



July 19, 2024

Drs. Longsheng Fu, Manoj Karkee, Francesco Marinello, and Tomás Norton,  
Editors-in-Chief, *Computers and Electronics in Agriculture*

Dear Drs. Longsheng Fu, Manoj Karkee, Francesco Marinello, and Tomás Norton,

I am writing to submit our manuscript titled "A Model Generalization Study in Localizing Indoor Cows with the COw LOcalization (COLO) Dataset." While AI-driven applications in agriculture have been extensively studied, there is a notable gap in evaluating the quality and generalizability of these applications in real-world scenarios. A persistent challenge for farm operators is determining how well existing models can adapt to their specific environments and the additional resources required for this adaptation.

Our study aims to address this challenge through a case study focused on cow localization within a free-stall barn setting. We investigate the generalization capabilities of existing models under varying conditions, including environmental lighting, model complexity, and camera view angles. Furthermore, we introduce a new dataset, the COw LOcalization (COLO) dataset, which serves as a benchmark for future research in this domain.

We believe that our findings will be of significant interest to the readers of *Computers and Electronics in Agriculture* and would be honored if you considered our manuscript for publication in your esteemed journal.

I appreciate your consideration.

Sincerely,

**Chun-Peng James Chen, Ph.D.**

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