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| Book Name: | **Morden control theory** |
| Manuscript Number: | **Ms\_BP\_8574A.5** |
| Title of the Manuscript: | **Controllability and Observability for Linear System** |
| Type of the Article | **Book chapter** |

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| PART 1: Review Comments | | |
|  | Reviewer’s comment | Author’s comment *(If agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. Authors must write his/her feedback here)* |
| Is the manuscript important for the scientific community? Please write a few sentences explaining your answer | Determining the importance of a manuscript for the scientific community depends on several factors, such as the novelty of the research, its contribution to existing knowledge, and its potential impact on the field. This manuscript delves into linear system observability criteria, providing theoretical foundations and examples. If it introduces novel insights and methodologies or addresses current gaps in the literature, it is valuable for researchers and practitioners in control theory and linear systems. The significance ultimately depends on the originality and relevance of the content to the broader scientific community. |  |
| Is the title of the article suitable? Do you have any alternative Title in your mind? | Insights into Complete State Observability of Linear Systems: Section 5.3 Exploration |  |
| Is the abstract of the article comprehensive? If your answer is No, please provide suggestions | This abstract should be improved by including more specific details about the methods or approaches that will be covered in the discussion of controllability, observability, structural decomposition, and minimal realization. This would help potential readers understand the depth and relevance of the chapter's content. Consider adding a brief mention of key concepts, theories, or applications that will be explored within each topic. |  |
| Do you think the English quality of the article is suitable for scholarly communications?  If your answer is No, please provide suggestions | The English quality of the provided manuscript appears to be generally good, but there are areas where improvements can be made for scholarly communication. Here are some suggestions:  **Clarity and Precision**  Ensure that sentences are clear and precise. Use specific terms and avoid unnecessary complexity. This is crucial for effective communication in scholarly writing.  **Consistency in Terminology**  Ensure consistent use of terminology throughout the manuscript. This helps in maintaining clarity and avoids confusion for the readers.  **Grammar and Syntax**  Review the manuscript for any grammatical errors or awkward sentence structures. Clear and grammatically correct sentences contribute to the professionalism of the writing.  **Explicit Details**  Provide explicit details and examples where necessary to support the concepts discussed. This can enhance the reader's understanding and engagement with the material.  **Introduction and Conclusion**  The abstract briefly mentions the topics to be discussed, but consider providing a more detailed introduction and a concise conclusion to summarize key points and insights.  Referencing  If applicable, ensure proper citation and referencing according to the required citation style (APA, MLA, Chicago, etc.). |  |
| Please provide your comments regarding the appropriateness of different sections of the manuscript. | The title "Controllability and Observability for Linear System" is appropriate, as it clearly reflects the main focus of the chapter on key concepts in control system theory.  **Abstract**  The abstract provides a brief overview of the topics to be covered in the chapter, including controllability, observability, judgment criteria, and additional discussions on structural decomposition and minimal realization of transfer function matrices.  It is concise, but adding a bit more detail on the significance of controllability and observability in control system theory could enhance its comprehensiveness.  **Introduction**  It seems that the abstract serves as an introduction. Consider expanding the introductory section to provide more context on why controllability and observability are important in control system theory.  **Main Body (Controllability and Observability)**  The sections on controllability and observability are detailed and cover the necessary mathematical formulations.  Ensure that the mathematical notations are consistent and well-explained for readers who may not be deeply familiar with the specific symbols used.  **Examples (e.g., Example5.9, Example5.10)**  The inclusion of examples is beneficial for illustrating theoretical concepts. Consider providing more context or explanations for the examples to enhance understanding.  **Conditions for Complete Observability in the s Plane**  The section on conditions for complete observability in the s-plane is well-presented. However, breaking down complex equations into smaller steps with explanations could aid in reader comprehension.  **Conclusion**  A concise conclusion summarizing the key findings and contributions of the chapter could enhance the closure of the manuscript.  **Language Quality**  The English quality is generally good, but some sentences are complex. Ensure clarity, simplicity, and precision in expression.  **Figures and Equations**  If applicable, consider including figures or diagrams to visually support the concepts discussed.  Make sure that equations are well-formatted and explained.  **Referencing**  If relevant, ensure proper citation and referencing according to the required style. |  |
| Do you think that the references in the manuscript are proper,recent and sufficient? If you have any suggestions, please write here. | I don't have access to the specific references in the manuscript, so I cannot evaluate their adequacy, recency, or appropriateness. However, I recommend the following general guidelines for ensuring the quality of references:  Recency:  Ensure that the references include recent and up-to-date sources, especially for rapidly evolving fields. Include key publications from the last few years to demonstrate awareness of the latest developments.  Relevance:  Ensure that each reference is directly relevant to the topics discussed in the manuscript. Avoid including sources that may not add significant value to the context of controllability and observability in linear systems.  Diversity:  Include a mix of seminal works and recent publications to provide a comprehensive understanding of the topic. This helps demonstrate a balance between foundational knowledge and current research trends.  Accuracy:  Double-check the accuracy of citation details, including author names, publication titles, journal names, and publication years. Inaccuracies in references can impact the credibility of the manuscript.  Sufficiency:  Ensure that the references sufficiently support the claims and concepts presented in the manuscript. If there are notable gaps in the coverage of relevant literature, consider adding additional sources to strengthen the scholarly foundation.  Credible Sources:  Use reputable and peer-reviewed journals, conference proceedings, and books as primary sources. Be cautious about relying heavily on non-peer-reviewed or less-established publications.  Consistency in Citation Style:  Maintain consistency in the citation style throughout the manuscript. Follow the guidelines of the preferred citation style (e.g., APA, IEEE) consistently.  Cross-Verification:  Cross-verify the references against the specific guidelines or requirements of the target journal or publication venue. |  |

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| **PART 2:** | | | | |
|  | | | **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)* |
| **Are there ethical issues in this manuscript?** | | | *(If yes, Kindly please write down the ethical issues here in details)* |  |
| **Reviewer Details:** | | | |
| Name: | **Harisa Mardiana** | | |
| Department, University & Country | **Universitas Buddhi Dharma, Indonesia** | | |