

Call for Contributions

Note: Onsite and Online Options

In order to accommodate a large number of situations, we are offering the option for either physical presence or virtual participation. We would be delighted if all authors manage to attend in person, but are aware that special circumstances are best handled by having flexible options.

Submission:

1. Inform the Chair: with the Title of your Contribution

2. Submission URL:

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICAS+2020+Special>

Please select Track Preference as **SWARM ROBOTICS**

Special track

SWARM ROBOTICS: Collective Decisions of Interacting Robots

Chair and Coordinator

Adj. Prof., Dr Giulia De Masi - Zayed University, UAE

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Co-Chair

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along with

ICAS 2020, The Sixteenth International Conference on Autonomic and Autonomous Systems

<https://www.iaria.org/conferences2020/ICAS20.html>

September 27 - October 01, 2020 - Lisbon, Portugal

Swarm robotics is an emerging field of robotics inspired by collective behaviour of social insects (swarms). While the usage of single robots is well established, the use of group of robots is an increasingly relevant topic of research. Based on local interaction of a single robot with environment and other few robots, the final aim is to design the emergent behaviour of a whole swarm of robots for specific tasks. Compared to a single robot, the swarm is more robust, flexible, efficient and scalable.

Together with simulations, the availability of low cost micro robots allows the realization and study of swarm of robots in the laboratory, before the applications on the field. At the same time also the application of swarm design to drones and aquatic vehicles is gaining a momentum.

Potential applications are -among the others- environmental monitoring, disaster rescue missions, precision agriculture.

Topics include, but not limited to:

- Swarm robotics
- Swarm robotics and applications
- Challenges and problems in swarm robotics
- Advances in swarm robotics
- Cooperative control

- Modeling and simulation
- Multi-agent systems
- Decentralized control and distributed systems
- Swarm robotics and behavior models
- Swarm robotics and multi-robotic systems
- Experimental platforms in swarm robotics
- Swarm robotics system in real life
- Advantages and disadvantages of swarm robotics
- Mathematical modelling of swarm-robotic systems

Important Datelines

Submission: July 3, 2020

Notification: July 23, 2020

Registration: August 2, 2020

Camera ready: August 2, 2020

Contribution Types

- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Paper Format

- See: <http://www.iaria.org/format.html>

- Before submission, please check and comply with the editorial rules: <http://www.iaria.org/editorialrules.html>

Publications

- Extended versions of selected papers will be published in IARIA Journals: <http://www.iariajournals.org>
- Print proceedings will be available via Curran Associates, Inc.: <http://www.proceedings.com/9769.html>
- Articles will be archived in the free access ThinkMind Digital Library: <http://www.thinkmind.org>

Paper Submission

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICAS+2020+Special>

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Registration

- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.

- Registration fees are available at <http://www.iaria.org/registration.html>

Contact

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