# Shuang Liu

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| **Contact Information** | Department of Computer Science and Engineering<br>University of California, San Diego<br>9500 Gilman Drive, EBU3B      *E-mail:* s3liu@eng.ucsd.edu<br>La Jolla, CA 92093      *Mobile:* (+1) 858-230-5110 |

**Education**

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

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

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

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

**Research Interest**

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

**Programming Skills**

C, C++, Java, Python (Pytorch)

**Research Experience**

**Quantitative Research Intern, Global Quantitative Strategies**, June 2020 - Aug. 2020
- Company: Citadel LLC
- Topics: 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, Spotlight
- 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, 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 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

**Graduate 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