

# Shuang Liu

---

## Contact Information

Department of Computer Science and Engineering  
University of California, San Diego  
9500 Gilman Drive, EBU3B  
La Jolla, CA 92093

*E-mail:* s3liu@eng.ucsd.edu

*Mobile:* (+1) 858-230-5110

## Education

**University of California, San Diego**, Sept. 2016 - Present

- Ph.D candidate in Computer Science
- Research Advisor: Hao Su

**Shanghai Jiao Tong University**, Sept. 2012 - 2016

- B.S. in Computer Science (ACM Class)
- Research Advisors: Karthik Sridharan, Zhihua Zhang, Xiaomin Chen

## Research Interest

My research focus is on theoretical and applied machine learning. My current research interests are Reinforcement Learning and Graph Neural Networks. My past research areas include Multi-armed Bandit and Generative Adversarial Networks.

## Programming Skills

C, C++, Python

## Research Experience

**Research Intern, Google Research**, June 2021 - Sept. 2021

- Company: Google
- Project: Unified Multi-Level Page Layout Entity Clustering by Graph Convolutional Networks

**Quantitative Research Intern, Global Quantitative Strategies**, June 2020 - Aug. 2020

- Company: Citadel
- Project: Futures volume prediction

**Research Assistant**, Sept. 2016 - Sept. 2018

- Institute: University of California, San Diego
- Mentor: Kamalika Chaudhuri
- Topics: Machine Learning Theory, Generative Adversarial Learning, Large-Scale Optimal Transport, Adversarial Examples

**Research Intern**, Feb. 2016 - May 2016

- Company: Yitu Technology
- Topics: Face detection and Face alignment

**Research Assistant**, July 2015 - Dec. 2015

- Institute: Cornell University
- Mentor: Karthik Sridharan
- Topics: Convex Analysis, Banach Space Geometry, Large-Scale Smooth Optimization, Online Learning, Bandit Convex Optimization, Partial Information Games

**Research Assistant**, June 2014 - June 2015

- Institute: Shanghai Jiao Tong University
- Mentor: Zhihua Zhang
- Topics: Convex Optimization, Statistical Machine Learning, Stochastic Bandit Optimization, Distributed Bandit Optimization

## Publications

### Conferences

- Shuang Liu, Olivier Bousquet, Kamalika Chaudhuri  
*Approximation and Convergence Properties of Generative Adversarial Learning*  
NeurIPS 2017

- Jiachen Li, Quan Vuong, Shuang Liu, Minghua Liu, Kamil Ciosek, Henrik Christensen, Hao Su  
*Multi-task Batch Reinforcement Learning with Metric Learning*  
NeurIPS 2020

#### Manuscripts

- Shuang Liu, Hao Su  
*Regret Bounds for Discounted MDPs*
- Shuang Liu, Kamalika Chaudhuri  
*The Inductive Bias of Restricted f-GANs*
- Shuang Liu, Cheng Chen, Zhihua Zhang  
*Regret vs. Communication: Distributed Stochastic Multi-Armed Bandits and Beyond*

#### Teaching Experience

##### Teaching Assistant, Spring 2015

- Course: Advanced Compiler Design
- Institute: Shanghai Jiao Tong University
- Instructor: Yong Yu

##### Teaching Assistant, Spring 2018

- Course: Introduction to AI: A Statistical Approach
- Institute: University of California, San Diego
- Instructor: Kamalika Chaudhuri

#### Undergraduate Course Projects

##### C Compiler implemented in Java

- <https://bitbucket.org/sadkangaroo/compiler2014>

##### Nachos Operating System implemented in Java

- <https://bitbucket.org/sadkangaroo/nachos2014>

##### Unix-like Shell implemented in C

- <https://github.com/sadkangaroo/shellproject>

##### Simulated GPGPU implemented in C++

- <https://bitbucket.org/sadkangaroo/my-gpgpu-sim>

##### Database Back-End implemented in C

- <https://bitbucket.org/sadkangaroo/shuangliudbspring15>

##### Database Front-End implemented in MySQL and Java

- [https://bitbucket.org/vegetable\\_h/database-project](https://bitbucket.org/vegetable_h/database-project)

#### Graduate Course Projects

##### Compiler Optimization through LLVM

- <https://ucsd-pl.github.io/cse231/wi17/project.html>

##### Functional Programming (Haskell)

- <https://ucsd-cse230.github.io/sp20/>

#### Awards

##### 2018 Google PhD Fellowship

(39 recipients from North America, Europe and the Middle East)

##### 2015 Google Excellence Scholarship

(58 Recipients in China)

##### ACM International Collegiate Programming Contest, Asia Regional

- Gold Medal in Shanghai, China, 2011
- Gold Medal in Fuzhou, China, 2011

- Gold Medal in Tianjin, China, 2012
- 4th Place in Hat Yai, Thailand, 2012
- Gold Medal in Changsha, China, 2013
- Silver Medal in Changchun, China, 2013

**National Olympiad in Informatics, China**

- Bronze Medal (National), 2011
- Gold Medal (Province), 2007, 2008, 2009, 2010

**Services**

**Conference Reviewer:** NeurIPS 2019, ICML 2019, ACML 2019, AISTATS 2019, NeurIPS 2020

**Journal Reviewer:** JMLR