**Dear Editor, Dear Reviewers**

Ljubljana, 07.10.2019

The authors would like to thank the reviewers for insightful comments, critiques, and questions. The issues have been thoroughly addressed. Based on the reviewer's comments, we have revised our paper and we resubmit our paper titled *"**A cyber-physical approach to the management and control of manufacturing systems**"* as a revised paper. The parts of the paper were reexamined and rewritten. The major changes include:

- Section 1 is expanded. Section 1 introduces the new conceptual models of CPPS.
- Based on the suggestion of the editor, the article was shortened.

Please find our responses to reviewer questions below.

| **EDITOR** | **AUTHORS** |
|---|---|
| Suggest that you shorten the article in such a way that you highlight the scientific contribution of your research work and shorten the article. | The article was shortened. |
| **Review:** | **Authors** |
| There are many grammar errors in this paper, such as 'see Fig 1. | We went through the paper several times and corrected the errors found. The paper was proofread. |
| The description of 'vertical connection' and 'horizontal connection' is not specific, adding content about connectionism should be better. | In the new version of the paper, the description of 'vertical connection' and 'horizontal connection' is presented clearly. Section 1, p. 3-4. |
| As this paper showed in figure 1-3, just putting a few units（EWS\AWS\CAMS） together. The figures don't match the illustration. | The figures has been revised and supplemented with the new figures. Section 1, p. 3-4 |
| There is a spelling error in the upper left corner of figure 1（CCPS). | The spelling error in the upper left corner of figure 1 has been corrected. |
| Figure 1 does not illustrate the relationship between social space and physical space. | The figure 1 has been corrected. The relationship between the *Subject* and the physical work systems is presented in figure 1. Section 1, p.3. |
| There is something unclear in figure 2, such as the relationship between TN and Internet of | The figure 2 has been revised. Section 1, p. 3. The new figures represent the relationship |

| | |
|---|---|
| thing, AWS cyber system and ADMS‘s connected relation. | between different manufacturing and network structures. |
| Too many words in figure 3 which makes figure 3 hard to understand. | The figure 3 has been revised. In the new version of the paper, the figure 3 is figure 6. Section 2, p. 5. |
| ‘IDEF0’ in figure 3 title doesn’t be mentioned in this paper. | In the new version of the paper, the figure 3 title has been rewritten. Section 2, p. 5. |
| Communications showed in figure 4 needs a different presentation. | Based on the editor's request, the figure 4 has been deleted, in the new wersion of the paper. The section 3 (Multy-agent system for the implementation of a cybernated PPC) is deleted. |
| In this paper, some of the current research results together, the innovation point is general. | In the paper, the authors have demonstrated the application of cyber-physical approach to the management and control of CPPS to new model of manufacturing systems described in Section 1.<br><br>This research addresses the question of how a CPPS can contribute to the improved management, planning, scheduling, control and monitoring of manufacturing systems.<br><br>The paper will present a model of CPPS and a new method for the management and control of CPPS in the real-time. Further on, the cybernetic, functional, and implementation models of CPPS are presented. A cyber-physical approach to the management and control is based on the foundational ontology of manufacturing systems and definitions of the terms and elements of the production-planning and scheduling domain. |