**BUSINESS SYSTEMS RESEARCH REVIEW FORM**

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| TITLE OF THE PAPER | Performance Analysis of Partial Use of Local Optimization Operator on Genetic Algorithm for TSP |
| NAME OF REVIEWER |  |
| REVIEWER’S E-MAIL |  |
| DATE OF THE REVIEW | 29th May, 2012 |

**I. RATE THE MANUSCRIPT**









**II. DESCRIBE THE MANUSCRIPT WITH A SENTENCE OR TWO UNDER EACH ITEM.**

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| 1. Title and abstract. Does the Abstract appropriately summarize the manuscript? Does title clearly present the article? Abstract should clearly state the purpose of the study; briefly explain what was done, what was found and what was concluded. |
| It would be more appropriate to change the title into: Performance Analysis of Partial Use of Local Optimization Operator on Genetic Algorithm for Traveling Salesman Problem  Please change the abstract so that you describe with one or two sentences: Background; Objectives; Method; Results and Conclusion. Abstract will follow this structure from the following volume, altough this instructions is still not available at the website. Important - do not use abbreviations like TSPLIB in the abstract. The readers should not know this abbreviation!  Example of such an abstract is following (altough it is from medical research):  Background: Obesity in pregnancy has continued to attract global attention due to its contribution to maternal morbidity and mortality. However, this attention appears to be concentrated on developed countries with little or no attention to developing countries, resulting in very little statistics from developing countries on the subject matter. Objectives: To determine the prevalence and characteristics of obesity during pregnancy, in South-east Nigeria. Method : Women who registered for antenatal care in their first trimester of pregnancy were interviewed and requisite data collected. Fischer exact test, t-test and bivariate correlation analysis were carried out as appropriate at the 95% confidence level. P-values less than 0.05 were considered significant. Results : A total of 3,167 pregnant women were recruited. The prevalence of obesity in pregnancy was 10.7%. Obesity was significantly more prevalent amongst women residing in urban areas. Only 15.1% of participants knew their pre-pregnancy weight. Education, employment, parity and age did not have significant relations with obesity in pregnancy. Conclusion : Obesity in pregnancy exists in appreciable proportion in south-eastern Nigeria and majority of women in this setting do not know their pre-pregnancy weights. There is need to begin to consider obesity in pregnancy as a problem that does exist in resource-poor settings and specific guidelines on the management of obese pregnant women in resource-poor settings would be needed. Nigerian women need to be encouraged to check their weights periodically especially before planning pregnancy.  1.The title have been changed according to the suggestion of reviewer.  2.The abstract have been changed so the Background; Objectives; Method, Results and Conclusion parts are described with one or two sentences.  3. Abbrevations like TSPLIB have been puted off from the abstract. |

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| 2. Introduction. Does the Introduction present the question being asked and place it in the context of what is already known about the topic? Introduction should describe the nature of the problem and current state of knowledge; give the statement of the purpose, scope and general methods, and present hypothesis and/or research goals. |
| Holland (1975) is rather old reference. Could you add one more newer?  The structure of your introduction should be improved. Introduction should consist on the following paragraph  1. Explain why is traveling salesman problem important  2. Explain what methods are usually used for solving TSP  3. Explain why do you think your approach would be better and what you improve  4. Explain the goal of the paper  5. Briefly describe the sections of the paper (here is the example from another article):  Example. Section 2 presents definitions of business process management and business intelligence and describes their relationship in the context of performance management. The third section introduces the research design and methodology and reports on the results of five case studies. The fourth section reports on the findings and results of five case studies. In the Section 5 the research results are analyzed and discussed. The final section provides a discussion of limitations, suggestions for future research and conclusions.   1. One more newer reference have been added in the Introduction part concerning the Genetic Algorithms. 2. The structure of introduction have been improved with changing and adding next sentences:   The Traveling Salesman Problem is important because several variations of the TSP have been originated from various real life or potential applications. Various methods for solving TSP have been proposed and many approximation and exact algorithms can be found in the literature. The case with Euclidean distance is well researched and there are algorithms which perform well even on very large cases (Applegate, Bixby, Chvátal and Cook, 2001).  The goal of this paper is to investigate the impact of hybridization of a 2-opt based local optimizer into the canonical genetic algorithm for solving the TSP.  Although the 2-opt algorithm (Helsgaun, 2000), (Engels and Manthey, 2009) performs well and can be applied to TSP with many cities, it finds only a local minimum. The nearest neighbor algorithm (Hoos and Stutzle, 2005) is one of the most intuitive heuristic algorithms for the TSP. It is a greedy method for solving the TSP.  The genetic algorithms considered in this paper are hybrid genetic algorithms, incorporating local optimization (cf. Memetic Algorithms, (Merz and Freisleben, 2001)). One example of hybridization of genetic algorithms is shown in (Sels and Vanhoucke, 2011).  The paper is organized as follows. Section 2 introduces the methodology and presents procedure of hybridization of genetic algorithm for solving TSP. The third section describes experiment on instances from TSPLIB. The fourth section reports on the findings. Moreover, the research results are analyzed and discussed. The final section provides conclusion and suggestions for further research in the future. |

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| 3. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored? |
| Literature is relevant and appropriate. Maybe few newer references could be added.   1. One new reference have been added in section References. |

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| 4. Methods. Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate? |
| Please, change the title of the "Grafted GA for the TSP" into "Methodology"   1. The title of section 2 have been changed to “Methodology”. |

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| 5. Results. Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper? |
| Results are presented clearly and analysed aprpropriately. |

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| 6. Discussion and conclusion. Do authors provide brief discussion? Should it be shortened or extended? Whether their research question was answered? Do the authors note limitations of the study? Are there additional limitations that should be noted? Do the authors‘conclusions based on this study results? |
| Conclusion part of the paper is adequate. However, the third paragraph should note limitations of the study and recommendations for the further research in the future. Last sentence is really not appropraite. You should finish the paper with more clear conclusion!   1. The third paragraph have been changed so the recommendations for future research are included. 2. Last sentence from Conclusion part have been puted off. |

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| 7. Quality of communications. Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc. |
| Authors sometimes use abbreviations that are not expected, or in the abstract and conclusion part of the paper, where it is not appropriate to use them (only if they are explained there).   1. Abbrevations like TSPLIB have been puted off from Abstract and Conslusion parts of the paper. |

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| 8. References. Does the reference list contain errors?Are there any important references that are not mentioned that should be noted?Does the number of references is adequate or more detailed review of literature is necessary? |
| References are appropriate. |

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| 9. Comments to the author. |
| Please, take a look at the example paper attached. This is a very good example of the well written introduction, abstract and conclusion, and the paper is of similar thematic to yours.  I have take a look on this research paper. Than you on your advice. |

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| 10. Comments to the editor. Not visible to author. |
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