

Hao Tian

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EDUCATION

Southern Methodist University, Dallas, Texas, USA

Aug 2019 – May 2023 (expected)

- Ph.D. in Theoretical and Computational Chemistry
- Adviser: Prof. Peng Tao
- Topic: Understanding protein allostery through molecular dynamics and artificial intelligence
- GPA: 3.97 / 4.0

Georgia Tech, Atlanta, Georgia, USA

Aug 2020 – May 2022 (expected)

- M.S. in Computer Science, specialization: Computing Systems
- GPA: 4.0 / 4.0
- Courses took:
 - Software Analysis and Design
 - Database Systems Concepts and Design
 - Computer Networks
 - Artificial Intelligence for Robotics

Beijing University of Chemical Technology, Beijing, China

Aug 2015 – Jun 2019

- B.Eng. in Chemical Engineering
- GPA: 3.49 / 4.33

PUBLICATIONS

- [5] Hao Tian, Xi Jiang and Peng Tao. PASSer: Prediction of Allosteric Sites Server. *Machine Learning: Science and Technology*, 2021.
- [4] Zilin Song, Hongyu Zhou, Hao Tian, Xinlei Wang and Peng Tao. Unraveling the energetic significance of chemical events in enzyme catalysis via machine-learning based regression approach. *Communications Chemistry*, 2020, 3, 134.
- [3] Hao Tian, Francesco Trozzi, Brian Zoltowski and Peng Tao. Deciphering the Allosteric Process of Phaeodactylum tricornutum Aureochrome 1a LOV Domain. *The Journal of Physical Chemistry B*, 2020, 124, 41, 8960–8972.
- [2] Hao Tian and Peng Tao. ivis Dimensionality Reduction Framework for Biomacromolecular Simulations. *Journal of Chemical Information and Modeling*, 2020, 60, 10, 4569–4581.
- [1] Hao Tian and Peng Tao. Deciphering the Protein Motion of S1 Subunit in SARS-CoV-2 Spike Glycoprotein Through Integrated Computational Methods. *Journal of Biomolecular Structure and Dynamics*, 2020.

SKILLS

Programming languages: Python, Java, Bash

Front end: HTML, CSS, JavaScript

Back end: PHP, SQL

Machine learning packages: Scikit-learn, Keras, PyTorch

CODING PROJECTS

PASSer: Protein Allosteric Sites Server, passer.smu.edu

- A public web server for protein calculations and predictions;
- Implemented using Python Django framework and JSmol;
- Integrated with machine learning models: XGBoost and graph convolutional neural network.

getarticle, an open source Github repository, star: 23, downloads: 6k

- A package written in Python to download scientific papers in one shot;
- Web scrapy on Sci-Hub and Google Scholar;
- Used as both Python module or command line.

AWARDS & SCHOLARSHIPS

Research Days Dean's Award

Mar 2021

Southern Methodist University

Outstanding Teaching Assistant

May 2020

Southern Methodist University

Meritorious Winner of Mathematical Contest in Modeling

Mar 2018

Beijing University of Chemical Technology

Outstanding Undergraduate

Sep 2015

Beijing University of Chemical Technology

INVITED TALKS

Machine Learning Framework for Deciphering

the Allosteric Process of Circadian Clock Protein

Dec 2020

Department of Chemistry and Biochemistry, The University of Oklahoma