Junteng Jia

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Education

- **Cornell University** GPA: **4.10/4.30**
  *Ph.D. in **Computer Science**; Specialization: Network Science* *expected **May 2021***
  - Courses: *Algorithm Analysis, Structure of Information Networks, Machine Learning for Data Science, etc.*
- **Cornell University** GPA: 4.00/4.30
  M.S. in Chemistry; Specialization: High Performance Computing *May 2017*
  - Courses: *Application of Parallel Computers, Matrix Computation, Mathematical Programming, etc.*
- **Nanjing University** GPA: 3.78/4.00
  B.S. in Chemistry; *Sept. 2015*

Research Experience

- **Cornell University** *Research Assistant*
  Network Science (with Prof. Austin R. Benson) *May 2018 — Current*
  - **High-Order Regulation in Flow Networks**: Introduced a new regulation framework to flow networks, which can be used in semi-supervised learning for traffic flow prediction, foreign exchange rate precition, etc.
  - **Core-Periphery Structure in Spatial Networks**: Introduced a new measurement of vertex centrality in spatial networks, which is proven to be good machine learning features for traffic prediction and network classification.
- **Cornell University** *Research Assistant*
  High Performance Computing (with Prof. Robert A. DiStasio) *May 2017 — Apr. 2018*
  - **Quantum ESPRESSO**: Greatly improved the efficiency of Quantum ESPRESSO, a massively-parallel simulation software, using asynchronous MPI communication and load balancing.
  - **Atomic Simulation Environment**: Implemented the QChem interface to Atomic Simulation Environment, a python package for automated molecular simulations.

Internship & Work Experience

- **Argonne National Laboratory** *Research Intern*
  High Performance Computing *Summer 2016*
  - **Auger Decay Simulation**: Implemented a highly efficient parallel software for simulating Auger Decay process.
  - **Extreme-Scale Computing**: Selected into a highly competitive training program (ATPESC) on the key skills, approaches, and tools to design and implement applications on current and future supercomputers.
- **Cornell University** *Teaching Assistant*
  Department of Chemistry *Sept. 2015 — Apr. 2017*
  - **CHEM 2070/3900**: Managed student teams · Led discussion sections · Held recitation sections

Selected Publications

- Detecting core-periphery structure in spatial networks.
  Junteng Jia and Austin R. Benson.
  arXiv:1808.06544, 2018.
- Unraveling substituent effects on the glass transition temperatures of biorenewable polyesters.
  Xiaopeng Yu[†], **Junteng Jia**[†], *et al.*
  Nat comm., 2018.

Programming Skills

- **Languages**: Python, Julia, Java, C++, C, MATLAB **Technologies**: Git, HTML, MPI, OpenMP