**Summary of Training Record (for a two-week period)**

|  |  |  |
| --- | --- | --- |
| **Brief Description of Experience** | **From** | **To** |
| Progress Evaluation | 13-July | 13-July |
| Simulation on my own control scheme | 14-July | 16-July |
| Report Writing | 20-July | 23-July |
| End Project Presentation | 24-July | 24-July |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Comments by Organization Supervisor:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Designation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Training Record**

**(Elaborate on training outlined in summary)**

Since the early weeks, my intention is to try developing a controller which may be implemented in real time system. Instead of controlling both trolley’s position and sway angle to indirectly control load’s position, I thought that it must be possible to control payload’s position directly. A block to estimate payload’s position is developed with trolley’s position and sway angle as an input. The payload’s position is taken as a feedback to the position controller instead of trolley’s position. The result shows that the payload is able to track the reference trajectory closely even in the presence of wind gust. On the other hand, the trolley keeps on oscillating around the reference trajectory at the initial and endpoint with relatively high speed. However, this trolley’s high speed may not be practically achievable. In order to lower down trolley’s speed to a reasonable boundary, we must decrease travelling velocity which contradicts the idea of rapid transfer. Hence, the middle solution is reasonable and can be compared with other control schemes.

During the final 2-weeks, we completed a few requirements towards the end of our Industrial Orientation. Firstly, our progress is being evaluated by Prof. Murukeshan. Then we prepare our report for both SIMTech and NTU as well as a presentation is done among Mechatronics research group in SIMTech.

Organization Supervisor’s Initial: Dr. Chen Silu

NTU Tutor’s Initial: Assoc Prof Murukeshan Vadakke Matham