



Adaptive Operator Selection and Management in Evolutionary Algorithms

Submitted by Frédéric Lardeux on Tue, 02/24/2015 - 11:42

Titre	Adaptive Operator Selection and Management in Evolutionary Algorithms
Type de publication	Chapitre
Type	Ouvrage scientifique
Année	2011
Langue	Anglais
Pagination	161-189
Numéro du chapitre	6
Titre de l'ouvrage	Autonomous Search
Auteur	Maturana, Jorge [1], Fialho, Alvaro [2], Saubion, Frédéric [3], Schoenauer, Marc [4], Lardeux, Frédéric [5], Sebag, Michèle [6]
Editeur scientifique	Hamadi, Youssef [7], Monfroy, Eric [8]
Editeur	Springer-Verlag
Ville	Berlin Heidelberg
ISBN	978-3-642-21433-2
Résumé en anglais	<p>One of the settings that most affect the performance of Evolutionary Algorithms is the selection of the variation operators that are efficient to solve the problem at hand. The control of these operators can be handled in an autonomous way, while solving the problem, at two different levels: at the structural level, when deciding which operators should be part of the algorithmic framework, referred to as Adaptive Operator Management (AOM); and at the behavioral level, when selecting which of the available operators should be applied at a given time instant, called as Adaptive Operator Selection (AOS). Both controllers guide their choices based on a common knowledge about the recent performance of each operator. In this chapter, we present methods for these two complementary aspects of operator control, the ExCoDyMAB AOS and the Blacksmith AOM, providing case studies to analyze them in order to highlight the major issues that should be considered for the design of more autonomous Evolutionary Algorithms.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua8141 [9]
DOI	10.1007/978-3-642-21434-9_7 [10]
Lien vers le document	https://link.springer.com/chapter/10.1007/978-3-642-21434-9_7#citeas [11]

Liens

[1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=7534>

[2] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=15500>

- [3] <http://okina.univ-angers.fr/frederic.saubion/publications>
- [4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=7582>
- [5] <http://okina.univ-angers.fr/frederic.lardeux/publications>
- [6] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=15501>
- [7] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=13297>
- [8] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=7575>
- [9] <http://okina.univ-angers.fr/publications/ua8141>
- [10] http://dx.doi.org/10.1007/978-3-642-21434-9_7
- [11] https://link.springer.com/chapter/10.1007/978-3-642-21434-9_7#citeas

Publié sur *Okina* (<http://okina.univ-angers.fr>)