

SUBMISSION LETTER

Dear Editor Board of Swarm Intelligence,

I am writing to submit a manuscript titled “*A Multi-model Distributed Controller for Swarm Navigation: Obstacle Clearance Strategy*” for consideration of publication in your journal. The manuscript presents a novel concept of swarm robotics that would be of great interest to the readers of Swarm intelligence and make a significant contribution to the journal.

We declare that our manuscript is not submitted to another journal or conference, and it is free from plagiarism. The manuscript has been edited for language, and we have used a spell checker Grammarly to ensure its quality.

The main contributions of our manuscript are as follows:

- A novel distributed obstacle-pushing strategy for obstacle clearance. Self-identified pushing section and self-adapted pushing strategy are proposed to deal with various types of shapes and friction of obstacles.
- A multi-model distributed controller for swarm navigation using obstacle clearance strategy. This is the first work that synthesizes the flocking technique, wall-following behavior and object manipulation for the purpose of swarm navigation.
- The proposed control is fully distributed, adaptable to various environments, and versatile in different missions.

We suggest the following three possible referees for our manuscript, with whom we have no publications or projects in common and do not share our affiliations:

- Mr. Preston Culbertson, a PhD student in Multi-Robot Systems Lab (Director: Dr. Mac Swager), Department of Mechanical Engineering at Stanford University,
- Mr. Jahir Argote Gerald, a PhD student in Natural Robotics Lab (Director: - Dr Roderich Gross), Department of Automatic Control and Systems Engineering, University of Sheffield,
- Pratik Prajapati, a PhD student in Human-Centered Robotics Lab at IIT Gandhinagar, Gujarat, India.

Lastly, we are confident that our manuscript meets the high standards of the journal and would be an excellent addition to its collection. Thank you for considering our submission.

Sincerely,

Truong Nhu, Anh Duy Nguyen, Pham Duy Hung and Trung Dung Ngo,

“A Multi-model Distributed Controller for Swarm Navigation: Obstacle Clearance Strategy”