Professor João Soares Editor-in-Chief Canadian Journal of Chemical Engineering

Dear Professor João Soares,

Thank you for considering our manuscript, Optimal Control of Axial Dispersion Tubular Reactors with Recycle: Addressing State-Delay through Transport PDEs, for publication. We are also grateful to the reviewers for their valuable comments and suggestions, which have been very helpful in improving our work.

To assist in the review process, we have included the following:

- **Reply letter**: Following this cover letter, detailed responses to each reviewer's comment is provided. In addition to addressing each comment individually, we have also discussed two common concerns raised by multiple reviewers at the beginning of the reply letter: the modeling approach and parameter sensitivity analysis.
- Revised manuscript: The updated and final version of the manuscript that incorporates changes based on the reviewers' feedback and our own revisions.
- Tracked changes summary: A document showing all modifications made to the initial submission, with color-coded text and explanations for added, removed, and revised content.

Thank you again for considering our work. We do hope the revised manuscript meets the expectations of the reviewers and the journal.

Sincerely,

Behrad Moadeli Department of Chemical and Materials Engineering University of Alberta, Edmonton, Alberta, Canada moadeil@ualberta.ca