

Review Form 3

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_129986
Title of the Manuscript:	Advances and Current Applications of Two-Dimensional Force Sensors
Type of the Article	Original Research Article

PART 1: 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>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.		
Is the title of the article suitable? (If not please suggest an alternative title)		
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.		
Is the manuscript scientifically, correct? Please write here.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		

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Is the language/English quality of the article suitable for scholarly communications?		
<u>Optional/General</u> comments	<p>The review comments are given below:</p> <p>1. The manuscript deals with an important theme in sensor technology, providing an extensive review of two-dimensional force sensors. Much more relevance could have been achieved if the technological advancements and their practical industrial applications had been better connected.</p> <p>2. This review tries to bridge a gap, but the gap is not explicitly defined. More explanation of this aspect would clearly elucidate the novelty of the study and make it more precise and accurate.</p> <p>3. The "Technical Depth" section is well-written but could include more detailed comparative examples to illustrate why certain principles are better suited for specific applications.</p> <p>4. The applications are diverse but are briefly summarized. Consider expanding one or two key applications, such as healthcare or robotics, to better detail their transformative power in those areas.</p> <p>5. The manuscript often uses technical terms without adequate explanation, which may impede the reader's understanding, especially for a non-specialist. Brief definitions, explanatory footnotes, or a glossary of key terms would greatly enhance accessibility and engagement with the reader.</p>	<p>1. Thank you for your valuable advice. We agree that a stronger link between technological advances and their practical applications will enhance the relevance of manuscripts. In the "Applications" section, we have integrated a more detailed discussion of how the latest technological advances directly affect the industrial sector. Specifically, we highlight the role of 2D force sensors in fields such as robotics, healthcare, and aerospace, and provide concrete examples of how advances in sensor technology translate into real-world applications.</p> <p>2. Thank you for this important observation. We acknowledge that clearly defining the research gap is crucial for highlighting the novelty of the study. In response to your suggestion, we have added more detailed explanations in both the introduction and the conclusion to explicitly define the gap our review aims to bridge. Specifically, we emphasize that while numerous reviews exist on force sensors in general, there is a lack of comprehensive studies focused specifically on two-dimensional force sensors, particularly in relation to their technological advancements and application-specific insights. By clarifying this gap, we aim to show how this study offers a unique contribution to the field, providing a thorough analysis of the most recent developments in two-dimensional force sensor technologies and their diverse industrial applications.</p> <p>Changes Made:</p> <p>Added a more explicit discussion of the research gap in the introduction, clarifying that the manuscript fills a void in the existing literature on two-dimensional force sensors.</p> <p>Enhanced the conclusion to underline the novelty and contribution of this review, specifically addressing how it offers insights into recent advancements and practical applications of two-dimensional force sensors.</p> <p>3. Thank you for this constructive feedback. We appreciate your suggestion to strengthen the "Technical Depth" section with more detailed comparative examples. In response, we have expanded this section by including additional case studies and examples that illustrate why certain sensing principles (e.g., resistive, capacitive, piezoelectric, optical) are more suitable for specific applications. For example, we now include a more in-depth comparison between resistive and capacitive sensors in robotic applications, highlighting how resistive sensors offer greater stability and precision for industrial automation, while capacitive sensors are more sensitive and thus preferred for static force measurement in laboratory settings. Additionally, we compare the use of piezoelectric sensors in dynamic applications like impact testing with optical sensors for biomedical applications, emphasizing the unique advantages of each technology.</p>

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		<p>Changes Made:</p> <p>Expanded the "Technical Depth" section with additional comparative examples, focusing on how specific sensor principles are better suited for certain applications.</p> <p>Added detailed case studies comparing resistive, capacitive, piezoelectric, and optical sensors in various application domains (e.g., robotics, biomedical, industrial automation).</p> <p>4.Thank you for this insightful suggestion. We agree that expanding the discussion on key applications would strengthen the manuscript's impact. In response, we have significantly elaborated on the applications of two-dimensional force sensors in healthcare and robotics. In the healthcare domain, we have added a detailed discussion on how fiber Bragg grating-based force sensors are enabling precise force measurements in minimally invasive surgeries, such as robot-assisted cardiac interventions. These sensors provide high-resolution feedback, allowing surgeons to operate with enhanced safety and accuracy.</p> <p>5. Thank you for this valuable suggestion. We recognize the importance of making the manuscript more accessible, particularly for non-specialist readers. In response to your feedback, we have taken several measures to improve clarity and ensure that key technical terms are well-explained.</p>
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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)	