

No	Module	No	Parameter		
1	Settings	1	Simulation mode (0: rapid prototype, 1: parameter auto-tuning, 2: batch processing)		
		2	Number of agents		
		3	Simulation time		
		4	Sample time of motion		
		5	Sample time of upper control		
		6	Sample time of bottom control		
		7	Flag to control whether to save data		
		8	Time interval for storing agents' states		
		9	Flag to select motion type $flag^m$		
		10	Flag to select swarm algorithm $flag^s$		
		11	Flag to select set of performance metrics $flag^p$		
		12	Flag to control whether to plot figures		
		13	Time interval for updating figures		
2	Map	1	Flag to control whether to regard the specified range as walls		
		2-3	X range		
		4-5	Y range		
		6-7	Z range		
		8	Radius of cylinders		
		9	Row number of cylinders		
		10	Col number of cylinders		
		11	Space between adjacent cylinders in x direction		
		12	Space between adjacent cylinders in y direction		
		13	Offset of cylinders in x direction		
		14	Offset of cylinders in y direction		
		15	Number of walls that a cylinder is dispersed into		
		16	Resolution of grid map in x direction		
		17	Resolution of grid map in y direction		
		3	Motion ($flag^m = 0$, point-mass)	1	Maximum acceleration
				2	Maximum velocity
				3	Time constant for desired position convergence
4	Time constant for desired velocity convergence				
Motion ($flag^m = 1$, quadcopter)	1		Gravity constant		
	2-4		Inertia		
	5		Mass		
	6		Length from center to motor		
	7		Maximum horizontal speed		
	8		Maximum vertical speed		
	9		Maximum yaw rate		
	10		Maximum vertical acceleration		
		
		

	Motion ($flag^m = 2$, quadcopter)	1	Maximum speed
		2	Maximum rotation speed
		3	Time constant for desired position convergence
4	Noise	1	Standard deviation of velocity noise
5	Sensor	\	Sensor type (Currently only LASER)
		1-2	Detection angular range
		3	Angular resolution
		6-7	Detection distance range
6	Swarm ($flag^s = 0$, Vasarhelyi)	1	Communication range
		2	Flock speed
		3	Repulsion range
		4	Repulsion gain
		5	Stopping point offset of alignment
		6	Coefficient of velocity alignment
		7	Velocity slack of alignment
		8	Gain of braking curve
		9	Acceleration of braking curve
		10	Stopping point offset of walls
		11	Velocity of virtual shill agents
		12	Gain of braking curve for walls
		13	Acceleration of braking curve for walls
		14	Maximum of desired speed
	Swarm ($flag^s = 1$, Vasarhelyi+will)	1-2	The same as the No.1-2 parameters above
		3	Time constant of exponential decay of will
		4-15	The same as the No.3-14 parameters above
	Swarm ($flag^s = 2$, Couzin)	1	Half field of view
		2	Dimension
		3	Flock speed
		4	Repulsion radius
		5	Width of orientation range
		6	Width of attraction range
		7	Angular noise of desired velocity
7	Evaluation ($flag^p = 0$)	1	Flock speed
		2	Collision radius
		3-5	Parameters of fitness functions
	Evaluation ($flag^p = 1$)		
8	Visualization	1	Flag to control whether to plot trajectories
		2	Flag to control whether the perspective follows the group center
		3	Flag to control whether to save figures
		4	Flag to control whether to save video
		5	Plot dimension

	6	Time interval of trajectories
	7	Video speed