

Shuyang Gu

Texas A&M University - Central Texas

EDUCATION

Ph.D. in Computer Science The University of Texas at Dallas (UTD)	2020
M.S. in Computer Science The University of Texas at Dallas (UTD)	2020
B.E. in Electrical Engineering North China Electric Power University	2003

RESEARCH INTERESTS

Data Science especially in computational social system, i.e. analysis of emerging topics of modern online social networks, e.g., online friending, online profit maximization and influence maximization; approximation algorithms analysis, set function optimization (submodular/non-submodular function optimization, submodular maximization on bounded integer lattice etc).

TEACHING EXPERIENCE

Assistant Professor Sep. 2020 – present
 Department of Computer Information Systems
Texas A&M University-Central Texas

CIS 3331	Visual Basic Programming	Summer 2021
CIS/COSC 3351	Data Structures	Summer 2021
CIS 3305	Operating Systems	Spring 2021
COSC 3380	Operating Systems	Spring 2021
CIS 3342	Advanced Java Programming	Spring 2021
COSC 3343	Computer Architecture	Spring 2021
CIS 3351	Data Structures	Fall 2020
COSC 3351	Data Structures	Fall 2020
CIS 4352	Structured Query Language	Fall 2020
COSC 3343	Computer Architecture	Fall 2020

Teaching Assistant Jan. 2014– May 2020
 Department of Computer Science
The University of Texas at Dallas

Course project mentor, assignment grading and special lecturing, etc.

CS 6382	Theory of Computation	Fall 2019
CS 6301	Special Topics in Computer Science - Software Defined Networks	Fall 2019

CS 4384	Automata Theory	Summer 2019
CS 6382	Theory of Computation	Spring 2019
CS 6301	Special Topics in Computer Science-Theory of Social Computing	Spring 2019
CS 4347	Database Systems	Spring 2019
CS 6382	Theory of Computation	Fall 2018
CS 6363	Design and Analysis of Computer Algorithms	Fall 2018
CS 3376	C/C++ Programming in a Unix Environment	Summer 2018
CS 4337	Organization of Programming Languages	Spring 2018
CS 6313	Statistical Methods for Data Science	Fall 2017
CS 4337	Organization of Programming Languages	Fall 2017
CS 6313	Statistical Methods for Data Science	Fall 2016
CS 6301	Special Topics in Computer Science-Wireless Networks	Fall 2016
CS 4337	Organization of Programming Languages	Spring 2015
CS 6366	Computer Graphics	Spring 2015
CS 5390	Computer Networks	Spring 2014

Activities

Peer Referee

- Peer-to-Peer Networking and Applications (PPNA) 2021
- Discrete Mathematics, Algorithms and Applications (DMAA) 2021
- Theoretical Computer Science (TCS) 2020
- IEEE Transactions on Cybernetics 2020
- IEEE Transactions on Computational Social Systems (TCSS 2020)
- Transactions on Knowledge and Data Engineering (TKDE 2019)
- The 39th IEEE International Conference on Distributed Computing Systems (ICDCS 2019)
- The 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2019)
- 2019 International Symposium on Computing, Networking and Communications (ISCNC 2019)
- The 4th International Conference on Internet of Things, Big Data and Security
- Journal of Combinatorial Optimization (JOCO 2018)
- IEEE Transactions on Computational Social Systems 2019
- Discrete Mathematics, Algorithms and Applications (DMAA) 2019

Professional Membership

- IEEE Member

Conference Organizing Services

- Local Arrangement Staff, The 39th IEEE International Conference on Distributed Computing Systems (ICDCS 2019)
- Local Arrangement Staff, the Twelfth International Conference on Algorithmic Aspects in Information and Management (AAIM 2018)

EMPLOYMENT

Assistant Professor Department of Computer Information Systems Texas A&M University – Central Texas	Sep. 2020 - present
Teaching Assistant Department of Computer Science University of Texas at Dallas	Sep. 2017 – May 2020
Teaching Assistant & Research Assistant Department of Computer Science University of Texas at Dallas	Jan. 2014 – August 2017
State Grid Corporation of China Electrical Engineer	Jan. 2006 - Aug. 2012
Beijing Electric Power Company Electrical Engineer	Jul. 2003 - Jan. 2006

AWARDS AND HONORS

- *Outstanding Faculty/Staff Quantitative Scholarship Award Finalist*
Texas A&M University – Central Texas 2021
- *Faculty Senate Summit Scholarship/Presentation*
Texas A&M University – Central Texas 2021
- *Outstanding Thesis Award*
North China Electric Power University 2003
- *Outstanding Thesis Award*
North China Electric Power University 2003
- *Excellent Academic Performance Fellowship*
North China Electric Power University 2001
- *Excellent Academic Performance Fellowship*
North China Electric Power University 2000
- *Freshman Award for Excellent Performance
in National College Admission Exam*
North China Electric Power University 1999

PUBLICATIONS

Book Chapters

1. **Shuyang Gu**, Hongwei Du, My T. Thai, and Ding-Zhu Du. “Friending.” *Nonlinear Combinatorial Optimization*, pp. 265-272. Springer, Cham, 2019.
2. **Shuyang Gu**, Chuangen Gao, and Weili Wu. “Interaction-Aware Influence Maximization in Social Networks.” *Nonlinear Combinatorial Optimization*, pp. 285-294. Springer, Cham, 2019.

Journal Papers

1. **Gu, Shuyang**, Chuangen Gao, Ruiqi Yang, Weili Wu, Hua Wang, and Dachuan Xu. "A general method of active friending in different diffusion models in social networks." *Social Netw. Analys. Mining* 10, no. 1 (2020): 41.
2. Gao, Chuangen, **Shuyang Gu**, Ruiqi Yang, Jiguo Yu, Weili Wu, and Dachuan Xu. "Interaction-Aware Influence Maximization and Iterated Sandwich Method." *Theoretical Computer Science* (2020).
3. Yang, Ruiqi, **Shuyang Gu**, Chuangen Gao, Weili Wu, Hua Wang, and Dachuan Xu. "A constrained two-stage submodular maximization." *Theoretical Computer Science* (2020).
4. Yuqi Fan, Chen Wang, Bei Zhang, **Shuyang Gu**, Weili Wu and Ding-Zhu Du, "Data Placement in Distributed Data Centers for Improved SLA and Network Cost." *Journal of parallel and distributed computing* 2020.
5. **Gu, Shuyang**, Ganquan Shi, Weili Wu, and Changhong Lu. "A fast double greedy algorithm for non-monotone DR-submodular function maximization." *Discrete Mathematics, Algorithms and Applications* 12, no. 01 (2020): 2050007
6. Shi, Ganquan, **Shuyang Gu**, and Weili Wu. "k-Submodular maximization with two kinds of constraints." *Discrete Mathematics, Algorithms and Applications* (2020): 2150036.

Conference Papers

1. Chuangen Gao, **Shuyang Gu**, Ruiqi Yang, Hongwei Du, Smita Ghosh, and Hua Wang. "Robust Profit Maximization with Double Sandwich Algorithms in Social Networks" *The 39th IEEE International Conference on Distributed Computing Systems (ICDCS 2019)*.
2. Chuangen Gao, **Shuyang Gu**, Ruiqi Yang, Jiguo Yu, Weili Wu, and Dachuan Xu. "Interaction-Aware Influence Maximization and Iterated Sandwich Method." *International Conference on Algorithmic Applications in Management*, pp. 129-141. Springer, Cham, 2019.
3. Ruiqi Yang, **Shuyang Gu**, Chuangen Gao, Weili Wu, Hua Wang, and Dachuan Xu. "A Two-Stage Constrained Submodular Maximization." *International Conference on Algorithmic Applications in Management*, pp. 329-340. Springer, Cham, 2019.