

第二十二届京津冀地区青年概率统计
研讨会手册

中国数学会概率统计学会
天津大学数学学院与应用数学中心

二零一八年六月二日

第二十一届京津冀地区青年概率统计研讨会日程表

(2018年6月2日)

一、 颁奖及大会特邀报告

第一阶段：颁奖与致辞（地点：天津大学卫津路校区科学图书馆二楼报告厅）		
9:30-10:00	主持人：邵井海 教授，天津大学	
	1. 中国数学会概率统计学会理事长何书元教授致辞	
	2. 北京大学郑忠国教授代表钟家庆纪念基金会负责人吴美娟女士致辞	
	3. 中科院骆顺龙研究员公布评奖结果	
4. 颁奖		
10:00-10:30	合影留念	
第二阶段：大会特邀报告（地点：科学图书馆二楼报告厅）		
10:30-11:10	大会报告（1）	主持人：杨瑛 教授，清华大学
		报告人：王兆军 教授，南开大学
题目：我国统计学科简介及某些研究方向		
11:10-11:50	大会报告（2）	主持人：骆顺龙 研究员，中国科学院应用数学所
		报告人：董昭 研究员，中国科学院应用数学所
题目：Limiting behavior of stationary measures for stochastic evolution systems		
11:50-13:30	午餐（地点：天津大学学四食堂三楼狗不理天大店）	
13:30-17:00	分组讨论与交流	

一、 分组讨论与交流

第一分会场（地点：天津大学卫津路校区第六教学楼应用数学中心：108 室）	
第一组	主持人： 黎怀谦，天津大学
13:30-13:50	梁晓青，河北工业大学
	带交易费用及两个无风险资产模型最小化生命破产概率问题的研究
13:50-14:10	黄璐静，北京师范大学
	Variational formulas for asymptotic variance of Markov processes
14:10-14:30	吕铀，北京师范大学
	Brownian motion between two random trajectories
14:30-14:50	王翔宇，中国科学院大学
	Expected Utility Maximization with Stochastic Dominance Constrains in Complete Markets
14:50-15:10	李月爽，北京师范大学
	Approximation Theorem for Principle Eigenvalue of Discrete p-Laplacian
15:10-15:40	茶歇
第二组	主持人： 胡二彦，天津大学
15:40-16:00	张少钦，中央财经大学
	On invariant probability measures of regime-switching diffusion processes with singular drifts
16:00-16:20	金晓，北京大学
	Anomalous contribution and fluctuation relations of diffusion processes under averaging and homogenization
16:20-16:40	齐博瑞，北京师范大学
	Quasi-stationary distribution for one-dimensional diffusion process with regular boundary

第二分会场（地点：天津大学卫津路校区会议楼：第三会议室）	
第三组	主持人：关静，天津大学
13:30-13:50	潘蕊，中央财经大学
	Spatially Dependent Autoregression Model
13:50-14:10	叶鹏，对外经济贸易大学
	A GEE-type approach to untangle structural and random zeros in predictors
14:10-14:30	朱容，中国科学院数学与系统科学研究院
	A Mallows-type Model Averaging Estimator for the Varying-Coefficient Partially Linear Model
14:30-14:50	廖军，首都师范大学
	Additive model averaging
14:50-15:10	付盛，中国科学院大学
	A new tree-based non-crossing probability estimation
15:10-15:40	茶歇
第四组	主持人：周茂袁，中国民航大学
15:40-16:00	贺婕，北京师范大学
	Additive Hazards Model with Auxiliary Subgroup Survival Information
16:00-16:20	岳莉莉，北京工业大学
	Regression Adjustment for Treatment Effect with Multicollinearity in High Dimensions
16:20-16:40	宋丽莎，天津大学
	Semiparametric mean-covariance analysis of varying-coefficient single-index models for longitudinal data
16:40-17:00	李文龙，南开大学
	Minimal Coincidence Designs for Order-of-Addition Experiments

第三分会场（地点：天津大学卫津路校区会议楼：第八会议室）	
第五组	主持人：赵慧，天津大学
13:30-13:50	王磊，南开大学
	Simultaneous Propensity and Instrument Selection with Nonignorable Nonresponse
13:50-14:10	王亚平，北京大学
	On the connection between maximin distance designs and orthogonal designs
14:10-14:30	韩晓雪，南开大学
	Asymmetrical fractional factorial split-plot designs with clear effects
14:30-14:50	赵志豪，首都师范大学
	Model Averaging for Estimating Treatment Effects
14:50-15:10	徐璘，国防科技大学&中国科学院数学与系统科学研究院
	Sliced Latin hypercube designs for computer experiments with unequal batch sizes
15:10-15:40	茶歇
第六组	主持人：张海祥，天津大学
15:40-16:00	李沐雨，北京工业大学
	More accurate semiparametric regression in pharmacogenomics
16:00-16:20	王睿，北京理工大学
	Integrated Likelihood Ratio Test
16:20-16:40	王存蔓，河北科技大学
	Maximum Domain of Attraction of the Conditional Exponential-Weibull Distribution
16:40-17:00	胡雪华，北京交通大学
	Assessing the lifetime performance index with Lomax distribution based on progressive type I interval censored sample

报告摘要

(按姓名拼音首字母排序)

大会特邀报告:

1. 报告人: 董昭, 中国科学院应用数学所

题目: Limiting behavior of stationary measures for stochastic evolution systems

摘要:

The limiting behavior of stochastic evolution processes with small noise intensity ε is investigated in distribution-based approach. Let μ^ε be stationary measure for stochastic process X^ε with small ε and X^0 be a semiflow on a Polish space. Assume that $\{\mu^\varepsilon: 0 < \varepsilon < \varepsilon_0\}$ is tight. Then all their weak* limits are X^0 invariant and their supports are contained in Birkhoff center of X^0 . Applications are made to various stochastic evolution systems, including stochastic partial differential equations, stochastic functional differential equations, stochastic ordinary differential equations driven by Brownian motion or Levy process, as well as stochastic approximation with constant step.

2. 报告人: 王兆军, 南开大学

题目: 我国统计学科简介及某些研究方向

摘要:

首先, 对我国统计学过去的重点学科、一级学科的设立及规模等作一简单介绍, 之后, 简述了一些研究方向。

分组报告:

1. 报告人: 付盛, 中国科学院大学

题目: A new tree-based non-crossing probability estimation

摘要:

Classification is a very useful statistical tool for information extraction from data. In practice, besides the class label, it is often desirable to estimate the class conditional probability for new observations. The traditional approaches can lead to biased and poor probability estimation, which also involve intensive calculations. As shown in this article, the weighted margin-based classifiers, such as weighted penalized lo- gistic

regression (WPLR), can enjoy Fisher consistency and have a close connection to probability estimation under some weak assumptions. To overcome this difficulty, we propose a new tree-based algorithm for probability estimation, which integrates with weighted classifiers. Our method has smaller computation cost, and is able to ensure the non-crossing property for theoretical decision boundaries. Numerical results demonstrate that our proposed tree-based method is highly competitive, which attains similar prediction accuracy as some regular approaches and significant improvements on probability estimation.

2. 报告人：贺婕，北京师范大学

题目： Additive Hazards Model with Auxiliary Subgroup Survival Information

摘要：

The semiparametric additive hazards model is an important way for studying the effect of potential risk factors for right-censored time-to-event data. In this paper, we study the additive hazards model in the presence of auxiliary subgroup t^* -year survival information. We formulate the known auxiliary information in the form of estimating equations, and combine them with the conventional score-type estimating equations for the estimation of the regression parameters based on the maximum empirical likelihood method. We prove that the new estimator of the regression coefficients follows asymptotically a multivariate normal distribution with a sandwich-type covariance matrix that can be consistently estimated, and is strictly more efficient, in an asymptotic sense, than the conventional one without incorporation of the available auxiliary information. Simulation studies show that the new proposal has substantial advantages over the conventional one in terms of standard errors, and with the accommodation of more informative information, the proposed estimator becomes more competing. An AIDS data example is used for illustration.

3. 报告人：韩晓雪，南开大学

题目： Asymmetrical fractional factorial split-plot designs with clear effects

摘要：

Fractional factorial split-plot (FFSP) design is a kind of important experimental design both in theory and in practice. There is an extensive literature on the two-level FFSP design and its various variants. However, there is little work on the s -level FFSP and its variant in the asymmetrical (i.e., mixed-level) case, where s is any prime or prime

power. The s -level FFSP designs are commonly used in a lot of fields, such as agriculture, medicine, chemistry, artificial manufacture, and high-tech industry. This paper provides the necessary and sufficient conditions for the existence of resolution III or IV regular $s(n_1+n_2)-(k_1+k_2)(sr)$ designs which contain clear main effects or two-factor interaction components, in particular, the sufficient conditions are proved through constructing the corresponding designs, and some examples are provided to illustrate the construction methods.

4. 报告人：胡雪华，北京交通大学

题目： Assessing the lifetime performance index with Lomax distribution based on progressive type I interval censored sample

摘要：

In manufacturing industry, the lifetime performance index C_L is applied to evaluate the larger-the-better quality features of products. It can quickly show whether the lifetime performance of products meets the desired level. In this article, we obtain the maximum likelihood estimator of C_L with Lomax distribution on basis of progressive type I interval censored sample. And the MLE of C_L is used to establish the hypothesis test procedure under a given lower specification limit L . Finally, we illustrate the proposed inspection procedure through two examples.

5. 报告人：黄璐静，北京师范大学

题目： Variational Formulas for Asymptotic Variance of Markov Processes

摘要：

The asymptotic variance plays an important role in the central limit theorem for Markov processes. We give some variational formulas for asymptotic variance for Markov processes, by solving associated Poisson's equation. As applications, we give some comparison theorems for the asymptotic variance and extend Peskun's theorem to non-reversible Markov processes.

6. 报告人：金晓，北京大学

题目： Anomalous contribution and fluctuation relations of diffusion processes under averaging and homogenization

摘要：

The paper presents a unified approach to analysis a variety types of functional's

behaviour under averaging and homogenization. We consider the case when the diffusions taking place on widely separated time scales. View the fluctuation-relation type functionals as slow dynamics. Using the method of averaging and homogenization of stochastic differential equations. We find out there is a difference between averaged/homogenized functionals defined on the original process and the same functionals defined on the averaged/homogenized process. The first one is always larger than the second one, and the difference also satisfies integral fluctuation theorem.

7. 报告人：李沐雨，北京工业大学

题目： More Accurate Semiparametric Regression in Pharmacogenomics

摘要：

A key step in pharmacogenomic studies is the development of accurate prediction models for drug response based on individuals' genomic information. Recent interest has centered on semiparametric models based on kernel machine regression, which can flexibly model the complex relationships between gene expression and drug response. However, performance suffers if irrelevant covariates are unknowingly included when training the model. We propose a new semiparametric regression procedure, based on a novel penalized garrotized kernel machine (PGKM), which can better adapt to the presence of irrelevant covariates while still allowing for a complex nonlinear model and gene-gene interactions. We study the performance of our approach in simulations and in a pharmacogenomic study of the renal carcinoma drug temsirolimus. Our method predicts plasma concentration of temsirolimus as well as standard kernel machine regression when no irrelevant covariates are included in training, but has much higher prediction accuracy when the truly important covariates are not known in advance. Supplemental materials, including R code used in this manuscript, are available online.

8. 报告人：李文龙，南开大学

题目： Minimal Coincidence Designs for Order-of-Addition Experiments

摘要：

An order-of-addition experiment, whose response is affected by the addition order of components or materials, has been discussed recently in the literature. In this article, we first obtain the discrete discrepancy for any order-of-addition experiments from the viewpoints of similarity. Meanwhile, the lower bound of discrete discrepancy under U-type designs is derived to serve as a benchmark of design optimality. Further, some

methods are proposed to construct fractional designs with flexible number of runs that can achieve the lower bound of the discrete discrepancy. Modeling method and a real data example show that the designs we proposed are efficient.

9. 报告人：李月爽，北京师范大学

题目： Approximation Theorem for Principle Eigenvalue of Discrete p -Laplacian

摘要：

For the principle eigenvalue of discrete weighted p -Laplacian on the set of nonnegative integers, this paper proves the convergence of an approximation procedure and the inverse iteration. Besides, the monotonicity of an approximation sequence is also proved. Some examples are presented to illustrate these results.

10. 报告人：梁晓青，河北工业大学

题目： Minimizing the Probability of Lifetime Ruin: Two Riskless Assets with Transaction Costs

摘要：

We compute the optimal investment strategy for an individual who wishes to minimize her probability of lifetime ruin. The financial market in which she invests consists of two riskless assets. One riskless asset is a money market, and she consumes from that account. The other riskless asset is a bond that earns a higher interest rate than the money market, but buying and selling bonds is subject to proportional transaction costs. We consider three cases: (1) The individual is allowed to borrow from both riskless assets; ruin occurs if total imputed wealth reaches zero. Under the optimal strategy, the individual does not sell short the bond. However, she might wish to borrow from the money market to fund her consumption. Thus, in the next two cases, we seek to limit borrowing from that account. (2) We assume that the individual pays a higher rate to borrow than she earns on the money market. (3) The individual is not allowed to borrow from either asset; ruin occurs if both the money market and bond accounts reach zero wealth. We prove that the borrowing rate in case (2) acts as a parameter connecting the two seemingly unrelated cases (1) and (3).

11. 报告人：廖军，首都师范大学

题目： Additive model averaging

摘要：

In this paper, we consider model averaging estimation for nonlinear additive models. The F distribution based weight choice criterion, called AMA, is proposed. Theoretically, the asymptotic optimality for AMA is established. Moreover, for the weights selected by AMA, the rate of convergence to the optimal weights minimizing MSE is also derived. Further, the proposed AMA method is extended to additive time series models. Numerically, substantial simulations and two empirical examples show the merits of AMA for additive models.

12. 报告人：吕铀，北京师范大学

题目：Brownian motion between two random trajectories

摘要：

Consider the first exit time of one-dimensional Brownian motion $\{B_s\}_{s \geq 0}$ from a random passageway. We discuss a Brownian motion with two time-dependent random boundaries in quenched sense. Let $\{W_s\}_{s \geq 0}$ be another one-dimensional Brownian motion independent of $\{W_s\}_{s \geq 0}$ and $P(\cdot | W)$ represents the conditional probability depend on the realization of $\{W_s\}_{s \geq 0}$. We show

$$-t^{-1} \ln \mathbb{P}^x(\forall_{s \in [0, t]} a + \beta W_s \leq B_s \leq b + \beta W_s | W)$$

converges to a finite positive constant $\gamma(\beta)(b-a)^{-2}$ almost surely and in $L^p(p \geq 1)$ if $a < B_0 = x < b$ and $W_0 = 0$. Some properties of the function $\gamma(\beta)$ are also obtained. For example, we prove that for any non-trivial condition (i.e. $\beta \neq 0$) there has $\gamma(\beta) > \gamma(0)$. That is to say, for a Brownian motion, the first exit time from a fixed interval $[a, b]$ will be longer than from a random time-dependent interval $[\beta W_s + a, \beta W_s + b]$ in some extent.

13. 报告人：潘蕊，中央财经大学

题目：Spatially Dependent Autoregression Model

摘要：

Geostatistical data have received great attention in recent years. One particular type of

data is collected from a set of locations at regular time points. To model such type of data, an autoregression model with spatial dependence is proposed. Particularly, the time dependency for each location is modeled by a univariate autoregression model with spatial random coefficients. In the meanwhile, the spatial dependence is specified by the spatial covariance functions across different locations. To estimate the model, a least squares type estimation is proposed and theoretically investigated. The model shows particular usefulness for the predictive kriging, which is kriging on unobserved locations but for future time points. Lastly, a number of numerical studies is presented and we illustrate the practical usefulness of the proposed model through a monitored PM2.5 data in China.

14. 报告人：齐博瑞，北京师范大学

题目： Quasi-stationary distribution for one-dimensional diffusion process with regular boundary

摘要：

For the minimal one-dimensional diffusion process on the half-line with 0 entrance boundary and regular boundary, we prove that there is a unique quasi-stationary distribution, which attracts all initial distributions. The convergence rate to the quasi-stationary distribution and a spectral representation for the quasi-stationary distribution are also obtained.

15. 报告人：宋丽莎，天津大学

题目： Semiparametric mean-covariance analysis of time varying-coefficient single-index models for longitudinal data

摘要：

In this paper, semiparametric mean-covariance analysis of varying-coefficient single-index models (VCSIM) for longitudinal data is considered. A semiparametric model is established for the covariance structure. The variance function and correlation structure parameters are estimated by the generalized estimating equation (GEE) technique and the quasi-likelihood approach respectively. A B-spline-based profile iteration approach is proposed to estimate the single-index parameters and unknown functions in the mean. Asymptotic properties of the estimators are established. Simulation studies and real data analysis show that the proposed approach is more efficient than that ignoring within- subject correlation.

16. 报告人：王存蔓，河北科技大学

题目： Maximum Domain of Attraction of the Conditional Exponential-Weibull Distribution

摘要：

In this paper, the maximum domain of attraction of the three-parameter conditional Exponential-Weibull distribution is studied. The conditional Exponential-Weibull distribution is confirmed and proven to belong to the maximum domain of attraction of the Gumbel distribution, and the expressions of the corresponding normalizing constants are derived. Numerical simulations are conducted to investigate the performance of the proposed normalizing constants.

17. 报告人：王磊，南开大学

题目： 带有不可忽略缺失数据的模型及工具变量选择

摘要：

参数是否可识别是不可忽略缺失数据研究的核心问题，也是目前尚未完全解决的重要问题。一种有效的处理方法是假设倾向得分函数服从参数模型（但对响应变量关于协变量的条件分布不作任何要求），并引入工具变量来解决参数可识别的问题。工具变量是有用的协变量，且在给定响应变量和其它协变量的情况下，工具变量与倾向得分函数是条件独立。然而，在给定协变量后，如何确定工具变量尚不明确。此外，当存在多个倾向得分函数模型时，如何选择正确的模型也未解决。为解决上述两个问题，本文提出一种新的方法同时对模型和工具变量进行选择。特别地，当倾向得分函数模型集合中包含真模型且工具变量存在时，新方法可以一致性地选择最优的倾向得分函数模型以及正确的工具变量。最后，我们通过数值模拟和实际数据来验证新方法的表现。

18. 报告人：王睿，北京理工大学

题目： Integrated Likelihood Ratio Test

摘要：

A general methodology called integrated likelihood ratio test is proposed which takes posterior Bayes factor and fractional Bayes factor as the main test statistics. Different from Bayesian hypothesis testing, we treat the resulting test procedure as frequentist test which controls the significance level. Under certain regular conditions, we prove the Wilks phenomenon of the integrated likelihood ratio test and derive its asymptotic

local power. It is shown that the integrated likelihood ratio test shares similar frequency properties as the likelihood ratio test with fewer conditions. Our results hold even if the likelihood is unbounded where the likelihood ratio test cannot be defined. We apply the proposed method to two testing problems in normal mixture model. The likelihood ratio test cannot be defined for the first problem and has undesirable local power behavior for the second problem. In comparison, we prove that the integrated likelihood ratio test has good asymptotic power behavior in both problems.

19. 报告人：王翔宇，中国科学院大学

题目： Expected Utility Maximization with Stochastic Dominance Constraints in Complete Markets

摘要：

We study the problem of expected utility maximization with stochastic dominance constraints in complete markets. It turns out that, in our formulation, the problem with FSD (first-order stochastic dominance) constraint is easy and its optimal solution can be explicitly worked out. For the problem with SSD (second-order stochastic dominance) constraint, the duality is established and the dual problem can be regarded as a problem of two-person efficient risk-sharing. Moreover, the optimal solution of the problem of efficient risk-sharing is fully characterized and, in some special cases, has closed form.

20. 报告人：王亚军，北京大学

题目： On the connection between maximin distance designs and orthogonal designs

摘要：

Maximin distance designs and orthogonal designs are widely used in computer and physical experiments. We characterize a broad class of maximin distance designs by establishing new 15 bounds on the minimum inter-site distance for mirror-symmetric and general U-type designs. We show that maximin distance designs and orthogonal designs are closely related and coincide under some conditions.

21. 报告人：徐琰，国防科技大学&中科院数学与系统科学研究院

题目： Sliced Latin hypercube designs for computer experiments with unequal batch sizes

摘要：

Sliced Latin hypercube designs are designs that can be partitioned into a number of batches so that both the whole design and the batches achieve optimal univariate uniformity. Such designs are useful for estimating the mean output value of computer experiments that are carried out in batches, come from multiply resources or have categorical variables. All existing sliced Latin hypercube designs have equal batch sizes. In this talk, we propose a new type of sliced Latin hypercube design that has unequal batch sizes and show their advantages theoretically and numerically.

22. 报告人：叶鹏，对外经济贸易大学

题目： A GEE-type approach to untangle structural and random zeros in predictors.

摘要：

Count outcomes with excessive zeros are common in behavioral and social studies, and zero-inflated count models such as zero-inflated Poisson (ZIP) and zero-inflated Negative Binomial (ZINB) can be applied when such zero-inflated count data is used as response variable. However, when the zero-inflated count data is used as predictors, ignoring the difference of structural and random zeros can result in biased estimates. In this paper, a generalized estimating equation (GEE)-type mixture model is proposed to jointly model the response of interest and the zero-inflated count predictors. Simulation studies show that the proposed method performs well for practical settings and more robust for model misspecification than the likelihood-based approach. A real data example is also provided for illustration.

23. 报告人：岳莉莉，北京工业大学

题目： Regression Adjustment for Treatment Effect with Multicollinearity in High Dimensions

摘要：

Randomized experiment is an important tool for studying the average treatment effect (ATE). Conventionally, SATE can be estimated by the difference of means in the treatment and control groups, but recently several approaches have been proposed that focus on regression adjustments in the hope of reducing variance of SATE estimates. The adjusted estimation method has been generalized to the high-dimensional data analysis based on the least absolute shrinkage and selection operator (Lasso) penalty. In this paper, we consider the regression adjustment estimation of the sample average treatment effect (SATE) in high-dimensional case, where the multicollinearity problem

is often encountered and needs to be properly handled. Many existing regression adjustment methods fail to achieve satisfactory performances. To solve this issue, we propose an Elastic-net adjusted estimator for SATE under the Rubin causal model of randomized experiments with multicollinearity in high dimensions. The asymptotic normality of the proposed SATE estimate are shown under some regularity conditions, and the asymptotic variance is proved not greater than that of unadjusted (difference-of-means) estimator. Further, we propose a conservative variance estimate method for the asymptotic variance of resulting SATE estimator, which yields tighter confidence intervals than unadjusted and Lasso-based adjusted estimates. Some simulation studies are carried out to show that the Elastic-net adjusted method deals with collinearity problem better than unadjusted and Lasso-based adjusted approaches, thus improves the finite sample performance (bias, standard deviations, mean squares errors, the number of selected covariates, mean interval lengths) of the existing methods. Finally, we apply the proposed estimate method to analyze the dataset of HER2 breast cancer patients.

24. 报告人：张少钦，中央财经大学

题目： On invariant probability measures of regime-switching diffusion processes with singular drifts

摘要：

We prove the existence and uniqueness of the invariant probability measure for regime-switching diffusions processes with singular drifts.

25. 报告人：赵志豪，首都师范大学

题目： Model Averaging for Estimating Treatment Effects

摘要：

In many empirical investigations, particularly in fields such as economic policy, personalized medicine, and direct marketing, estimating a treatment effect on a response is a primary goal. Typically, we would select a statistical model based on sample data to estimate the conditional treatment effects. However, the average of the candidate models often provides a more accurate estimate than the selection of a single candidate model. This paper proposes a new weight choice for model averaging estimates of the treatment effects that are conditional on covariates. We demonstrate that our new model average estimator is asymptotically optimal in the sense that it

achieves the lowest possible squared error. In a simulation experiment, we show that the proposed estimator compares favorably with those based on AIC and BIC weights. We apply the averaging method to evaluate the effect of the labor market program.

26. 报告人：朱容，中国科学院数学与系统科学研究院

题目：A Mallows-type Model Averaging Estimator for the Varying-Coefficient Partially Linear Model

摘要：

In the last decade, significant theoretical advances have been made in the area of frequentist model averaging (FMA); however, the majority of this work has emphasised parametric model setups. This paper considers FMA for the semiparametric varying-coefficient partially linear model (VCPLM), which has gained prominence to become an extensively used modeling tool in recent years. Within this context, we develop a Mallows-type criterion for assigning model weights and prove its asymptotic optimality. A simulation study and a real data analysis demonstrate that the FMA estimator that arises from this criterion is vastly preferred to information criterion score-based model selection and averaging estimators. Our analysis is complicated by the fact that the VCPLM is subject to uncertainty arising not only from the choice of covariates, but also whether the covariate should enter the parametric or nonparametric parts of the model.

校园地图



本示意图由天津大学保卫处提供 天津大学保卫处值班电话：27404429 防火科电话：27404430 校卫队电话：27406829

周边环境图

