

# A History of Metaheuristics\*

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## Abstract

This chapter describes the history of metaheuristics in five distinct periods, starting long before the first use of the term and ending a long time in the future.

## 1 Introduction

Even though people have used heuristics throughout history, and the human brain is equipped with a formidable heuristic engine to solve an enormous array of challenging optimization problems, the *scientific study* of heuristics (and, by extension, metaheuristics) is a relatively young endeavour. It is not an exaggeration to claim that the field of (meta)heuristics, especially compared to other fields of study like physics, chemistry, and mathematics, has yet to reach a mature state. Nevertheless, enormous progress has been made since the first metaheuristics concepts were established. In this chapter, we will attempt to describe the historical developments this field of study has gone through since its earliest days.

No history is ever neutral, and a history of metaheuristics — or any other topic — can be written in many different ways. A straightforward (one could say “easy”) history of metaheuristics would consist of an annotated and chronological list of metaheuristic methods. Useful as such a list may be, it suffers from a lack of insight into the development of the field as a whole. To illustrate this viewpoint, consider the list in Figure 1, that appeared on Wikipedia until April 8, 2013 to illustrate the “most important contributions” in the field of metaheuristics. It is our opinion that such a list is not particularly enlightening (and neither was the article that contained it) when it comes to explaining the evolution of the field of metaheuristics.

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