# **Hao Tian**

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#### **EDUCATION**

#### Southern Methodist University, Dallas, Texas, USA

Aug 2019 - Now

- Ph.D. in Theoretical and Computational Chemistry
  - Adviser: Prof. Peng TaoCumulative GPA: 3.95 / 4.0

### Georgia Tech, Atlanta, Georgia, USA

Aug 2020 - Now

- M.S. in Computer Science
  - Specialization: Computing Systems

## Beijing University of Chemical Technology, Beijing, China

Aug 2015 – Jun 2019

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

# RESEARCH EXPERIENCE

## Center for Research Computing,

### Center for Drug Discovery, Design, and Delivery (CD4)

Aug 2019 - Now

Department of Chemistry, Southern Methodist University

Graduate Research Assistant

Focus:

- Molecular dynamics of biomacromolecules
- · Decipher protein allostery through machine learning based methods
- Machine learning and database based allostery development

#### **PUBLICATIONS**

- [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.
- [2] <u>Hao Tian</u> and Peng Tao. ivis Dimensionality Reduction Framework for Biomacromolecular Simulations. *Journal of Chemical Information and Modeling*, 2020.
- [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.

#### **PROJECTS**

getarticle, an open source Github repository, star: 21, downloads: 4k

- •A package based on SciHub and Google Scholar that can download articles given DOI, website address or keywords;
- •Imported in Python or used as command line.

PASS: Protein Allosteric Site Server (preparing for public depolyment)

- •A web server to predict allosteric sites given protein PDB ID or PDB file;
- •Implemented using Django framework, SQLite database and JSmol;
- Learn both physical properties through XGBoost model and pocket topology through Graph Convolutional Network.

# AWARDS & SCHOLARSHIPS

### **Outstanding Teaching Assistant**

May 2020

Southern Methodist University, Dallas, TX, USA, 2020

# **Meritorious Winner of Mathematical Contest in Modeling**

Mar 2018

Beijing University of Chemical Technology, Beijing, China

## **Outstanding Undergraduate**

Sep 2015

Beijing University of Chemical Technology, Beijing, China

# LEADERSHIP & SERVICES

## **Diversify Protein Science**

TCES Member

# **Living Journal of Computational Molecular Sciences**

Student reviewer

**SKILLS** Scripting languages: Python, Java, Bash

Front end: HTML, CSS, JavaScript, jQuery

Machine learning packages: Scikit-learn, Keras, PyTorch

Source control management: Git

Others: LATEX

[Last updated on 2020-09-24]