

Review Form 3

Journal Name:	Journal of Advances in Mathematics and Computer Science
Manuscript Number:	Ms_JAMCS_124120
Title of the Manuscript:	Dynamical Virtual-fenced Warning Technology to Prevent Bridge Pier from Collision with Ships
Type of the Article	Original Research Article

General guidelines for the 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. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript presents a significant advancement for the maritime and structural engineering fields by introducing a dynamical virtual-fenced warning technology aimed at preventing collisions between ships and bridge piers. The innovative use of multi-tier geofencing, coupled with real-time data integration (land, water, ship, climate), offers a robust method for enhancing navigation safety. The application of cubic B-spline curves to calculate virtual control points for geofencing lines is technically sound and has practical implications for collision prevention.</p> <p>I appreciate this manuscript because it addresses a critical safety issue with a novel solution that integrates dynamic parameters and advanced mathematical modeling, providing a scalable framework for future safety systems in marine infrastructure. Additionally, the multi-tier alert system introduces a nuanced approach to risk management, which can lead to better situational awareness for ship operators.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>Yes, the title is suitable for the paper</p>	
<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>Clarify the significance – Mention the practical implications of the research. How will this technology impact safety or reduce accidents? Highlighting the significance can increase the manuscript's relevance to the scientific community.</p> <p>Evaluation or testing – Include information on whether the method has been tested or simulated. Were there experiments or data used to validate the technology? If yes, briefly mention the results.</p> <p>Potential limitations – Briefly stating any limitations or challenges can add depth to the abstract, allowing readers to understand the context better.</p> <p>Applications – The abstract can include potential real-world applications, like which types of rivers or bridges are best suited for this technology.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>Yes its appropriate</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>How does the dynamical virtual-fenced warning technology improve upon existing geofencing techniques in the context of preventing ship collisions with bridge piers?</p> <p>What are the potential limitations of using multi-tiered geofencing lines based on variable data (e.g., climate, water velocity) in real-time navigation scenarios?</p> <p>In what ways could the integration of cubic B-spline curves for geofencing lines influence the accuracy and reliability of warning systems for ship navigation near bridges?</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>No</p>	

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Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	Yes understandable	
<u>Optional/General</u> comments	How does the consideration of variable parameters (e.g., ship size, load, velocity, climate) in calculating geofencing lines contribute to a more dynamic and adaptive warning system, and what challenges might arise from this approach? What are the potential applications of this dynamical geofencing technology beyond bridge pier protection, and how might it be adapted for other forms of transportation or infrastructure?	

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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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