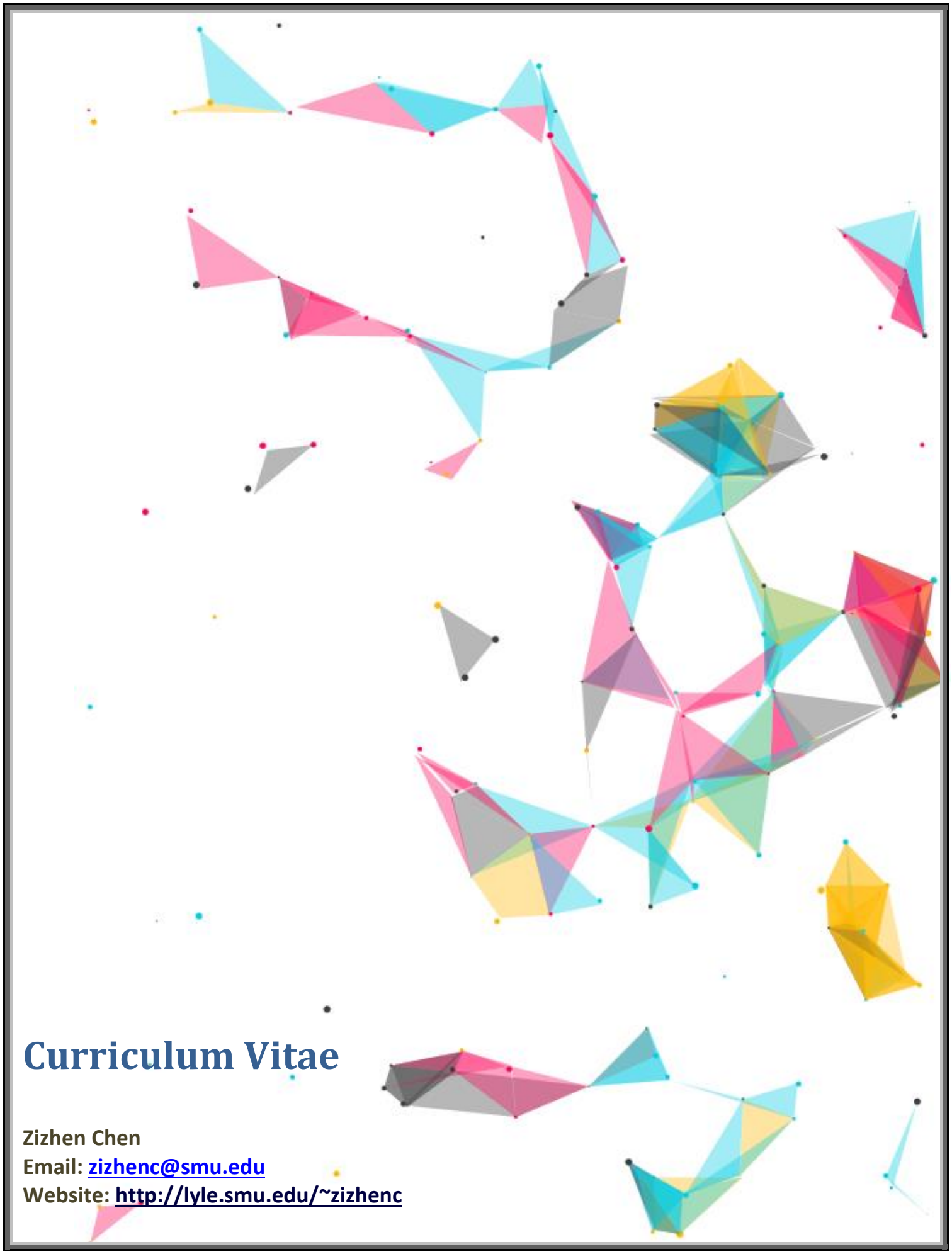


# Curriculum Vitae

**Zizhen Chen**
**Email: zizhenc@smu.edu**
**Website: http://lyle.smu.edu/~zizhenc**

**Brief Introduction:**
My research focuses on Visualized Algorithm Engineering. Currently I work on partitioning problems in Graph Theory (Network partitioning problems and Big Data clustering problems). I am interested in Computer Graphics, Algorithms/Data Visualization, User interface Design and Software Engineering.

**Education:**
**Degree:** Ph.D. of Computer Science **GPA:** 3.922 **Grad date:** 8/2019 **Affiliation:** Southern Methodist University
**Degree:** Master of Computer Science **GPA:** 3.911 **Grad date:** 8/4/2015 **Affiliation:** Southern Methodist University

**Technical Expertise:**
**Programming:** C/C++; Java; Javascript; Nodejs; Processing; R; AMPL; SQL; Perl; HTML 5; JSON/XML; C#
**Libraries (Most for Visualization):** openFrameworks; P5.js; Jquery; Chart.js; d3.js
**Developing Environments:** Xcode, Visual Studio 2019; JetBrains; Processing; Netbeans; Eclipse
**Related courses:** Computer Graphics, Algorithm Engineering, Data Mining, Machine Learning, Advanced Software Security, User Interface Design, Operating System and System Software, File Organization and Database Management, XML and Enterprise, Software Engineering

**Work Experiences:**
**SMU At&t Center for Virtualization Title: Research Assistant Time: 1/18/2019~Present**
I work on Data Visualization for the At&t Center for Virtualization in SMU. Currently I create visualizations for performance benchmarks of different cloud platforms (Google Cloud, AWS and Azure) from the data stored on the Bigquery database of Google Cloud Platform.
**SMU CS && CC Department Title: Adjunct Faculty Time: 8/22/2016~Present**
I am currently teaching classes for both Computer Science department in Lyle School of Engineering and Creative Computation department in Meadows School of the Art.
I teach Creative Coding classes (CRCP/ASIM 1310 and CRCP/ASIM 3305) for undergraduate students and Graph Theory class (CSE 8355) for graduate students.
**Southern Methodist University Titles: Teaching Assistant, Grader and Tutor Time: 9/6/2011~12/3/2018**
I have several teaching related experiences before being Adjunct Faculty in SMU:
Teaching Assistant or Grader of several classes (Creative Coding: CRCP/ASIM 1310 and CRCP/ASIM 3305, Algorithm Engineering: CSE 7350, Operating System: CSE 7343/5343 and so on) of both Creative Computation department in Meadows school of the Art and Computer Science department of Lyle school of Engineering, Computer Science Tutor in Learning Enhancement Center.
**Covansys Software Technology (Shanghai) Co., Ltd. Job Title: Software Engineer Time: 3/15/2011 ~ 7/20/2011**
It is a group company of Computer Science Corporation (CSC). I worked in the team that is the connection between the front and back end of Citi Bank which is one of the biggest clients to CSC. Fixing, adding or deleting functional features for bank transaction our work.

**Publications/Presentations/Competitions/Activities:**
**26th IEEE Symposium on Computer Arithmetic Time: 6/10/2019~6/12/2019**
I published paper “Precise and Concise Graphical Representation of the Natural Numbers”
**SIAM Workshops on Network Science Time: 2016, 2017, 2018**
I presented “Backbone Structure of Hierarchical Network Partitioning” in NS18 workshop at Portland, Oregan; “The Evolution of Flow-Based Hierarchy in Networks” in NS17 workshop at Pittsburgh, Pennsylvania; “Partitioning Random Geometric Graphs into Bipartite Backbones” in NS16 workshop at Boston, Massachusetts.
**International Conference on Distributed Computing in Sensor Systems (DCOSS) Time: 6/5/2017 ~ 6/7/2017**
I published paper “Bipartite Grid Partitioning of a Random Geometric Graph” and gave a speech on this topic at University of Ottawa, Canada.
**RS&A (RANDOM STRUCTURES AND ALGORITHMS) 2015 Time: 7/27/2015 ~ 7/31/2015**

I gave contributed Talk on “Bipartite Subgraphs of Random Geometric Graphs” at Carnegie Mellon University in Pittsburgh, PA.

**2014 Capital One Data Mining Cup** **Time: 11/2014**

I am member of SMU competition team and we reached the final round of competition presented solution for "Optimal Search Engine AdWords Pricing" at the Capital One Corporate Headquarters in McLean, VA.

**CSC14 (The Sixth SIAM Workshop on Combinatorial Scientific Computing)** **Time: 7/21/2014 ~ 7/23/2014**

I published abstract on “Partitioning RGG's into disjoint (1-ε) dominant bipartite subgraphs” and gave a contributed talk on this topic at École Normale Supérieure de Lyon in Lyon, France.

**Administrator of Chinese Student Union (CSU) of SMU** **Time: 5/2014 ~ 5/2018**

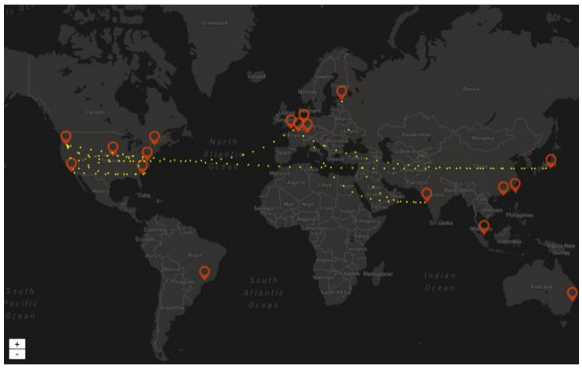
I designed the CSU logo, work on connection between SMU and CSU and manage our email system.

**Honors:**

Alpha Chi National College Honor Society Membership; Golden Key International Honor Society Membership
Society for Industrial and Applied Mathematics (SIAM) Membership; IEEE Student Membership
Outstanding Graduate Student Award 2016 in SMU

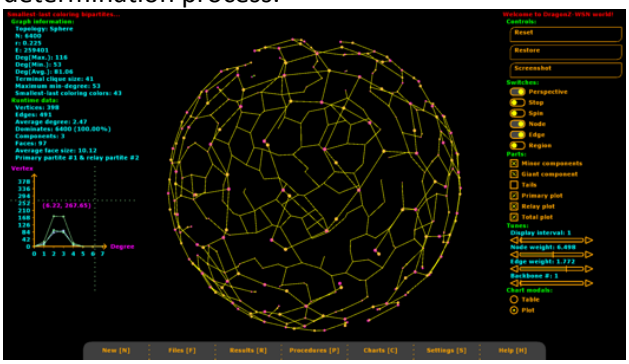
**Projects:**

**Data Visualization Website for Performance Benchmarks of Cloud Providers:** Created a website based on Nodejs server and Bigquery Database of Google Cloud to provide data visualization of Performance Benchmarks of Cloud Providers (Google Cloud, AWS and Azure)



**Maximum Concurrent Flow Problem:** A new clustering method based on network density and centrality for community detection in social networks. I work on visualization of this problem.

**Wireless Sensor Network:** A 3D animation built by Processing Language which describes a Wireless Sensor Network backbone determination process.



**SimpleScalar Testing:** Using SimpleScalar tool set to test the influence of changing some CPU architecture

**Work-hour Registration System Design:** A user interface design for work-hour registration system

**C-Minus Language Complier:** A complier made by C++ for a simple C-like language called “C-Minus”