

September 1<sup>st</sup>, 2023

Prof Dame Wendy Hall  
Editor-In-Chief  
Royal Society Open Science  
**Online Submission**

**RE:** Manuscript submission – *‘The Quest for Dynamic Consistency: A Comparison of OpenSim Tools for Residual Reduction in Simulations of Human Running’*

Please accept our submission of the above-named **original research article** for your consideration in *Royal Society Open Science*. This work compares a range of approaches applicable for residual reduction in biomechanical simulations of human running using OpenSim (one of the world’s most commonly used musculoskeletal modelling and simulation software). Reducing residuals in simulations of human gait is important to ensure appropriate and feasible outputs from musculoskeletal models. The findings of this study provide evidence to inform OpenSim users decision-making at the residual reduction step of their modelling and simulation workflow – and therefore has applicability to researchers investigating the biomechanics of human gait.

There are no conflicts of interest associated with the production of this manuscript. No external financial support was obtained in the production of this manuscript, nor does this publication concern any commercial product. This manuscript has not been published or submitted for publication elsewhere (with the exception of a preprint on BioRxiv servers), and will not be submitted for publication elsewhere until a decision has been made regarding its acceptability by the *Royal Society Open Science* review process.

Thank you for your consideration of this manuscript and I look forward to your feedback.

Kind regards,

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