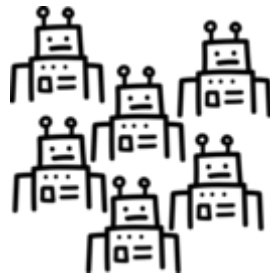


# Welcome to NEST lab!

## Novel Engineering for Swarm Technologies



### What is NEST Lab?

Robot swarms are complex and weird machines. A robot swarm is a distributed system, with a constantly changing communication topology, populated by a large number of that act in the physical space. Robot swarms must react intelligently to environmental stimuli and interact with humans in a friendly manner. At NEST, we study how to best express swarm algorithms, how to make swarms aware of their internal state and the environment, and how to prevent the robocalypse.



### Latest News

- **Jun 24, 2019** » Nathalie Majcherczyk will be joining [GoogleX](#) for a summer internship.
- **Sep 19, 2018** » The paper *Decentralized Progressive Shape Formation with Robot Swarms* by Guannan Li, David St-Onge, Carlo Pinciroli, Andrea Gasparri, Emanuele Garone, and Giovanni Beltrame was accepted at the [Autonomous Robots journal](#).
- **Sep 3, 2018** » The paper *A Gamification Concept for Teaching Swarm Robotics* by Heiko Hamann, Carlo Pinciroli, and Sebastian von Mammen was accepted at the [12th European Workshop on Microelectronics Education \(EWME 2018\)](#).
- **Aug 30, 2018** » Nathalie Majcherczyk received a *IROS Student and Developing Countries (SDC) Travel Award* to attend [IROS 2018](#) in Madrid and present her paper.
- **Jul 24, 2018** » The paper *Decentralized Connectivity-Preserving Deployment of Large-Scale Robot Swarms* by Nathalie Majcherczyk, Adhavan Jayabalan, Giovanni Beltrame, and Carlo Pinciroli was accepted at [IROS 2018](#).
- **Jul 24, 2018** » The paper *Circle Formation with Computation-Free Robots Shows Emergent Behavioral Structure* by David St-Onge, Carlo Pinciroli, and Giovanni Beltrame was accepted at [IROS 2018](#).
- **Jun 14, 2018** » The paper *Simulating Kilobots within ARGoS: Models and Experimental Validation* by Carlo Pinciroli, Mohamed Salaheddine Talamali, Andreagiovanni Reina, James A. R. Marshall, and Vito Trianni was accepted at the [11th International Conference on Swarm](#)

### [Intelligence \(ANTS 2018\)](#).

- **Jun 14, 2018** » The paper *Simulating Multi-Robot Construction in ARGoS* by Michael Allwright, Carlo Pinciroli, Navneet Bhalla, and Marco Dorigo was accepted at the [11th International Conference on Swarm Intelligence \(ANTS 2018\)](#).
- **May 07, 2018** » Nathalie Majcherczyk will be joining Amazon Robotics [Amazon Robotics](#) for a summer internship.
- **Apr 16, 2018** » Nathalie Majcherczyk received an *Inclusion@RSS* travel grant to attend [RSS 2018](#) in Pittsburgh and present a poster about her work.
- **Mar 27, 2018** » Nathalie Majcherczyk received an *WPI Graduate Student* travel grant to attend [IROS 2018](#) in Madrid and present her paper.
- **Mar 6, 2018** » The paper *Engineering Safety in Swarm Robotics* by Giovanni Beltrame, Ettore Merlo, Jacopo Panerati, and Carlo Pinciroli was accepted at the [1st International Workshop on Robotics Software Engineering \(RoSE 2018\)](#).
- **Jan 12, 2018** » The paper *From Swarms to Stars: Task Coverage in Robot Swarms with Connectivity Constraints* by Jacopo Panerati, Luca Gianoli, Carlo Pinciroli, Abdo Shabah, Gabriela Niclescu, and Giovanni Beltrame was accepted for publication at [ICRA 2018](#).
- **Aug 14, 2017** » [Worcester Channel 3 coverage](#) of research at NEST Lab.
- **Aug 8, 2017** » [Article of WPI Today](#) about research at NEST Lab.
- **May 29, 2017** » [Tutorial](#) about [Buzz](#) at [ICRA2017](#).
- **Apr 5, 2017** » WPI undergrad Brandon M. Sanders awarded a [Summer Undergraduate Research Fellowship](#). Brandon will use this scholarship to join NEST Lab over the summer.
- **Mar 7, 2017** » Nathalie Majcherczyk awarded the first [WPI PhD Global Research Scholarship](#). Nathalie will use this scholarship to visit [MIST Lab](#) in Montreal over the summer.
- **Feb 24, 2017** » WPI undergrad Sierra T. Palmer nominated [Clare Boothe Luce Research Scholar](#). Sierra will use this scholarship to join NEST Lab over the summer.
- **Nov 16, 2016** » Tutorial proposal about [Buzz](#) accepted at [ICRA2017](#).
- **Nov 9, 2016** » Talk about paper *Decentralized Progressive Shape Formation with Robot Swarms* at [DARS2016](#).
- **Oct 29-30, 2016** » [Buzz](#) demo at [NERC2016](#).
- **Oct 12, 2016** » Talk about [Buzz](#) at [IROS2016](#).
- **Sep 28, 2016** » Paper *Swarm-Oriented Programming of Distributed Robot Networks* to appear on the [IEEE Computer Magazine](#).

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