A brave new algorithm *

First Author[1][0000−1111−2222−3333], Second Author[2,3][1111−2222−3333−4444], and Third Author[3][2222−−3333−4444−5555]

[1] Princeton University, Princeton NJ 08544, USA
[2] Springer Heidelberg, Tiergartenstr. 17, 69121 Heidelberg, Germany
lncs@springer.com
http://www.springer.com/gp/computer-science/lncs
[3] ABC Institute, Rupert-Karls-University Heidelberg, Heidelberg, Germany
{abc,lncs}@uni-heidelberg.de

Abstract. At the beginning of this year one of the authors read 'A brave new world' by Aldous Huxley. The Nobel describes a dystopia, which anticipates the development of breeding technology, and how this technology creates the perfect human race. Taking into account that when talking about genetic algorithms our goal is to achieve the optimum solution of a problem, and this book kind of describes the process for making the "perfect human", we will try to work on this parallelism in this paper. The goal is to develop a Genetic algorithm based on the fecundation process of the book and compare it to other algorithms to see how it behaves. Investigating how the division in castes affects the diversity in the poblation.

Keywords: Evolutionary algorithm · Metaheuristics · Another keyword.

1 First Section

1.1 A Subsection Sample

Please note that the first paragraph of a section or subsection is not indented. The first paragraph that follows a table, figure, equation etc. does not need an indent, either.

Subsequent paragraphs, however, are indented.

Sample Heading (Third Level) Only two levels of headings should be numbered. Lower level headings remain unnumbered; they are formatted as run-in headings.

Sample Heading (Fourth Level) The contribution should contain no more than four levels of headings. Table 1 gives a summary of all heading levels.
Displayed equations are centered and set on a separate line.

$$x + y = z \tag{1}$$

* Supported by organization x.

Table 1. Table captions should be placed above the tables.

Heading level	Example	Font size and style
Title (centered)	**Lecture Notes**	14 point, bold
1st-level heading	**1 Introduction**	12 point, bold
2nd-level heading	**2.1 Printing Area**	10 point, bold
3rd-level heading	**Run-in Heading in Bold.** Text follows	10 point, bold
4th-level heading	*Lowest Level Heading.* Text follows	10 point, italic

Please try to avoid rasterized images for line-art diagrams and schemas. Whenever possible, use vector graphics instead (see Fig. 1).

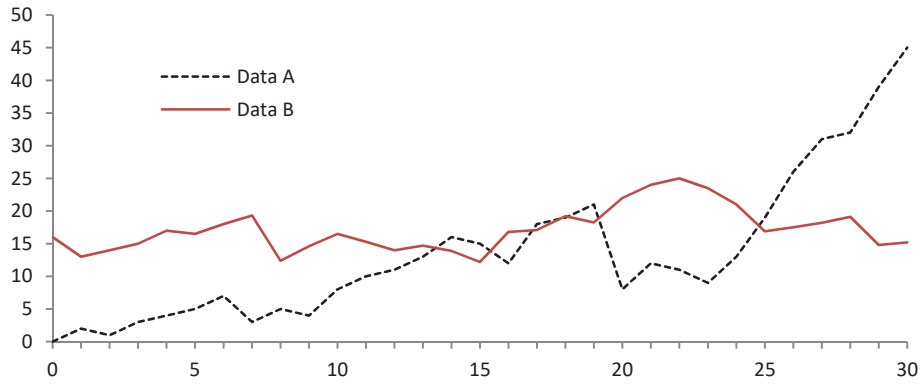

Fig. 1. A figure caption is always placed below the illustration. Please note that short captions are centered, while long ones are justified by the macro package automatically.

Theorem 1. *This is a sample theorem. The run-in heading is set in bold, while the following text appears in italics. Definitions, lemmas, propositions, and corollaries are styled the same way.*

Proof. Proofs, examples, and remarks have the initial word in italics, while the following text appears in normal font.

For citations of references, we prefer the use of square brackets and consecutive numbers. Citations using labels or the author/year convention are also acceptable. The following bibliography provides a sample reference list with entries for journal articles [1], an LNCS chapter [2], a book [3], proceedings without editors [4], and a homepage [5]. Multiple citations are grouped [1–3], [1, 3–5].

2 Introduction

At the beginning of the year one of the authors read the famous book by Aldous Huxley: A brave new world. The novel is a distopy that describes the develop-

ment in reproductive technology, psychological manipulation and classical conditioning. The population is divided in *castes*, assigned since birth, where everyone knows and accepts their place. We are talking about a "optimum world", whose optimization is based on the population and in the balance the division in castes creates, not in an individual.

When we talk about evolutionary algorithms the target is reaching the optimum solution for a problem., and this books perfectly describes the process through which they have reached the perfect human race. Thereforth we want to develop an algorithm based on the book's fecundation proceses and compare its behaviour with other algorithms. Also, investigating how the division in castes affects the poblation's diveristy.

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