Shuchu Han

CONTACT INFORMATION	2 Sherbrooke Dr Princeton Junction NJ, USA 08550	*Phone:* NA *E-mail:* shuchu.han@gmail.com *Homepage:* shuchu.github.io

BACKGROUND

- Born on October 1984.
- Permanent Resident of USA
- Citizen of P.R.China.
- Married with two daughters.

RESEARCH INTERESTS

- Machine learning.
- Data mining, anomaly detection.
- Time series data, Graph data, Security log data.

EDUCATION

Stony Brook University (SUNY)   2011-2017
Ph.D, Computer Science, May 2017
Thesis Title: *S*parse Graph Representation and Its Applications.
Advisors: **Hong Qin**

Nanyang Technological University (NTU)   2008-2010
M.Eng, Computer Science, May 2010
Thesis Title: *Quality Tetrahedral Mesh Generation for Volume Data Processing.*
Advisor: **Ying He**

Shandong University   2005-2008
M.Eng, Control Theory, May 2008
Thesis Title: *Impulsive synchronized chaotic communication system with time delay and parametric mismatch.*
Advisors: **Chengjin Zhang**, **Changyun Wen**(NTU)

Xi'an Jiaotong University   1998-2003
Special Class for Gifted Young (1998-2000)
B.Eng, Electronic and Information Engineering, July 2003
Thesis Title: *Wireless File Transfer System Based on Bluetooth Protocol V1.1.*
Advisor: **En-Xin Feng**.

HONORS AND AWARDS

Best Research Paper Award in SIAM Int. Conf. on Data Mining (SDM), 2015
Best Student Paper Award in IEEE Int. Conf. on BioInformatics and BioEngineering, 2014
President Scholarship for Study Abroad, Shandong University, 2007
The Third Prize Scholarship, Xi'an Jiaotong University, 1999

EXPERIENCE

Software Engineer, Data Science, devo.com   2022/08-now
Manager: Dr. Chaz Lever, Dr. Kevin Zhou
- Work on ETL data pipeline with AWS Managed Airflow, and Kafka.

Software Engineer, ML Infra, StellarCyber.ai   2020/03-2022/08
Manager: Dr. Albert Zhichun Li
- Work on real-time detection engine for security log data.

Research Engineer, NEC Labs 2017/06-2020/02
Manager: Dr. Haifeng Chen
- Work on anomaly detection and causality analysis over multivariate time series.

Intern Scientist, Yahoo! Research, 2016-2017
Mentor: Dr. Yifan Hu, Dr. Baris Coskun
- Text mining, graph embedding, deep learning.
- Scientific visualization.

Software Engineer Intern, Siemens Healthcare Diagnostics, Summer 2015
Manager: Dr. Zhenrong Xiao

Research Assistant, Stony Brook University 2012-2015
Advisors: Dr. Hong Qin, Dr. Leman Akoglu
- Researching on sparse graph representation.
- Researching on graph mining, graph structure analysis and dense subgraphs mining.

Research Assistant, Computational Science Center, Brookhaven National Lab 2012-2015
Mentor: Dr. Dantong Yu
- System Administrator for DOE kbase project(`http://kbase.us`) at BNL site.
- Manage and maintain HPC cluster service with other three national labs: ANL, LBNL and ORNL. description

Teaching Assistant, Stony Brook University 2011-2012

Research Engineer, National University of Singapore 2010-2011
Mentor: Dr. Ping Tan
- Large scale 3D city scene modeling from LIDAR point clouds.

Research Engineer, Nanyang Technological University 2008-2010
Advisor: Dr. Ying He
- Computational geometry, geometry processing, scientific visualization.
- Volume mesh generation from arbitrary geometry shape.

Research Engineer, Centre for Signal Processing, NTU 2007-2008
Manager: Dr. Sre Wee
- Video signal processing.

Research Engineer, SAMSUNG Electronics Ltd., 2003-2004

PROFESSIONAL ACTIVITIES AND SERVICES

PC Member/Reviewer: CIKM 2017, WSDM 2019, 2020, 2021, SIGIR 2020
Vice Present, Computer Science Graduate Student Council (CSGSC), 2013-2014
Department of Computer Science, Stony Brook University

TEACHING EXPERIENCE

Teaching Assistant, Stony Brook University, 2011-2012
- CSE528, Computer Graphics, 2012 Fall.
- CSE306, Operating System, 2012 Spring.
- CSE548/AMS542, Analysis of Algorithm, 2011 Fall.
- CSE328, Fundamental of Computer Graphics, 2011 Spring.

- CSE130, Introduction to Programming in C Language, 2011 Spring.

JOURNAL
PUBLICATIONS

Pengfei Xu, Shuchu Han, Hao Huang, Hong Qin, *Redundant Features Removal for Unsupervised Spectral Feature Selection Algorithms: An Empirical Study based on Nonparametric Sparse Feature Graphh*, Int. J. Data Science and Analytics (2018)

Shuchu Han, Hong Qin, *A Greedy Algorithm to Construct Sparse Graph by Using Ranked Dictionary*, Int. J. Data Science and Analytics (2016).

Shuchu Han, Jiazhi Xia, and Ying He. *Constructing hexahedral shell mesh via volumetric polycube map*, Computer-Aided Design, 2011.

CONFERENCE
PUBLICATIONS

Shuchu Han, Yifan Hu, Steven Skiena, Baris Coskun, Meizhu Liu, Hong Qin, *Generating Look-alike Names For Security Challenges*, AISec (2017)

Junting Ye, Shuchu Han, Yifan Hu, Baris Coskun, Meizhu Liu, Hong Qin, Steven Skiena, *Nationality Classification using Name Embeddings*, CIKM (2017)

Shuchu Han, Yifan Hu, Steven Skiena, Baris Coskun and Meizhu Liu. *Generating Look-alike Names via Distributed Representations*, Yahoo Tech Pulse, 2016.

Shuchu Han and Hong Qin. *A Greedy Algorithm to Construct L1 Graph with Ranked Dictionary.* Pacific-Asia Conference on Knowledge Discovery and Data Mining. Springer International Publishing, 2016.

Shuchu Han and Hong Qin. *Structure Aware L1 Graph for Data Clustering.* Thirtieth AAAI Conference on Artificial Intelligence. 2016.

Hau Chan, Shuchu Han, and Leman Akoglu. *Where graph topology matters: the robust subgraph problem.* Proceedings of the 2015 SIAM international conference on data mining, SDM. Vol. 15. 2015. **(Best Research Paper Award)**.

Shuchu Han, Hao Huang, Hong Qin and Dantong Yu, Locality-Preserving L1-Graph and Its Application in Clustering.(ACM Symposium on Applied Computing, 2015)

Shuchu Han, Hong Qin, and Dantong Yu. *An Improved Ratio-Based (IRB) Batch Effects Removal Algorithm for Cancer Data in a Co-Analysis Framework.* Bioinformatics and Bioengineering (BIBE), 2014 IEEE International Conference on. IEEE, 2014. **(Best Student Paper Award)**.

Shuchu Han, Jiazhi Xia, Ying He. *Hexahedral shell mesh generation by volumetric parameterization.* Proceedings of ACM Symposium of Solid & Physical Modeling(SPM'10), accepted, 2010.

Jiazhi Xia, Ying He, Shuchu Han, Chi-Wing Fu, Feng Luo, Xianfeng Gu. *Parameterization of Star Shaped Volumes Using Green's Functions,* Proceedings of Geometric Modeling and Processing(GMP'10), accepted, 2010.

Jiazhi Xia, Ying He, Xiaotian Yin, Shuchu Han, Xianfeng Gu. *Direct-Product Volumetric Parameterization of Handle bodies via Harmonic Fields,* Proceedings of IEEE International Conference on Shape Modeling(SMI'10), accepted, 2010.

REFEREES

Available upon request