

# Shan Jiang

PH.D. CANDIDATE

Department of Computing, The Hong Kong Polytechnic University

✉ [cssjiang@comp.polyu.edu.hk](mailto:cssjiang@comp.polyu.edu.hk) | 🏠 [jasison27.github.io](https://jasison27.github.io)

## Education

### The Hong Kong Polytechnic University

PH.D. IN COMPUTER SCIENCE

Under the supervision of Prof. Jiannong Cao (Fellow of IEEE)

Hong Kong SAR, China

Jul. 2016 - Present

### Sun Yat-sen University

B.Sc. IN COMPUTER SCIENCE

Member of University ACM-ICPC team

Guangzhou, China

Sep. 2011 - Jul. 2015

## Experience

### Department of Computing, The Hong Kong Polytechnic University

RESEARCH ASSISTANT, UNDER THE SUPERVISION OF PROF. JIANNONG CAO

Working on distributed algorithms and programming model for multi-robot systems.

Hong Kong SAR, China

Apr. 2011 - Jun. 2016

### Global Market Group

SOFTWARE ENGINEER

Working on Android app development.

Guangzhou, China

Jul. 2014 - Sep. 2014

### Flamingo Network Inc. Co. Ltd.

SOFTWARE ENGINEER

Working on mobile game development using cocos2d-x.

Guangzhou, China

Jul. 2012 - Sep. 2012

## Publication

#### Journal

Xiulong Liu, Jiannong Cao, Yanni Yang, Shan Jiang, "CPS-Based Smart Warehouse for Industry 4.0: A Survey of the Underlying Technologies", accepted MDPI Computers

#### Conference

Jia Wang, Jiannong Cao, Shan Jiang, "Fault-Tolerant Pattern Formation by Multiple Robots: A Learning Approach", *SRDS 2017*: 268-269 (PhD Forum)

#### Conference

Shan Jiang, Jiannong Cao, Jia Wang, Milos Stojmenovic, Julien Bourgeois, "Uniform Circle Formation by Asynchronous Robots: A Fully-Distributed Approach", *ICCCN 2017*: 1-9

#### Book Chapter

Yuvraj Sahni, Jiannong Cao, Shan Jiang, "Middleware for Multi-Robot System", a chapter to appear in "The Philosophy of Mission-Oriented Wireless Sensor Networks" (Springer), Habib M. Ammari (Ed.). 2017.

#### Conference

Shan Jiang, Jiannong Cao, Yan Liu, Jinlin Chen, Xuefeng Liu, "Programming Large-Scale Multi-Robot System with Timing Constraints", *ICCCN 2016*: 1-9

#### Conference

Shan Jiang, Junbin Liang, Jiannong Cao, Rui Liu, "An ensemble-level programming model with real-time support for multi-robot systems", *PerCom Workshops 2016*: 1-3 (Demo)

## Project

### AI3 - A Layered-Federation Information Sharing Architecture

LEADER

- Proposed and developed TSAR, a fully-distributed Trustless data ShARing platform. It employs Blockchain as the underlying technology.
- Proposed BlochIE, a BLOckchain-based platform for Healthcare Information Exchange.

HK PolyU

Sep. 2017 - Present

### Declarative Programming and Runtime Support for Distributed Coordination of Multirobot Systems

LEADER

- Improve the multi-robot test-bed concerning hardware. A new demo "multi-robot pattern formation" is developed.
- Proposed a fully-distributed approach for multi-robot uniform circle formation problem.
- Investigated the possibility to employ learning approaches in multi-robot systems.

HK PolyU

Jan. 2017 - Present

## Coordination and Computation in Distributed Intelligent MEMS

HK PolyU

CORE MEMBER

Apr. 2015 - Aug. 2016

- Surveyed existing middleware for multi-robot systems.
- Proposed an ensemble-level programming model supporting time-constraint mechanism.
- Developed a test-bed and a simulation environment for multi-robot systems. The simulator is extended from VisibleSim with supports of action and wireless communication. On the test-bed, a demo that “multiple robots pass through a narrow corridor” is developed.
- Wrote the project completion report.

## Honors & Awards

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Jun. 2017 **Second Runner-up (3/33)**, ACM-HK Programming Contest 2017

Hong Kong, China

Nov. 2014 **Silver Medal (32/182)**, Beijing Regional Contest, The 39th ACM-Asia Programming Contest

Beijing, China

May. 2014 **The Fourth Place (4/147)**, ACM-Guangdong Provincial Programming Contest 2014

Guangzhou, China

Nov. 2014 **Outstanding Student with Second-class Scholarship**, Sun Yat-sen University

Guangzhou, China

Nov. 2012 **Outstanding Student with Third-class Scholarship**, Sun Yat-sen University

Guangzhou, China

## Service

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S2018 **Assistant Coach**, HK PolyU ACM-ICPC Team

HK PolyU

F2017 **Teaching Assistant**, Distributed Computing (COMP5325)

HK PolyU

S2017 **Teaching Assistant**, Programming Fundamentals (COMP1011)

HK PolyU

F2016 **Teaching Assistant**, Computer Communications Networks (COMP312)

HK PolyU

F2014 **Teaching Assistant**, Algorithm Design and Analysis

SYSU