The Director ASRB

Hafiz Hayat Campus

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**Subject: Response for Minor Concerns pointed out by External Examiner in Review of MS Thesis**

With reference to the letter with even no. UOG/ASRB/HH/EE/02/1139 dated: 01 Sept 2020 it is stated that the response for the minor concerns pointed out by the external examiner has been answered in tabular form by point to point in proceeding lines.

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| **Sr. No.** | **Comments of External Examiner** | **Responses** | **Locations in thesis** |
| **1.** | Few acronyms were not defined properly, for instance, PC/BC-DIM used in abstract before defining it. Please make sure in revised Thesis that all acronyms must be properly defined before they are used. | Few acronyms were not defined properly, which are properly defined now. The acronyms which I added before their use, in the corrected file, are  A) PC/BC-DIM. B) Wi-Fi. C) USBL. D) SONAR. E) SLAM. F) B-PR-F. G) RMS. | Mentioned at various pages which can be located using Ctrl+F and in appendix 1 page 45. |
| **2.** | Axes in most of graphs are not labeled which makes it difficult to follow the graphs. For instances, graphs in figure 4.1, 4.2, 4.3, 4.4, 4.5, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12 are not properly labeled. | The mentioned figures 4.1, 4.2, 4.3 4.4, 4.5, 4.7 4.8, 4.9, 4.10 4.11 are now corrected with labels as instructed. Other than mentioned figures some other figures which are 2.4, 3.2, 3.3, 3.4, 3.5, 3.6 also corrected and properly labeled. I hope now all figures can be followed. | Chapter 03 and Chapter 04 figures |
| **3.** | Particle Filter is not compared or mentioned (summary). | I did not mentione particle filter term in table-4.4 at the page number 34 of 47 but I have already compered particle filter. Monte Carlo Localization (MCL) is also known as Particle Filter localization and In table 4.4 I have compared MCL. Other than it I have mentioned “(using Particle Filter)” now. | Table 4.4. |
| **4.** | Topic of thesis seems to be robot tracking. | I discussed it with my supervisor the name "Robot Localization". In this task, we are interested in finding the location of robot so “Robot Localization” is more dominant than “Robot tracking” in our point of view. Furthermore, the paper with which we compared our results also has the same term “robot localization”. | Title of Thesis |