# Introduction of Supplementary Videos for

**Obstacle Avoidance of Biological Groups Based on Visual Perception-Decision-Propulsion**

- Supplementary Video 1 (.mp4 format). Obstacle avoidance with $N = 50,\ R = 10,\ \lambda = 0.01,\ \alpha = 1$ and $\beta = 0.5$ in scene A. This scene is an enclosed spatial form, the edge of which is made up by a $200 \times 200$ square boundary.
- Supplementary Video 2 (.mp4 format). Obstacle avoidance with $N = 50,\ R = 10,\ \lambda = 0.01,\ \alpha = 1$ and $\beta = 0.5$ in scene B. This scene is an enclosed spatial form, the edge of which is made up by $200 \times 200$ and $80 \times 80$ square boundaries.
- Supplementary Video 3 (.mp4 format). Obstacle avoidance with $N = 50,\ R = 10,\ \lambda = 0.01,\ \alpha = 1$ and $\beta = 0.5$ in scene C. This scene is an enclosed spatial form, the edge of which is made up by $300 \times 300$ and 5 $20 \times 20$ square boundaries.
- Supplementary Video 4 (.mp4 format). Obstacle avoidance with $N = 50,\ R = 10,\ \lambda = 0.01,\ \alpha = 1$ and $\beta = 0.5$ in scene D. This scene is an enclosed spatial form, the edge of which is made up by $300 \times 300$ and 9 $20 \times 20$ square boundaries.
- Supplementary Video 5 (.mp4 format). Obstacle avoidance with $N = 50,\ R = 10,\ \lambda = 0.01,\ \alpha = 1$ and $\beta = 0.5$. The obstacles of this scene are made up by a $100 \times 300$ fixed obstacle (which has an opening at one end) and 2 $20 \times 20$ dynamic obstacles (which move up and down periodically).
- Supplementary Video 6 (.mp4 format). Vortex motion with $N = 50,\ R = 10,\ \lambda = 0.02,\ \alpha = 0.1$ and $\beta = 0.02$.