Chengxin Gong

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EDUCATION

- **Peking University** — Beijing, China
  Department of Probability and Statistics, School of Mathematical Sciences — Sept. 2019 - present

COURSES

- **Grades**: GPA: 3.**/4.00, ranking: **/211
- **Average scores of professional basic courses**: 9*.**/100
- **Average scores of professional advanced courses**: 9*.**/100
- **Courses for postgraduates**: Statistical Models and Computing Methods, Statistical Learning, Applied Partial Differential Equations, Computational Systems Biology (in process), Bayesian Theory and Computation (in process)
- **Seminars**: Bayesian Theory and Computation, Machine Learning and Causal Inference (in process)

PROJECTS

- 1. Model Selection for Mixture of Gaussian Process Functional Regressions (mix-GPFR).
  Gong, C., Wang, Z.
  Team Project for *Statistical Models and Computing Methods*, 2021

- 2. An Analysis of Representation Learning.
  Ai, R., Chen, H., **Gong, C.**, Shao, K.
  Team Project for *Statistical Learning*, 2021

- 3. A Comparative Study on Electrophysiological Models of Single Neurons..
  Gong, C., Wang, Z., Wang, S., Hu, B.
  Team Project for *Mathematical Models*, 2021

RESEARCH INTERESTS

- **Statistical Learning, Bayesian Statistics**: Train machine learning models by applying Baysian theory, conduct data mining and predict the unknown data.
- **Computational Learning Theory, Interpretability**: Obtain generalization bounds for machine learning models, and theoretically interpret the feasibility and robustness for algorithms.

RESEARCH EXPERIENCES

- **Automatic Model Selection for A Two-Layer Mixture Model of Gaussian Process Functional Regressions**: Currently, I am conducting a research supervised by Dr. Jinwen Ma of Peking University, which focuses on 本项目主要采用贝叶斯推理和信息论等方法对双层高斯过程混合模型的自动模型选择问题进行探索，建立适当的模型选择准则和学习算法，并将其应用在曲线聚类分析和数据预测等实际问题上. 具体而言, 我们建立了一个双层全连接型的高斯过程混合模型, 并成功将贝叶斯阴阳机学习算法应用在该模型的自动模型选择问题上, 同时完成了模拟数据和实际数据的试验, 试验结果良好. 目前该项目已处在收尾阶段.

HONORS AND REWARDS

- **Merit Student**, 2021

- **Panasonic Scholarship**, 2021

- **Award for Academic Excellents**, 2020

- **The Third Prize of Peking University Scholarship**, 2020

- **The First Prize in the 12th Mathematics Competition of Chinese College Students**, 2020

- **The Second Prize in the 37th Physics Competition of Chinese College Students**, 2020

- 北京大学"挑战杯"特别贡献奖竞赛三等奖, 2021

SKILLS

- **Programming Languages**: Python, Matlab, C/C++

- **Languages**: Chinese, English

- **Social Positions**: The 13th president of PKU Association of Railway Culture Enthusiasts