

# TAO TANG

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5004 Stockton Way, Durham, NC 27707

## EDUCATION

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**Duke University** *08/2018-Present*  
Ph.D. Candidate GPA 3.95/4  
Department of Mathematics Major in Statistics and Applied Math

**Peking University** *08/2014-07/2018*  
Bachelor of Science GPA 3.60/4  
Double Major in Mathematics and Biology GPA 3.85/4

**Hong Kong University of Science and Technology** *01/2017-05/2017*  
Exchange Program in Department of Math, School of Science GPA 4.3/4

## SKILLS

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Programming: Python, R, Pytorch, Matlab, C/C++, L<sup>A</sup>T<sub>E</sub>X

## RESEARCH INTERESTS

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Uncertainty Quantification; Sampling Methods; Monte Carlo Methods; Non-Parametric Bayesian Methods; Stochastic Modeling with application in Biological and Physical science, Machine Learning.

## RESEARCH EXPERIENCES

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**Duke University** *August 2019 - Present*  
Focused on Emulation and inferences of dynamical systems using Gaussian Processes and shrinkage methods; non-parametric/parametric Bayesian methods with application and uncertainty quantification ; sampling methodologies and application in Bayesian models [1][3].

**Peking University** *10/2015-06/2018*  
Stochastic modeling of formation and decreasing of HIV Latency[4].

**University of Washington, Seattle** *07/2017 - 10/2017*  
Study gene expression pattern and statistics with stochastic models.

## PUBLICATIONS

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[1] **Tao Tang**, Simon Mak and David Dunson. *Hierarchical Shrinkage Gaussian Processes for Emulation and Dynamical Recovery*. In preparation

[2] **Tao Tang**, Irene Ji Yi, Simon Mak and Chih-li Song. *Multi-level emulator for multi-fidelity simulations*. In preparation.

[3] Omar Melikechi, Alex Young, **Tao Tang**, Trevor Bowman, James Johndrow and David Dunson. *Limits of epidemic prediction using SIR models*. arXiv preprint arXiv:: 2112.07039

[4] Xiaolu Guo, **Tao Tang**, Minxuan Duan, Lei Zhang, Hao Ge. The Nonequilibrium Mechanism of Noise Enhancer synergizing with Activator in HIV Latency Reactivation. arXiv preprint arXiv:: 2001.05115

## TEACHING EXPERIENCES

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<b>TA of Calculus II for college students</b> <i>Duke Math 122L</i>	<i>Fall 2018</i>
<b>Instructor of Calculus II for college students</b> <i>Duke Math 122L</i>	<i>Fall 2019</i>
<b>Project manager of DoMath:Duke Summer Undergraduate Research Program</b> <i>Mathematical and statistical modeling of COVID-19: SIR models and beyond</i>	<i>Summer 2021</i>

## HONORS AND AWARDS

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<b>School Summer Fellowship</b> <i>Duke University</i>	<i>06/2019-09/2019,06/2020-09/2020</i>
<b>Guanghua Scholarship</b> <i>Peking University</i>	<i>2015</i>
<b>Awards of excellent academic performance</b> <i>Peking University</i>	<i>2015,2016</i>