

# Yaozhu Sun

孫耀珠

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## EDUCATION

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- **Zhejiang University** Hangzhou, China  
*B.Eng. (Hons) in Computer Science and Technology* *Sept. 2014 – June 2019*
  - *Affiliation:* Qiushi Science Class, Chu Kochen Honors College.
  - *Thesis:* A High-Performance Erlang Virtual Machine Based on Partial Evaluation (Work In Progress).
  - *Teaching Assistantship:* 21190650 Programming Principle (Fall 2018).
- **Tokyo Institute of Technology** Tokyo, Japan  
*Exchange Student under Academic Cooperation Agreement Program* *Apr. 2017 – Feb. 2018*
  - *Affiliation:* Programming Research Group, Department of Mathematical and Computing Science.
  - Conducted research on programming languages under the guidance of Prof. Hidehiko Masuhara and contributed to two relevant projects, namely Ikra-Ruby and Ikra-Cpp. The former is a Ruby Gem for array-based GPU computing and the latter is a C++/CUDA DSL for object-oriented programming with structure-of-arrays layout.

## WORK EXPERIENCE

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- **Microsoft Research Asia** Beijing, China  
*Research Intern, Machine Learning Group* *Apr. 2019 –*
  - Doing research work on GraphMachine, a dataflow system for generalized distributed continuations.
- **Huawei Technologies Co., Ltd.** Hangzhou, China  
*Software Engineering Intern, Compilers and Programming Languages Lab* *July 2018 – Aug. 2018*
  - Contributed to the Clang-based compiler frontend for Huawei Ascend chips, and the deep learning framework on top of it.
- **Qiushichao Website, Zhejiang University** Hangzhou, China  
*Part-Time Software Engineer, iOS Team* *Mar. 2015 – Mar. 2017*
  - Led the iOS team in the development of the new version of Qiushichao Mobile and contributed most of the code. The new version embraced a totally different design and was rewritten in Swift. It is available on the App Store and is the most popular campus app at Zhejiang University with 9,000+ weekly active users.

## GROUP MEMBERSHIP

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- **Apple Club, Zhejiang University** Mar. 2018 – June 2019  
*President*
  - Started the club with the support of Apple Inc. and the College of Computer Science and Technology, aiming to promote Apple's software technology and design principles on campus.
  - Built the official website, recruited the first members, organized the internal training programs, and held several public lectures with invited speakers.
- **Supercomputing Team, Zhejiang University** 2015, 2018  
*Member*
  - Participated on behalf of Zhejiang University in supercomputing competitions, where we built a cluster with GPUs on site and optimized scientific computing applications on the cluster.

## PUBLICATIONS

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- Matthias Springer, Yaozhu Sun, and Hidehiko Masuhara. Inner Array Inlining for Structure of Arrays Layout. In *Proceedings of the 5th ACM SIGPLAN International Workshop on Libraries, Languages, and Compilers for Array Programming (ARRAY@PLDI)*. Philadelphia, USA. June 19, 2018.

## AWARDS

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- **ASC Student Supercomputing Challenge** Asia Supercomputing Community and Inspur Group  
*First Prize (8th/300+)* May 2018
- **ZJDaily-Alibaba Geek Projects** Zhejiang Daily and Alibaba Group  
*Funded with 10,000 CNY* Jan. 2017
- **Mobile Application Innovation Contest, China Collegiate Computing Contest** MOE, Tsinghua U. and Apple Inc.  
*Second Prize (4th–9th/360)* Sept. 2016
- **Parallel Application Challenge** CCF TCHPC and Intel Corporation  
*Bronze Award in Parallel Optimization (4th–8th/229)* Nov. 2015
- **National Olympiad in Informatics in Provinces** China Computer Federation  
*First Prize in Jiangsu Province* Dec. 2012

## CODE REPOSITORIES

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- **naive-pascal-compiler** (C++): A naive Pascal compiler, using Flex & Bison in its frontend and LLVM as its backend. This is a team project and my work is generating LLVM IR from AST.
- **inn** (Java): A website developed using Spring Boot (Spring MVC + Thymeleaf + Hibernate).
- **othello-ai** (C++): An Othello AI using negamax search with alpha-beta pruning and bitwise optimization.
- **PyJS** (JavaScript): A minimal Python interpreter compatible with Web browsers.
- **CurriculaTable** (Swift): A flexible timetable for curricula on iOS.
- **TinyDB** (C++): A mini relational database system with command line interface. This is a team project and my work is parsing SQL queries using PEGTL.
- **toshokan** (Ruby): A website developed using Ruby on Rails.
- **ArduinoBluetoothMusicPlayer** (Arduino & Swift): Playing music with your Arduino and controlling it with your iPhone.
- **wego.rb** (Ruby): A weather app for the command line.