Zipeng Liu

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Research Interests

- Information visualization

Academics

- **Uninversity of British Columbia** — Vancouver, Canada
  PhD student in Computer Science — *Sept. 2015 – Now*
- **Peking Uninversity** — Beijing, China
  Bachelors of Science Degree in Computer Science — *Sept. 2011 – Jul. 2015*
- **Technion - Israel Institute of Technology** — Haifa, Israel
  Research-Exchange Student in Faculty of Electrical Engineering — *Sept. 2012 – Feb. 2013*

Research Experience

- **Multi-scale Visual Comparison of Phylogenetic Tree Collection**
  Supervised by Tamara Munzner (UBC) — *May 2016 – April 2018*
  - Abstracted data and task for tree comparison problem in phylogeny
  - Proposed a new technique for aggregating trees for comparison
  - Developed a new system for comparing phylogenetic tree collection in multiple scales
  - Conducted interviews with phylogenetic researchers

- **VAST Challenge 2014 Mini-challenge 3 (Award for Excellent Collaborative Streaming Analysis)**
  Advised by Xiaoru Yuan (Peking University) — *Jun. 2014 – Jul. 2014*
  - Designed a flexible filter and interfaces for streaming messages
  - Implemented a client and server to enable collocated synchronized cooperation
  - Led a team to analyze the streaming data during the contest
  - Organized material and wrote answers to the challenge

- **Visualization of Social Media Flows with Interactively Identified Key Players**
  Advised by Xiaoru Yuan (Peking University) — *Nov. 2013 – Apr. 2014*
  - Designed and implemented the key component: interactive multi-faceted filter
  - Designed a poster and filmed a demonstration video

- **Overlay Distribution Networks for Live Streams**
  Advised by Ymir Vigfusson (Reykjavik University) and Daniel A. Freedman (Technion) — *Feb. 2012 – Sept. 2013*
  - Implemented an overlay distribution network protocol in Python with the Twisted package
  - Reviewed literature on distributed system design, Internet substrate topology evaluation methodology
  - Wrote a baseline system for comparison experiment
  - Conducted analysis of parameter space in simulation

Internships

- **Research intern**   *May 2018 – Jul. 2018*
  Supervised by Zhicheng (Leo) Liu   *Adobe Research, Seattle, USA*
- **Full-stack developer**   *May 2015 – Jul. 2015*
  Supervised by Xiaodi Hou and Jianan Hao   *Beijing Cogtu Network Technology Co., Ltd.*
- **Python backend developer**   *Sept. 2014 – Nov. 2014*
  Supervised by Yi Lv   *Beijing Dobigthing Network Technology Co., Ltd.*

Publications and Posters

- **Zipeng Liu**, Shing Hei Zhan, Tamara Munzner. Aggregated Dendrograms for Visual Comparison Between Many Phylogenetic Trees. *IEEE Trans. Visualization & Computer Graphics*, 2019.

- Xiaoru Yuan, Zhenhuang Wang, **Zipeng Liu**, Cong Guo, Hongwei Ai, Donghao Ren. Visualization of Social Media Flows with Interactively Identified Key Players. *IEEE Visual Analytics Science and Technology (VAST)*, Paris, France, 2014 (Poster).

- **Zipeng Liu**, Zhenhuang Wang, Siming Chen, Zuchao Wang, Zhengjie Miao, Xiaoru Yuan. A Platform For Collaborative Visual Analysis on Streaming Messages. *IEEE Visual Analytics Science and Technology (VAST) Challenge*, Paris, France, 2014. **Award Winner of VAST Challenge Mini-challenge 3**.

- Ymir Vigfussion, Annie Liu, **Zipeng Liu**, Yuanchao Zhu, Gunnar S. Sigurbjornsson, Kristyan V. Jonesson, Qi Huang, Ken Birman, Daniel A. Freedman. Balancing Cost and User Utility for Live Network Streaming. *Proc. Asia-Pacific Workshop on Systems (APSys)*, Seoul, Korea, July 2012 (Poster).

- Ymir Vigfussion, Annie Liu, **Zipeng Liu**, Yuanchao Zhu, Gunnar S. Sigurbjornsson, Kristyan V. Jonesson, Qi Huang, Ken Birman, Daniel A. Freedman. Live Network Streaming with Utilities and Cost. *6th ACM SIGOPS/SIGACT Workshop on Large-Scale Distributed Systems and Middleware (LADIS)*, Madeira, Portugal, July, 2012.

Technical Skills

- **Visualization**: HTML/CSS/Javascript for frontend (D3, ReactJS); NodeJS or Python for backend
- **Miscellaneous**: MongoDB, Redis, NGINX, bash, git, LaTeX
- **Language**: English, Mandarin, Cantonese

Extracurricular Activities

- **Experienced calligrapher**
  National / provincial calligraphic award winners
- **Amateur badminton player**
  A previous member of the Badminton Team of EECS in PKU
- **Finger-style guitar learner**
  Just for fun