**Rebuttal**

I deeply appreciate the time and effort put forth in reviewing this paper. I value all of the noted corrections and suggestions as to how the paper can be better. As per the feedback, all editorial changes were implemented. This included all suggested font changes, requests for rephrasing of confusing statements, APA formatting errors, and the like. The only exception was that the citations at the end of the work were completed as per APA 6 rather than APA 7. This was done because much difficulty was encountered in tracking down the conference editor’s names required for APA 7.

One suggestion was to include side by side comparison of this algorithm with other similar algorithms. This paper improvement, while attempted multiple times throughout the initial submission and revision, proved to not be feasible for the following reasons. During the literature review, few papers were found that outline algorithms similar to this one. While there are a number of papers about swept volumes, this topic is an older computer graphics topic that has not had extensive implementation in predictive collision detection of robots. Thus, direct comparison was difficult.

Furthermore, the papers that do bear more similarities to this work proved to not be repeatable. There was no open source code, and not enough details were given in the publications to reproduce the work. To have attempted degraded approximations of these works (degraded due to the authors lack of expertise on other’s research and the lack of particular detail in the work) for benchmarking would have been misleading and not useful. Even if the algorithms developed in these works were available, the situations surrounding the implementation were often not similar to this work.

For these reasons, rather than relying on the relative computational ability of this algorithm, other successes of the algorithm should be highlighted to differentiate it. This algorithm was shown to run in real time, and this was our primary speed requirement. On top of achieving this, the algorithm serves as a unique approach to modeling an entire trajectory of the robot rather than just a projection of the robot into an immediately future state. The algorithm provides point clouds that can subsequently be used in a replan if desired. It is particularly suited to online operation in Human Robot Collaboration settings.

Again, gratitude cannot be overstated for the time taken by the reviewers to evaluate this work and provide feedback. The feedback has been deeply appreciated and, to the author’s best abilities, implemented.