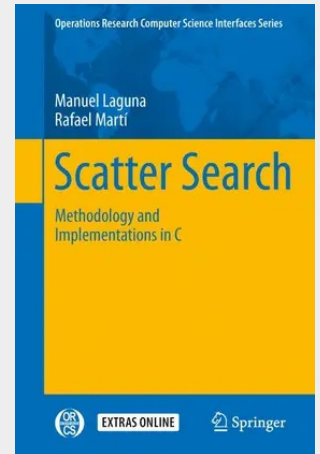


Scatter Search

Methodology and Implementations in C

The book *Scatter Search* by Manuel Laguna and Rafael Martí represents a long-awaited "missing link" in the literature of evolutionary methods. Scatter Search (SS)-together with its generalized form called Path Relinking-constitutes the only evolutionary approach that embraces a collection of principles from Tabu Search (TS), an approach popularly regarded to be divorced from evolutionary procedures. The TS perspective, which is responsible for introducing adaptive memory strategies into the metaheuristic literature (at purposeful level beyond simple inheritance mechanisms), may at first seem to be at odds with population-based approaches. Yet this perspective equips SS with a remarkably effective foundation for solving a wide range of practical problems. The successes documented by *Scatter Search* come not so much from the adoption of adaptive memory in the range of ways proposed in Tabu Search (except where, as often happens, SS is advantageously coupled with TS), but from the use of strategic ideas initially proposed for exploiting adaptive memory, which blend harmoniously with the structure of Scatter Search. From a historical perspective, the dedicated use of heuristic strategies both to guide the process of combining solutions and to enhance the quality of offspring has been heralded as a key innovation in evolutionary methods, giving rise to what are sometimes called "hybrid" (or "memetic") evolutionary procedures. The underlying processes have been introduced into the mainstream of evolutionary methods (such as genetic algorithms, for example) by a series of gradual steps beginning in the late 1980s.

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106,99 €

99,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781402073762

Medium: Buch

ISBN: 978-1-4020-7376-2

Verlag: Springer

Erscheinungstermin: 28.02.2003

Sprache(n): Englisch

Auflage: 1. Auflage 2003

Serie: Operations Research/Computer Science Interfaces Series

Produktform: Kartoniert

Gewicht: 476 g

Seiten: 291

Format (B x H): 155 x 235 mm

