different domains. They also became more complex, which means that they are hard to use and fine-tuning to the peculiarities of a given problem, limiting its use to a small set of experts, and instead black-box solvers with automated search procedure are needed for its broad applicability. Autonomous Search Systems represent a new research field defined to precisely address the above challenge. The main goal of this paper is to review recent works on this kind of Self-adaptive Systems from the standpoint of the actual requirement for solvers. © Springer International Publishing Switzerland 2014.

Autonomous Search Systems

Combinatorial Problem Solvers

Self-adaptive Systems

Safety devices

Automated searches

Autonomous searches

Black boxes

Combinatorial problem

Different domains

Research fields

Self-adaptive system

Adaptive systems