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Journal Name:	<u>British Journal of Mathematics & Computer Science</u>
Manuscript Number:	Ms_BJMCS_21744
Title of the Manuscript:	Empirical Performance Analysis of Parallel Programs on Wired and Wireless Local Area Networks Using Beowulf Clusters
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Line 14, what kind of parallel programs? Can you explain more in the abstract? Can you claim all parallel programs work better with wired LAN? If you only processed several experiments, you cannot claim do not gain, this is an absolute word. Please polish the word. Line 17 doesn't know what you are talking about, please polish the English. Line 217 how come the matrix dimension is that format, should do it using formatting equation Line 219 two loop nested loops, what is that mean? Line 294, why only 4000 x 1 vector? This is a relatively easy vector, usually in computer this kind of multiplication will not cost too much time, and it only calculates once, also add the result together will generate little difference. This calculation isn't complicated at all. Line 307 below, figure 7, can you explain why wireless is better than wired in cluster 3, this is contradicted with your claim in 307, which mean figure 5.6.7 show a sharp decline in the overall performance. The References part, 14 and 15, regular scientific	Thank you for the review. As regards line 14, we were referring to distributed memory parallel programs. And for line 17, we were referring to multiprogramming where multiple processes are scheduled to run on a single cluster thereby cutting down inter-machine communication. The matrix dimension in line 219 is well formatted As regards to line 294, the idea is to test performance on relatively simple calculations involving minimal communication overhead afterwards, we tested a more complex multiplication algorithm involving more communication and computation. As for line 307, we were more focused on the average performance of wired and wireless distributed memory parallel programs and not the performance at a specific cluster. However, as seen in the figure 7, wired



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	paper shouldn't reference wikipedia information, find other sources for these references.	network experienced a poorer performance compared to wireless and a possible reason can be attributed to the decomposition nature of the matrix. However, this would require further study to prove.
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<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments	The paper did some meaningful experiments about distributed computing for performance speedup. However, there testbenches cannot fully support their points. In order to make a solid conclusion, the author need to do more experiments for it. Currently, I see them use some distribution MPI to send information to another computer, and do simple calculations. The problem is the complication of the algorithm is good for this paper, but there are other type of calculation, only one type of math is not enough to support for the conclusion. Second, in the parallel computing system, some time people need to only transfer data to another place. This divides the testbench to two categories, one is a mathematical intensive calculation, one is a memory intensive activities algorithm. So it is better to continue to do some research for another direction. Another problem is the interconnections. We all know that not only wired LAN, but also wireless, they all have some ratio of error frame, there is no information about it, so this makes the conclusion not very solid. It is obvious that the wireless supposed to be slower than the wired ones, especially about the large data exchange. But modern computer has evolved to use higher connections among each other, so this maybe a direction in the future.	