Evolutionary Computation in the Real World: Successes and Challenges

Graham Kendall

Abstract. Evolutionary Computation has the potential to address many problems which may seem intractable to some of the methodologies that are available today. After briefly describing what evolutionary computation is (and what it is not), I will outline some of the success stories before moving onto the challenges we face in having these algorithms adopted by the industrial community at large. Some of the areas I will draw upon include Checkers and Chess, Scheduling and Timetabling, Hyper-heuristics and Meta-heuristics, as well some other problems drawn from the Operational Research literature.