

Lingkun Kong
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SEIEE Buildings 1-441, SJTU

EDUCATION

- **Shanghai Jiao Tong University** Shanghai, China
Department of Computer Science Feb. 2016 – Jul. 2018 (expected)
 - BS in Computer Science, Technology and Engineering Honor Class
 - Cumulative GPA: **91.88/100***School of Mechanical Engineering* Sept. 2014 – Jan. 2016
 - Engineering Pilot Class
 - Cumulative GPA: **88.33/100**
- **Cornell University** Ithaca, NY
Computer Science Department, Visiting Student Jun. – Jul. 2017

RESEARCH INTERESTS

- Software System, Distributed System, Data System, Measurement & Performance Analysis
- Theoretical Networking, Big-scale Network Analysis

PATENTS

- J. He, Y. Huang, **L. Kong**, J. Shen, C. Liu, Y. Jia, H. Xiao, W. Tang, T. Hu, L. Fu, X. Wang, "An Method to Construct & Visualize the Heterogeneous Topic Network Based on Text Information", CHN No. 106372147A, Approved Feb. 1st 2017

RESEARCH EXPERIENCE

- **Bancor Simulator:** *Simulator for Market Analysis under Bancor Protocol* Jul 2017 - Present
Research Assistant, supervised by Prof. Emin Gün Sirer
 - Goal: to build a simulator monitoring market performance under Bancor protocol to explore the robustness and efficiency of Bancor.
 - Construct the simulator framework, mainly consisting of four classes - Smart Token, Customer, Bancor Market and Classic Market.
 - Propose and build the simulation model for both Bancor market and classic market, run experiments in multiple circumstances.
 - Experimental results show that Bancor protocol is flawed in three aspects:
 - a) The problem of "Co-incidence of Double Wants" Bancor wants to solve might neither be better solved by Bancor than classic market, nor even exist.
 - b) Bancor neglects potential human behaviors, thus failing to reflect significant fluctuation of smart token price.
 - c) Under limited order, Bancor protocol is faced with high cancellation of concurrent transaction orders in real world.
- **Are Scholarly Domains Crossable?** Feb. 2017 - Jun. 2017
Research Assistant, supervised by Prof. Xinbing Wang & Prof. Luoyi Fu
 - Goal: to explore the possible existence of scholarly cross-domain collaborations.
 - Quantify "crossability", to evaluate the capability of two scientific domains to establish collaborations
 - Propose a Gaussian-like model based the citation count of a paper to predict the papers future citation
 - Train the peak pattern model in the correlation of research works influence and reach the conclusion: *research works focusing on a certain number of domains can produce significant impact.*

- **Evolving Scholarly Networks: Experiments, Modeling & Analysis** *Jun. 2016 - Feb. 2017*
Research Assistant, supervised by Prof. Xinbing Wang & Prof. Luoyi Fu
 - Goal: to provide the first comprehensive study of the scholarly network which is a structure extracted from massive scholarly data.
 - Propose a novel evolving scholarly model, jointly capturing both intra and inter correlations of papers, authors and topics during the evolving process, based on empirical observations.
 - Conduct theoretical analysis and empirical evaluations on the model, and demonstrate that the model accurately reproduces the global and local structures of real scholarly networks.

SIDE PROJECTS

- **Acemap: Academic Map System** *Jun. 2015 - Present*
 - Develop visualizing applications for scholarly information networks and presentation approaches.
 - Implement the recommending algorithm for papers in Acemap, and present the result on website.
 - Build and maintain the server and the back-end for Acemap.
- **Paper-forest Map: Graphic Tracker for Scholar's Publications** *Sept. 2017*
 - One of the visualization applications in Acemap, which aims to provide users with direct access of connections between one scholar's publications.
- **Linux Kernel Applications Development** *Spring 2016*
 - Get understanding of how operating system works by developing Linux Kernel applications.
 - Score 99/100, Rank 2/141
- **CPU Design on MIPS Architecture in Verilog** *Spring 2016*
 - Build a simple pipelining CPU by Verilog coding under MIPS architecture.
 - Score 98/100, Rank 1/137
- **Visualization for Machine Vision Understanding** *Fall 2016*
 - Implements idea of paper "*Shallow and Deep Convolutional Networks for Saliency Prediction*" to make a Saliency Prediction GUI, which helps people get better understanding of how Saliency Detection works under CNN framework.
 - Score 99/100, Rank 2/89
- **Using ConvNets to Recognize Captcha Digits** *Fall 2016*
 - Implements idea of paper "*Convolutional Neural Networks Applied to House Numbers Digit Classification*" to make a Captcha Digits recognizing GUI.
 - Score 99/100, Rank 1/180

SELECTED SCHOLARSHIP & HONORS

- **National Scholarship** *highest honor for undergraduates in China, top 1% nationwide* *2015 & 2017*
- **Junzheng Scholarship** *award for excellent research performance, top 30 in SJTU* *2017*
- **Scholarship of Outstanding Undergraduates** *award for excellent research performance, top 2 in School of Electronic Information & Electrical Engineering* *2017*
- **Zhiyuan Honor Scholarship** *award for excellent academic performance* *2015 & 2016*
- **Merit Student of Shanghai Jiao Tong University** *award for superior comprehensive performance* *2015*

TEACHING EXPERIENCE

- **Teaching Assistant for CS 499** *Mathematical Foundations of Computer Science* *Spring 2017*
- **Teaching Assistant for CS 334** *Computer Organization Lab* *Spring 2016*