Hao Tian

3215 Daniel Ave, Dallas, TX, 75205, USA

haot@smu.edu • +1 (682) 347-6392 • https://htian1997.github.io

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: 3.9 / 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

Beijing University of Chemical Technology, Beijing, China　　　Aug 2015 – Jun 2019
- B.Eng. in Chemical Engineering
- GPA: 3.49 / 4.33

PUBLICATIONS

[5] <u>Hao Tian</u>, Xi Jiang and Peng Tao. PASSer: Prediction of Allosteric Sites Server. *Machine Learning: Science and Technology,* 2021, 2, 035015.

[4] Zilin Song, Hongyu Zhou, <u>Hao Tian</u>, 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] <u>Hao Tian</u>, 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] <u>Hao Tian</u> and Peng Tao. ivis Dimensionality Reduction Framework for Biomacromolecular Simulations. *Journal of Chemical Information and Modeling,* 2020, 60, 10, 4569-4581.

[1] <u>Hao Tian</u> 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: 8k

•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

Graduate Research Assisstant Award　　　May 2021
Southern Methodist University

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

PRESENTATIONS   **Prediction of Allosteric Sites Through Ensembled Learning**
Oral, ACS Spring 2021   Apr 2021

ivis Dimensionality Reduction Method for Macromolecular Simulations
Oral, ACS Spring 2021   Apr 2021

Machine Learning Framework for Deciphering
the Allosteric Process of Circadian Clock Protein
Oral, The Virtual 2021 Meeting in Miniature at UT Dallas   May 2021
Oral, ACS Spring 2021   Apr 2021
Invited talk, Department of Chemistry and Biochemistry, The University of Oklahoma   Nov 2020

What is hidden behind allostery? An integrated
framework to decipher key components in AuLOV dimerization
Lightning presentation, 3rd RSC-BMCS/RSC-CICAG Artificial Intelligence in Chemistry   Nov 2020