

Aiyi LI
PhD student
October 2023

Research laboratory B501,
Graduate School of Information Science and Technology,
Osaka University 1-5 Yamadaoka,
Suita, Osaka 565-0871, Japan

Email: li-aiyi@ist.osaka-u.ac.jp
Research lab: www-waka.ist.osaka-u.ac.jp
Homepage: argyili.github.io

RESEARCH INTERESTS

Swarm systems, agent-based simulation, biological physics, data science

EDUCATION

PhD student in Informatics, *Osaka University*. Current

M.Sc. in Informatics, *Osaka University*. 2023

B.Eng. in Software Engineering, *Hefei University of Technology*. 2020

AWARDS AND HONORS

IEEE TCSE Diversity and Inclusion Travel Grant Award, ACSOS. 2023

The Award of the Graduate School of Information Science and Technology, Osaka University. 2023

SICE Excellent Student Award, The Society of Instrument and Control Engineers, Japan. 2023

Master Course Scholarship, Yoneyama Memorial Foundation, Japan. 2022

Study Progress Prize, Hefei University of Technology. 2018

RESEARCH EXPERIMENTENCE

Research Assistant, Graduate School of Information Science and Technology, Osaka University. May 2023-Current.

Fellowship Student, Fellowship Program for Developing IT Talent to Achieve Cross-Border Innovation, Osaka University. Apr 2023-Current

Program Student, Humanware Innovation Program, Leading Graduate Schools of Osaka University. Apr 2022-Current

Research Assistant, Institute of Social and Economic Research, Osaka University. Jun 2021-Jul 2021

Part-time Lecturer, Imawa Academy, Japan. Apr 2021-Current

GRANTS

A. Li (PI) et al., “Cooperative Transport System for Drone Swarms with Leader Drones,” *Osaka University Humanware Innovation Program Student Driven Interdisciplinary Research*, June 2023-Mar 2024, JPY 900,000.

PUBLICATIONS

JOURNAL ARTICLES

- [1] A. Li, M. Ogura and N. Wakamiya, “Communication-free shepherding navigation with multiple steering agents,” *Frontiers in Control Engineering*, vol. 4, 2023.

CONFERENCE PRECEEDINGS

- [2] A. Li, “Swarm control approach combining leader and predator agents,” in *4th IEEE International Conference on Autonomic Computing and Self-Organizing Systems, Doctoral Symposium*, 2023.
- [3] Y. Deng, A. Li, M. Ogura and N. Wakamiya, “Collision-free shepherding control of a single target within a swarm,” in *2023 IEEE International Conference on Systems, Man, and Cybernetics*, 2023.
- [4] Y. Deng, A. Li, M. Ogura and N. Wakamiya, “Collision-free property analysis for the shepherding swarm,” in *SICE Annual Conference 2023*, pp. 1072-1073, 2023.
- [5] A. Li, M. Ogura and N. Wakamiya, “Proposal of a bearing-only shepherding algorithm with limited sensing capabilities,” in *AROB-ISBC-SWARM 2023*, pp. GS34-1, 2023.
- [6] Y. Deng, M. Ogura, A. Li and N. Wakamiya, “Shepherding control for separating a single agent from a swarm,” in *1st IFAC Workshop on Control of Complex Systems*, pp. 217-222, 2022.
- [7] A. Li, M. Ogura and N. Wakamiya, “Proposal of farthest-agent targeting algorithm with indirect chasing,” in *SICE Annual Conference 2022*, pp. 92-94, 2022.

DOMESTIC PRESENTATIONS

- [8] A. Li, M. Ogura and N. Wakamiya, “Evaluation of applicability of a bearing-only shepherding algorithm to various initial placements,” 第 67 回システム制御情報学会研究発表講演会, pp. 251-3, 2023.
- [9] 秋口敬, 小蔵正輝, 李艾義 and 若宮直紀, “最遠個体追跡法に着想を得たリーダー型群れ誘導アルゴリズムの開発と評価,” *信学技報*, vol. 122, no. 435, MSS2022-94, pp. 150-155, 2023.
- [10] Y. Deng, M. Ogura, A. Li and N. Wakamiya, “Shepherding algorithm for separating a single agent from swarm,” 第 35 回自律分散システム・シンポジウム, pp. 1C1-4, 2023.
- [11] A. Li, M. Ogura and N. Wakamiya, “A distributed approach for shepherding with multiple steering agents,” 第 34 回自律分散システム・シンポジウム, pp. 2B2-3, 2022.

TEACHING EXPERIMENTENCE

Teaching assistant, IST Seminar B (for undergraduate students), Osaka University. Sep 2021-Current
Part-time Lecturer, Imawa Academy, Japan. Apr 2021-Current
Teacher Qualification Certification for Senior School English Subject, China. 2020

INTERNSHIP

App Dev, Sider Inc Fixstars Corp., Japan. Sep 2021

Back-End Dev, Cocone Corp., Japan. Aug 2021

App Dev, Shenzhen Danale Technology Co., Ltd, China. Jul 2019-Oct 2019

Aiyi LI, October 2023