1. A detailed circuit diagram of the EIT Board system, demonstrating its connection to the electrodes, would be beneficial.

We agree that a schematic of the electrical hardware is a useful addition, and have now added Figure 4E to reflect this. Since the specific details of the board are not our development and our commercially available, we do not show its entire circuit diagram, and instead reference the board’s manufacturer:

*“The 16 electrodes are wired to a commercially available multichannel Spectra electrical impedance measurement device (Minds Eye Biomedical)”*

1. Based on Figures 6 and 7, the absence of a pattern seems advantageous near the outer points, while patterns reduce error at further distances. Could you suggest a pattern design strategy based on these observations? For instance, a more frequent pattern near the center and less so towards the outer areas? Relevant references to computational design papers would be helpful

Thank you for the suggestion – we have added a discussion surrounding design strategies into Figure 7’s discussion:

*“The `optimum pattern' is application dependent, and formalized design processes should be developed to propose patterns for a variety of reward functions. In simulation, such optimization relies on an accurate models of the material behaviors, so physical iterative approaches could instead be employed, using Bayesian optimization to avoid the reality gap.”*

Though we have not cited any computational design papers, we agree that this is a logical direction for future work, and have therefore suggested this approach in the paper’s conclusions:

*“…In particular, the integration of a formalized pattern design process into the manufacturing stages would facilitate optimal sensorization of these bodies.”*

1. Composite materials may display hysteresis and variability in resistance, contingent upon the particular batch within the manufacturing process. It is reasonable to infer that neural networks categorize localization by discerning output patterns. Consequently, the author may wish to highlight this as a notable advantage of the data analysis employed in the paper.

Thank you – we agree that this is an advantage of our approach, and have now discussed this benefit in the results section:

*“By using a data-driven approach, we not only learn to localize tactile stimuli from the fabricated pattern anisotropies, but also benefit from fluctuations in the material properties and hysteresis, tuning our network to each specific sensor to maximize accuracy.”*

***Also, if you have any idea how we could dodge this one that would be amazing.***

"Would it be possible to include tests on the repeatability of the sensor's self-healing properties?"

I think we can just suggest this is out of scope, pointing at your ACS paper & my NPG paper as locations where the healabilities have been characterized. If you want to add a brief discussion about how repeatable the healing is, you could reference Julie’s new paper: [Autonomous Testing of the Repeatable Healability of Pneumatic Self-Healing Soft Actuators | Robotics Reports (liebertpub.com)](https://www.liebertpub.com/doi/10.1089/rorep.2023.0014)